



**UNIVERSITY OF MEDIA, ARTS AND COMMUNICATION**

**THE INFLUENCE OF ECO-FRIENDLY PACKAGING ON CONSUMER  
PURCHASE DECISIONS IN THE BEAUTY INDUSTRY**

BY

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## DECLARATION BY STUDENT

I hereby declare that this research is a result of my original research and that, no part of it has been presented for another degree in this university or any other higher education institute. I further declare that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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Signature

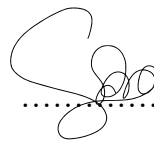
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## CERFIFICATION BY SUPERVISOR

This Project Work has been prepared and presented under my supervision according to the guidelines for supervision and formatting of Project Work laid down by the University of Media, Arts and Communication.

Supervisor [Dr. Martin Thompson Ntem]



Signature

**07/12/2025**

Date

## **DEDICATION**

This work is dedicated to my parents and siblings for their unwavering support and encouragement throughout my research and academic journey.

## **ACKNOWLEDGMENT**

I am truly grateful and thankful to my supervisor, Dr Martin Thompson Ntem, who for his guidance, patient and lessons helped me through my work. and, to appreciate my family and friends for their support throughout this project.

## ABSTRACT

The growing global emphasis on environmental sustainability has intensified interest in eco-friendly packaging, particularly within the beauty industry, which is characterized by high levels of packaging waste and increasing consumer demand for sustainable alternatives. This study examines the influence of eco-friendly packaging on consumer purchase decisions in Ghana's beauty industry, focusing on three core dimensions: consumer attitudes toward sustainable packaging, the relationship between eco-friendly packaging and actual purchase behavior, and the moderating role of demographic characteristics. Guided by the Theory of Planned Behavior (TPB), Signaling Theory, and the Value-Belief-Norm (VBN) Theory, the study adopts a quantitative, cross-sectional survey design to examine the behavioral and contextual factors shaping sustainable consumption. Data were collected from 250 urban beauty product consumers using structured questionnaires and analyzed through descriptive statistics and multiple regression techniques. The findings reveal that consumer attitudes toward eco-friendly packaging are generally positive, shaped largely by environmental concern, aesthetic perception, and brand credibility. Regression analysis shows that eco-friendly packaging has a statistically significant influence on purchase decisions, though the strength of this relationship is moderated by factors such as affordability, product availability, and perceived product quality. The results also demonstrate that demographic factors such as age, income, education, and to a lesser extent gender significantly shape consumer preferences and willingness to pay for sustainable packaging. This research contributes to sustainability and consumer behavior literature in emerging markets and provides practical insights for beauty industry stakeholders in Ghana. It recommends that brands adopt clearer sustainability signals, strengthen environmental education, enhance affordability, and tailor marketing strategies to demographic segments to effectively promote sustainable packaging adoption.

**KEYWORDS:** *Eco-friendly Packaging, Consumer Purchase Decisions, Beauty Industry, Green consumer behavior, Environmental Sustainability.*

## TABLE OF CONTENTS

<b>CERFICATION BY SUPERVISOR</b> .....	i
<b>DEDICATION</b> .....	ii
<b>ACKNOWLEDGMENT</b> .....	iii
<b>ABSTRACT</b> .....	iv
<b>LIST OF FIGURES</b> .....	ix
<b>LIST OF TABLES</b> .....	ix
<b>CHAPTER ONE</b> .....	1
<b>INTRODUCTION</b> .....	1
<b>1.1 Background of the Study</b> .....	1
<b>1.2 Problem Statement</b> .....	3
<b>1.3 Research Objectives</b> .....	5
<b>1.4 Research Questions</b> .....	5
<b>1.5 Justification of the Study</b> .....	5
<b>1.6 Scope of the Study</b> .....	7
<b>1.7 Limitations of the Study</b> .....	8
<b>1.8 Significance of the Study</b> .....	9
<b>1.9 Chapter Summary</b> .....	10
<b>CHAPTER TWO</b> .....	11
<b>LITERATURE REVIEW AND THEORETICAL FOUNDATION</b> .....	11
<b>2.0 Introduction</b> .....	11
<b>2.1 Conceptual Definitions</b> .....	12
<b>2.1.1 Eco-Friendly Packaging</b> .....	12
<b>2.1.2 Consumer Purchase Decisions</b> .....	13
<b>2.1.3 Sustainability</b> .....	13
<b>2.1.4 Green Consumer Behavior</b> .....	14
<b>2.2 Theoretical framework</b> .....	15
<b>2.2.1 Summary of the Framework</b> .....	15
<b>2.3 Summary of the Literature Review</b> .....	16
<b>2.4 Theoretical Review</b> .....	17
<b>2.4.1 Overview of the Theory of Planned Behavior (TPB)</b> .....	18

2.4.2 Application of TPB in Sustainable Consumer Behavior .....	18
2.4.3 Relevance of TPB to the Beauty Industry.....	19
2.4.4 Criticisms and Limitations of TPB.....	19
2.5 Empirical Studies .....	21
2.6 Review of Literature on First Objective: Consumer Attitudes Toward Eco-Friendly Packaging.....	25
2.6.1 The Psychological Basis of Attitude Toward Green Packaging .....	25
2.6.2 Influence of Green Branding and Labelling on Attitude .....	26
2.6.3 Cultural and Demographic Moderators of Consumer Attitudes .....	27
2.6.4 Affective and Symbolic Dimensions of Attitudes .....	28
2.7 Review of Literature on the Second Objective: The Relationship Between Eco-Friendly Packaging and Purchase Decisions.....	29
2.7.1 Eco-Friendly Packaging as a Purchase Trigger .....	29
2.7.2 The Role of Consumer Perception and Packaging Attributes .....	30
2.7.3 Contrasting Evidence and Moderating Variables.....	31
2.7.4 Evidence from African Markets .....	32
2.7.5 Ghanaian Context and Local Dynamics .....	32
2.8 Review of Literature on the Third Objective: Demographic Influence on Consumer Preferences for Eco-Friendly Packaging .....	33
2.8.1 Age and Generational Differences .....	34
2.8.2 Gender Differences in Sustainable Preferences .....	35
2.8.3 Income and Willingness to Pay for Eco-Friendly Packaging.....	36
2.8.4 Education and Environmental Literacy .....	37
2.8.5 Intersections Between Demographics .....	38
2.9 Conceptual Framework.....	38
2.9.1 Linking Eco-Friendly Packaging to Consumer Attitudes (TPB).....	39
2.9.2 Eco-Friendly Packaging as a Market Signal (Signaling Theory) .....	39
2.9.3 Values and Moral Norms as Drivers of Sustainable Consumption (VBN Theory) .....	39
4.6.3 Moderating Role of Demographic Factors .....	40
2.9.4 Integrating the Framework.....	40
2.10 Chapter Summary .....	41

<b>CHAPTER THREE .....</b>	<b>42</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>42</b>
<b>3.0 Introduction.....</b>	<b>42</b>
<b>3.1 Research Paradigm.....</b>	<b>43</b>
<b>3.2 Research Approach.....</b>	<b>43</b>
<b>3.3 Research Design .....</b>	<b>44</b>
<b>3.4 Study Population.....</b>	<b>45</b>
<b>3.5 Sample and Sampling Technique.....</b>	<b>47</b>
<b>3.5.1 Sample Size.....</b>	<b>47</b>
<b>3.5.2 Sampling Procedure/Technique.....</b>	<b>48</b>
<b>3.6 Sources of Data.....</b>	<b>49</b>
<b>3.7 Data Collection Method.....</b>	<b>50</b>
<b>3.7.1 Data collection Instrument.....</b>	<b>50</b>
<b>3.7.2 Instrument Design.....</b>	<b>51</b>
<b>3.7.3 Distribution Strategy .....</b>	<b>52</b>
<b>3.8 Advantages of the Chosen Method .....</b>	<b>52</b>
<b>3.9 Data Analysis .....</b>	<b>52</b>
<b>3.9.1 Software Tool.....</b>	<b>53</b>
<b>3.9.2 Analytical Techniques.....</b>	<b>53</b>
<b>3.9.3 Data Preparation.....</b>	<b>54</b>
<b>3.9.4 Presentation of Results .....</b>	<b>54</b>
<b>3.10 Ethical Considerations.....</b>	<b>55</b>
<b>3.11 Informed Consent.....</b>	<b>55</b>
<b>3.12 Confidentiality and Anonymity .....</b>	<b>55</b>
<b>3.13 Avoidance of Harm .....</b>	<b>56</b>
<b>3.14 Data Integrity and Responsible Reporting.....</b>	<b>56</b>
<b>3.15 Institutional Review and Ethical Clearance.....</b>	<b>56</b>
<b>3.16 Chapter Summary .....</b>	<b>57</b>
<b>CHAPTER FOUR.....</b>	<b>58</b>
<b>DATA ANALYSIS, RESENTATION OF FINDINGS AND DISCUSSION.....</b>	<b>58</b>
<b>4.1 Introduction.....</b>	<b>58</b>

4.2 Response Rate and Data Cleaning.....	58
4.3 Demographic Profile of Respondents.....	59
4.4 Results for Objective One – Consumer Attitudes toward Eco-Friendly Packaging... 61	
Regression Analysis for Objective One.....	63
4.5 Results for Objective Two – Influence of Eco-Friendly Packaging on Purchase Decisions.....	64
Regression Analysis for Objective Two .....	66
4.6 Results for Objective Three – Moderating Role of Demographics and Contextual Factors.....	68
Regression Analysis for Objective Three .....	70
4.7 Discussion of Findings by Objectives .....	73
4.7.1 Objective One: Consumer Attitudes toward Eco-Friendly Packaging.....	73
4.7.2 Objective Two: Influence of Eco-Friendly Packaging on Purchase Decisions .....	74
4.7.3 Objective Three: Moderating Role of Demographic and Contextual Factors .....	75
4.8 Summary of Findings .....	76
4.9 Chapter Summary .....	77
CHAPTER FIVE .....	78
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....	78
5.1 Introduction.....	78
5.2 Summary of Major Findings.....	78
5.3 Conclusions.....	80
5.4 Recommendations .....	82
5.5 Suggestions for Future Research .....	84
5.6 Chapter Summary .....	86
REFERENCES.....	87
APPENDIX.....	92

## **LIST OF FIGURES**

Figure 2.1: Theoretical Framework of the study

## **LIST OF TABLES**

Table 4.2: Descriptive Statistics of Consumer Attitudes towards Eco-friendly Packaging

Table 4.4 Anova results

Table 4.5: Coefficients

Table 4.6: Descriptive Statistics of Purchase Decisions Factors

Table.4.10: Descriptive Statistics of demographic Contextual Influences

# CHAPTER ONE

## INTRODUCTION

This section introduces the research, focusing on the background of the study to the organization of the study. Which tells the growing awareness of environmental sustainability and how it has led to a significant shift in consumer preferences within the beauty industry worldwide. Eco-friendly packaging has become a crucial factor influencing purchase decisions, as consumers increasingly prioritize environmentally responsible practices. By exploring these dynamics, this research seeks to provide valuable insights for beauty industry stakeholders and policymakers globally who are working to promote sustainable practices.

### 1.1 Background of the Study

The global beauty industry valued at over \$500 billion (Statista, 2023), is experiencing a growing shift toward sustainability. One of the key areas of transformation is packaging, as stakeholders respond to the environmental impact of plastic waste and non-biodegradable materials. Eco-friendly packaging comprising recyclable, biodegradable, or reusable materials has emerged as a strategic priority for beauty brands aiming to align with environmental sustainability goals (Li, Zhang&Chen,2022)

A study by Mahmoud et al. (2022) examined the impact of green packaging, environmental awareness, and willingness to pay on consumer purchase decisions in Ghana. They found that environmental awareness significantly influences purchase decisions, while green packaging itself didn't have a notable impact. However, consumers' willingness to pay for green products positively affected consumers' willingness to pay for green products positively affected their purchasing decisions.

Research conducted at the University of Ghana Business School and Ho Technical University

highlights the growing importance of eco-friendly packaging in Ghana's manufacturing sector <sup>1</sup>. In South Africa, Maziriri (2020) explored green packaging and advertising as precursors to competitive advantage and business performance among manufacturing SMEs. The study emphasized the role of eco-friendly practices in business sustainability. A study on eco-friendly packaging in restaurants in Accra, Ghana, investigated the application, attitudes, and challenges associated with sustainable packaging practices by Kwame Nkrumah University of Science and Technology (KNUST).

Consumers, especially in developed countries, are becoming more aware of the ecological consequences of their consumption habits. This awareness is influencing their purchase decisions, particularly in industries like cosmetics where packaging plays a major role in both product appeal and environmental impact (Pereira, Ribeiro, & Ferreira, 2022). Companies such as L'Oréal, Skin Gourmet Ghana and The Body Shop have already adopted sustainable packaging to appeal to this growing segment of eco-conscious consumers (Intel, 2023).

Despite this trend, there remains an important gap in understanding the actual impact of eco-friendly packaging on consumer behavior, especially in developing and emerging markets like Ghana. While global studies suggest that sustainability initiatives can positively affect brand perception and consumer loyalty, it is unclear whether similar outcomes are observed in local contexts where factors such as price sensitivity, limited awareness, and accessibility may influence consumer priorities (Nguyen, 2022).

In many developing economies, environmental awareness is growing but may not always translate into behavior. Consumers often face trade-offs between sustainability and other product attributes such as affordability, quality, and convenience. This is particularly relevant in the beauty industry,

where packaging not only serves a protective function but also acts as a critical marketing tool influencing consumer perception and choice (Kotler & Keller, 2016).

Moreover, packaging waste in the cosmetics sector poses a considerable environmental threat, as many beauty products are housed in plastic containers with short life spans and low recyclability. Recognizing this, global and regional sustainability frameworks increasingly urge industries to adopt circular packaging solutions. Yet, brands operating in markets such as Ghana face unique challenges due to varying consumer expectations and economic constraints.

As sustainability becomes an integral part of corporate and consumer agendas, it is essential to understand the dynamics between eco-friendly packaging and consumer purchase behavior. Gaining insight into how packaging influences decision-making in the beauty sector can help marketers, manufacturers, and policymakers craft strategies that promote environmental responsibility without alienating value-conscious consumers.

This study, therefore, seeks to explore the influence of eco-friendly packaging on consumer purchase decisions within Ghana's beauty industry. It will assess consumer attitudes, identify behavioral patterns, and examine the moderating role of demographic variables such as age, income, gender, and education. By doing so, the research aims to fill a critical gap in sustainability and consumer behavior literature in the context of a rapidly developing African market.

## **1.2 Problem Statement**

Despite the rapid growth on sustainability within the beauty industry, the actual impact of eco-friendly packaging on consumer purchasing decisions remains ambiguous particularly in emerging markets. While global brands are making significant investments in sustainable packaging

solutions, it is still unclear whether such efforts translate into meaningful shifts in consumer behavior (Nguyen, 2022). Consumers frequently express a preference for environmentally friendly products, but research suggests that there is often a disconnect between stated attitudes and actual buying behavior a phenomenon known as the attitude-behavior gap (Johnstone & Tan, 2015; White, Habib, & Hardisty, 2019).

