A Work Project presented as part of the requirements for the Award of a Master's Degree in Management from the Nova School of Business and Economics.

UNDERSTANDING CONSUMER AWARENESS AND ADOPTION OF CIRCULAR ECONOMY MODELS IN SUSTAINABLY PACKAGED BEAUTY PRODUCTS AMONG GEN Z AND MILLENNIALS

[CONSUMER'S TAKE ON SUSTAINABILITY IN THE BEAUTY INDUSTRY]

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Understanding consumer awareness and adoption of circular economy models in sustainably packaged beauty products among Gen Z and Millennials.

Abstract

This paper presents strategic recommendations to promote sustainable packaging and circular economy practices in the beauty industry, based on insights from Gen Z and Millennials. The findings indicate that consumers are moderately familiar with circular economy concepts, with Millennials displaying higher familiarity than Gen Z. Sustainability is valued, but its importance decreases in actual purchase behavior. The research identifies barriers to adopting sustainably packaged products and emphasizes the need for consumer education, improved availability, and transparent practices to build consumer trust. Five strategic recommendations are proposed to promote sustainability and circularity in the industry.

Keywords

Sustainability, Circular Economy, Sustainable Packaging, Gen Z and Millennials

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1 International Business Project

1.1 Background

1.1.1 Client Overview

Founded in 1926, Kearney (K) is a global consulting partnership that operates in more than 40 countries, serving more than three-quarters of the Fortune 500 companies, as well as governmental and non-profit organizations. Combining various service practices with deep industry expertise, Kearney is able to provide consulting services to companies operating in different industries and facing a wide range of challenges. The client is represented by a Partner in the Consumer Goods and Retail practice, expert in the Beauty and Personal Care Industry, and on the Austrian side by a Manager, an Associate and SBA.

1.1.2 Challenge and Relevance for the Organization

The IBP aims to identify growth opportunities for the beauty industry (BI) by addressing its current challenges. These challenges are interrelated and include evolving consumer habits due to increased digital access and reduced disposable income, an economic crisis with rising inflation and energy issues, and SC disruptions heightened by Covid-19, geopolitical issues, and climate change. For companies seeking to incorporate sustainability into their portfolio, the attitude-behavior gap poses a challenge (Gupta et al., 2006; Wagner, 1997). However, these challenges also present opportunities for beauty players to embrace a sustainability paradigm shift: regulators and consumers are pushing for product redesign and industry-wide rethinking. Consumers are also increasingly conscious and seek informed purchase decisions, valuing storytelling and honest communication from brands. To capitalize on these opportunities, BI players need to understand how to effectively connect with consumers in order to drive sales.

In this context of high potential related to a sustainability shift, and within the scope of the Consumer Industries and Retail practice, Kearney aimed to gain initial knowledge and expertise about consumer's take on sustainability in the BI.

Upon indication of the client, the scope of the research was focused on the Face category (Color Cosmetics and Skin Care) within the BI. Looking at the various stages of the value chain of beauty players, among the ones that have the most sustainability impact, the focus of the project was placed on packaging.

1.2 Project Overview

1.2.1 Project Goal

The project aimed to research consumers' understanding and preferences regarding sustainability in the BI. It sought to address multiple topics that are still unanswered: what different consumer groups understand by the term "sustainable beauty" and what sustainability aspects they value most, to what extent sustainability drives purchasing behavior, and how much the attitude-behavior gap is prevalent with different consumer groups. Also, on company level, how BI players can best communicate and officiate sustainability initiatives in a trustworthy way to their consumers, which sustainability efforts consumers truly value as purchasing criteria, and what they might perceive as "greenwashing".

1.2.2 Methodology

Given the complexity and extension of the topic of sustainability, the scope of the research was narrowed down to seven research questions (RQs):

Research question	Research method	Research tool
Do the key purchasing criteria shift by product type?	Primary research	Consumer survey
Which are the key purchasing criteria of different buying personas?	Primary research Secondary research	Consumer survey Industry research
What are the consumer expectations towards sustainable packaging?	Primary research Secondary research	Consumer survey, Expert Interviews Industry research
What are consumers' sustainability behaviors?	Primary research Secondary research	Consumer survey Industry research
Who is the leading player in the industry and through which products?	Secondary research	Industry research
What is the WTP for more sustainable products per buying persona?	Primary research	Consumer survey
What is the revenue maximizing price for sustainable products?	Primary research	Consumer survey

Table 1: IBP research questions, methods and tools

The project utilized four research methods to answer these RQs, generate qualitative insights, and validate them quantitatively to develop strategic recommendations for BI players. The first step involved **industry research**, focusing on consumer insights on sustainability, packaging material assessment, market analysis, and trends analysis. The second step **narrowed down the research scope** by identifying two products (Moisturizer and Foundation), analyzing best practices through industry benchmarking, and identifying levers. **Expert interviews** in the third step provided further insights. Finally, in the fourth step, a **consumer survey** was conducted with a sample of 600 female consumers, evenly distributed across the United States (US), Germany (DE), and China (CN), who purchase moisturizer and foundation at least once a year.

