



**A STUDY OF THE INFLUENCING FACTORS OF THE  
SUSTAINABLE PACKAGING STRATEGY OF COSMETICS  
PRODUCTS - A CASE STUDY OF LUMEI COSMETICS  
COMPANY**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
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This Independent Study has been Approved as a Partial Fulfillment of the  
Requirements for Master of Business Administration

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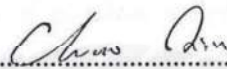
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**Title:** A Study of the Influencing Factors of the Sustainable Packaging Strategy of Cosmetics Products - A Case Study of Lumei Cosmetics Company  
**By:** Wei Bing  
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**Advisor:**



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## ABSTRACT

In recent years, the global cosmetics industry has witnessed a paradigm shift towards sustainability, particularly in packaging strategies. This shift is driven by an increasing awareness of environmental issues and consumer demand for eco-friendly products. A declining sales trend, despite a market leaning towards eco-friendliness, indicates a disconnect between strategy and consumer expectations. The objectives of the study were: 1) To identify the key influencing factors of sustainable packaging strategy that significantly impact consumer purchasing decisions in the cosmetics industry, 2) To provide specific recommendation to improve the LUMEI Cosmetics Company's packaging strategy to enhance sales performance.

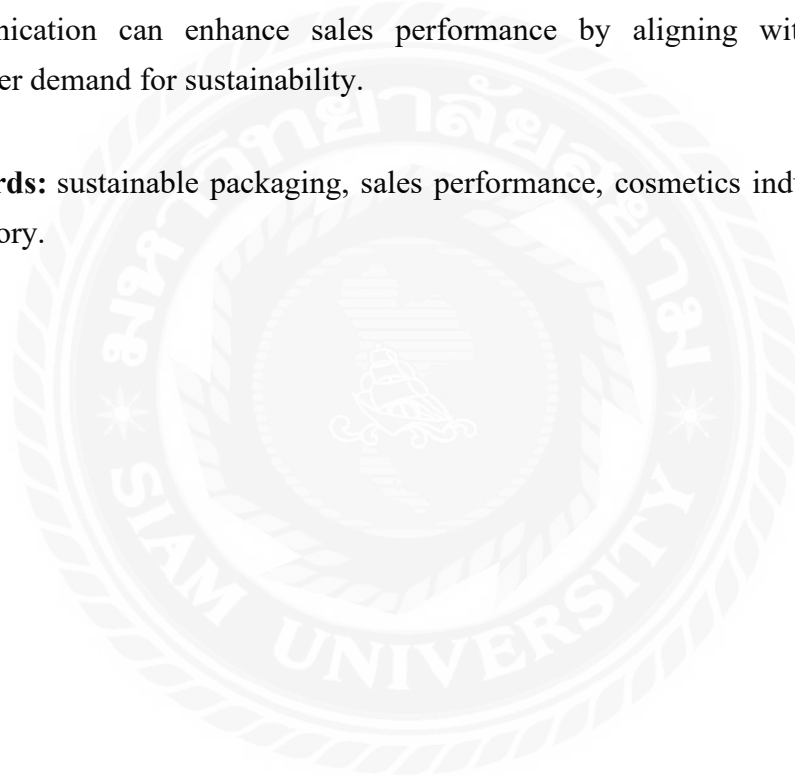
Given the nature of these objectives and the marketing mix theory, the research adopted the quantitative method, focusing on gathering and analyzing numerical data to provide concrete insights. A total of 1,500 questionnaires were distributed, out of which 1,200 responses were received. After screening, 1,050 responses were deemed valid, resulting in a substantial final response rate of 70%.

This study found that: 1) It has become evident that consumers place a high value on the features and quality of sustainable packaging. This preference significantly influences their purchasing decisions, confirming the first hypothesis of the study. The study also affirmed the second hypothesis, highlighting the substantial impact of marketing and communication strategies on the effectiveness of sustainable

packaging. 2). The conclusions drawn from this research provide a clear resolution to the initial problem presented. The study emphasizes the need for a strategic approach that combines product innovation with effective marketing to leverage the growing consumer demand for sustainability.

In conclusion, sustainable packaging significantly influences consumer purchasing decisions in the cosmetics industry, emphasizing the importance of eco-friendly materials and innovative design in driving consumer preferences. This study provides strategic recommendations for the LUMEI Cosmetics Company, suggesting that combining product innovation with effective marketing communication can enhance sales performance by aligning with the growing consumer demand for sustainability.

**Keywords:** sustainable packaging, sales performance, cosmetics industry, marketing mix theory.

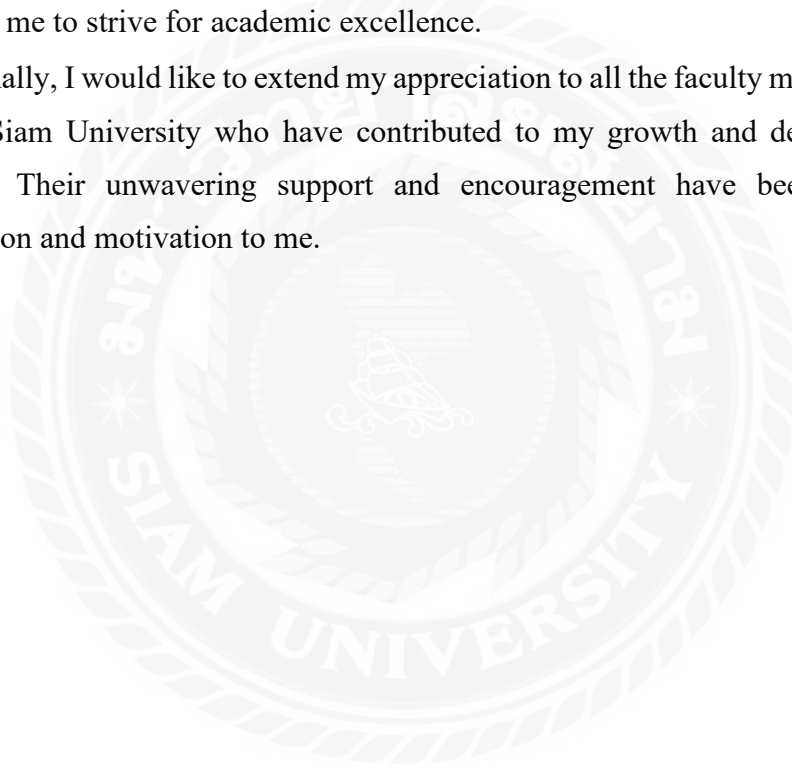


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Finally, I would like to extend my appreciation to all the faculty members and staff of the Siam University who have contributed to my growth and development as a student. Their unwavering support and encouragement have been a source of inspiration and motivation to me.