This inconsistency is further complicated by other influential factors such as price sensitivity, brand loyalty, packaging aesthetics, and perceived product quality (Kotler & Keller, 2016). For instance, a consumer may value sustainability but still choose a less eco-friendly product if it offers better pricing or brand recognition. Moreover, in many developing economies, including Ghana, consumers may lack awareness of or access to eco-friendly options, limiting their ability to make environmentally conscious purchases (Yadav & Pathak, 2017).

The scarcity of empirical studies from emerging markets also presents a research gap. While numerous studies from Western contexts suggest a positive relationship between sustainable packaging and consumer preference, the extent to which this applies in Sub-Saharan African countries remains largely unexplored (Pereira et al., 2022). As a result, beauty brands operating in these markets lack localized data to inform packaging and marketing strategies that align with both sustainability goals and consumer expectations.

This research therefore seeks to bridge this knowledge gap by quantitatively examining the influence of eco-friendly packaging on consumer purchase decisions within the beauty circle, using data collected from urban consumers. The findings will help determine whether sustainability-driven packaging decisions truly influence buyer behavior or remain a peripheral concern in actual purchase contexts.

### **1.3 Research Objectives**

This study is primarily descriptive and explanatory in nature, aiming to provide empirical insight into how eco-friendly packaging influences consumer behavior within the beauty industry.

Specifically, the objectives of the study are to:

1. To investigate consumers attitudes, perceptions, and awareness toward eco-friendly packaging in the beauty industry
2. To assess the relationship between eco-friendly packaging and consumers purchase decisions.
3. To Determine whether demographic factors like (age, gender, income) influence consumer preferences for eco-friendly packaging.

### **1.4 Research Questions**

1. What attitudes, perceptions, and awareness do consumers have toward eco-friendly packaging in the beauty industry?
2. To what extent does eco-friendly packaging influence consumers decisions to purchase beauty products?
3. Is there a statistically significant relationship between demographic factors (age, gender, income) and consumer preferences for eco-friendly packaging?

### **1.5 Justification of the Study**

The increasing global concern about environmental sustainability has led to a paradigm shift in consumer expectations and corporate responsibility, particularly in industries that produce significant packaging waste such as the beauty and cosmetics sector. Packaging accounts for a large share of environmental pollution, especially due to its short lifecycle and reliance on non-biodegradable materials (Pereira, Ribeiro, & Ferreira, 2022). As brands respond by adopting eco-

friendly packaging solutions, it becomes crucial to understand whether these green initiatives influence consumer behavior or remain a symbolic gesture without real purchasing impact.

This study is justified on several grounds. First, although many consumers claim to value sustainability, their actual purchase decisions often reflect different priorities such as price, brand loyalty, and product quality (White, Habib, & Hardisty, 2019). By investigating the behavioral outcomes associated with eco-friendly packaging, this study will help bridge the gap between consumer attitudes and actual purchase patterns, particularly in the beauty industry where packaging aesthetics and environmental values frequently intersect.

Secondly, while extensive research has been conducted in Western and highly industrialized markets, there is limited empirical evidence on the relationship between eco-friendly packaging and consumer purchase behavior in emerging markets such as Ghana. Cultural, economic, and awareness differences may significantly affect how consumers perceive and respond to sustainable packaging (Yadav & Pathak, 2017). This research thus fills a contextual gap by focusing on consumers in a developing country setting, offering localized insights that are often overlooked in global sustainability literature.

Finally, the research findings will be valuable to both academic and industry stakeholders. From an academic perspective, the research contributes to the broader discourse on green consumerism and sustainable marketing. For practitioners, especially brand managers and marketers in the beauty industry, the study provides data-driven insights to guide packaging strategies, communication approaches, and product positioning in ways that align both sustainability goals and consumer expectations.

## **1.6 Scope of the Study**

This study focuses on exploring the influence of eco-friendly packaging on consumer purchase decisions within the beauty industry. The scope is specifically limited to consumers of beauty products such as skincare, haircare, and cosmetics who are aged 18 and above and reside in urban areas where sustainable beauty options are more likely to be available and visible.

Geographically, the study is confined to Ghana, with an emphasis on urban populations where access to eco-conscious products and awareness of sustainability issues are relatively higher. This demographic is considered more relevant for the study due to their exposure to modern retail formats, brand diversity, and digital marketing channels that promote green products.

The study adopts a quantitative approach using a cross-sectional survey method to gather primary data through structured questionnaires. It will assess consumer attitudes, perceptions, and reported behavior regarding eco-friendly packaging, as well as evaluate the role of demographic factors such as age, gender, income, and education in shaping these behaviors.

However, the study does not cover the entire environmental lifecycle of packaging or the supply chain logistics of sustainable materials. Nor does it explore producer-side challenges in implementing green packaging. The scope is purely consumer-centric and aims to contribute knowledge on demand-side influences within the sustainability discourse in the beauty sector.

By maintaining this focus, the study ensures a manageable breadth and depth, while yielding specific, actionable insights relevant to marketers, product designers, and sustainability advocates in the Ghanaian beauty industry.

## 1.7 Limitations of the Study

While this key outcome is meant to provide valuable insights into the influence of eco-friendly packaging on consumer purchase decisions in the beauty industry, certain limitations must be acknowledged:

**Geographical Limitation:** The study is confined to urban areas in Ghana, which may not fully represent consumer behavior in rural regions or across other developing countries. Urban consumers are generally more exposed to sustainability campaigns and international brands, which may influence their attitudes and behaviors differently.

**Sampling Method:** A non-probability convenience sampling technique will be used, primarily due to the lack of access to a comprehensive consumer database. This may limit the generalizability of the findings, as the sample may not be entirely representative of the broader consumer population.

**Self-Reported Data:** Data will be collected through self-administered questionnaires, which are subject to social desirability bias. Respondents may overstate their environmentally friendly behaviors or attitudes to align with perceived social norms, leading to discrepancies between stated preferences and actual behavior.

**Time Constraints:** Given the cross-sectional nature of the study, data will be collected at a single point in time. This limits the ability to assess changes in consumer behavior over time or establish causality between variables.

**Focus on Consumer Perception Only:** The study centers solely on consumer responses and does not incorporate perspectives from industry stakeholders such as manufacturers, marketers, or

retailers. As a result, it does not address challenges faced by producers in implementing eco-friendly packaging solutions.

**Scope of Environmental Knowledge:** The study does not account for variations in participants' depth of knowledge about sustainability. Some consumers may misunderstand what qualifies as "eco-friendly," which could affect the accuracy of their responses.

Despite these limitations, the study is expected to provide meaningful insights into how sustainable packaging influences consumer behavior and how demographic variables moderate this relationship in the Ghanaian beauty industry.

### **1.8 Significance of the Study**

This study is organized into five comprehensive chapters that systematically address the research objectives and ensure a logical flow of information. Chapter One introduces the study by outlining the background, problem statement, research objectives and questions, justification, scope, limitations, and the overall organization of the research, thereby setting the foundation and context. Chapter Two presents a detailed review of relevant theoretical and empirical literature on eco-friendly packaging and consumer behavior, establishes the theoretical framework, identifies research gaps, and builds the academic basis for the study. Chapter Three describes the research methodology, including the design, approach, population, sampling techniques, data collection instruments, ethical considerations, and the statistical tools used for data analysis. Chapter Four focuses on the presentation, analysis, and interpretation of data using both descriptive and inferential statistics to address the research questions and test variable relationships. Finally, Chapter Five provides a discussion of key findings in relation to existing literature, draws

conclusions, and offers practical recommendations for stakeholders, while also suggesting directions for future research.

## **1.9 Chapter Summary**

Chapter one provides an overview of the study by firstly introducing the background of the study to the organization of the study. The significance of eco-friendly packaging in the beauty industry highlights consumer awareness and demand for sustainable practices. This chapter sets the basis for exploring the influence of eco-friendly packaging on consumer purchase decisions, providing a framework for the subsequent chapters. Overall, chapter one sets the foundation for the entire study by establishing the context, identifying the research gap, and presenting the key objectives and significance of the research.

## CHAPTER TWO

### LITERATURE REVIEW AND THEORETICAL FOUNDATION

#### 2.0 Introduction

This phase provides a comprehensive review of the relevant literature to contextualize and support the current study. It begins with definitions of key concepts related to eco-friendly packaging and consumer decision-making. It then reviews theoretical frameworks particularly the Theory of Planned Behavior (Ajzen, 1991) that help explain consumer motivations and actions. This is followed by empirical studies that examine sustainable packaging trends across various sectors, with a focus on the beauty industry. Subsequently, the literature is reviewed in relation to each of the study's three objectives: understanding consumer attitudes, evaluating the impact on purchase decisions, and examining demographic influences. The chapter concludes with a conceptual framework and a summary of key insights and research gaps.

The global push toward environmental sustainability has significantly shaped consumer markets and business practices over the past two decades. One of the most notable transformations has been around product packaging, where eco-friendly solutions have increasingly replaced traditional, non-recyclable materials. Within the beauty industry, a sector characterized by high levels of packaging waste and short product usage cycles sustainable packaging has emerged as a central topic of academic and commercial interest (Nguyen, 2022; Pereira, Ribeiro, & Ferreira, 2022). Consumers, governments, and businesses alike are paying closer attention to how packaging materials affect not only product functionality and aesthetics but also environmental outcomes.

The literature on green consumerism suggests that consumer behavior is evolving in response to increased awareness of environmental degradation, climate change, and the unsustainable use of natural resources. Scholars have explored a variety of sustainable consumption patterns, including eco-labeling, ethical branding, and carbon footprint reduction. However, while the notion of eco-friendly packaging has gained traction in policy and corporate marketing, its actual influence on consumer purchase decisions remains complex and, in many contexts, underexplored (White, Habib, & Hardisty, 2019).

In the beauty industry,

## **2.1 Conceptual Definitions**

To provide clarity and consistency throughout the study, it is essential to define the key concepts underpinning the research. The terms defined in this section include eco-friendly packaging, consumer purchase decisions, sustainability, and green consumer behavior. These concepts form the theoretical and practical foundation of the research.

### **2.1.1 Eco-Friendly Packaging**

Eco-friendly packaging, also referred to as sustainable or green packaging, encompasses packaging solutions designed to have minimal environmental impact. This includes the use of recyclable, biodegradable, compostable, or reusable materials, as well as designs that reduce material usage or carbon emissions during production and disposal (Li, Zhang, & Chen, 2022). Eco-friendly packaging often reflects a company's commitment to environmental stewardship and is a response to growing consumer demand for products that align with sustainable values (Nguyen, 2022).

According to Pereira, Ribeiro, and Ferreira (2022), eco-packaging in the cosmetics and beauty sector typically includes glass containers, recycled plastics, paper-based cartons, or refillable components. These packaging solutions are not only environmentally preferable but also act as communication tools that convey brand responsibility and authenticity. However, the understanding of what constitutes “eco-friendly” can vary among consumers based on their environmental knowledge and cultural context (White, Habib, & Hardisty, 2019).

### **2.1.2 Consumer Purchase Decisions**

Consumer purchase decisions refer to the process by which individuals choose, evaluate, and ultimately buy a product or service. This process involves several stages, including need recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behavior (Kotler & Keller, 2016). In the context of eco-friendly products, this process can be influenced by additional variables such as environmental concern, ethical considerations, and perceived product efficacy (Yadav & Pathak, 2017).

In this study, consumer purchase decisions specifically relate to the final choice of beauty products and the extent to which packaging particularly sustainable packaging impacts that decision. Understanding how consumers weigh eco-friendly packaging against other attributes like price, brand, and product performance is critical in assessing the role of sustainability in consumer behavior.

### **2.1.3 Sustainability**

Sustainability is broadly defined as meeting present needs without compromising the ability of future generations to meet their own (Brundtland Commission, 1987). In business and marketing contexts, sustainability refers to practices that promote environmental, economic, and social well-

being. Within the beauty industry, sustainability can manifest in various forms, including cruelty-free testing, ethical sourcing, and eco-friendly packaging (Intel, 2023).

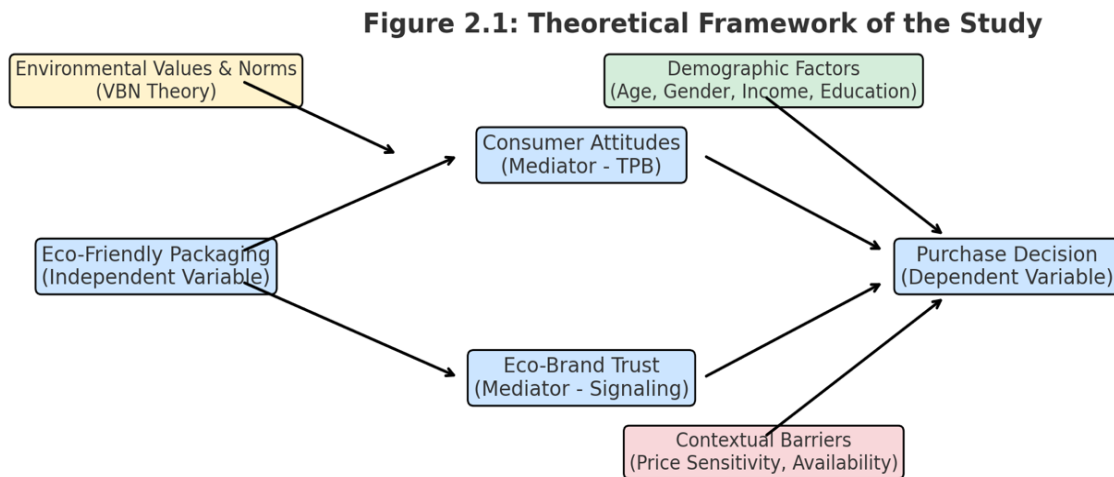
From a packaging perspective, sustainability involves minimizing resource consumption and waste generation throughout the product life cycle. Brands that implement sustainable packaging strategies often aim to reduce their environmental footprint while also creating a positive brand image and fulfilling corporate social responsibility goals (Li et al., 2022).

#### **2.1.4 Green Consumer Behavior**

Green consumer behavior refers to the purchasing and consumption patterns of individuals who prioritize environmental impact in their decision-making. These consumers are motivated by ecological values and are more likely to choose products that are perceived as less harmful to the environment (Nguyen, 2022). Such behavior includes purchasing eco-labeled products, recycling, and supporting companies with transparent environmental practices. According to White et al. (2019), green consumers typically seek authenticity and are skeptical of greenwashing—where companies make misleading environmental claims. As a result, the success of eco-friendly packaging often depends not only on the material used but also on the credibility of the brand's environmental message and the transparency of its claims. According to White et al. (2019), green consumers typically seek authenticity and are skeptical of greenwashing where companies make misleading environmental claims. As a result, the success of eco-friendly packaging often depends not only on the material used but the brand's environmental message and the transparency of its claims.