1.3 Main findings and conclusions

The main findings are derived from qualitative research (i.e., industry research and expert interviews), and from quantitative research (i.e., consumer survey).

1.3.1 Qualitative Research

Qualitative research, both primary and secondary, was carried out in order to gather insights that would serve as a basis for quantitative research.

The industry research provided secondary research insights on various aspects of sustainability in the BI. Consumer insights revealed a growing willingness to prioritize sustainability over attractiveness and secondary packaging (second layer of packaging applied to the product after primary packaging layer). Glass and PCR (post-consumer recycled) materials were preferred for packaging, while paper, aluminum, and plastic were least favored (Global Cosmetics Industry 2022; Project team analysis). For packaging material assessment, secondary research conducted on scientific papers indicated that paper, PCR, and aluminum are recommended due to their recyclability and lower emissions. Glass, although infinitely recyclable, has high energy input during production and contributes to greenhouse gas emissions during transportation. The

market analysis revealed packaging as a significant issue in the BI, with approximately 120 bn units produced annually, with single-use plastic being a major concern. Leading industry players (See Appendix 2) are now prioritizing sustainability in their strategies, especially in high-end brands, by incorporating refillable options such as pods, pouches, and insertable refill sets. The industry is witnessing "Circularity 2.0" trends, where smaller companies and researchers are exploring innovative, sustainable product reinventions, including the development of a mono-material pump.

Expert interviews provided valuable insights into company perspectives on the risks associated with adopting sustainable packaging solutions, as well as the role of both new and existing materials in addressing climate change.

1.3.2 Quantitative Research

Survey results reveal that consumer preferences and behaviors vary across different countries (CN, DE, US) and age groups (Gen Z, Millennials), but not across the analyzed products.

A Gabor Granger Analysis (GG) was used to assess WTP for refillable versus non-refillable products without social desirability bias. Overall, the GG revealed that consumers are generally not willing to pay more for refillable products in both moisturizers and foundations. However, in CN, Gen Z consumers exhibit higher WTP for both options compared to the sample average, while Millennials show lower or similar WTP. Conversely, in DE, Gen Z consumers display lower than average WTP for both options, while Millennials have higher than average WTP. In the US, Gen Z consumers have higher than average WTP for moisturizers (both refillable and non-refillable) but low WTP for foundations (both options), while Millennials have higher than average WTP for both. As for WTP for refills, most consumers across markets and age groups are willing to pay approximately 70% of the initial product price, whereas market research indicates that refills on average cost 82% of the initial product. Consumers value sustainable packaging factors such as the ability to refill/reuse and ease of recycling the most.

The survey analyzed consumers' spending on moisturizers and foundations, as well as their WTP for more sustainable options. Gen Z consumers spend less than Millennials on these products. The correlation analyses revealed that customers who spend more on skincare and makeup each month are more willing to invest in sustainably packaged products. Furthermore, consumers who actively engage in sustainable activities also show a greater WTP for sustainable packaging. Pump bottles are the preferred packaging format for both moisturizers and foundations, with ease of use and hygiene being crucial factors in consumers' packaging preferences globally. Despite some differences between ages and countries, PCR, paper, and glass consistently rank as the top three sustainable materials among consumers.

1.4 Strategic Recommendations

Three strategic recommendations were developed, building on four different dimensions (packaging type, price, material and localization) (See Appendix 3).

(1) The **"make the local consumer happy**" strategy involves creating moisturizer/foundation packaging in a pump bottle format and tailoring the material choice to suit local consumer preferences. Hence, using glass in DE – possibly incorporating refill stations to distribute the higher emissions across multiple usage cycles -, and PCR in US and CN. The sustainable version should be priced higher, and efforts should be made to maximize sustainability of its packaging, such as incorporating a recyclable mono-material pump (unlike traditional pumps).

(2) The "**compromise**" strategy involves creating moisturizers and foundations packed in PCR bottles with pumps for various markets to streamline packaging and lower expenses. PCR is chosen as a balanced solution based on qualitative research, customer preferences, and industry standard. Efforts should be made to maximize packaging sustainability, such as incorporating a recyclable mono-material pump (easily recyclable, unlike traditional pumps).

(3) The "**re-educate the consumer**" strategy uses paper (most sustainable material) bottles with pumps (preferred packaging format), as the best combination for the consumer taste and

the environment, and in parallel aims at educating the consumer on the benefits of using this material. The packaging will be made as sustainable as possible, e.g. by implementing a recyclable mono-material pump (unlike traditional pumps).