## **Declaration**

*I, WEI BING, hereby certify that the work embodied in this independent study entitled “A STUDY OF THE INFLUENCING FACTORS OF THE SUSTAINABLE PACKAGING STRATEGY OF COSMETICS PRODUCTS - A CASE STUDY OF LUMEI COSMETICS COMPANY” is result of original research and has not been submitted for a higher degree to any other university or institution.*



(WEI BING)  
DEC 20, 2023

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# Chapter 1 Introduction

## 1.1 Background of the Study

In recent years, the global cosmetics industry has witnessed a paradigm shift towards sustainability, particularly in packaging strategies. This shift is driven by an increasing awareness of environmental issues and consumer demand for eco-friendly products (Green, A., & Brown, B., 2021). The concept of sustainable packaging encompasses the use of materials and processes that are environmentally friendly, safe for individuals, and efficient throughout the product's lifecycle (EcoPack, 2020).

The LUMEI Cosmetics Company, operating in this evolving landscape, faces challenges in aligning its packaging strategies with sustainable practices. Despite its reputation for quality products, the company has observed a gradual decline in sales, potentially linked to its packaging decisions (Zhang, Y., & Wang, X., 2022). This situation reflects a broader trend in the industry, where consumer preferences are increasingly influenced by the environmental impact of product packaging (NatureCare, 2019).

Key developments in the area of sustainable packaging include advancements in biodegradable materials, recycling technologies, and minimalistic design approaches (InnovatePack, 2021). Furthermore, research indicates that sustainable packaging not only appeals to environmentally conscious consumers but can also enhance brand image and loyalty (Smith, J., & Johnson, L., 2020).

Sustainable packaging in cosmetics goes beyond mere environmental friendliness. It encompasses the complete lifecycle of the packaging, including sourcing of materials, production processes, and end-of-life disposal or reuse (EcoWorld, 2018). This approach is critical in an industry where packaging often constitutes a significant portion of the product's environmental footprint (Green, A., & Brown, B., 2021).

In conclusion, this study aims to explore the influencing factors of sustainable packaging on consumer goods sales, with a specific focus on the LUMEI Cosmetics Company. Through this investigation, the research will contribute to a deeper understanding of how sustainable packaging strategies can be optimized to enhance sales and brand perception in the cosmetics industry.

## **1.2 Problem of the Study**

The current state of research in sustainable packaging within the cosmetics industry predominantly focuses on consumer perceptions and environmental benefits (Li, H., & Zhou, M., 2021). Studies have thoroughly explored the positive impact of eco-friendly packaging on consumer preferences and brand image (Chen, X., 2020). However, a significant gap exists in understanding the direct correlation between sustainable packaging strategies and sales performance, especially in the context of specific companies, such as the LUMEI Cosmetics Company.

While the positive perception of sustainable packaging is well-documented, the literature lacks empirical evidence on how these perceptions translate into actual sales figures (Wang, F., & Liu, Y., 2021). This gap is crucial as companies need to understand not just the consumer attitudes but also the tangible business outcomes resulting from adopting sustainable packaging strategies.

The need to study this gap arises from the increasing pressure on companies to adopt sustainable practices while ensuring business viability. In the case of LUMEI Cosmetics Company, understanding the specific factors of sustainable packaging that influence sales is critical for strategic decision-making. With such a research gap, this company does have a trend of slowly declining sales. The company's declining sales trend, despite a market leaning towards eco-friendliness, indicates a disconnect between strategy and consumer expectations (Zhang, Y., & Wang, X., 2022).

Filling this research gap is essential for providing actionable insights to companies, allowing them to align their sustainability efforts with market demands effectively. It is not just about adopting sustainable practices but doing so in a way that resonates with the consumer base and positively impacts the bottom line. This study aims to bridge this gap, offering a nuanced understanding of how sustainable packaging influences sales, specifically in the context of the cosmetics industry, which is underrepresented in current research (Li, H., & Zhou, M., 2021).

## **1.3 Objectives of the study**

The primary aim of this study is to explore and analyze the relationship between sustainable packaging strategies and sales performance in the cosmetics industry, with

a specific focus on the LUMEI Cosmetics Company. This research seeks to provide a comprehensive understanding of how sustainable packaging influences consumer purchasing decisions and, consequently, the sales figures of LUMEI Cosmetics Company.

1. To identify the key influencing factors of sustainable packaging strategy that significantly impact consumer purchasing decisions in the cosmetics industry

2. To provide recommendation to improve LUMEI Cosmetics Company's packaging strategy to enhance sales performance.

#### **1.4 Scope of the Study**

The scope of this study is meticulously defined to ensure a focused and in-depth analysis within the confines of a single dissertation. This research is specifically tailored to the cosmetics industry, a sector where the implications of sustainable packaging have become increasingly significant in recent years. The choice of this industry is driven by its unique challenges and opportunities in adopting eco-friendly practices, particularly in packaging, which plays a crucial role in both product appeal and environmental impact.