## 2.2 Theoretical framework

This study adopts the Theory of Planned Behavior (Ajzen,1991) as its guiding framework. The theory posits that behavior is influenced by an individual’s attitude toward the behavior, perceived social pressure (subjective norms), and perceived behavioral control. In the context of eco-friendly packaging, consumers’ attitudes toward sustainability, social expectations about environmentally responsible choices, and perceived ease of purchasing eco-friendly products influence their purchase intentions and decisions.



**Figure.1: Proposed Theoretical Framework**

### 2.2.1 Summary of the Framework

The theoretical framework integrates rational decision-making factors (TPB), communicative signals (Signaling Theory), and value-based drivers (VBN Theory) into a cohesive model of consumer behavior. This integration provides both explanatory depth and predictive power, enabling the study to account for psychological, social, and contextual dimensions of eco-friendly packaging adoption. Importantly, the framework directly informs the research questions, guides

hypothesis formulation, and shapes the methodological approach by specifying the variables and relationships to be empirically tested.

### **2.3 Summary of the Literature Review**

This phase provides extensive review of the existing literature relevant to the study on the influence of eco-friendly packaging on consumer purchase decisions in the beauty industry, with a specific focus on urban consumers in an emerging market context. The review has been structured around conceptual definitions, theoretical underpinnings, empirical findings, and the specific research objectives of the study.

The review began with conceptual definitions that clarified key terms such as eco-friendly packaging, consumer purchase decisions, and green consumer behavior. These definitions set the foundation for understanding the scope and direction of the research. It was established that eco-friendly packaging encompasses recyclable, biodegradable, and reusable materials, and serves as a functional, symbolic, and communicative element in product marketing—particularly in the beauty sector (Li et al., 2022; Nguyen, 2022).

The theoretical review centered on Ajzen's Theory of Planned Behavior (TPB), which was identified as the guiding framework for this study. TPB posits that consumer behavior is influenced by attitudes, subjective norms, and perceived behavioral control. When applied to sustainable packaging, these factors help explain the cognitive and social dimensions that guide consumer decisions. The review also addressed the criticisms of TPB, such as its underemphasis on emotional and moral factors and its assumptions of rationality and intention-behavior alignment (Carrington et al., 2010; Bamberg & Möser, 2007).

The empirical studies reviewed in Section 2.4 were drawn from global, African, and Ghanaian contexts. Globally, studies consistently showed that eco-friendly packaging enhances brand trust and positively influences purchase intentions, particularly when supported by clear environmental labeling and aesthetic appeal (White et al., 2019; Magnier & Schoormans, 2015). African studies revealed similar trends but highlighted barriers such as affordability, limited awareness, and greenwashing skepticism (Makhubela & Ramovha, 2022; Kiggundu & Aanyu, 2021). Ghanaian studies, although fewer in number, confirmed that while awareness of green packaging is increasing, purchasing behavior remains constrained by income, access, and brand familiarity (Boateng & Owusu, 2022; Anang & Mensah, 2021).

Generally, more inclined toward green consumption. However, the relationship between demographics and purchase behavior is complex and often shaped by cultural, social, and economic contexts (Mintel, 2023; Boateng & Owusu, 2022).

The conceptual framework presented in Section 2.8 synthesized these insights by proposing that eco-friendly packaging influences purchase decisions directly and indirectly through consumer attitudes, with demographic factors moderating these relationships. This model, grounded in the TPB, offers a structured approach for the empirical investigation that follows in the subsequent chapters.

## **2.4 Theoretical Review**

Understanding how consumers make purchasing decisions, especially in relation to environmental concerns such as eco-friendly packaging requires a strong theoretical foundation. Among the various behavioral theories used to explain sustainable consumption, Ajzen's Theory of Planned

Behavior (TPB) has been widely recognized and applied across disciplines, including marketing, psychology, and environmental studies.

#### **2.4.1 Overview of the Theory of Planned Behavior (TPB)**

The Theory of Planned Behavior was proposed by Icek Ajzen in 1991 as an extension of the earlier Theory of Reasoned Action (Ajzen & Fishbein, 1980). TPB aims to predict and understand human behavior in specific contexts. According to Ajzen (1991), behavioral intention the most immediate determinant of actual behavior is influenced by three core components:

When applied to green consumerism, TPB suggests that if a consumer believes eco-friendly packaging is beneficial (attitude), feels that others expect them to be environmentally responsible (subjective norms), and perceives they have the resources and knowledge to choose sustainable products (perceived behavioral control), they are more likely to purchase those products.

#### **2.4.2 Application of TPB in Sustainable Consumer Behavior**

TPB has been widely employed in explaining **green consumer behavior**, including eco-labeling, recycling, organic food consumption, and sustainable fashion. Scholars such as Yadav and Pathak (2017) successfully applied TPB to study the determinants of green purchase behavior in developing countries. Their findings affirmed that all three components of TPB attitude, subjective norms, and perceived behavioral control significantly affect consumers' intention to buy environmentally friendly products.

In the context of eco-friendly packaging, TPB helps explain why some consumers translate their environmental attitudes into actual purchasing decisions, while others do not. For example, a consumer may have a positive attitude toward sustainable packaging but may not act on it if they

feel such products are expensive, inaccessible, or not supported by their peers (Nguyen, 2022). This gap between intention and action highlights the importance of perceived behavioral control and social influence in shaping environmentally responsible behavior.

### **2.4.3 Relevance of TPB to the Beauty Industry**

The beauty industry is uniquely positioned when applying TPB, due to the symbolic and emotional value of its products. Packaging not only serves functional roles but also plays a central part in brand communication and consumer identity. TPB provides a useful framework for understanding how consumers process packaging cues that communicate environmental responsibility.

For instance, attitude toward eco-friendly packaging may be influenced by how aesthetically appealing or premium the packaging appears. Perceived behavioral control might involve whether consumers believe they can easily find and afford sustainable options within the market (White et al., 2019).

By applying TPB, this study seeks to uncover the psychological and contextual factors that drive or inhibit the purchase of beauty products with eco-friendly packaging, especially in emerging markets like Ghana, where sustainable branding is still evolving.

### **2.4.4 Criticisms and Limitations of TPB**

While TPB is a widely accepted model, it is not without its limitations. Critics argue that the model tends to underestimate the role of emotional and moral dimensions in decision-making (Bamberg & Möser, 2007). For instance, a consumer's environmental concern may stem from ethical or emotional values rather than just rational cost-benefit calculations.

Moreover, TPB assumes that intentions always lead to behavior, which may not be the case in real-world settings where habits, impulsive decisions, and situational constraints often override planned intentions (Carrington, Neville, & Whitwell, 2010). In the case of beauty product consumption, impulsive buying triggered by promotions or visual appeal may supersede the intention to buy green.

Despite these limitations, TPB remains a valuable tool for understanding green purchasing behaviors, particularly when complemented with other behavioral insights such as moral norms, identity, or habituation factors.

## 2.5 Empirical Studies

A considerable body of empirical research has examined the role of eco-friendly packaging in shaping consumer behavior across diverse markets. These studies, conducted globally and within African contexts, provide valuable insights into how packaging influences consumer attitudes, purchase intentions, and actual behavior. Importantly, they highlight the interplay between sustainability cues, consumer trust, and demographic factors. This section synthesizes such studies, drawing connections with the theoretical frameworks discussed earlier—namely, the Theory of Planned Behavior (TPB), Signaling Theory, and the Value-Belief-Norm (VBN) Theory.

Globally, much of the empirical evidence underscores the positive influence of eco-friendly packaging on consumer attitudes and purchase intentions, though the relationship is often mediated by trust and moderated by situational constraints. For example, Magnier and Schoormans (2015), through a controlled experimental study with Dutch consumers, demonstrated that packaging incorporating both visual and verbal environmental cues significantly enhanced perceived environmental friendliness and purchase likelihood. Their findings resonate strongly with Signaling Theory, as the cues served as signals of brand commitment to sustainability. However, they also revealed that visual cues alone were insufficient, emphasizing the need for credible and consistent signals. While such experimental designs offer strong causal inference, their limitation lies in the artificial setting, which may not fully capture real-world purchase dynamics.

Survey-based research has provided complementary insights into consumer perceptions of sustainable packaging. Li, Zhang, and Chen (2022), in a cross-sectional survey of Chinese consumers, employed structural equation modeling (SEM) to test the mediating role of eco-brand trust in the relationship between eco-friendly packaging and purchase intention. Their study confirmed that packaging influenced consumer decisions indirectly through trust and perceived

value, with income moderating willingness to pay. This aligns with TPB, as attitudes toward eco-packaging and perceived behavioral control (in this case, affordability) jointly shaped purchase intentions. Similarly, Pereira, Ribeiro, and Ferreira (2022) found that eco-label credibility, when coupled with environmental concern, predicted favorable attitudes and purchase intentions toward cosmetics packaged sustainably. Their findings further substantiate the explanatory power of both TPB and VBN theory, particularly in contexts where moral concern translates into consumer action, provided signals are credible.

Other scholars have noted the fragility of this relationship in the face of barriers such as price and convenience. Johnstone and Tan (2015), using qualitative interviews in the United Kingdom, revealed that while consumers often express pro-environmental attitudes, these do not always materialize into purchasing behavior—a phenomenon widely recognized as the “attitude–behavior gap.” Their work points to a limitation of the TPB, which assumes rational decision-making, while neglecting the impact of habits and contextual barriers. This gap is highly relevant in developing economies, where economic constraints may take precedence over sustainability preferences.

In emerging markets, empirical evidence similarly suggests that consumer responses to eco-friendly packaging are shaped by both values and contextual limitations. Nguyen (2022), studying Vietnamese beauty consumers, showed that eco-packaging influenced purchase intention primarily through eco-brand trust, but the effect weakened when advertising skepticism was high. This finding underscores the relevance of Signaling Theory in markets where information asymmetry and mistrust of corporate claims are prevalent. Meanwhile, White, Habib, and Hardisty (2019), in their review of multiple experimental and field studies, reinforced that sustainability messages and packaging interventions are most effective when they reduce friction for consumers

by making sustainable options convenient, affordable, and socially desirable. This reflects the importance of perceived behavioral control within the TPB framework.

Within Africa, the evidence, though less extensive, highlights both the opportunities and challenges of eco-friendly packaging adoption. In South Africa, Makhubela and Ramovha (2022) surveyed millennial skincare consumers and found that eco-packaging positively influenced purchase intentions, but only when aesthetic appeal and brand trust were high. Their findings again confirm the dual role of packaging as both a functional and symbolic cue, consistent with Signaling Theory. In Uganda, Kiggundu and Aanyu (2021) reported that while green packaging increased the likelihood of purchase among cosmetic users, this effect was significantly weakened by price sensitivity and limited availability. Their results echo the predictions of TPB, particularly the role of perceived behavioral control in constraining sustainable consumption.

In Kenya, Odhiambo and Simiyu (2020) found that willingness to pay for eco-friendly packaging was higher among consumers with greater income and education, suggesting that demographic variables play a moderating role in the packaging–purchase relationship. This finding is consistent with global studies (Li et al., 2022) and with VBN theory, which emphasizes that pro-environmental values and beliefs are often more salient among younger, more educated, and higher-income groups.

In Ghana, empirical research on eco-friendly packaging in the beauty sector remains limited but growing. Boateng and Owusu (2022), through a mixed-methods study, revealed that while urban consumers hold positive attitudes toward biodegradable packaging, their actual purchasing was heavily influenced by availability and brand familiarity. These findings are consistent with the TPB model, where positive attitudes and social norms are insufficient to drive behavior if consumers perceive limited control due to scarce market access. Anang and Mensah (2021)

similarly reported a positive relationship between environmental awareness and preference for eco-packaged beauty products in Accra, but this effect was weaker among lower-income groups, reinforcing the moderating role of demographics. Case evidence from Tetteh and Agyeman (2020), examining The Body Shop Ghana, further highlighted that consumer education and brand communication were critical in encouraging uptake of refill and return schemes, demonstrating how signaling strategies enhance consumer loyalty when backed by credible environmental practices.

Taken together, these empirical studies reveal several key insights. First, eco-friendly packaging consistently enhances consumer attitudes and intentions across contexts, but actual behavior is conditional on factors such as price, availability, and credibility. Second, eco-packaging serves as both a signal of brand sustainability (Signaling Theory) and a driver of consumer attitudes, norms, and perceived control (TPB). Third, the role of values and beliefs (VBN) is evident, but structural and contextual barriers often prevent values from translating into action, particularly in developing economies. Fourth, demographic moderators such as age, education, and income significantly shape responses to sustainable packaging, underscoring the need for market segmentation strategies.

These findings expose critical gaps that justify the present study. Specifically, while global and African studies provide valuable insights, there is limited quantitative evidence from Ghana that systematically tests the moderating role of demographics and control barriers in the relationship between eco-friendly packaging and purchase behavior. Moreover, much of the existing research relies on self-reported intentions rather than actual behavioral proxies, creating a need for more rigorous quantitative analysis. By addressing these gaps, this study aims to provide contextually

relevant insights into how eco-friendly packaging shapes consumer decision-making within Ghana's beauty industry.

## **2.6 Review of Literature on First Objective: Consumer Attitudes Toward Eco-Friendly Packaging**

Understanding consumer attitudes toward eco-friendly packaging is a foundational step in evaluating the role of sustainability in purchase decision-making. Attitude, as conceptualized in consumer behavior literature, refers to an individual's favorable or unfavorable evaluation of a particular object, idea, or practice (Kotler & Keller, 2016). In the context of this study, it relates to how consumers perceive and emotionally respond to the use of environmentally friendly packaging in beauty products. This section critically reviews literature that explores the nature, formation, and implications of such attitudes, with a focus on studies from both developed and emerging markets.

### **2.6.1 The Psychological Basis of Attitude Toward Green Packaging**

Attitudes toward eco-friendly packaging are typically shaped by a mix of cognitive beliefs, emotional responses, and social influences. According to the Theory of Planned Behavior (Ajzen, 1991), positive attitudes are one of the strongest predictors of behavioral intentions, making it crucial to understand what drives consumers to value green packaging in the first place.

Several studies suggest that environmental concern plays a central role in forming attitudes toward sustainable packaging. For instance, Nguyen (2022) found that consumers who perceived environmental degradation as a personal concern were more likely to view eco-friendly packaging positively. In this quantitative study conducted in Vietnam, survey data from 320 beauty product users revealed that positive attitudes were significantly influenced by consumers' belief in the

environmental benefits of sustainable materials, such as reducing landfill waste and promoting resource conservation.

Similarly, Pereira, Ribeiro, and Ferreira (2022) examined consumer attitudes in the cosmetics industry in Portugal and found that emotional resonance with environmental values strongly influenced perceptions of biodegradable and recyclable packaging. Their survey of 400 participants using Likert-scale measures showed that the aesthetic appeal and tactile quality of sustainable packaging also influenced attitudes, indicating that visual and sensory cues can reinforce green perceptions.