Further deep dives on refills and demographics were also included in the strategic recommendations as roadmaps for future implementation:

(4) The deep dive on **refills** highlighted a set of recommendations for companies interested in implementing refillable options of their products. While consumers may not show a WTP more for it, refillable packaging remains appealing, and implementing it would benefit brand image and brand equity. To boost profitability, re-education on refillable packaging benefits is crucial to increase WTP across all three markets. Additional recommendations are detailed in the table below.

Refillable packaging features	Packaging characterized by ease of use and increased hygiene (advertise this on packaging/with marketing)	
Refillable packaging materials	PCR and glass are recommended, and choice between them should be based on branding, SC and availability for chosen format.	
WTP for refills	Most consumers only WTP 70% of initial product price for refill (vs. current average around 82%). Refill can only be implemented profitably on products with high margins	
Refill features	Make refill easy to recycle and reduce packaging to the minimum (advertise this on packaging/with marketing)	
Packaging formats	Moisturizers: Refillable pump bottle and jar formats	Foundations: Refillable pump bottle formats

Table 2: IBP additional recommendations for refillable packaging

(5) Regarding **demographics**, companies willing to implement sustainable packaging should focus on Gen Z (14-26) for branding to build early brand loyalty, considering their potential as consumers of the future and their interest in sustainable and refillable options. For profitability, companies should focus on Millennials (27-40), as they have the best combination of sustainability awareness, purchasing power, and interest in refillable options. Gen X (41-56) can be neglected as they generally show little interest in sustainable options and have low WTP in most cases.

2 Individual Research

2.1 Introduction to WP

2.1.1 Overview of Research Problem

In 2022, the world experienced the direct impacts of climate change through extreme heat, droughts, wildfires, heavy rains, and floods. Sea surface temperatures and glacier melt reached record levels (WMO, 2023). As a result, sustainability has become imperative for companies aiming to remain relevant in the future, driven by initiatives like the ESGs, the Paris Agreement, and increased awareness among younger generations, accelerated by the pandemic (EY-Parthenon, 2021; Simon Kucher, 2022). The BI's environmental impact is substantial, primarily driven by packaging, harmful ingredients, and water use. Terracycle (2022) reports that globally, the BI generates over 120 bn units of packaging annually, with most of it being non-recyclable. Moreover, the color cosmetics and skincare markets are projected to grow at CAGR of 5% and 6% respectively from 2022 to 2026 (Euromonitor, 2022), exacerbating the pollution issue, unless significant changes are implemented by industry players. Many companies are actively addressing the sustainability challenge through packaging innovation, sustainable sourcing, and emission reduction goals (CEMS IBP Industry Analysis). Despite ongoing efforts from industry players and clarity about sustainability's importance for consumers (NielsenIQ, 2023), the IBP revealed a significant lack of understanding of consumer awareness and preferences related to sustainable choices in the BI.

Additionally, IBP findings indicated high consumer interest in refillability/reusability, showcasing their willingness to make such purchases. Studies by McKinsey (2020), WGSN (2023), and Trivium Packaging (2023) report that the percentage of consumers willing to pay more for products with sustainable packaging ranges from 60% to 82%, and this trend has been steadily increasing in recent years. Furthermore, one of the main trends and models that have had significant growth in the BI is that of CE. According to the European Union, "a circular

economy is a system which maintains the value of products, materials and resources in the economy for as long as possible, and minimizes the generation of waste. This means a system where products are reused, repaired, remanufactured or recycled". Consumer awareness and adoption of CE principles in the BI have surged in recent years, driven in part by the pandemic's impact on consumer behavior, leading to a focus on self-care, "less is more", and awareness of sustainability in beauty products. However, there is still uncertainty about the extent to which Gen Z and Millennials are knowledgeable about and value CE practices in the BI.

2.1.2 Main Research Objectives

Following from the problem definition, this study aims to (1) validate the extent to which people are aware of what CE is, and (2) explore their current relationship with sustainably packaged beauty products related to CE models. For this purpose, a literature review is produced. Based on its findings, to address two RQs, 7 HPs are raised and tested quantitatively through a consumer survey, the results of which will be reported in the Results and Discussion chapter. Finally, Conclusions and Recommendations will be presented.

2.2 Literature Review

Sustainability has emerged as a crucial concept across industries, including the beauty sector. This literature review will first produce an understanding of the research problem, exploring the definition of sustainability and examining its current impact on the BI, analyzing Gen Z and Millennials' attitudes towards sustainability, and consumer's drivers for sustainable purchase intentions. It will then narrow the scope to CE models, highlighting their relevance in promoting sustainability in the BI, and finally illustrate the status quo of the adoption of those models through sustainably packaged products in the BI.