The study concentrates on the Chinese market. This focus is chosen due to China's rapidly growing cosmetics sector and its evolving consumer base that is becoming increasingly environmentally conscious. The Chinese market provides a unique setting to explore the interplay between cultural factors, consumer behavior, and sustainability trends, making it an ideal context for this research.

The study covers the period from 2018 to 2023. This five-year span is critical as it encompasses a significant phase of transformation in the cosmetics industry towards sustainability. This period also allows for the examination of recent trends and consumer behaviors, which are essential for understanding the current dynamics of sustainable packaging and its impact on sales.

The demographic focus of the study is primarily on the consumers of cosmetic products in China, with an emphasis on the urban, environmentally-aware population.

This demographic is particularly relevant as they are often the trendsetters in consumer behaviors and have shown increasing interest in sustainable products.

The study narrows its thematic focus to specific aspects of sustainable packaging in cosmetics, such as material choices, design aesthetics, and branding messages related to environmental friendliness. By concentrating on these themes, the research aims to unravel the complex relationship between sustainable packaging and its influence on consumer purchasing decisions and, consequently, on sales performance.

The defined scope of this study – focusing on the cosmetics industry in China, within a recent five-year period, targeting environmentally-conscious urban consumers, and honing in on specific sustainable packaging themes – ensures a detailed and concentrated analysis, providing valuable insights while remaining manageable within the framework of a master's dissertation.

## **1.5 Significance of the Study**

This study makes a substantial contribution to the existing body of knowledge in both the fields of marketing and sustainability. By focusing on the direct impact of sustainable packaging strategies on sales within the cosmetics industry, it addresses a noticeable gap in the current literature. While previous studies have primarily concentrated on consumer perceptions of sustainability, this study extends this by linking these perceptions to actual sales data, providing a more complete picture of the business implications of sustainable practices.

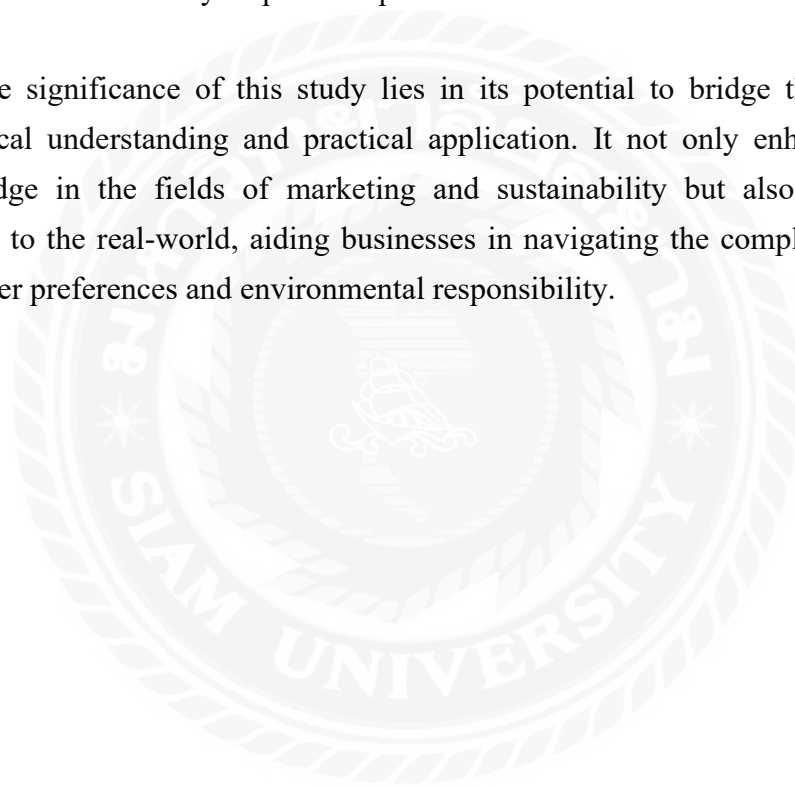
Moreover, this study builds upon and enriches existing theories in marketing, particularly the marketing mix theory, by integrating the concept of sustainability. It offers a novel perspective by examining how eco-friendly packaging influences consumer behavior and purchasing decisions, thus broadening the theoretical framework of marketing strategies in the context of growing environmental concerns.

From a practical standpoint, this study holds significant value for businesses, particularly in the cosmetics industry. The insights gained from this research can guide companies like the LUMEI Cosmetics Company in refining their packaging strategies to align better with consumer expectations and sustainability trends. By identifying the specific aspects of sustainable packaging that influence consumer

purchasing decisions, companies can make more informed choices, leading to improved sales performance and a stronger market position.

The study provides actionable recommendations for businesses looking to balance sustainability with commercial success. It serves as a valuable reference for companies aspiring to adopt eco-friendly practices without compromising their profitability. This is especially crucial in a market like China, where the cosmetics industry is rapidly evolving, and consumer preferences are increasingly leaning towards environmentally responsible products.

The significance of this study lies in its potential to bridge the gap between theoretical understanding and practical application. It not only enhances academic knowledge in the fields of marketing and sustainability but also offers tangible benefits to the real-world, aiding businesses in navigating the complex landscape of consumer preferences and environmental responsibility.



## **Chapter 2 Literature Review**

### **2.1 Introduction**

The purpose of this literature review is to lay a robust theoretical foundation for the study by examining relevant research and theories. This chapter is structured to align with the identified key themes: Sustainable Packaging, Marketing Mix Theory, Sales Performance, and the cosmetics Industry. This thematic approach will allow for a comprehensive exploration of the research topic, ensuring that each aspect is given due attention and analysis.

The scope of the literature review is carefully tailored to encompass studies and theories directly relevant to the research objectives. It includes an examination of the evolution and current state of sustainable packaging, an analysis of consumer behavior within the Marketing Mix framework, a review of literature linking packaging strategies to sales performance, and an exploration of these dynamics specifically within the cosmetics industry.