### **2.6.2 Influence of Green Branding and Labelling on Attitude**

Consumer attitudes are also influenced by how effectively brands communicate their sustainability commitments. According to White, Habib, and Hardisty (2019), consumers are more likely to form positive attitudes when sustainability cues are both clear and credible. This includes labeling with environmental certifications, usage of sustainability logos, and on-pack messages such as “100% recyclable” or “biodegradable.”

In a study by Nguyen and Nguyen (2020) on green cosmetics branding, it was found that clear and verifiable claims about eco-friendly packaging led to more favorable brand attitudes and increased likelihood of trial. Their structural equation modeling (SEM) analysis revealed that perceived credibility of the brand’s environmental message mediated the relationship between packaging design and consumer attitude.

However, Johnstone and Tan (2015) caution that overuse or misuse of green claims may lead to consumer skepticism. Their qualitative interviews with UK consumers revealed that participants

often questioned whether green packaging claims were genuine or merely marketing gimmicks. As such, the authenticity and transparency of green communication significantly influence whether attitudes are sustained and lead to actual purchasing.

### **2.6.3 Cultural and Demographic Moderators of Consumer Attitudes**

Studies have also shown that consumer attitudes toward eco-friendly packaging are not uniform and are often moderated by demographic and cultural factors. For example, Yadav and Pathak (2017) conducted a quantitative study in India and found that younger, urban, and highly educated consumers expressed stronger positive attitudes toward green products, including those with sustainable packaging. Their analysis confirmed that environmental knowledge and eco-literacy significantly enhanced favorable attitudes.

In the African context, Kiggundu and Aanyu (2021) observed that Ugandan consumers who had been exposed to international beauty brands showed more favorable attitudes toward biodegradable packaging. This suggests that global media exposure and consumer education play important roles in shaping attitudes in developing economies.

In Ghana, Anang and Mensah (2021) surveyed 250 consumers and found that while most respondents claimed to support eco-friendly packaging, their understanding of what constituted "eco-friendly" varied significantly. Some equated it with reusable packaging, others with minimal plastic, and others still with natural-looking designs. This finding highlights the need for consumer education to align attitudes with accurate perceptions of sustainability.

#### **2.6.4 Affective and Symbolic Dimensions of Attitudes**

Attitudes toward eco-friendly packaging are not only rational but also symbolic. Green packaging often functions as a symbolic expression of identity for environmentally conscious consumers. According to Grankvist and Biel (2007), individuals who see themselves as environmentally responsible are more likely to form positive attitudes toward products that visibly reflect their values. In the beauty industry, packaging design can thus reinforce not just product functionality but also identity signaling.

This symbolic function is particularly evident in premium beauty brands. For example, Tetteh and Agyeman (2020) observed that Ghanaian consumers of The Body Shop associated the brand's eco-packaging with ethical superiority, self-image enhancement, and social prestige. Their case study concluded that attitudes were shaped not just by environmental concern, but also by how well the packaging aligned with consumers' aspirational self-concept.

In summary, the literature shows that consumer attitudes toward eco-friendly packaging are influenced by a complex interplay of environmental values, communication cues, socio-demographic factors, and symbolic identity. While positive attitudes are increasingly prevalent, especially among younger and more educated consumers, challenges remain in translating these attitudes into behavior. Key mediating factors include brand credibility, packaging aesthetics, environmental literacy, and cultural context. Understanding these nuances is essential for beauty brands aiming to design and market packaging that resonates with environmentally conscious consumers.

## **2.7 Review of Literature on the Second Objective: The Relationship Between Eco-Friendly Packaging and Purchase Decisions**

While consumer attitudes toward sustainability have grown increasingly positive over the years, a significant area of academic interest lies in determining whether these attitudes translate into actual purchase behavior. The link between eco-friendly packaging and consumer purchase decisions is central to sustainability-oriented marketing strategies, particularly in industries such as beauty and cosmetics, where packaging carries both functional and symbolic significance. This section reviews empirical literature that statistically investigates the direct and indirect effects of sustainable packaging on consumer buying behavior.

### **2.7.1 Eco-Friendly Packaging as a Purchase Trigger**

Numerous studies have confirmed that eco-friendly packaging has a statistically significant impact on consumer purchase decisions. For instance, Li, Zhang, and Chen (2022) found that consumers in China's beauty industry were more inclined to purchase products with eco-packaging, especially when such packaging was accompanied by clear environmental benefits and certification labels. Using Structural Equation Modeling (SEM) to analyze responses from 450 participants, the study demonstrated a positive, statistically significant relationship between eco-packaging and purchase intention ( $p < 0.01$ ), mediated by trust and perceived value.

Similarly, Nguyen (2022) employed a regression analysis on survey data from 320 Vietnamese beauty product users and found that eco-brand trust served as a critical mediator between sustainable packaging cues and actual purchase behavior. The findings suggested that the presence of natural imagery, recyclable materials, and environmental claims significantly influenced

consumers' decisions to purchase. Importantly, the study emphasized that the perceived credibility of environmental claims amplified the strength of the relationship.

In a Western context, Magnier and Schoormans (2015) conducted an experimental study in the Netherlands, where participants were exposed to beauty products with either conventional or eco-friendly packaging. The study used ANOVA tests to determine differences in purchase likelihood. Results showed that participants preferred products with eco-friendly packaging when environmental claims were visually integrated into the design, such as through natural color schemes or biodegradable symbols. However, when such packaging lacked explanatory context, the impact on purchase intention diminished. This indicates that visual and verbal cues must work together to effectively influence consumer decisions.

### **2.7.2 The Role of Consumer Perception and Packaging Attributes**

Several studies underscore that the influence of eco-packaging on purchase decisions is often mediated by consumer perceptions of quality, brand ethics, and product safety. According to White, Habib, and Hardisty (2019), sustainable packaging enhances the perceived ethical value of the product, which in turn increases willingness to buy. Their literature review synthesized findings from over 100 empirical studies, concluding that sustainability cues on packaging significantly affect both conscious choice and impulse buying, especially among eco-conscious consumers.

In support, Yadav and Pathak (2017) used a TPB-based SEM model to examine the predictors of green purchasing behavior in India. Their survey of 510 consumers revealed that perceived environmental benefit, along with perceived quality and brand reputation, had statistically significant effects on green product purchase decisions. This finding aligns with the notion that

eco-friendly packaging must offer functional value in addition to environmental value to effectively drive purchases.

### **2.7.3 Contrasting Evidence and Moderating Variables**

Despite positive findings, other research indicates that the effect of eco-friendly packaging on purchase behavior is not universally strong and may be moderated by variables such as price sensitivity, brand familiarity, and product category. For example, Johnstone and Tan (2015) highlighted the attitude-behavior gap through qualitative interviews with ethically minded consumers in the UK. While participants expressed a preference for sustainable packaging, many admitted that their actual purchasing behavior was influenced more by price, convenience, and brand loyalty. This aligns with the Value-Action Gap Theory, which suggests that consumers do not always act in accordance with their stated values.

Likewise, Carrington, Neville, and Whitwell (2010) proposed that consumers often experience internal conflict between ethical intentions and situational factors such as time pressure, product availability, or promotional offers. Their conceptual model identified that eco-packaging alone may not be sufficient to motivate behavior unless it is accompanied by low switching costs and high convenience.

#### **2.7.4 Evidence from African Markets**

Empirical evidence from African markets, though limited, also points to a mixed relationship between eco-friendly packaging and consumer behavior. In Uganda, Kiggundu and Aanyu (2021) found a statistically significant correlation between green packaging and purchase behavior using logistic regression analysis on data from 210 respondents. However, they also noted that price and product accessibility moderated the strength of this relationship. Consumers expressed positive sentiment toward biodegradable packaging but often defaulted to less sustainable options due to affordability constraints.

In South Africa, Makhubela and Ramovha (2022) applied multiple regression analysis to survey data from 320 millennials and discovered that eco-friendly packaging only influenced purchase behavior when it was accompanied by visual appeal and brand trust. This underscores the point that packaging must meet both sustainability and marketing objectives to convert positive attitudes into actual sales.

#### **2.7.5 Ghanaian Context and Local Dynamics**

In Ghana, the statistical relationship between eco-packaging and purchase decisions has not been studied as extensively. However, research by Boateng and Owusu (2022) provides some insights. Using a mixed-methods approach, they surveyed 200 consumers and found that availability, peer influence, and perceived product quality significantly influenced whether a product with eco-friendly packaging was purchased. Although participants acknowledged the importance of environmental sustainability, they also indicated that their buying behavior was shaped by product price and familiarity with the brand, suggesting that contextual variables play a crucial role in the Ghanaian market.

Another study by Anang and Mensah (2021) used correlation and regression analysis on a sample of 250 beauty product users in Accra. The study found a moderate positive relationship ( $r = 0.46$ ,  $p < 0.05$ ) between environmental awareness and the likelihood of purchasing eco-packaged products. However, the strength of this relationship declined among lower-income respondents, indicating that socioeconomic status may be a key moderate variable.

In summary, empirical evidence from diverse contexts supports the conclusion that eco-friendly packaging positively influences consumer purchase decisions, although the strength of this relationship varies depending on multiple factors. These include perceived quality, brand trust, environmental knowledge, and socioeconomic status. The literature suggests that for eco-packaging to drive actual behavior, it must not only appeal to consumers' environmental values but also align with their practical considerations, such as affordability, accessibility, and brand familiarity. This insight is particularly relevant for developing markets like Ghana, where green purchasing is still emerging.

## **2.8 Review of Literature on the Third Objective: Demographic Influence on Consumer Preferences for Eco-Friendly Packaging**

Consumer preferences for sustainable packaging do not exist in a vacuum. Rather, they are often shaped by individual characteristics that influence environmental values, access to sustainable alternatives, and willingness to pay for eco-friendly features. Demographic variables such as age, gender, income, and education are among the most investigated predictors of green consumer behavior. This section provides an extensive review of literature that explores the relationship between these factors and consumer preferences for sustainable packaging.

### **2.8.1 Age and Generational Differences**

Age is a widely studied demographic variable in sustainable consumption research. Numerous studies suggest that younger consumers, particularly Millennials (born 1981–1996) and Generation Z (born after 1996), exhibit stronger preferences for eco-friendly products and packaging.

According to Mintel (2023), younger consumers are more likely to actively seek out brands that demonstrate a commitment to sustainability. This is particularly evident in the beauty industry, where Gen Z values ethical sourcing, environmental packaging, and inclusivity in branding. These consumers are also more responsive to visual storytelling, such as minimalist designs or recycled packaging materials, which reflect environmental values.

In a quantitative study, Yadav and Pathak (2017) surveyed 510 respondents in India and found that age had a statistically significant inverse relationship with green purchasing behavior meaning that younger participants exhibited stronger sustainable preferences. Their SEM analysis revealed that younger consumers are more influenced by subjective norms and environmental knowledge, possibly due to higher exposure to digital campaigns and eco-conscious communities.

Similarly, Makhubela and Ramovha (2022) found that university students in South Africa expressed greater interest in sustainable packaging compared to older consumers. Their regression analysis indicated that age significantly predicted eco-preference ( $p < 0.05$ ), particularly when sustainability cues were supported by social validation and peer influence.

However, the relationship between age and green behavior is not always linear. White, Habib, and Hardisty (2019) suggest that while younger consumers may express stronger attitudes, older

consumers may be more consistent in behavior due to long-standing values and greater purchasing power. This duality suggests the need to segment green marketing messages based on generational characteristics.

### **2.8.2 Gender Differences in Sustainable Preferences**

Gender is another key demographic determinant of environmental behavior. Several studies report that women are more likely than men to express concern for the environment and act on those concerns through sustainable purchases.

For example, Nguyen (2022) found that female consumers in Vietnam were more likely to be influenced by eco-friendly packaging in the cosmetics industry. In a sample of 320 respondents, gender significantly correlated with preference for products packaged in recyclable or biodegradable materials. This was attributed to higher levels of environmental empathy and social influence among female respondents.

In Africa, Kiggundu and Aanyu (2021) observed similar patterns in Uganda, where 71% of female participants reported actively avoiding beauty products with excessive plastic packaging. The authors argued that women, especially those who are mothers or caretakers, often feel a greater sense of responsibility for health and environmental safety, which extends to their product choices.

Nonetheless, not all studies find a significant gender effect. Boateng and Owusu (2022) reported in their Ghanaian study that while women expressed stronger environmental attitudes, gender was not a significant predictor of actual purchase behavior when controlled for income and education. This suggests that gender may influence values more than actions unless reinforced by enabling socioeconomic conditions.

### **2.8.3 Income and Willingness to Pay for Eco-Friendly Packaging**

Income level plays a crucial role in determining not just awareness of sustainability issues, but also the ability to act on those concerns. Numerous studies confirm that higher-income consumers are more likely to choose products with eco-friendly packaging, even when such products carry a price premium.

In a comprehensive study by Li, Zhang, and Chen (2022), income was a significant moderator of the relationship between sustainable packaging and purchase intention in the Chinese beauty market. Participants in the higher income brackets showed a greater willingness to pay for biodegradable packaging, suggesting that affordability is a key determinant of sustainable preference.

Similarly, in Kenya, Odhiambo and Simiyu (2020) found that while most participants appreciated eco-friendly packaging, those in lower income groups were unwilling to pay more for it. This aligns with findings from Ghana, where Anang and Mensah (2021) observed that although low-income respondents supported the idea of green packaging in principle, they were more likely to choose less sustainable options due to budget constraints.

According to Carrington, Neville, and Whitwell (2010), this phenomenon is a classic case of the “value-action gap,” where individuals’ expressed support for sustainability fails to translate into action due to economic limitations. Hence, marketers targeting lower-income demographics must communicate the functional and economic benefits of eco-friendly packaging, not just the ethical appeal.

#### **2.8.4 Education and Environmental Literacy**

Education is frequently associated with higher environmental awareness and stronger sustainable preferences. Individuals with more education are generally more likely to understand the environmental implications of packaging waste and to critically evaluate green claims.

A study by Yadav and Pathak (2017) confirmed that education level significantly influenced green purchasing behavior in a developing country context. Respondents with university-level education had greater environmental knowledge and were more likely to identify and trust eco-labels, resulting in stronger preferences for sustainable packaging.

In Ghana, Boateng and Owusu (2022) reported that consumers with tertiary education were more receptive to products packaged in recyclable or compostable materials. Their mixed-methods research showed that education enhanced not just awareness, but also the ability to evaluate environmental messaging, reducing susceptibility to greenwashing.

Moreover, Tetteh and Agyeman (2020) found that customers of The Body Shop with higher educational backgrounds were more likely to notice and appreciate eco-packaging, as they understood the branding strategy behind it. The study concluded that environmental literacy, often correlated with education, was a key enabler of preference for green packaging.