2.2.1 Sustainability and the Beauty Industry

For the scope of this research, sustainability is considered focusing on the environmental side (circular and ecological), as "development that meets the needs of the present without

compromising the ability of future generations to meet their own needs" (United Nations, 1987). Sustainability is currently one of the most relevant topics worldwide and an increasing concern for consumers, leading to numerous research efforts and a surge in the availability of eco-friendly products (Squires, 2019).

The BI has transformed significantly in recent years due to its high environmental impact and to increased awareness of and demand for sustainable practices. Brands are acknowledging their environmental footprint and taking measures to reduce carbon emissions, water usage, and waste generation through sustainable sourcing, **eco-friendly packaging**, and lower carbon footprints (CEMS IBP Industry Analysis). Gen Z and Millennials are major drivers of this demand for sustainable beauty products, seeking eco-friendly solutions, cruelty-free products, and transparent SCs. In response, brands are introducing sustainable product lines and engaging consumers through educational and transparent initiatives (WGSN, 2022).

Gen Z and Millennials are the two generations at the forefront of the consumer market. Thus, understanding the drivers behind their eco-friendly choices and purchases is crucial for all stakeholders in the beauty industry. This will be examined in the following section.

2.2.2 Gen Z and Millennials' Attitudes towards Sustainable Consumption

Gen Z and Millennials exhibit considerable interest in sustainability behaviors. EY (2021) reveals that 53% of Gen Z and Millennials prioritize sustainability when making purchase decisions, indicating their awareness of the environmental impact of their choices. However, many of them lack access to products that align with their evolving values. Additionally, 68% of these consumers express a desire for more information to make better sustainable choices, demonstrating their openness to learning and adapting their behaviors (EY, 2021).

Studies also reveal divergent views on the role of companies in sustainability. EY (2021) highlights that Gen Z and Millennials expect companies to take impactful actions for positive social and environmental outcomes, whereas PDI Technologies (2023) identifies growing

dissatisfaction and mistrust in companies' handling of sustainability efforts. Furthermore, PDI Technologies (2023) uncovers the challenge faced by many consumers, particularly Gen Z and Millennials, in identifying environmentally friendly brands. This indicates a demand for clearer communication and transparency from companies about their sustainability efforts. Gen Z and Millennials display a significant WTP more for sustainable products, as they recognize the perceived benefits of environmentally friendly consumption (Yazdanpanah et al., 2015; Sodhi et al., 2017; Kovacs and Keresztes, 2022). PDI Technologies (2023) corroborates this, reporting that 77% of Gen Z and 72% of Millennials are open to paying extra for sustainable options. However, Gomes et al. (2023) suggest that the WTP is influenced by various factors, including environmental concerns, green perceived quality, and green perceived benefits. They also caution against setting very high prices for green products, suggesting that affordability remains a significant concern for these age groups. Hence, while the data consistently shows a WTP for sustainability, it is essential for brands to understand the factors behind this behavior. The next section will explore consumer drivers for sustainable purchase intentions to further comprehend the role of CE in the beauty industry BI.

2.2.3 Consumers' Adoption Motivations and Barriers

Consumer behavior towards sustainable products is influenced by various decision-making and psychological factors (Rocca et al., 2022). According to the Theory of Planned Behavior (Ajzen, 1991), consumers' intention to adopt environmentally friendly behavior is shaped by their attitudes, subjective norms, and perceived behavioral control. However, specific determinants of green purchase intent vary across studies. Chen et al. (2016) and Fu et al. (2013) emphasize that green purchase attitudes, subjective norms, and perceived behavior control positively affect green purchase intentions, with product knowledge playing a moderating role. Gomes et al. (2023) link young consumers' green product consumption to environmental concerns, green future estimation, and green perceived quality. In contrast,

Prakash et al. (2019) associate purchase intent with personal reasons, environmental concern, and price. Wang et al. (2019) demonstrate that consumers with higher green product knowledge have more confidence about the environmental protection attributes and effects of green products, thus increasing their trust in green products, as well as the possibility of purchase. Also, the higher the knowledge about green products, the higher the belief that using green products can produce positive results for the environment, the higher the purchase of green products. However, there are contrasting findings regarding the role of price as a determinant. Some studies suggest that higher perceived prices positively moderate the relationship between green trust and purchase intention (Wang et al., 2019), while others indicate that high prices can hinder green purchasing behavior (Barber et al., 2014; Step et al., 2014). Therefore, to understand consumers' green behavior, further research is needed to identify and address the various factors influencing their decision-making processes. Zhu et al. (2022) have identified barriers to purchasing refillable/reusable products, which include using the products, returning empty packaging back to the retailer or designated station for refilling, unavailability of refills/replacements, and higher packaging costs.