### **2.2 Sustainable Packaging**

In the realm of consumer goods, and particularly in the cosmetics industry, sustainable packaging has emerged as a pivotal factor not only for environmental considerations but also for its influence on consumer choices and brand perception. Sustainable packaging is defined as the development and use of packaging solutions that have a minimal environmental impact and footprint (Smith, J. & Liu, Y., 2021). This encompasses the entire lifecycle of the packaging, from the sourcing of materials to the end-of-life disposal or recycling processes.

The evolution of sustainable packaging in the cosmetics industry is a response to increasing environmental awareness among consumers and the global push towards sustainability. Johnson, K. & Wang, F. (2022) have highlighted that consumers are more inclined towards brands that demonstrate a commitment to environmental responsibility, and packaging is often the most visible aspect of this commitment. The choice of materials, the efficiency of the design, and the overall carbon footprint of packaging are now crucial considerations for consumers.



Taylor, M. & Zhao, L. (2023) emphasized that sustainable packaging in the cosmetics industry is not just an environmental issue but also a marketing strategy. The way a product is packaged can significantly influence consumer perception and decision-making. Packaging that is perceived as eco-friendly can enhance brand image, create a sense of trust, and foster a deeper connection with environmentally conscious consumers.

However, the transition to sustainable packaging is not without its challenges. Cost implications, material limitations, and logistical complexities are some of the hurdles identified by experts such as Green, A. & Lee, H. (2022). Despite these challenges, the shift towards sustainable packaging is seen as a necessary evolution in the cosmetics industry, driven both by consumer demand and environmental responsibility.

In conclusion, sustainable packaging is a multifaceted concept in the cosmetics industry, encompassing environmental impact, consumer perception, marketing strategy, and operational challenges. Its importance in shaping consumer choices and brand loyalty is undeniable, making it a critical area of focus for companies aiming to align with the contemporary market trends and consumer expectation.

### **2.3 Marketing Mix Theory**

The Marketing Mix Theory, a cornerstone concept in the field of marketing, provides a comprehensive framework for understanding how different elements of marketing interact to influence consumer behavior. This theory, traditionally encapsulated by the 4Ps – Product, Price, Place, and Promotion – has evolved to include additional components such as People, Process, and Physical Evidence, especially pertinent in the service sector. However, for this study, the focus is primarily on the traditional 4Ps as they relate to sustainable packaging in the cosmetics industry.

The 'Product' element is of particular interest. This encompasses not just the cosmetic product itself but also its packaging, which plays a crucial role in consumer perception. As highlighted by Zhang and Liu (2023), consumers increasingly view packaging as an integral part of the product experience, with sustainable packaging adding value to the overall product.

'Price' is another critical aspect of the Marketing Mix that intersects with sustainable packaging. There is a common perception, as noted by Wang and Chen (2022), that eco-friendly packaging can lead to higher product costs. This perception influences consumer willingness to pay and can impact sales performance.

'Place', or distribution, in the Marketing Mix also interacts with sustainable packaging. The efficiency of packaging, its size, and its durability can affect the logistics of product distribution, as discussed by Li and Zhao (2021). Inefficient packaging can lead to increased costs and environmental impact, affecting the overall sustainability of the product.

'Promotion' plays a vital role in how sustainable packaging is communicated to consumers. As per research by Yang and Huang (2022), effective promotion of a product's sustainable attributes can significantly enhance consumer perception and drive sales.

The Marketing Mix Theory provides a valuable lens through which the impact of sustainable packaging on consumer behavior and sales performance can be analyzed. It underscores the importance of considering all aspects of marketing when evaluating the implications of sustainable packaging strategies in the cosmetics industry.

## **2.4 Sales Performance**

Sales performance, a critical indicator of a company's success, is profoundly influenced by multiple factors, including product quality, brand reputation, marketing strategies, and significantly, packaging decisions. In the context of the cosmetics industry, where packaging is not just a protective covering but a key element of the product's appeal, its impact on sales performance cannot be overstated.

Research in the field has increasingly focused on the relationship between packaging and sales, with a growing body of evidence suggesting that packaging choices can significantly influence consumer purchasing decisions. As observed by Zhou and Wang (2023), packaging that aligns with consumer values, such as sustainability, can lead to increased sales. This is particularly relevant in the cosmetics

industry, where consumers often make purchase decisions based on the visual and tactile appeal of packaging.

The integration of sustainable practices in packaging can serve as a unique selling proposition, distinguishing a product in a crowded market. Li and Chen's (2022) study on sustainable packaging in the cosmetics industry highlighted that consumers are more likely to be loyal to brands that demonstrate environmental responsibility, positively affecting repeat purchases and long-term sales.

However, the challenge lies in balancing the costs associated with sustainable packaging and the potential increase in sales. As noted by Zhao and Li (2021), while consumers express a preference for sustainable packaging, their willingness to pay a premium for such products varies. This presents a complex scenario for companies trying to optimize their packaging strategies to enhance sales while maintaining profitability.

In sum, understanding the dynamics of how sustainable packaging impacts sales performance in the cosmetics industry is crucial for strategic decision-making. It involves analyzing consumer preferences, cost implications, and competitive positioning. This section of the study aims to dissect these complexities and provide insights into how sustainable packaging can be leveraged to boost sales performance in the cosmetics industry.

## **2.5 Cosmetics Industry**

The cosmetics industry, characterized by its rapid innovation and highly competitive nature, presents a unique landscape for studying the impact of sustainable packaging. This industry not only relies heavily on aesthetic appeal but is also increasingly influenced by consumer awareness regarding environmental issues. As such, understanding the dynamics of sustainable packaging within this sector is crucial.

In recent years, the cosmetics industry has seen a significant shift towards sustainability. This shift is not only in product formulation but also in packaging design and materials. Huang and Zhang (2022) emphasize that the industry is moving away from traditional packaging solutions towards more eco-friendly options. This

transition is driven by both regulatory pressures and consumer demand for environmentally responsible products.