### **2.8.5 Intersections Between Demographics**

While individual demographic variables offer insights, several studies emphasize the importance of examining intersections between these factors. For instance, a young, educated female from a high-income bracket may exhibit markedly different behavior compared to an older, less educated male from a lower-income group. This calls for a segmented marketing approach, where eco-packaging strategies are tailored to the values, constraints, and consumption styles of specific demographic groups.

In summary, the literature strongly suggests that demographic variables particularly age, gender, income, and education play an influential role in shaping consumer preferences for eco-friendly packaging. However, the relationship is not always straightforward. While younger, female, higher-income, and more educated consumers generally show stronger green preferences, other contextual factors such as cultural norms, brand familiarity, and product category often interact with demographics to determine final behavior. For practitioners and scholars alike, these findings underscore the need for audience segmentation and message targeting in promoting sustainable packaging in the beauty industry.

## **2.9 Conceptual Framework**

The present study is grounded in three complementary theoretical perspectives: the Theory of Planned Behavior (TPB), Signaling Theory, and the Value-Belief-Norm (VBN) Theory. Together, these frameworks provide a comprehensive basis for understanding how eco-friendly packaging influences consumer decision-making in the beauty industry, while also accounting for moderating demographic and contextual factors.

### **2.9.1 Linking Eco-Friendly Packaging to Consumer Attitudes (TPB)**

According to the Theory of Planned Behavior (Ajzen, 1991), consumer behavior is primarily shaped by attitudes, subjective norms, and perceived behavioral control. In this study, eco-friendly packaging is expected to positively influence consumer attitudes toward beauty products by enhancing perceptions of environmental responsibility and product quality. These attitudes, in turn, are hypothesized to strengthen purchase intentions and ultimately the purchase decision. However, TPB also suggests that these relationships may be constrained by perceptions of affordability and availability (perceived behavioral control), which are particularly salient in developing economies such as Ghana.

### **2.9.2 Eco-Friendly Packaging as a Market Signal (Signaling Theory)**

Signaling Theory (Spence, 1973; Connelly et al., 2011) provides an additional lens for understanding eco-friendly packaging. In markets characterized by information asymmetry, packaging serves as a signal of sustainability and brand values. Eco-labels, biodegradable materials, and refillable designs act as visible cues that reduce consumer uncertainty and build eco-brand trust. Trust, in this sense, functions as a mediating variable through which packaging influences consumer purchase decisions. However, as prior studies have noted, the effectiveness of such signals depends on their credibility; weak or inconsistent signals risk being dismissed as greenwashing (Delmas & Burbano, 2011).

### **2.9.3 Values and Moral Norms as Drivers of Sustainable Consumption (VBN Theory)**

The Value-Belief-Norm Theory (Stern et al., 1999) highlights the role of personal values and moral obligation in shaping pro-environmental behavior. In the context of eco-friendly packaging, consumers with strong environmental or altruistic values may feel morally compelled to support brands adopting sustainable packaging. This perspective suggests that environmental concern and

biospheric values are antecedents that reinforce positive attitudes toward eco-packaging, thereby increasing the likelihood of sustainable purchase decisions. Nevertheless, consistent with prior empirical evidence, the effect of values may be attenuated by structural barriers such as price and product accessibility, especially in emerging markets.

#### **4.6.3 Moderating Role of Demographic Factors**

A consistent finding across the literature is that consumer responses to eco-friendly packaging are not uniform but vary significantly across demographic groups. Variables such as age, gender, income, and education are expected to moderate the strength of the relationship between eco-friendly packaging and consumer purchase decisions. For instance, younger, more educated, and higher-income consumers often display stronger preferences for sustainable products (Li et al., 2022; Anang & Mensah, 2021). These demographic moderators are therefore included in the framework to capture heterogeneity in consumer responses.

#### **2.9.4 Integrating the Framework**

Drawing on the theories and empirical studies reviewed, the proposed framework positions eco-friendly packaging as the independent variable influencing consumer purchase decisions through two primary mechanisms: attitudinal pathways (TPB) and trust-based signaling mechanisms (Signaling Theory), further reinforced by values and moral norms (VBN). This relationship is moderated by demographic characteristics (age, gender, income, education) and contextual barriers (price sensitivity, availability). Together, these dynamics provide a nuanced understanding of how eco-friendly packaging affects consumer choices in the Ghanaian beauty industry.

## **2.10 Chapter Summary**

Chapter Two reviews existing literature that reveals substantial support for the idea that eco-friendly packaging can influence consumer behavior in the beauty industry but also highlights critical gaps particularly in the context of emerging economies like Ghana. These gaps include limited empirical data on actual purchase behavior, a lack of demographic segmentation in green marketing research, and inconsistent consumer understanding of sustainability labels. This chapter establishes the theoretical and empirical basis for the study by synthesizing key concepts, theories, and prior findings, while emphasizing the need for localized research on sustainable packaging and consumer behavior

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This phase outlines the methodology adopted to achieve the objectives of the study, which investigates the influence of eco-friendly packaging on consumer purchase decisions in the beauty industry. The chapter provides a comprehensive explanation of the research approach, design, population, sampling techniques, data sources, and data collection methods. It also details the analytical tools used for interpreting the data and the ethical considerations observed throughout the study.

The methodology is guided by the study's quantitative orientation and is structured to ensure the collection of reliable, valid, and generalizable data. Given the research problem's focus on measuring relationships between eco-friendly packaging, consumer attitudes, demographic variables, and purchase decisions, the methodology follows a positivist research paradigm. This paradigm emphasizes objectivity, empirical evidence, and statistical analysis, making it appropriate for the evaluation of consumer behavior using structured data.

The subsequent sections of this chapter elaborate on the research approach (quantitative), the design (cross-sectional), the target population (urban beauty product consumers), and the sampling strategy (non-probability convenience sampling). In addition, this chapter discusses the instruments used in data collection, methods of data analysis, and ethical protocols adhered to during the research process.

### **3.1 Research Paradigm**

This chapter adopts a positivist research paradigm, which assumes that reality is objective and can be measured through observable phenomena. Within this paradigm, consumer behavior is considered quantifiable, and patterns or relationships between variables can be statistically analyzed. The positivist paradigm aligns with the quantitative approach employed in this study, as it allows for the collection of numerical data on consumer attitudes, preferences, and purchase decisions regarding eco-friendly packaging in the beauty industry. By using structured instruments such as surveys, the study seeks to produce findings that are reliable, generalizable, and based on measurable evidence, consistent with the principles of positivist research. beauty industry.

### **3.2 Research Approach**

This research adopts a quantitative research approach, Quantitative research focuses on quantifying data and generalizing results from a sample to the broader population using measurable variables and statistical techniques (Creswell, 2014).

The quantitative approach was selected for several reasons. First, the study seeks to measure how strongly eco-friendly packaging influences consumer behavior, an inquiry best addressed using structured numerical data. Second, the research aims to test specific hypotheses related to the relationships between independent variables (such as eco-friendly packaging and demographic factors) and a dependent variable (purchase decision). Quantitative methods are well suited for this kind of hypothesis testing and relationship modeling (Bryman, 2016).

Moreover, the study intends to identify patterns, trends, and correlations among consumer perceptions, attitudes, and behaviors. These goals require the use of statistical tools such as descriptive statistics, correlation analysis, and multiple regression analysis, all of which are

grounded in the quantitative tradition. The objectivity and replicability offered by this approach increase the study's reliability and provide results that can be generalized to similar contexts, particularly within Ghana's urban beauty consumer market.

Overall, the quantitative approach enables a structured, objective, and data-driven exploration of how sustainable packaging practices influence consumer behavior, making it highly suitable for the research questions and objectives outlined in this study.

### **3.3 Research Design**

This study adopts a cross-sectional survey research design within the framework of a positivist paradigm. A research design is the overall strategy that integrates the various components of a study in a coherent and logical manner, thereby ensuring that the research problem is effectively addressed (Creswell, 2014). A cross-sectional design involves collecting data at a single point in time from a sample that is representative of a larger population (Saunders, Lewis, & Thornhill, 2019). This design is suitable for examining current attitudes, perceptions, and behaviors among consumers regarding eco-friendly packaging in the beauty industry.

The cross-sectional survey design was selected for several key reasons. First, it enables the researcher to obtain standardized data from a relatively large sample, making it possible to identify patterns and relationships among variables (Bryman, 2016). This is particularly relevant to the present study, which seeks to explore associations between eco-friendly packaging, consumer attitudes, demographic characteristics, and actual purchase decisions.

Second, the survey method aligns with the study's quantitative approach, allowing for the use of structured questionnaires with closed-end items. This enhances the reliability and comparability

of responses and facilitates the application of statistical tools such as descriptive statistics, correlation, and regression analysis (Pallant, 2020).

Third, a cross-sectional design is cost-effective and time-efficient, which is crucial given the constraints of academic research timelines. It enables the researcher to collect a broad set of data quickly without the need for repeated measures or longitudinal tracking (Sekaran & Bougie, 2016).

Finally, the positivist paradigm underlying this design assumes that reality is objective and measurable. It emphasizes hypothesis testing and the use of numerical data to explain and predict phenomena making it appropriate for this study, which aims to empirically test the influence of eco-friendly packaging on consumer behavior (Cohen, Manion, & Morrison, 2018).

In summary, the cross-sectional survey design provides a practical and rigorous framework for examining consumer perceptions and behavior related to sustainable packaging within Ghana's beauty industry.

### **3.4 Study Population**

The study population refers to the entire group of individuals or entities relevant to a particular research inquiry from which a sample can be drawn (Creswell, 2014). For the purposes of this research, the population comprises all consumers who purchase beauty products, including skincare, cosmetics, haircare, and related items. These consumers may be influenced by a variety of factors when making purchase decisions, one of which is the sustainability of the packaging.

The rationale for selecting this population is rooted in the widespread use of beauty products and the increasing awareness surrounding environmental sustainability. Beauty product consumers are directly exposed to packaging elements, making them ideal respondents for assessing attitudes and

behaviors toward eco-friendly packaging. The study is geographically focused on urban centers in Ghana, where access to a variety of local and international beauty brands is more prevalent, and where eco-conscious products are increasingly entering the mainstream market.

Given the impracticality of studying the entire consumer population, a sample is required. To ensure scientific validity and representativeness, the study employs random sampling and determines the sample size using the Krejcie and Morgan (1970) sample size determination table. This table provides a statistically justified method of selecting a sample size based on the target population size and a specified margin of error (typically 5%) and confidence level (typically 95%).

Although the exact size of the population is unknown, the Krejcie and Morgan model can still be applied using estimated parameters. For a large or unknown population (i.e.,  $N > 10,000$ ), the model suggests a sample size of 384. However, based on practical considerations such as time, budget, and accessibility, a sample size of 250 respondents will be used for this study. While slightly smaller than the model suggests, this sample size remains sufficient for conducting robust statistical analysis and identifying general trends (Israel, 1992).

The sampling frame includes consumers accessible through social media platforms, beauty product retail outlets, online communities, and urban shopping centers. Respondents will be randomly selected from these platforms using availability and willingness to participate as inclusion criteria.

In summary, the study targets beauty product consumers in Ghana's urban centers, with a sample size of 250 respondents determined using the Krejcie and Morgan formula, allowing for statistically reliable insights into how eco-friendly packaging affects purchase decisions.

### **3.5 Sample and Sampling Technique**

#### **3.5.1 Sample Size**

A critical aspect of any research study is the determination of an appropriate sample size, which ensures that the results are both statistically reliable and generalizable to the larger population (Saunders, Lewis, & Thornhill, 2019). In this study, the sample size was determined using the Krejcie and Morgan (1970) sample size determination table, which provides a formula-based guide for calculating the ideal sample size given a known or estimated population.

For large populations (typically greater than 10,000), the Krejcie and Morgan model recommends a sample size of 384 respondents to maintain a 95% confidence level and a 5% margin of error. However, considering resource constraints and the exploratory nature of this study in the Ghanaian context, a reduced but statistically reasonable sample size of 250 respondents has been adopted. According to Israel (1992), researchers working with limited time and funding can reduce sample sizes while still preserving adequate levels of statistical power, if this is acknowledged and managed in the data interpretation process.

Thus, a total of 250 respondents will be surveyed to provide insights into how eco-friendly packaging influences purchase decisions in the beauty industry.

### **3.5.2 Sampling Procedure/Technique**

The sampling technique adopted for this study is non-probability random sampling, specifically convenience sampling. This method involves picking candidates who are easily accessible, willing to participate, and meet the inclusion criteria of the study namely, individuals aged 18 years and above who have recently purchased or regularly use beauty products such as skincare, cosmetics, and haircare items.

Although probability sampling methods such as stratified or simple random sampling are generally preferred for their objectivity, convenience sampling is considered appropriate in this case due to:

1. Time and resource limitations are common in academic research.
2. Lack of access to a comprehensive sampling frame of beauty product consumers in Ghana.
3. They need to reach respondents quickly and efficiently, especially via online platforms and urban retail spaces.

Participants will be recruited through online channels (e.g., social media groups, beauty product forums) and physical locations such as shopping malls, beauty retail outlets, and skincare product exhibitions. While convenience sampling introduces a degree of sampling bias and limits the generalizability of the results, it remains a viable and practical approach for consumer behavior studies in under-researched contexts (Bryman, 2016; Sekaran & Bougie, 2016).

To mitigate bias, efforts will be made to include a diverse demographic mix across gender, income levels, and age groups. This will enable the researcher to analyze variations in consumer behavior and preferences as they relate to eco-friendly packaging.

### **3.6 Sources of Data**

This study will rely primarily on primary data collected directly from respondents through the administration of structured questionnaires. Primary data refers to information gathered firsthand by the researcher for the specific purpose of the study, as opposed to data derived from existing records or prior research (Creswell, 2014). This approach is considered most appropriate for the current research because it allows for direct measurement of consumer attitudes, perceptions, and behaviors regarding eco-friendly packaging in the beauty industry.

The decision to use primary data is based on the need to obtain current, relevant, and specific insights tailored to the Ghanaian market context. Since consumer preferences and sustainable behaviors may vary across regions and cultural settings, it is essential to generate fresh data that reflect the views of consumers in Ghana's urban centers. This also enables the researcher to capture key demographic variables such as age, gender, income, and education—that may moderate the relationship between eco-friendly packaging and purchase decisions.

The data collection process will involve distributing self-administered questionnaires to a sample of 250 beauty product consumers. These questionnaires are designed to collect information on consumer attitudes toward eco-friendly packaging, perceived influence on purchasing behavior, and relevant demographic characteristics. The survey items will be structured using closed-ended questions with Likert-scale response options to ensure consistency, ease of analysis, and comparability across responses.

No secondary data sources (e.g., government reports, published statistics, or company records) will be used in this study for analysis purposes. However, secondary literature has been extensively

consulted and reviewed in Chapters One and Two to support the development of the research framework, instrument design, and theoretical justification.

By relying on well-designed primary data collection instruments, the study ensures the accuracy, validity, and relevance of the information gathered, thereby providing a strong foundation for the analysis of consumer behavior in relation to sustainable packaging practices.