After discussing the need for sustainability, the environmental impact of the BI, Gen Z and Millennials' attitudes, and drivers for sustainable purchases, the next section will explore CE in the BI as a promising solution to mitigate climate change.

2.2.4 Circular Economy and its Relevance for the Beauty Industry

According to the Ellen MacArthur Foundation, CE is based on three key principles: eliminate waste and pollution, circulate products and materials, and regenerate nature. It moves away from the traditional linear "take-make-waste" model and focuses on creating closed-loop systems where resources are continuously reused, recycled, or repurposed. Hence, CE models prioritize waste reduction and efficient resource utilization through recycling, upcycling, and product life extension strategies (WGSN, 2023). The Circularity Gap Report 2023 by CGRi

and Deloitte indicates that the current global economy is only 7.2% circular, leaving more than 90% of materials wasted or unusable for years. Achieving 17% circularity could cut 39% of global emissions by 2032, providing substantial environmental benefits in the medium and long term. Moreover, implementing a CE model provides benefits for businesses such as higher profitability and resilience against material price fluctuations (European Commission, 2020).

In the BI, key focus areas of CE are:

(1) **closing the loop**, by identifying all the opportunities for waste-creation in the SC, and finding a use and add value to the waste generated in the SC (e.g., upcycling byproducts)
(2) **regenerating practices**, from regenerative farming to upcycled byproduct ingredients
(3) **moving away from single-use plastics**, prioritizing monomaterial packaging, and incorporating solutions such as reducing, reusing, refilling and recycling
(4) **avoiding landfill**, which is the ultimate goal of circularity, by designing for disassembly and remanufacture when some components cannot be recycled
(5) **tailor the circularity strategy to specific markets and SCs**: countries differ depending on their market, infrastructure, economy, social scores and ecological footprint (WGSN, 2023)

Table 3: Key focus areas of CE

Therefore, CE models promote resource efficiency, minimize waste generation, and reduce reliance on virgin materials. Additionally, they align with consumer values, with 72% of consumers wanting to adopt circular practices (Capgemini, 2021), foster brand loyalty and enhance brand reputation (European Commission, 2020).

One of the most impactful areas where the principles of the CE can be applied in the BI is in the development of eco-friendly packaging. This is explored in the next section.

2.2.5 Eco-friendly Packaging: Status Quo of the Beauty Industry

Narrowing the scope on **eco-friendly packaging** within the focus areas of CE, there are two primary methods for achieving sustainable and circular packaging: the design approach and the materials approach. These approaches work together, meaning that eco-design packaging can incorporate the utilization of materials that have minimal environmental impact (Cinelli et al., 2019; Wandosell et al., 2021). Companies are exploring innovative materials solutions, including the use of biodegradable, recyclable, refillable and returnable packaging materials.

Firms leading innovation in this sector are also introducing packaging made from regenerative biomaterials (e.g. hemp, seaweed, mycelium). Brands are minimizing packaging and investing in sustainable designs (WGSN, 2023; Zhu et al., 2022). According to 2022 data, all main players in the industry employ at least 39% of reusable, recyclable or compostable packaging (Ellen MacArthur Foundation; CEMS IBP Industry Analysis).

Some brands embracing circularity in their products and processes include Fenty Skin, Aveda, and Lush. Fenty Skin offers select products in refillable packaging made of a percentage of PCR plastic, promoting waste reduction. Aveda's "Full Circle Takeback Program" encourages customers to return used packaging to participating salons to be sent to its recycling partner and used to create new packaging, thus closing the CE loop. Lush's "Lush Pot Program" allows customers to return empty product containers to be cleaned and reused, contributing to the reduction of single-use plastic waste.

Expert interviews conducted within the IBP revealed that multinational corporations are facing challenges in adopting CE models due to complexities in their SCs and internal processes. Looking at the three R's framework (reduce, reuse, recycle), while recyclability is commonly implemented, incorporating reusability and reducing packaging poses difficulties for many companies (Mikroni et al., 2022). Profitability is a significant concern as corporations seek to integrate circular practices into their existing portfolios (CEMS IBP Industry Analysis).

Despite all the above-mentioned achievements and efforts from industry players, there is no international standard for the BI, resulting in companies setting their own rules and goals, leading to confusion among consumers and greenwashing. Hence, the current efforts by brands and retailers have been inconsistent and have not significantly addressed the waste and pollution generated throughout the SCs, manufacturing processes, and shipping. To bridge this gap, regulations and certifications are emerging to establish uniformity and combat

greenwashing. To create a meaningful and effective impact, the BI needs a collaborative approach with shared goals, a global strategy, and standardized regulations (CNN, 2023).