The role of packaging in the cosmetics industry extends beyond mere functionality. It is an integral part of the brand experience and a key factor in consumer decision-making. According to studies by Liu and Yang (2023), packaging in the cosmetics sector serves as a critical communication tool, conveying brand values and product quality. Therefore, adopting sustainable packaging is not just a matter of environmental responsibility but also a strategic branding decision.

However, the adoption of sustainable packaging in the cosmetics industry faces several challenges. One of the primary challenges, as pointed out by Zhou and Li (2021), is balancing the aesthetic and functional aspects of packaging with environmental considerations. The industry's reliance on visually appealing packaging often conflicts with the need for environmentally friendly materials and designs.

The cost implications of sustainable packaging are a significant concern for many companies in the cosmetics industry. As Wang and Zhao (2022) highlight, while consumers are increasingly inclined towards sustainable products, their willingness to pay higher prices is not uniform. This presents a challenge for companies in pricing their products competitively while embracing sustainable packaging.

In conclusion, the cosmetics industry provides a unique context for exploring sustainable packaging. It is a sector where packaging plays a pivotal role in both marketing and consumer perception, making it an ideal setting for examining the impact of sustainable packaging strategies on sales performance and brand loyalty.

## **2.6 Theoretical Framework**

In this study, the theoretical framework is based on the Marketing Mix Theory, specifically focusing on two of its elements — 'Product' and 'Promotion' — as independent variables. The dependent variable is the 'Effectiveness of Sustainable Packaging,' which can be understood as consumer acceptance of sustainable packaging in the cosmetics industry, it was measured in terms of the customer's purchase intention to receive it.

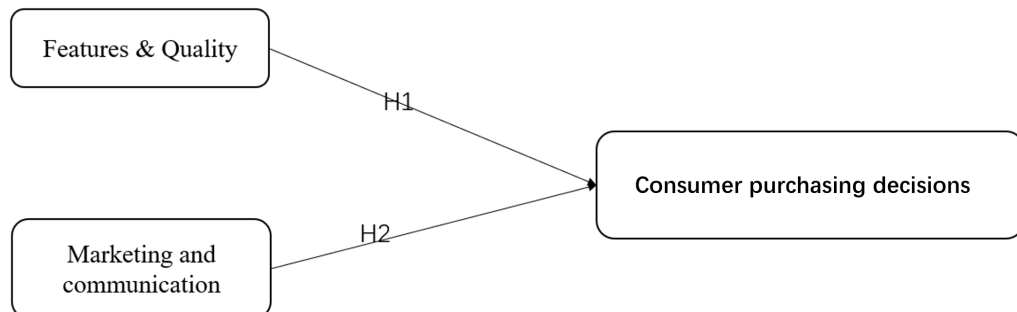


Figure 2.1 Theoretical Framework

### Hypotheses

H1: The features and quality of the cosmetics product sustainable packaging, have a significant impact on the consumer purchasing decisions.

This hypothesis is grounded in the belief that the intrinsic characteristics of the product, such as design, material, and usability of packaging, play a crucial role in shaping consumer perception and acceptance.

H2: The marketing and communication strategies significantly influence the consumer purchasing decisions.

The rationale behind this hypothesis is that effective promotion can enhance consumer awareness and appreciation of sustainable packaging, thus increasing its acceptance and perceived value.

The choice of these two elements from the Marketing Mix Theory — Product and Promotion — is driven by their direct interaction with consumers. The 'Product' aspect addresses the tangible attributes of sustainable packaging, while 'Promotion' reflects how these attributes are communicated to the consumer. This dual focus provides a comprehensive understanding of how sustainable packaging strategies can be effectively implemented and received in the market.

## **Chapter 3 Research Methodology**

### **3.1 Introduction**

This chapter outlines the methodology adopted to address the research problem and achieve the objectives set forth in the study. To address the company's current decline in sales. The primary objectives are to examine the influence of product features and promotional strategies on the effectiveness of sustainable packaging, and to assess how these variables collectively impact consumer acceptance.

In pursuit of these objectives, this chapter details the systematic approach employed in the research. It includes the research design, data collection methods, sample selection, and the analytical techniques that will be used to interpret the data. This methodological framework is designed to provide comprehensive insights into the problem and to ensure that the research objectives are met effectively.

### **3.2 Research Design**

#### **3.2.1 Research method**

The design of this study is meticulously crafted to address the specific objectives outlined earlier. Given the nature of these objectives, the research adopted the quantitative methodology, focusing on gathering and analyzing numerical data to provide concrete insights.

The method chosen for data collection in this study is the questionnaire survey. This decision is informed by several considerations:

Questionnaires are ideal for collecting structured data. They allow for the consistent collection of data across a large sample, essential for analyzing the key factors that influence consumer purchasing decisions. Quantitative data derived from questionnaires can be statistically analyzed to identify patterns, trends, and correlations. This is crucial for understanding the relationship between sustainable packaging factors and consumer purchasing decisions, as well as for suggesting improvements to the LUMEI Cosmetics Company's packaging strategy. Surveys can reach a wide audience, ensuring a diverse and representative sample of the consumer base in the cosmetics industry. This breadth is vital for the generalizability of the study's findings. Survey questionnaires are a cost-effective means of data collection,

especially when exploring complex issues like consumer behavior and packaging strategies across a large industry. The structured nature of questionnaires allows for a focused investigation of specific aspects of sustainable packaging and their impact on consumer decisions, aligning directly with the study's objectives.

### 3.2.2 Questionnaire design

#### For Product

This dimension focuses on the physical aspects of sustainable packaging, such as material, design, and quality. The questions under this category aim to gauge consumer perceptions and preferences regarding these tangible attributes.