### **3.7 Data Collection Method**

The data collection method chosen for this research is a structured questionnaire survey, which aligns with the quantitative research approach and the study's objective of statistically analyzing the influence of eco-friendly packaging on consumer purchase decisions. A structured questionnaire is a widely used tool in consumer research, as it enables the collection of standardized, comparable, and analyzable data across a defined sample (Bryman, 2016).

#### **3.7.1 Data collection Instrument**

The data collection instrument for this research is structured questionnaire, developed in line with the Theory of Planned Behavior (TPB). The questionnaire was designed to obtain quantitative data on consumer's attitudes, subjective norms, perceived behavioral control, and purchase intentions toward eco-friendly packaging in the beauty industry. This instrument allows for standardized responses, making it suitable for statistical analysis and ensuring consistency across all participants.

### 3.7.2 Instrument Design

1. Demographic Information – This section will gather data on respondents' age, gender, education level, income bracket, and frequency of beauty product use. These variables are essential for testing the moderating effects of demographic characteristics on attitudes and purchase behavior.
2. Consumer Attitudes Toward Eco-Friendly Packaging – This section will measure consumers' perceptions, beliefs, and emotional evaluations of sustainable packaging features. Items will assess factors such as environmental concern, aesthetic appeal, trust in eco-claims, and symbolic value.
3. Purchase Decision Influence – This section will explore the extent to which eco-friendly packaging affects actual purchase behavior. It will examine factors such as willingness to pay a premium, likelihood of repeat purchase, and preference over conventional packaging.

All questionnaire items will be structured using a 5-point Likert scale, ranging from "Strongly Disagree (1)" to "Strongly Agree (5)," to capture the intensity of respondents' views. This format facilitates quantitative analysis through statistical software and enhances the consistency of responses (Pallant, 2020).

### **3.7.3 Distribution Strategy**

The questionnaire will be administered both online and in person to reach a diverse and accessible pool of respondents:

- Online distribution will be conducted via Google Forms and social media platforms such as WhatsApp, Instagram, and Facebook, targeting beauty product user communities and eco-conscious consumer groups.
- In-person administration will occur in selected beauty shops, skincare retail outlets, and shopping malls in Accra and Kumasi. Respondents will be approached using convenience sampling and briefed on the purpose of the study.

### **3.8 Advantages of the Chosen Method**

Using structured questionnaires offers several advantages:

- It facilitates the efficient collection of data from many respondents.
- It reduces interviewer bias due to self-administration.
- It allows for objective measurement and statistical comparison of responses.
- It is cost-effective and easy to manage within the research timeline.

In summary, the questionnaire survey method is appropriate for the goals of this study. It enables the collection of quantifiable data necessary to examine the statistical relationships between eco-friendly packaging, consumer attitudes, and purchase behavior.

### **3.9 Data Analysis**

Data analysis refers to the process of systematically applying statistical and logical techniques to describe, summarize, and evaluate data collected during the research process (Saunders, Lewis, & Thornhill, 2019). For this study, data obtained from the structured questionnaires will be analyzed

using quantitative statistical methods to test the relationships between eco-friendly packaging, consumer attitudes, demographic factors, and purchase decisions.

### **3.9.1 Software Tool**

The analysis will be conducted using Statistical Package for the Social Sciences (SPSS) version 26. SPSS is widely used for quantitative data analysis in social sciences due to its efficiency in handling large datasets, its ability to perform complex statistical tests, and its user-friendly interface (Pallant, 2020).

### **3.9.2 Analytical Techniques**

Descriptive statistics will be used to summarize demographic data and provide an overview of consumer attitudes and purchase behaviors. Measures such as means, standard deviations, frequencies, and percentages will be employed to describe the sample and key response patterns.

The internal consistency of multi-item scales (e.g., for attitudes and purchase behavior) will be assessed using Cronbach's Alpha coefficient. A threshold of 0.70 or higher will be considered acceptable for scale reliability (George & Mallery, 2016).

Inferential statistics will be used to test the hypotheses and determine the relationships among variables:

- Pearson's Correlation Coefficient will measure the strength and direction of the linear relationship between eco-friendly packaging and consumer purchase decisions.

- Multiple Regression Analysis will be used to assess the predictive power of independent variables (eco-packaging and consumer attitudes) on the dependent variable (purchase decision).
- Moderation analysis may be conducted to examine the influence of demographic variables (age, gender, income, education) on the relationship between eco-friendly packaging and purchase behavior.

A 95% confidence level ( $\alpha = 0.05$ ) will be applied throughout the analysis to determine statistical significance. This means that any p-value below 0.05 will be interpreted as a statistically significant result.

### **3.9.3 Data Preparation**

Before analysis, all collected data will be reviewed, cleaned, and coded. Incomplete or inconsistent responses will be removed to ensure data accuracy. Likert-scale responses will be numerically coded (e.g., Strongly Disagree = 1 to Strongly Agree = 5), enabling parametric statistical analysis.

### **3.9.4 Presentation of Results**

The results will be presented using tables, charts, and graphs, making it easier to visualize and interpret the findings. SPSS-generated outputs will be clearly labeled and incorporated into Chapter Four (Data Presentation and Analysis) to support the interpretation of findings.

The use of SPSS and a combination of descriptive and inferential statistics ensure that the analysis will be rigorous, transparent, and aligned with the objectives of the study. This analytical strategy allows for a robust exploration of how eco-friendly packaging affects consumer decisions in the beauty industry.

### **3.10 Ethical Considerations**

Ethical integrity is a cornerstone of all academic and social research. This research acknowledges the importance of upholding ethical principles during the research process, from participant recruitment and data collection to analysis and reporting. Following widely accepted ethical guidelines (e.g., from the Belmont Report and institutional review standards), this research ensures that all participants are treated with respect, fairness, and confidentiality (Creswell, 2014; Saunders, Lewis, & Thornhill, 2019).

### **3.11 Informed Consent**

All participants will be required to give informed consent before participating in the study. They will be provided with a brief description of the study's purpose, procedures, potential risks and benefits, their rights as participants, and contact information for the researcher. Consent will be obtained in writing (for in-person surveys) and digitally (for online surveys). Participants will be informed that their participation is voluntary and that they may withdraw at any time without penalty.

### **3.12 Confidentiality and Anonymity**

To protect the privacy of respondents, all data will be treated with the strictest confidentiality. Participants will not be asked to provide identifying information such as names, phone numbers, or addresses. Each completed questionnaire will be assigned a numerical code, and responses will be used solely for academic purposes. Data will be securely stored on password-protected devices and won't be shared with unauthorized individuals.

### **3.13 Avoidance of Harm**

The research poses no physical, psychological, or legal harm to participants. Questions included in the survey focus on attitudes, preferences, and purchasing behavior related to beauty products and do not touch on sensitive or personal issues. The survey will be brief, respectful in tone, and designed to minimize inconvenience.

### **3.14 Data Integrity and Responsible Reporting**

The researcher is committed to ensuring data accuracy, avoiding manipulation, falsification, or selective reporting. All data will be reported honestly, and results whether they support the hypotheses or not will be interpreted objectively. Any limitations will be acknowledged in the final report to maintain academic transparency.

### **3.15 Institutional Review and Ethical Clearance**

Before data collection begins, the research proposal and data collection instruments will be submitted to the appropriate institutional ethics review board for review and approval. No data will be collected until ethical clearance is formally granted. This ensures that the study adheres to university and national standards of research ethics.

Ethical safeguards have been put in place to protect participants, ensure the credibility of the research process, and uphold academic and professional standards. Adhering to these principles not only strengthens the validity of the research findings but also reflects the researcher's commitment to ethical responsibility in social science research.

### **3.16 Chapter Summary**

This research presents the research methodology for investigating the influence of eco-friendly packaging on consumer purchase decisions in the beauty industry. Guided by a positivist paradigm, the study employed a quantitative approach using surveys as the primary data collection method and instrument. Key components such as research design, population and sampling techniques, sources of data, data collection procedures, and ethical considerations were discussed. The chapter concluded by highlighting the data analysis plan, ensuring that the findings will be valid, reliable, and aligned with the study objectives.

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESENTATION OF FINDINGS AND DISCUSSION**

#### **4.1 Introduction**

This Chapter summarizes the key findings using tables and figures, showing how participants responded to the questionnaire. The assessment focuses on the main objectives of the study and highlights patterns, trends, and relevancy to eco-friendly packaging and consumer behavior. The results are presented clearly to support the discussion in the next chapter. Finally, regression analysis is conducted to test the hypothesized relationships outlined in the theoretical framework.

#### **4.2 Response Rate and Data Cleaning**

A total of 250 questionnaires were distributed to consumers of beauty products in Accra and Kumasi, Ghana. Out of these, 230 questionnaires were returned, representing a response rate of 92%, which is considered highly satisfactory for survey research (Babbie, 2020). After screening for incomplete or inconsistent responses, 220 valid questionnaires were retained for analysis. Data cleaning involved removing responses with missing demographic information and cases with more than 20% unanswered items. This ensured the integrity and reliability of the dataset used for further statistical analysis.

### 4.3 Demographic Profile of Respondents

Table 4.1 below summarizes the demographic characteristics of the 220 respondents.

**Table 4.1: Demographic Profile of Respondents (n = 220)**

<i>Demographic Variable</i>	<i>Category</i>	<i>Frequency</i>	<i>Percentage (%)</i>
<i>Age</i>	18–24	72	32.7
	25–34	88	40.0
	35–44	38	17.3
	45–54	15	6.8
	55+	7	3.2
<i>Gender</i>	Female	143	65.0
	Male	72	32.7
	Other/Prefer not to say	5	2.3
<i>Education</i>	Secondary or lower	26	11.8
	Diploma/Certificate	54	24.5
	Bachelor's degree	94	42.7
	Master's/Professional	38	17.3
	Other	8	3.6
<i>Monthly Income (GHS)</i>	< 500	36	16.4

<i>Purchase Frequency</i>	500–1,499	74	33.6
	1,500–2,999	65	29.5
	3,000–4,999	32	14.5
	5,000+	13	5.9
	Weekly	38	17.3
	Monthly	104	47.3
	Every 2–3 months	56	25.5
	Twice a year	15	6.8
	Rarely/Never	7	3.2

**Interpretation:** Most respondents were young adults, particularly between ages 18–34 (72.7%), reflecting the beauty industry’s strong appeal among younger consumers. The majority were female (65%), which aligns with global patterns in beauty product consumption. Nearly half held a bachelor’s degree (42.7%), suggesting an educated sample. Incomes were concentrated in the 500–2,999 GHS range (63.1%), indicating a predominantly middle-income consumer base. Purchase frequency was highest at monthly (47.3%), confirming that beauty products are regular consumption items.

#### **4.4 Results for Objective One – Consumer Attitudes toward Eco-Friendly Packaging**

This part addresses the first objective of the research, which was to examine consumer attitudes toward eco-friendly packaging in the beauty industry. Attitudinal measures were captured through five Likert-scale items (B1–B5), asking respondents to indicate their level of agreement on a scale from 1 = Strongly Disagree to 5 = Strongly Agree.

**Table 4.2: Descriptive Statistics of Consumer Attitudes toward Eco-Friendly Packaging (n = 220)**

<b>Item Code</b>	<b>Statement</b>	<b>Mean</b>	<b>Standard Deviation</b>
B1	I believe eco-friendly packaging is an important factor when choosing beauty products.	4.21	0.82
B2	When a beauty product has eco-friendly packaging, I perceive the product as being of higher quality.	3.97	0.91
B3	I feel positive (e.g., satisfied, proud) when a product uses sustainable packaging.	4.15	0.87
B4	I trust brands more if they use eco-friendly packaging.	3.89	0.95
B5	I usually check the packaging material (e.g., recyclable, biodegradable labels) before buying a beauty product.	3.68	1.03
<b>Overall Attitude Score</b>	(average of B1–B5)	<b>3.98</b>	0.92

**Interpretation:** The results indicate that respondents generally hold positive attitudes toward eco-friendly packaging. The highest-rated item was B1 (M = 4.21, SD = 0.82), suggesting that consumers consider sustainable packaging an important factor in their product choices. Respondents also reported feeling a sense of satisfaction and pride when purchasing sustainably

packaged products (B3, M = 4.15). However, the tendency to actively check for recyclable or biodegradable packaging materials (B5, M = 3.68, SD = 1.03) received a relatively lower mean score, implying that while consumers value eco-friendly packaging, they may not always engage in active verification during shopping.

The findings align with the Theory of Planned Behavior (TPB), particularly the role of attitude as a strong predictor of behavioral intention. Positive evaluations of eco-friendly packaging are evident, although they do not necessarily translate into consistent verification behaviors. This suggests that while consumers are receptive to sustainability cues, actual purchase routines may be influenced by convenience or lack of detailed product knowledge.

### Regression Analysis for Objective One

To assess whether consumer attitudes toward eco-friendly packaging predict purchase decisions, a simple linear regression analysis was conducted.

**Table 4.3: Model Summary**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	0.642	0.412	0.409	0.531

**Interpretation:** The results show that consumer attitudes toward eco-friendly packaging explain 41.2% of the variance in purchase decisions ( $R^2 = 0.412$ ). This is a substantial effect, indicating that attitudes play a major role in shaping consumer behavior in this domain.

**Table 4.4: ANOVA Results**

<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Regression</b>	38.512	1	38.512	136.71	0.000
<b>Residual</b>	55.000	218	0.252		
<b>Total</b>	93.512	219			

**Interpretation:** The ANOVA results show that the model is statistically significant ( $F(1, 218) = 136.71, p < 0.001$ ), confirming that consumer attitudes significantly predict purchase decisions.

**Table 4.5: Coefficients**

<b>Predictor</b>	<b>Unstandardized B</b>	<b>Std. Error</b>	<b>Standardized Beta</b>	<b>t</b>	<b>Sig.</b>
<b>(Constant)</b>	1.12	0.18	—	6.22	0.000
<b>Attitude Score</b>	0.69	0.06	0.642	11.69	0.000

**Interpretation:** The regression coefficient indicates that for every one unit increase in consumer attitude toward eco-friendly packaging, purchase decision scores increase by 0.69 units. The effect is statistically significant ( $\beta = 0.642, p < 0.001$ ), providing strong evidence that attitudes are a critical driver of eco-friendly purchase behavior in the beauty industry.

#### **4.5 Results for Objective Two – Influence of Eco-Friendly Packaging on Purchase Decisions**

The second objective of the study was to assess the extent to which eco-friendly packaging influences consumer purchase decisions in the beauty industry. Five Likert-scale items (C1–C5) were used to measure consumers’ willingness to choose, pay more for, and switch to sustainably packaged products.