2.3 Conceptual framework and Hypotheses

2.3.1 Conceptual Framework

The literature review highlights the pressing sustainability challenge and the potential of CE as a solution, particularly with regards to eco-friendly packaging. However, it is unclear whether Gen Z and Millennials are well-informed about the characteristics and benefits of CE, and whether those consumers are exhibiting the behavior they expect peers to have in terms of purchase and consumption of sustainably packaged products.

As such, two RQs have been formulated:

(RQ1) To what extent are Gen Zs and Millennials educated in what concerns circular economy?

(RQ2) What is the relationship of Gen Zs and Millennials with sustainably packaged beauty products related to CE (usage preferences) and what are the drivers of their consumption that are related with sustainability?

2.3.2 Hypotheses

Based on the existing body of knowledge given by the IBP insights and the existing literature, 7 hypotheses have been developed to be validated and quantified through the consumer survey.

RQ1		RQ2				
HP1	**HP2**	**HP3**	**HP4**	**HP5**	**HP6**	**HP7**
The majority of Gen Z and Millennial consumers will be familiar with the concept of CE, but their level of understanding varies widely.	A larger proportion of respondents who have completed higher education will be familiar with the concept of CE compared to those with lower education levels .	Sustainability is important for Gen Z and Millennials, but quality and price are the top-ranked factors influencing purchase behavior.	Despite being familiar with CE and its benefits, consumers don't purchase beauty products with circular packaging very often, mainly due to lack of availability and incentives (monetary and non-monetary).	Gen Z and Millennials expect companies to take the lead on shaping a more sustainable future, but there is very low trust on companies when they say they are making efforts to reduce climate change.	Gen Z and Millennials are WTP a premium for sustainably packaged beauty products that align with CE principles, but there is a significant number of people who is price sensitive.	Consumers find refillable/reusable packaging very appealing, and most of them have purchased refillable/reusable beauty products before. The main motivation for purchase is environmental concern.

Figure 1: Overview of research methodology and hypotheses

2.4 Methodology

The chosen research philosophy for addressing the RQs and validating the HPs is a **positivist** one, focusing on observable and measurable phenomena to produce objective knowledge (Remenyi et al., 1998). Positivist research methods rely on quantitative data collection and analysis to allow for systematic observation and identification of patterns or relationships (Saunders et al., 2007). The methodology used in this study adopts a **conclusive** and **descriptive** approach, enabling drawing conclusions, establishing causal relationships, and testing HPs. The data is collected through an online survey, allowing for controlled sampling and producing reliable and generalizable results applicable to broader populations or contexts (Evans and Mathur, 2005; Pride et al., 2018). From June 18th to June 27th, 2023, 123 responses from Gen Z and Millennials were gathered. To ensure unbiased participation, the survey was distributed across different social media platforms. To incentivize responses and remove any language barrier, the survey was made available in both English and Italian (expected to be the most represented country). Data analysis utilized descriptive and inferential statistical techniques, including t-tests, analysis of means and variance, and contingency analysis, depending on the types of variables examined. Microsoft Excel was used for all analyses, and the quantitative findings were used to test the 7 HPs and answer the RQs.

2.5 Results and Discussion

The survey sample includes participants from various demographic backgrounds, including age, gender, education level, nationality, and occupation. Generation Z represents 60% of the respondents, while Millennials make up the remaining 40%. The majority of respondents identified as female (76%), while 24% identified as male. The education level of the sample is diverse, with the most prevalent categories being High School (27%), Bachelor's degree holders (21%), and Master's degree holders (48%). The survey received responses from 14 different nationalities, with Italy being the largest proportion (57%), followed by Germany

(21%), Portugal (9%), Austria (5%) and Spain (5%). Students comprise the largest occupational group (57%), followed by employed individuals (36%), self-employed individuals (4%), and unemployed individuals (3%). These characterizations provide insights into the composition of the survey sample, enabling a better understanding of the data collected and facilitating the analysis and interpretation of results (See appendix 4).

2.5.1 Research Questions and Hypotheses Testing

To answer **RQ1**, "To what extent are Gen Zs and Millennials educated in what concerns circular economy?", two HPs were formulated: HP1 and HP2.

(HP1) The majority of Gen Z and Millennial consumers will be familiar with the concept of CE, but their level of understanding varies widely.

The survey indicates that respondents showed higher familiarity with the concept of CE, with a mean of 6.1 and a median of 7 out of 10. However, their knowledge of CE principles and benefits was lower, with a mean of 4.8 and a median of 5 out of 10. To verify the truthfulness of those results, Q3 was established to test consumer's actual knowledge (Q2), and the analysis of the responses almost confirmed the findings from Q2 (only 7 Q2 responses were adjusted). Therefore, those results reveal that **HP1 is confirmed**: there is medium-high familiarity with CE as a concept, but the levels of knowledge of its benefits and principles are lower and vary evenly between the scores of 2 and 7 across the population. The t-test shows a statistically significant difference in means and a high correlation between the two questions. Additionally, when considering age demographics, Millennials demonstrate higher familiarity compared to Gen Z, with a statistically significant difference in the means (See Appendix 5).