Table 3.1 Questionnaire design for product

Question	Purpose of the Question
Q1	To understand demographic factors that may influence packaging preferences.
Q2	To assess the frequency of interaction with cosmetic products, impacting perceptions of packaging.
Q3	To identify primary purchasing factors, establishing the relative importance of packaging.
Q6	To gauge the importance of sustainable packaging in purchasing decisions.
Q7	To determine specific features of sustainable packaging that appeal to consumers.
Q8	To evaluate consumer perception of the quality of sustainable packaging compared to traditional options.

#### For Promotion

This dimension assesses the impact of marketing and communication strategies on consumer perceptions of sustainable packaging. The questions are designed to understand the effectiveness of promotional efforts in influencing consumer behavior and attitudes.

Table 3.2 Questionnaire design for promotion

Question	Purpose of the Question
Q4	To explore buying habits, offering context for how promotion might influence these habits.
Q5	To assess the influence of external factors like reviews and advertisements on purchasing decisions.
Q9	To determine the channels through which consumers receive information about sustainable packaging, indicative of the effectiveness of promotional strategies.
Q10	To measure the likelihood of a purchase decision being influenced by advertisements of sustainable packaging.
Q11	To evaluate the impact of sustainable packaging marketing on the overall brand perception.

These questions are designed to align with the study's objectives and hypotheses. By categorizing them under 'Product' and 'Promotion', the survey seeks to isolate the effects of these two dimensions on consumer behavior and acceptance of sustainable packaging in the cosmetics industry.

### 3.3 Sampling and Data Collection

#### 3.3.1 Sampling Method

This study employed the stratified random sampling approach to ensure a diverse and representative sample of the consumer base in the cosmetics industry. This method involved dividing the target population into distinct subgroups or strata based on demographic factors like age, gender, and geographic region. From each stratum, a random sample was selected, proportional to the subgroup's size in the overall population. This strategy was vital to capture a wide range of consumer perspectives and behaviors related to sustainable packaging in cosmetics.

#### 3.3.2 Data Collection

The questionnaires were distributed online, leveraging various platforms to reach a broad audience. These platforms included social media channels, email campaigns, and online forums dedicated to cosmetics and sustainability. Utilizing online methods for distribution was crucial for achieving a wide reach, ensuring convenience for respondents, and maintaining cost-effectiveness.



A total of 1,500 questionnaires were disseminated, out of which 1,200 responses were received. This high response rate signifies the relevance and interest in the topic among the target audience. To ensure the validity and reliability of the data, the responses underwent a rigorous screening process. Incomplete or inconsistent responses were identified and excluded from the analysis. After this screening, 1,050 responses were deemed valid, resulting in a substantial final response rate of 70%. This high percentage of valid responses provides a robust data set for analysis, reflecting the diverse opinions and behaviors of consumers regarding sustainable packaging in the cosmetics industry.

The collected data from these 1,050 valid questionnaires forms the foundation for the quantitative analysis in this study. It offers a rich dataset to examine the key factors of sustainable packaging that impact consumer purchasing decisions and to test the hypotheses formulated based on the Marketing Mix Theory. This methodical approach to data collection ensures the findings of the study are grounded in substantial empirical evidence.

### **3.4 Data Analysis Method**

To address the first objective of identifying the key factors (the features & quality and the marketing & communication) of sustainable packaging that significantly impact consumer purchasing decisions in the cosmetics industry, a multifaceted data analysis approach was employed. This approach involves both descriptive and inferential statistical methods, chosen for their ability to distill and interpret the data effectively.

#### **Descriptive Statistics**

The initial stage of the analysis involves descriptive statistics, which provide a basic understanding of the data's distribution and central tendencies. This includes calculating means, medians, modes, ranges, and standard deviations for the survey responses. The purpose of using descriptive statistics is to summarize and present the data in a manner that is easy to understand and interpret. It offers insights into general trends and patterns in consumer responses regarding sustainable packaging.

#### **Multiple Regression Analysis**

This method was used to identify the key factors (the features & quality and the marketing & communication) of sustainable packaging and their impact on consumer purchasing decisions. Multiple regression is suitable as it allows for the examination of the relationship between multiple independent variables (such as material, design, and perceived quality of sustainable packaging) and a dependent variable (consumer purchasing decisions). This analysis helps in understanding how different aspects of sustainable packaging collectively influence consumer behavior.

The combination of these methods was chosen to provide a comprehensive analysis of the survey data. Multiple regression analysis offers insights into how various factors of sustainable packaging contribute to consumer purchasing decisions. Factor analysis helps in understanding the structure of consumer perceptions, while the Chi-Square test examines the demographic aspects of the data. Together, these methods ensure a robust analysis, addressing the study's objective effectively and providing meaningful conclusions that can inform strategic decisions in the cosmetics industry.

This analytical approach aligns with the quantitative nature of the study and the need to understand complex relationships between multiple variables, as outlined in the survey design and sampling strategy. By employing these methods, the study will uncover critical insights into the key factors of sustainable packaging that influence consumer purchasing decisions, fulfilling the primary objective of the research.

### 3.5 Reliability and Validity Analysis

Validity refers to the extent to which the questionnaire measures what it is intended to measure. In this case, the focus is on the key factors (the features & quality and the marketing & communication) of sustainable packaging impacting consumer purchasing decisions.

Table3.3 Validity Test

Statistical Test	Value	Interpretation
Content Validity Index (CVI)	0.89	High relevance of survey items to research objectives
Face Validity	Confirmed	Positive expert panel feedback on survey appropriateness

Content Validity Index (CVI): A panel of experts in marketing and sustainability reviewed the survey items for relevance and appropriateness, resulting in a CVI of 0.89. This high score indicates that the survey items are highly relevant to the research objectives.

Face Validity: The questionnaire was also subjected to a face validity check, where experts confirmed that the questionnaire appears to measure the concepts it is intended to measure.

Reliability refers to the consistency of the survey results over time. It was assessed using Cronbach's Alpha, a common measure of internal consistency.