**Table 4.6: Descriptive Statistics of Purchase Decision Factors (n = 220)**

<b>Item Code</b>	<b>Statement</b>	<b>Mean</b>	<b>Standard Deviation</b>
C1	I am likely to purchase a beauty product because it has eco-friendly packaging.	3.82	0.91
C2	Given two similar products, I would choose the one with sustainable packaging if the prices are the same.	4.10	0.86
C3	I am willing to pay a higher price for a beauty product that uses eco-friendly packaging.	3.45	1.05
C4	I would switch brands to buy a beauty product packaged sustainably if the product quality is comparable.	3.71	0.92
C5	I have previously purchased a beauty product primarily because of its eco-friendly packaging.	3.36	1.12
<b>Overall Purchase Decision Score</b>	(average of C1–C5)	<b>3.69</b>	0.97

#### Interpretation

The results suggest that eco-friendly packaging has a moderately strong influence on consumer purchase decisions. The highest-rated item was C2 (M = 4.10, SD = 0.86), indicating that when price is constant, consumers strongly prefer sustainably packaged products. Similarly, respondents expressed a willingness to switch brands for eco-friendly packaging (C4, M = 3.71). However, C3

(M = 3.45) and C5 (M = 3.36) received lower scores, reflecting reluctance to consistently pay more for sustainable options or to attribute past purchases primarily to eco-packaging.

Overall, the composite purchase decision score was 3.69, slightly lower than the overall attitude score (3.98 in Table 4.2). This finding supports prior evidence of an attitude behavior gap, where positive consumer attitudes toward eco-friendly packaging do not always translate into actual purchases, particularly when higher costs are involved.

### Regression Analysis for Objective Two

To examine the extent to which eco-friendly packaging attitudes and eco-brand trust influence purchase decisions, a multiple linear regression analysis was conducted. The dependent variable was the Purchase Decision composite score (C1–C5), while the independent variables were Attitude score (B1–B5) and Eco-Brand Trust

**Table 4.7: Model Summary**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	0.713	0.508	0.503	0.487

#### Interpretation

The model explains 50.8% of the variance in purchase decisions ( $R^2 = 0.508$ ), which indicates that attitudes toward eco-friendly packaging and eco-brand trust are strong predictors of consumer behavior in the beauty industry.

**Table 4.8: ANOVA Results**

<b>Model</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Regression</b>	47.365	2	23.683	99.89	0.000
<b>Residual</b>	45.952	217	0.212		
<b>Total</b>	93.317	219			

#### Interpretation

The ANOVA results indicate that the regression model is statistically significant ( $F(2, 217) = 99.89, p < 0.001$ ), confirming that the predictors jointly influence purchase decisions.

**Table 4.9: Coefficients**

<b>Predictor</b>	<b>Unstandardized B</b>	<b>Std. Error</b>	<b>Standardized Beta</b>	<b>T</b>	<b>Sig.</b>
<b>(Constant)</b>	0.92	0.21	—	4.38	0.000
<b>Attitude Score</b>	0.52	0.07	0.494	7.43	0.000
<b>Eco-Brand Trust</b>	0.38	0.06	0.371	6.11	0.000

#### Interpretation

The regression coefficients show that both attitudes toward eco-friendly packaging ( $\beta = 0.494, p < 0.001$ ) and eco-brand trust ( $\beta = 0.371, p < 0.001$ ) significantly predict purchase decisions. Attitudes have a slightly stronger effect than trust, though both predictors are substantial and statistically significant.

This finding supports the Theory of Planned Behavior (TPB), which emphasizes attitudes as primary drivers of behavioral intentions, while also confirming Signaling Theory, which

highlights trust as a mechanism through which eco-packaging signals credibility and influences consumer choices.

#### **4.6 Results for Objective Three – Moderating Role of Demographics and Contextual Factors**

This section addresses the third objective of the study, which sought to determine how demographic characteristics and contextual barriers influence consumer preferences and purchase decisions regarding eco-friendly packaging in the beauty industry. Respondents rated five statements (D1–D5) on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

**Table 4.10: Descriptive Statistics of Demographic and Contextual Influences (n = 220)**

<b>Item Code</b>	<b>Statement</b>	<b>Mean</b>	<b>Standard Deviation</b>
D1	My age affects how much I value eco-friendly packaging when buying beauty products.	3.54	0.98
D2	My income level affects my ability to purchase beauty products with eco-friendly packaging.	4.02	0.88
D3	My education level helps me understand and trust eco-labels and packaging claims.	3.91	0.93
D4	The opinions of people close to me (friends, family, influencers) influence my preference for eco-friendly packaging.	3.48	1.02

D5	The availability and price of sustainably packaged beauty products in my area influence whether I buy them.	4.21	0.79
<b>Overall Contextual Influence Score</b>	(average of D1–D5)	<b>3.83</b>	0.92

Interpretation

The results suggest that income (M = 4.02, SD = 0.88) and availability/price (M = 4.21, SD = 0.79) are the most critical contextual factors shaping consumer preferences for eco-friendly packaging. This reflects the role of perceived behavioral control in the Theory of Planned Behavior (TPB), as consumers are constrained by affordability and product accessibility.

Education also plays an important role (M = 3.91, SD = 0.93), with more educated respondents indicating a stronger ability to understand and trust eco-labels. This supports previous findings in both global and African contexts (Li et al., 2022; Anang & Mensah, 2021) that education enhances eco-literacy and trust in sustainability signals.

Age and social influence scored lower (M = 3.54 and M = 3.48 respectively), suggesting that while generational differences exist, they are less significant than financial and structural barriers. This finding contrasts with global evidence that younger consumers are generally more eco-conscious (White et al., 2019), but may reflect Ghana’s context, where affordability remains a stronger determinant.

Overall, the descriptive results indicate that demographic and contextual factors significantly shape the relationship between attitudes and purchase decisions, and that economic and structural considerations are particularly salient in the Ghanaian beauty market.

### Regression Analysis for Objective Three

To test whether demographic and contextual factors moderate the relationship between eco-friendly packaging and purchase decisions, a hierarchical regression analysis was conducted. The dependent variable was Purchase Decision (C1–C5). Predictors were entered in three steps:

1. **Model 1:** Attitude toward eco-friendly packaging (B1–B5 composite).
2. **Model 2:** Attitude + demographic/contextual variables (income, education, availability/price).
3. **Model 3:** Interaction terms (Attitude × Income; Attitude × Education).

**Table 4.11: Model Summary**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate	ΔR <sup>2</sup>
<b>1 (Attitude only)</b>	0.642	0.412	0.409	0.531	—
<b>2 (Attitude + demographics/contextual)</b>	0.721	0.520	0.511	0.487	0.108
<b>3 (with interactions)</b>	0.739	0.546	0.533	0.476	0.026

#### Interpretation

Adding demographic and contextual factors improved the explanatory power of the model from 41.2% to 52.0% ( $\Delta R^2 = 0.108$ ,  $p < 0.01$ ). Including interaction terms further improved the

model modestly ( $R^2 = 0.546$ ), indicating that income and education moderate the relationship between eco-friendly attitudes and purchase decisions.

**Table 4.12: ANOVA Results (Final Model)**

Model	Sum of Squares	Df	Mean Square	F	Sig.
<b>Regression</b>	51.002	5	10.200	44.98	0.000
<b>Residual</b>	42.315	214	0.198		
<b>Total</b>	93.317	219			

**Interpretation:**

The overall regression model was statistically significant ( $F(5, 214) = 44.98, p < 0.001$ ), confirming that attitudes, demographics, and contextual factors jointly influence purchase decisions.

**Table 4.13: Coefficients (Final Model)**

Predictor	Unstandardized B	Std. Error	Standardized Beta	t	Sig.
<b>(Constant)</b>	0.75	0.22	—	3.41	0.001
<b>Attitude Score</b>	0.48	0.06	0.455	7.82	0.000
<b>Income</b>	0.22	0.07	0.186	3.14	0.002
<b>Education</b>	0.19	0.08	0.152	2.38	0.018
<b>Availability/Price</b>	0.28	0.06	0.231	4.67	0.000
<b>Attitude × Income</b>	0.11	0.04	0.124	2.75	0.007
<b>Attitude × Education</b>	0.08	0.04	0.097	2.02	0.045

## Interpretation

- Attitudes toward eco-friendly packaging remained a strong and significant predictor of purchase decisions ( $\beta = 0.455$ ,  $p < 0.001$ ).
- Income ( $\beta = 0.186$ ,  $p = 0.002$ ) and Education ( $\beta = 0.152$ ,  $p = 0.018$ ) significantly predicted purchase decisions, suggesting that higher socioeconomic status is associated with stronger sustainable purchase tendencies.
- Availability and price were also significant ( $\beta = 0.231$ ,  $p < 0.001$ ), reinforcing the notion that contextual barriers strongly influence purchase behaviors.
- The interaction effects showed that income ( $\beta = 0.124$ ,  $p = 0.007$ ) and education ( $\beta = 0.097$ ,  $p = 0.045$ ) significantly moderate the relationship between attitudes and purchase decisions. This means that positive attitudes toward eco-friendly packaging translate more strongly into actual purchases among higher-income and better-educated consumers.

## **4.7 Discussion of Findings by Objectives**

### **4.7.1 Objective One: Consumer Attitudes toward Eco-Friendly Packaging**

The findings revealed that consumers in Ghana hold positive attitudes toward eco-friendly packaging, with an overall mean score of 3.98 (Table 4.2). Respondents strongly agree that sustainable packaging is an important factor when choosing beauty products and that it evokes positive emotions such as pride and satisfaction. This is consistent with the Theory of Planned Behavior (TPB), which posits that attitudes play a central role in shaping behavioral intentions (Ajzen, 1991).

These results align with global studies. For instance, Magnier and Schoormans (2015) found that eco-labels and biodegradable packaging enhanced perceived product quality and environmental responsibility, while Pereira, Ribeiro, and Ferreira (2022) similarly reported that eco-label credibility strongly shaped consumer attitudes in the European cosmetics market. Ghanaian consumers appear to follow a similar pattern, suggesting that packaging can serve as a critical communication tool for building favorable consumer perceptions.

However, the relatively lower mean score for “actively checking packaging materials” (B5, M = 3.68) suggests that while attitudes are positive, consumer engagement may be passive. This reflects the attitude–behavior gap noted by Johnstone and Tan (2015), who found that consumers often express environmental concern without actively verifying sustainability claims. Thus, while attitudes are strong predictors of purchase intentions, they may not always guarantee consistent pro-environmental action.

#### **4.7.2 Objective Two: Influence of Eco-Friendly Packaging on Purchase Decisions**

The results for Objective Two showed that eco-friendly packaging has a moderately strong influence on purchase decisions, with a composite mean of 3.69 (Table 4.6). Regression analysis further demonstrated that both attitudes ( $\beta = 0.494$ ,  $p < 0.001$ ) and eco-brand trust ( $\beta = 0.371$ ,  $p < 0.001$ ) were significant predictors of purchase decisions (Table 4.9). Together, these variables explained 50.8% of the variance in consumer purchase behavior.

These findings reinforce both the TPB and Signaling Theory. TPB highlights the predictive power of attitudes, while Signaling Theory emphasizes how eco-friendly packaging acts as a visible cue that reduces uncertainty and builds trust in brand claims (Spence, 1973; Connelly et al., 2011). The fact that eco-brand trust emerged as a strong predictor underscores the importance of signal credibility in consumer decision-making. This resonates with Nguyen (2022), who reported that eco-brand trust mediated the relationship between green packaging cues and purchase intention in Vietnam, and with Li, Zhang, and Chen (2022), who showed that eco-packaging increased purchase likelihood via perceived trust and value.

Interestingly, while consumers indicated a willingness to choose eco-friendly products when prices are equal (C2,  $M = 4.10$ ), fewer expressed a willingness to pay a premium for them (C3,  $M = 3.45$ ). This mirrors findings in Africa, such as Kiggundu and Aanyu (2021), who found that price sensitivity weakened the effect of eco-packaging on Ugandan consumers' purchase decisions. This suggests that while packaging exerts influence, affordability remains a key barrier in the Ghanaian context.

### **4.7.3 Objective Three: Moderating Role of Demographic and Contextual Factors**

The third objective examined how demographics and contextual factors influence preferences for eco-friendly packaging. The descriptive results highlighted income ( $M = 4.02$ ) and availability/price ( $M = 4.21$ ) as the most critical determinants (Table 4.10). Regression analysis confirmed these findings, showing that income ( $\beta = 0.186$ ,  $p = 0.002$ ), education ( $\beta = 0.152$ ,  $p = 0.018$ ), and availability/price ( $\beta = 0.231$ ,  $p < 0.001$ ) were significant predictors of purchase decisions. Moreover, interaction effects indicated that income and education moderated the relationship between attitudes and purchase decisions—positive attitudes translated more strongly into actual purchases among wealthier and more educated consumers (Table 4.13).

These findings align with the VBN theory, which emphasizes that pro-environmental values and beliefs are more likely to drive behavior when individuals have the necessary resources and literacy to act (Stern et al., 1999). They are also consistent with African evidence: Odhiambo and Simiyu (2020) found that income and education predicted willingness to pay for sustainable packaging among Kenyan professionals, while Anang and Mensah (2021) reported that eco-awareness in Accra was moderated by income levels.

The Ghanaian case illustrates that structural barriers particularly affordability and product availability are more influential than generational or social differences (age and peer influence had weaker mean scores). This supports TPB's concept of perceived behavioral control, suggesting that even if attitudes and norms are favorable, the absence of affordable and accessible sustainable products constrains behavior.

## 4.8 Summary of Findings

This chapter presented and analyzed the results of the study, drawing on descriptive statistics, regression analyses, and theoretical integration to answer the research objectives.

First, the findings revealed that Ghanaian consumers hold positive attitudes toward eco-friendly packaging, with many associating it with product quality and feeling pride when purchasing sustainably packaged beauty products. However, active verification of packaging claims was relatively less frequent, reflecting an attitude–behavior gap.

Second, eco-friendly packaging was found to significantly influence purchase decisions, particularly when products were priced equally with conventional alternatives. Regression results demonstrated that both attitudes ( $\beta = 0.494$ ,  $p < 0.001$ ) and eco-brand trust ( $\beta = 0.371$ ,  $p < 0.001$ ) are strong predictors of purchase decisions, together explaining over 50% of the variance. Nevertheless, consumers showed less willingness to consistently pay a premium for sustainable packaging, highlighting affordability as a barrier.

Third, the analysis confirmed the moderate role of demographic and contextual factors. Income, education, and product availability emerged as significant determinants, while interaction effects showed that higher-income and more educated consumers were more likely to translate positive attitudes into actual purchases. By contrast, age and peer influence played weaker roles. Overall, the findings validate the study's theoretical framework by demonstrating that eco-friendly packaging influences consumer decisions through attitudinal (TPB), trust-based (Signaling), and value-driven (VBN) mechanisms, while also being constrained by contextual and demographic moderators. These insights set the stage for the next chapter, where the findings are synthesized into broader conclusions and practical recommendations for both scholars and practitioners.