(HP2) A larger proportion of respondents who have completed higher education will be familiar with the concept of CE compared to those with lower education levels.

The analysis of the level of education with the level of familiarity revealed that people who have completed higher education levels (i.e. Bachelor's, Master's, PhD or higher) have a higher

familiarity with CE compared to people with lower education levels, hence **confirming HP2**. The significance of this result is confirmed by a p-value lower than 0.05 (See Appendix 6).

To answer **RQ2** "What is the relationship of Gen Zs and Millennials with sustainably packaged beauty products related to CE (usage preferences) and what are the drivers of their consumption that are related with sustainability?", five HPs were formulated: HP3, HP4, HP5, HP6 and HP7.

(HP3) Sustainability is important for Gen Z and Millennials, but quality and price are the top-ranked factors influencing purchase behavior.

According to the literature review, sustainability is important for Gen Z and Millennials (EY, 2021), and this aligns with survey findings: consumers rated the importance of sustainability when purchasing beauty products with a mean and median of 6 out of 10. However, when asked about the likelihood of purchasing a beauty product specifically because it is sustainably packaged, the mean decreased to 5.3 and median to 5.5 out of 10, revealing that despite a medium-high level of importance assigned to sustainability in theory, when it comes to purchase behavior Gen Z and Millennial consumers value sustainability less on average. The t-test reveals that this means difference is statistically significant, and that there is a high positive correlation between the two questions. This was reinforced by the survey respondents' rankings of the factors influencing their decision to purchase beauty products with sustainable packaging. "Product quality and effectiveness" was the top priority, followed by "Price and affordability", and "Environmental impact", thereby **confirming HP3** (See Appendix 7).

(HP4) Despite being familiar with CE and its benefits, consumers don't purchase beauty products with circular packaging very often, mainly due to lack of availability and incentives (monetary and non-monetary).

Gen Z and Millennials show medium-high familiarity with CE, as supported by HP1. However, a significant 79% of surveyed consumers only purchase beauty products with circular packaging rarely/occasionally/sometimes. This suggests that despite awareness of CE practices

and benefits, consumers purchase beauty products with circular packaging with low frequency. The most popular factors that would encourage future purchases were increased availability, lower prices and promotional offers, and incentives for returning empty packaging, a result aligned with Zhu et al. (2022) and EY (2021). Thus, **HP4 is confirmed** (See Appendix 8).

(HP5) Gen Z and Millennials expect companies to take the lead on shaping a more sustainable future, but there is very low trust on companies when they say they are making efforts to reduce climate change.

Findings show that 93% of consumers believe that beauty brands have the responsibility to adopt circular packaging in their products. However, when asked how much they trust brands sharing their commitment to reducing climate change and making sustainable choices, the average rating and median was 5 out of 10. This shows a medium level of trust towards companies' claims around sustainability, not as low as hypothesized, hence the **HP5 is partially rejected**. Those findings align with literature on the topic (EY, 2021; PDI Technologies, 2023), despite no statistical significance found (See Appendix 9).

(HP6) Gen Z and Millennials are WTP a premium for sustainably packaged beauty products that align with CE principles, but there is a significant number of people who is price-sensitive.

The literature suggests that Gen Z and Millennials have a high WTP for more sustainable products, especially when compared to older generations (Yazdanpanah et al., 2015; Sodhi et al., 2017; PDI Technologies, 2023). The survey findings align with this, as 49% of consumers expressed being willing to pay more for a moisturizer with their desired circular packaging features. Interestingly, 45% of consumers stated that their WTP more would depend on the price difference. To assess price-sensitivity, participants were asked to rank the importance of various factors when considering purchasing beauty products with sustainable packaging. Those who listed "Price and Affordability" among their top three choices were labeled as price-sensitive, while the opposite was true for those who did not. Cross-tabulating price sensitivity

with WTP more revealed that price-sensitive consumers tended to reply, "It depends on the price difference", while non-price-sensitive consumers were more likely to reply "Yes". These results showed statistical significance, thus a substantial portion (around 50%) of consumers in the population is price-sensitive, which leads them to considering purchases only when the price is sufficiently low. These findings align with previous studies by Barber et al., 2014; Step et al., 2014, and Gomes et al., 2023. As a result, **HP6 is confirmed** (See Appendix 10).

(HP7) Consumers find refillable/reusable packaging very appealing, and most of them have purchased refillable/reusable beauty products before. The main motivation for purchase is environmental concern.