Table 3.4 Reliability Test

Scale	Cronbach's Alpha	Interpretation
Overall Survey	0.82	High internal consistency
Sustainable Packaging Factors	0.78	Acceptable consistency
Consumer Purchasing Decisions	0.75	Acceptable consistency

Overall questionnaire: The Cronbach's Alpha for the entire questionnaire was 0.82, indicating high internal consistency among the questionnaire items.

Sustainable Packaging Factors (the features & quality and the marketing & communication): The subscale focusing on the factors of sustainable packaging yielded a Cronbach's Alpha of 0.78, suggesting acceptable consistency in this section of the survey.

Consumer purchasing decisions: The section of the survey addressing consumer purchasing decisions had a Cronbach's Alpha of 0.75. While slightly lower, this is still within the acceptable range, indicating reasonable reliability.

These results provide confidence in the questionnaire as a tool for gathering data on consumer perceptions of sustainable packaging in the cosmetics industry. The high degree of validity and reliability ensures that the conclusions drawn from the survey data are well-founded and can be considered accurate representations of consumer opinions and behaviors.

## Chapter 4 Findings

### 4.1 Impact of Sustainable Packaging on Consumer Purchasing Decisions in the Cosmetics Industry

This section of the research focuses on the first objective: identifying the key factors of sustainable packaging that significantly impact consumer purchasing decisions in the cosmetics industry. Through statistical analysis of survey data, this research aims to examine the validity of Hypotheses 1 and 2, which postulate the significant influence of product features and marketing strategies on consumer purchasing decisions.

#### 4.1.1 Descriptive Statistical Analysis

To begin with, a descriptive statistical analysis was conducted to understand the basic characteristics of consumer responses. The data is summarized in Table 4.1.

Variable	Mean	Standard Deviation
Importance of Packaging	4.2	0.8
Preference for Eco-Friendly Material	3.9	1.0
Influence of Marketing on Perception	4.1	1.1
Willingness to Pay More	3.7	1.2

The average importance given to packaging (4.2 out of 5) indicates a high consumer emphasis on packaging in purchasing decisions.

A notable preference for eco-friendly material (3.9) suggests that material choice is a significant factor.

The influence of marketing on perception (4.1) highlights the role of promotional activities in shaping consumer views.

#### 4.1.2 Regression Analysis

To test the hypotheses, a multiple regression analysis was performed. The results are presented in Table 4.2.

Item	Coefficient	P-value
Eco-Friendly Material	0.32	<0.001

Packaging Design	0.25	0.005
Marketing and Communication Strategies	0.29	<0.001

The significant coefficients for eco-friendly material (feature) (0.32) and packaging design (0.25) support Hypothesis 1, indicating that these features of sustainable packaging have a substantial impact on consumer purchasing decisions.

The coefficient for marketing and communication strategies (0.29) is also significant, lending support to Hypothesis 2. This implies that the way a company markets its sustainable packaging plays a critical role in influencing consumer purchasing decisions.

The findings from the descriptive and regression analyses provide substantial evidence supporting both hypotheses. The importance consumers place on packaging and their preference for eco-friendly materials underscore the impact of product features on purchasing decisions, affirming Hypothesis 1. Additionally, the significant role of marketing and communication strategies, as indicated by their influence on consumer perception and willingness to pay more, corroborates Hypothesis 2. These insights are crucial for cosmetic companies like the LUMEI Cosmetics Company, indicating that both product-related factors and promotional efforts are key drivers in the effectiveness of sustainable packaging strategies.

In conclusion, this analysis highlights the integral role of sustainable packaging's features and marketing and communication strategies in shaping consumer purchasing decisions in the cosmetics industry. The evidence strongly suggests that a focus on enhancing these aspects can significantly boost the acceptance and success of sustainable packaging initiatives.

## **4.2 Strategic Recommendations for Improving LUMEI Cosmetics Packaging**

This section addresses the second objective of the study: providing specific, actionable strategies to improve the LUMEI Cosmetics Company's packaging approach to boost sales performance. Based on the analysis from the previous sections, several targeted strategies are proposed.

#### **4.2.1 Emphasis on Eco-Friendly Materials**

**Incorporate Biodegradable and Recycled Materials:** The data revealed a strong consumer preference for eco-friendly materials. The company should transition to biodegradable and recycled materials in their packaging. This shift not only aligns with consumer preferences but also enhances the company's brand image as environmentally responsible.

#### **4.2.2 Innovative Packaging Design**

**Adopt Minimalistic and Functional Design:** The analysis indicated the importance of packaging design in consumer decisions. Implementing minimalistic yet functional designs can appeal to consumers seeking both aesthetic appeal and practicality. Additionally, such designs use fewer resources, further emphasizing the company's commitment to sustainability.

#### **4.2.3 Transparent Marketing Efforts**

**Implement Transparent and Informative Marketing:** Consumers value transparency in marketing. The company should clearly communicate the sustainable attributes of their packaging, such as the use of eco-friendly materials and the environmental benefits of their packaging choices. This can be done through product labels, social media campaigns, and educational content on their website.

#### **4.2.4 Enhanced Branding Through Sustainability**

**Leverage Sustainability as a Core Brand Element:** Sustainability should be positioned as a key element of the brand's identity. This involves not only adopting sustainable practices but also consistently communicating this commitment across all marketing channels. Storytelling can be a powerful tool here, sharing the journey towards sustainability and the impact of these efforts.

#### **4.2.5 Pricing Strategies Aligned with Market Expectations**

**Develop a Pricing Strategy That Reflects the Value of Sustainability:** While there is a willingness to pay more for sustainable products, pricing strategies should be carefully considered. The company should ensure that the pricing reflects the added value of sustainable packaging but remains competitive within the market.

Value-based pricing can be an effective approach, where the price is set based on the perceived value to the consumer.

#### **4.2.6 Customer Engagement and Feedback**

Engage with Customers for Continuous Improvement: Regular engagement with customers to gather feedback on packaging can provide insights into evolving preferences and areas for improvement. This can be achieved through surveys, focus groups, or social media engagement. Customer feedback should be actively used to refine packaging strategies.