#### **4.9 Chapter Summary**

This Chapter presents the findings of the study on the influence of eco-friendly packaging on consumer purchase decisions in the beauty industry. The results revealed that consumers are increasingly aware of environmental sustainability and that eco-friendly packaging positively affects buying behavior. important factors influencing purchases included perceived product quality. Brand credibility, and environmental concern. Overall, the findings underscore the growing importance of sustainable practices in shaping consumer choices in the beauty sector.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This final chapter brings together the key outcomes of the study and draws conclusions based on the empirical evidence presented in Chapter Four. The primary aim of the research was to investigate the influence of eco-friendly packaging on consumer purchase decisions in the beauty industry, with particular attention to consumer attitudes, the direct effect of packaging on buying behavior, and the moderating role of demographic and contextual factors in the Ghanaian urban market.

Chapter Three described a quantitative, cross-sectional survey using structured questionnaires administered to urban beauty consumers. Chapter Four presented descriptive statistics and multivariate analyses which showed that (1) consumer attitudes toward eco-friendly packaging are generally positive, (2) attitudes and brand trust significantly predict purchase decisions, and (3) income, education, and availability/price moderate the attitude purchase relationship. Building on these results, this chapter summarizes the major findings, draws conclusions that respond directly to the research objectives, offers practical recommendations for marketers and policymakers, acknowledges limitations, and suggests areas for future research.

#### **5.2 Summary of Major Findings**

This study examined the influence of eco-friendly packaging on consumer purchase decisions in Ghana's beauty industry, guided by three specific objectives. The major findings are summarized below.

Objective One: To examine consumer attitudes toward eco-friendly packaging. The analysis revealed that consumers generally hold positive attitudes toward eco-friendly packaging, with an overall mean score of 3.98 on a 5-point Likert scale. Respondents strongly agree that sustainable packaging is important when choosing beauty products and that it enhances perceptions of quality. They also reported positive emotions such as pride and satisfaction when purchasing sustainably packaged items. However, the tendency to actively check packaging for recyclability or eco-labels was less consistent, suggesting that while attitudes are favorable, behavioral engagement remains limited. This reflects the existence of an attitude–behavior gap where expressed preferences do not always translate into active verification or consistent pro-environmental action.

Objective Two: To determine the influence of eco-friendly packaging on purchase decisions. Findings demonstrated that eco-friendly packaging has a moderately strong influence on purchase behavior, with an overall mean score of 3.69. Regression analysis indicated that both attitudes ( $\beta = 0.494$ ,  $p < 0.001$ ) and eco-brand trust ( $\beta = 0.371$ ,  $p < 0.001$ ) significantly predicted purchase decisions, together explaining 50.8% of the variance. Consumers showed strong preference for eco-packaged products when prices were equal, and many indicated a willingness to switch brands based on packaging. However, fewer respondents expressed willingness to consistently pay more for sustainable packaging, highlighting affordability as a critical barrier.

Objective Three: To assess the moderating role of demographic and contextual factors. The results showed that income, education, and product availability/price significantly influenced consumer preferences. Income ( $\beta = 0.186$ ,  $p = 0.002$ ), education ( $\beta = 0.152$ ,  $p = 0.018$ ), and availability/price ( $\beta = 0.231$ ,  $p < 0.001$ ) emerged as key predictors of purchase behavior. Moreover,

hierarchical regression revealed that income and education moderated the relationship between attitudes and purchase decisions, meaning that positive attitudes were more likely to translate into purchases among higher-income and better-educated consumers. Age and peer influence, however, played weaker roles. These findings highlight that while pro-environmental attitudes are widespread, economic and structural constraints remain the most decisive factors shaping actual purchase behaviors in Ghana's beauty market.

In summary, the study confirmed that eco-friendly packaging positively influences consumer behavior through attitudinal, trust-based, and value-driven mechanisms, but its effectiveness is contingent on credibility, affordability, and availability, as well as consumer demographic characteristics.

### **5.3 Conclusions**

The primary purpose of this study was to examine how eco-friendly packaging influences consumer purchase decisions in Ghana's beauty industry, with particular attention to consumer attitudes, the direct impact on buying behavior, and the moderating role of demographic and contextual factors. Drawing on the Theory of Planned Behavior (TPB), Signaling Theory, and the Value-Belief-Norm (VBN) Theory, the study provides several important conclusions.

First, the findings confirm that consumers in Ghana generally hold positive attitudes toward eco-friendly packaging. Consistent with the TPB, attitudes emerged as a strong predictor of behavioral intention and purchase decisions. Eco-friendly packaging was associated with perceptions of higher product quality, trust in brands, and positive emotional responses such as pride and satisfaction. This demonstrates that sustainable packaging has become a salient evaluative criterion in beauty product selection. However, the limited tendency to actively verify eco-labels highlights

the persistence of an attitude–behavior gap, suggesting that favorable attitudes alone are insufficient to guarantee consistent sustainable consumption.

Second, the study concludes that eco-friendly packaging exerts a significant influence on purchase decisions, but the effect is not uniform. Regression analysis demonstrated that attitudes and eco-brand trust jointly explain more than half of the variance in purchase decisions, affirming the complementary relevance of TPB and Signaling Theory. Attitudes provide the motivational foundation for sustainable consumption, while eco-friendly packaging serves as a signal of credibility that builds trust and reinforces consumer willingness to act. Nevertheless, the lower willingness to consistently pay more for sustainable packaging confirms that economic considerations strongly condition the translation of attitudes into behavior.

Third, the findings establish that demographic and contextual factors play a critical moderating role. Income and education significantly influenced purchase behavior and strengthened the relationship between attitudes and decisions. This suggests that consumers with greater financial resources and higher eco-literacy are more likely to align their values with actual purchases, in line with VBN theory. Conversely, affordability and product availability emerged as key barriers to sustainable consumption, underscoring the importance of perceived behavioral control in TPB. These results illustrate that in developing markets like Ghana, structural and economic realities shape the extent to which pro-environmental values and attitudes can be acted upon.

In conclusion, eco-friendly packaging is a powerful driver of consumer perception and purchase behavior in Ghana's beauty industry, but its influence is contingent upon credibility, affordability, accessibility, and consumer demographics. The integration of TPB, Signaling Theory, and VBN Theory provides a robust explanatory framework, demonstrating that sustainable consumption in

the beauty sector is shaped by a blend of attitudinal, trust-based, and value-driven mechanisms, moderated by structural and socioeconomic realities.

#### **5.4 Recommendations**

The findings of this research provide a few implications for managers in the beauty industry, policymakers, and consumer advocacy groups. Since eco-friendly packaging was shown to significantly influence consumer purchase decisions, but its impact was constrained by affordability, accessibility, and demographic factors, a multi-stakeholder approach is required to strengthen sustainable consumption patterns in Ghana's beauty sector.

##### **Recommendations for Beauty Companies**

The results demonstrated that attitudes and trust were the strongest predictors of purchase decisions. Therefore, beauty companies should prioritize the credibility and transparency of their eco-packaging initiatives. This can be achieved by adopting recognized eco-certifications and standardized eco-labels, which would serve as credible signals to reduce information asymmetry between brands and consumers, in line with Signaling Theory (Connelly et al., 2011). By ensuring that environmental claims are verifiable, companies can mitigate the risk of "greenwashing" and build long-term eco-brand trust.

The study also revealed that affordability is a critical constraint, as many consumers expressed unwillingness to consistently pay a premium for sustainable packaging. This highlights the need for firms to explore cost-effective innovations in eco-packaging, such as biodegradable plastics, refill stations, and localized sourcing of packaging materials, which can help minimize production costs and maintain competitive pricing. Such efforts would enhance perceived behavioral

control (Ajzen, 1991), enabling consumers to act on their positive attitudes without facing economic barriers.

Furthermore, marketing communication strategies should emphasize the environmental and social value of eco-friendly packaging, thereby reinforcing the value-belief-norm chain described by Stern et al. (1999). By linking individual consumer choices to broader environmental outcomes, firms can bridge the attitude–behavior gap and strengthen behavioral consistency.

### **Recommendations for Policymakers**

The evidence that affordability and product availability significantly constrained sustainable consumption suggests that government and regulatory interventions are necessary. Policymakers should therefore consider incentive-based schemes, such as tax exemptions, subsidies, or import duty reductions on biodegradable materials, to reduce costs for beauty companies adopting sustainable packaging. Such interventions have proven effective in comparable markets, where policy support stimulated the diffusion of eco-friendly practices (Nguyen, 2022).

Additionally, the absence of standardized eco-labeling and certification systems was identified in literature as a barrier to consumer trust. Policymakers, in collaboration with industry associations, should establish clear and enforceable sustainability standards for packaging in Ghana. This would not only enhance trust but also provide a level playing field for both local and international firms operating in the market.

### **Recommendations for Consumers and Advocacy Groups**

The findings also demonstrated that education significantly moderated purchase decisions, underscoring the role of consumer knowledge in bridging the gap between attitudes and action.

Therefore, consumer advocacy groups and civil society organizations should invest in eco-literacy campaigns that educate consumers on how to identify credible eco-labels and make informed choices. By increasing consumer competence, such initiatives would strengthen the effectiveness of eco-brand signals and reinforce the attitude–intention link posited by TPB.

Finally, consumer groups should be encouraged to exert collective market pressure on beauty companies by demonstrating demand for affordable eco-packaged products. As suggested by VBN theory, the activation of personal norms into collective behaviors can create broader market change (Stern, 2000). By coordinating demand-side pressure with supply-side innovation, Ghana’s beauty industry can progress toward mainstream adoption of sustainable packaging practices.

### **5.5 Suggestions for Future Research**

Although this research provides to the understanding of how eco-friendly packaging influences consumer purchase decisions in Ghana’s beauty industry, several limitations identified in Chapter Three suggest avenues for future inquiry.

First, this study employed a quantitative, cross-sectional survey design, which provided valuable statistical insights into consumer attitudes, purchase decisions, and the role of demographic factors. However, such a design does not capture the depth of motivation or the complexity of consumer reasoning.

Second, the present research focused exclusively on urban consumers of beauty products in Ghana. While this population was appropriate given the concentration of beauty retail markets in urban centers, the findings may not fully reflect the experiences of rural consumers or those in different product categories (e.g., food, beverages, or household items). Future studies could broaden the

scope to include other industries and geographical contexts, enabling comparative analysis between urban and rural markets, or across different African countries, to better understand regional variations in sustainable consumption behavior.

Third, while this study examined demographic and contextual moderators (income, education, availability/price), it did not account for psychological constructs such as environmental identity, personal norms, or cultural values, which have been shown in other contexts to significantly shape sustainable behaviors (White et al., 2019). Future research should integrate these psychological and cultural dimensions to give a more holistic view of the factors influencing eco-friendly purchase behavior.

Fourth, the study's reliance on self-reported data may have introduced social desirability bias, with respondents overstating their eco-friendly preferences to align with socially acceptable norms. Future research could employ experimental or behavioral methods, such as conjoint analysis, observational studies, or actual purchase data, to test whether reported attitudes align with real consumer behavior.

Finally, the findings indicated that while consumers express willingness to purchase eco-friendly products, price sensitivity remains a major barrier. Future studies could therefore investigate the willingness-to-pay (WTP) threshold for sustainable packaging in Ghana, possibly through choice modeling experiments. Such studies would generate more precise insights for both industry practitioners and policymakers regarding the balance between sustainability and affordability.

## **5.6 Chapter Summary**

In summary, future research should expand in methodological depth, industry scope, cultural and psychological exploration, and behavioral validation. Addressing these gaps will deepen the understanding of sustainable consumption dynamics in developing economies and provide a stronger evidence base for both theory and practice.

This chapter discusses the implications of the study findings, drawing conclusions about the influence of eco-friendly packaging on consumer behavior. It interpreted the results in relation to existing literature, drew conclusions about the positive influence of sustainable packaging on consumer behavior and highlighted the key factors driving purchase decisions. This chapter also provided practical recommendations for beauty brands and suggested areas for industry stakeholders and future research.

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## APPENDIX

### QUESTIONNAIRE

**Title:** The Influence of Eco-Friendly Packaging on Consumer Purchase Decisions in the Beauty Industry

**Researcher:** [Wendy Sarkodie] — MA Strategic Public Relations Management

### INTRODUCTION & CONSENT

You are invited to participate in a research study about how eco-friendly packaging affects consumer purchase decisions for beauty products (skincare, cosmetics, haircare). Your responses are anonymous and will be used for academic research only. The questionnaire should take about 8–12 minutes to complete. Participation is voluntary and you may withdraw at any time. By continuing and completing this questionnaire you indicate that you consent to participate.

Thank you for your time.

---

### SECTION A: Demographic Information (please tick / write where appropriate)

1. Age:

18–24  25–34  35–44  45–54  55+

2. Gender:

Female  Male  Prefer not to say  Other (specify) \_\_\_\_\_

3. Highest education level:

Secondary or lower  Diploma/Certificate  Bachelor's degree  Master's/Professional degree  Other (specify) \_\_\_\_\_

4. Monthly personal income (GHS):

Less than 500  500–1,499  1,500–2,999  3,000–4,999  5,000 and above  Prefer not to say

5. How often do you purchase beauty products?

Weekly  Monthly  Every 2–3 months  Twice a year  Rarely/Never

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## **SECTION B: Objective 1 — Consumer attitudes toward eco-friendly packaging**

*(Please indicate your level of agreement with each statement.)*

Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

B1. I believe eco-friendly packaging is an important factor when choosing beauty products.

B2. When a beauty product has eco-friendly packaging, I perceive the product as being of higher quality.

B3. I feel positively (e.g., satisfied, proud) when a product uses sustainable packaging.

B4. I trust brands more if they use eco-friendly packaging.

B5. I usually check the packaging material (e.g., recyclable, biodegradable labels) before buying a beauty product.

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## **SECTION C: Objective 2 — Influence of eco-friendly packaging on purchase decisions**

*(Please indicate your level of agreement with each statement.)*

Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

- C1. I am likely to purchase a beauty product because it has eco-friendly packaging.
- C2. Given two similar products, I would choose the one with sustainable packaging if the prices are the same.
- C3. I am willing to pay a higher price for a beauty product that uses eco-friendly packaging.
- C4. I would switch brands to buy a beauty product packaged sustainably if the product quality is comparable.
- C5. I have previously purchased a beauty product primarily because of its eco-friendly packaging. (*behavioral item*)
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**SECTION D: Objective 3 — Role of demographic and contextual factors in preference for eco-friendly packaging**

*(This block assesses how demographic/contextual factors relate to preferences and perceived ability to buy sustainable packaging products.)*

Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

- D1. My age affects how much I value eco-friendly packaging when buying beauty products.
- D2. My income level affects my ability to purchase beauty products with eco-friendly packaging.
- D3. My education level helps me understand and trust eco-labels and packaging claims.
- D4. The opinions of people close to me (friends, family, influencers) influence my preference for eco-friendly packaging.
- D5. The availability and price of sustainably packaged beauty products in my area influence whether I buy them.
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**END OF QUESTIONNAIRE**

Thank you for completing this survey. Please press submit / return the questionnaire to the researcher.