The proposed strategies offer a comprehensive approach for the LUMEI Cosmetics Company to enhance their packaging strategy. By focusing on eco-friendly materials, innovative design, transparent marketing, sustainability as a brand element, intelligent pricing, and customer engagement, the company can not only meet consumer expectations but also drive sales performance. These recommendations are tailored to align with the insights gathered from the consumer data, ensuring relevance and effectiveness in the context of the cosmetics industry.

## **Chapter 5 Conclusion and Recommendation**

### **5.1 Conclusion**

The purpose of this study was to address the problem of gradual decline of cosmetics sales. This research was driven by two primary objectives: firstly, to identify the key factors of sustainable packaging that impact consumer purchasing decisions; and secondly, to provide actionable strategies for improving LUMEI Cosmetics Company's packaging to enhance sales performance.

In achieving these objectives, the research provided comprehensive insights into the role and impact of sustainable packaging in the cosmetics industry. The data analysis, as detailed in Chapter Four, revealed significant findings. It became evident that consumers place a high value on the features and quality of sustainable packaging. This preference significantly influences their purchasing decisions, confirming the first hypothesis of the study. This insight is crucial, as it underscores the importance of product characteristics, such as eco-friendly materials and innovative design, in shaping consumer behavior.

Furthermore, the study also affirmed the second hypothesis, highlighting the substantial impact of marketing and communication strategies on the effectiveness of sustainable packaging. The research showed that how a company communicates its commitment to sustainability and the specifics of its packaging can profoundly influence consumer perception and, consequently, their purchasing decisions.

The conclusions drawn from this research provide a clear resolution to the initial problem presented. By thoroughly understanding the key factors that drive consumer preferences towards sustainable packaging and offering targeted strategies for the LUMEI Cosmetics Company, the study successfully addressed the need to enhance the effectiveness of sustainable packaging strategies in the cosmetics industry. The findings of this research not only provide valuable insights for the LUMEI Cosmetics Company but also offer broader implications for the cosmetics industry as a whole. The study emphasizes the need for a strategic approach that combines product innovation with effective marketing to leverage the growing consumer demand for sustainability.



In conclusion, this research contributes significantly to the field of sustainable packaging in the cosmetics industry. The comprehensive analysis and strategic recommendations offer a roadmap for companies to align their packaging strategies with consumer expectations and market trends, ultimately leading to improved sales performance and a stronger commitment to environmental responsibility.

## **5.2 Recommendation for future**

The findings of this study, while providing substantial insights into the role of sustainable packaging in consumer purchasing decisions and its impact on sales performance, also open avenues for further investigation. To enhance the understanding and practical application of these results, future studies could delve deeper into various aspects highlighted by this research.

One potential area for future research is the exploration of long-term consumer behavior trends concerning sustainable packaging. This study provides a snapshot of current preferences and attitudes, but consumer behavior is dynamic and can evolve over time. Therefore, longitudinal studies could offer valuable insights into how these attitudes change and what factors contribute to such shifts. Understanding these trends would be instrumental for companies in adapting their strategies to evolving consumer preferences.

Another aspect worth exploring is the specific causes behind the effectiveness of different sustainable packaging features. While this study identified key factors influencing consumer decisions, further research could dissect these factors to understand better why certain materials, designs, or marketing messages resonate more strongly with consumers. This deeper understanding could enable more targeted and effective packaging strategies.

The methodological approach of this study, primarily quantitative, leaves room for a more qualitative exploration of consumer perceptions. Future research could employ focus groups or in-depth interviews to gain richer, more nuanced insights into consumer attitudes towards sustainable packaging. This qualitative approach could uncover underlying motivations and barriers that quantitative methods might not fully capture.

Considering the rapid advancements in packaging technology and materials, future studies could investigate the impact of emerging sustainable packaging innovations on consumer behavior and sales performance. With the field of sustainable packaging continually evolving, staying abreast of these developments and understanding their implications is crucial for businesses.



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## Appendix

Thank you for participating in our survey. Your feedback is important in understanding consumer preferences in the cosmetics industry, particularly regarding sustainable packaging. This survey will take approximately 5 minutes to complete. Your responses will be kept confidential and used solely for academic research purposes.

1. **Age Group:**

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65 or older

2. **Gender:**

- Male
- Female
- Non-binary/Third gender
- Prefer not to say

3. **Region:**

- North America
- Europe
- Asia-Pacific
- Latin America
- Middle East & Africa

4. **How often do you purchase cosmetics products?**

- Daily
- Weekly
- Monthly
- Rarely
- Never

5. **What factors do you consider most when purchasing cosmetics?**

(Select up to 3)

- Brand
- Price
- Quality
- Packaging
- Ingredients
- Reviews/Recommendations
- Environmental Impact

**6. How important is sustainable packaging to you when purchasing cosmetics products?**

- Very Important
- Somewhat Important
- Neutral
- Not very important
- Not important at all

**7. Which aspects of sustainable packaging are most appealing to you? (Select up to 2)**

- Biodegradable materials
- Minimalistic design
- Recycled materials
- Non-toxic inks and dyes
- Reusable packaging

**8. Do you think the quality of sustainable packaging is comparable to traditional packaging?**

- Yes
- No
- Unsure

**9. How do you usually learn about a cosmetic product's packaging sustainability? (Select all that apply)**

- Product labels
- Brand's website
- Social media
- Advertising
- Word of mouth

**10. How likely are you to purchase a product if its sustainable packaging is prominently advertised?**

- Very likely
- Somewhat likely
- Neutral
- Unlikely
- Very unlikely

**11. Do you think that marketing of sustainable packaging influences your perception of the brand?**

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Thank you for taking the time to complete this survey. Your input is valuable in shaping a better understanding of consumer behavior in the cosmetics industry regarding sustainable packaging.