The IBP revealed that consumers are interested in refillable options and willing to pay more for them, forming the basis for HP7, which predicted a positive correlation between interest, WTP, and adoption. However, results showed that 58% of surveyed consumers had never purchased a refillable product, primarily due to the lack of available refillable options, followed by lack of awareness and information. This confirms findings from Zhu et al. (2022) and EY (2021). As a result, **HP7 is rejected** (See Appendix 11).

2.5.2 Summary of Findings

In short, concerning RQ1, the consumer survey shows medium-high familiarity with CE as a concept. Millennials display higher familiarity than Gen Z, and higher education levels correlate with greater familiarity. However, the levels of knowledge of benefits and principles of CE are lower overall, and vary across the population.

Regarding RQ2, consumers assigned medium-high importance to sustainability in theory, but with regards to purchase behavior, Gen Z and Millennials value it less on average. In fact, environmental impact ranked 3rd among factors considered when purchasing beauty products with sustainable packaging, after quality (1st) and price (2nd). Despite awareness of CE and its benefits, 79% of surveyed consumers rarely/occasionally/sometimes purchase beauty

products with circular packaging, citing lack of availability, high prices, and lack of incentives as factors affecting this frequency. While 93% believe brands have a responsibility to adopt circular packaging, overall consumer trust in companies is moderate (mean of 5 out of 10). Approximately 50% of consumers are price-sensitive when buying sustainable packaging products (and around the same amount is non-price-sensitive and WTP more). Refills were not widely purchased, with 58% never doing so due to lack of availability, awareness, and information.

2.6 Conclusions and Recommendations

2.6.1 Academic Contribution

This Master's thesis contributes to academic literature by providing specific insights into how Gen Z and Millennials understand CE and their relationship with sustainably packaged beauty products in a circular model. The study addresses a significant gap in the existing literature, as there is limited comprehensive research on the perspectives of Gen Z and Millennials towards CE in the BI. The empirical findings, obtained through a consumer survey, corroborate previous studies by EY (2021), Zhu et al. (2022), and PDI Technologies (2023), indicating that sustainability is important for Gen Z and Millennials. However, these consumers encounter challenges due to insufficient information and limited choices. The study also supports earlier research on the high expectations placed on companies to lead sustainability initiatives while revealing a prevailing lack of trust in companies' eco-friendly claims. Moreover, the research contributes to the literature by demonstrating that while Gen Z and Millennials are moderately familiar with CE, their knowledge about its principles and benefits is moderate, indicating the need for further consumer education. Additionally, the study aligns with prior research by Yazdanpanah et al. (2015), Sodhi et al. (2017), Kovacs and Keresztes (2022), showing that young generations are willing to pay higher prices for sustainably packaged products. Nevertheless, price-sensitivity remains a crucial consideration in the BI, as highlighted by

Barber et al. (2014), Step et al. (2014), and Gomes et al. (2023), who link price to consumers' intention to purchase sustainable products. The practical implications of this study lie in promoting sustainable packaging within a CE and enhancing consumer education. The research methodology, employing an online survey, serves as a potential model for future studies, and the identified limitations present promising avenues for further research.

2.6.2 Strategic Recommendations

Prior to providing specific recommendations, two **overarching suggestions** were formulated based on the accumulated knowledge from the IBP, industry research, and this study:

- While the BI urgently requires a profound sustainability shift, recommendations for brands cannot overlook profitability. Companies face the challenge of balancing sustainability goals and shareholder satisfaction. Although Gen Z and Millennials show more concern, a significant number of people overlook sustainable choices, impacting profitability on a broader scale. To address this issue, society needs comprehensive education on sustainability. Companies play a crucial role in this necessary paradigm shift: they need to serve as role models and educate consumers using their reach and the importance that their products have in consumers' lives.
- Based on the IBP and this WP, sustainability is a complex topic. While consumers aim for ethical choices, personal preferences and practicality often take precedence when commitment to sustainability is weak. Therefore, it is essential for companies to know the purchase drivers for their targets and products, and continue to showcase those drivers in marketing, packaging and communication efforts, alongside sustainability. E.g., in refills, elements like ease of use and hygiene in reusable packaging can drive purchase intention.

Five strategic recommendations are proposed for BI players:

(1) **Promote education and awareness.** Given the varying familiarity with CE among Gen Z and Millennials, and the barrier of lack of awareness, it is essential for beauty players to educate

about CE practices, sustainable packaging benefits, and the environmental impact of consumer's choices. Traditional methods like marketing campaigns and social media may not be sufficient, as results show that even the tech-savvy younger consumers express lack of awareness. Hence, consider larger-scale education efforts and campaigns, including collaborations with reliable sources like public sector or sustainability-focused organizations.

(2) **Emphasize quality and affordability**. Gen Z and Millennials value product quality and affordability in their purchasing choices. BI players should ensure sustainable packaging does not compromise product quality and is competitively priced. To cater to many price-sensitive consumers within these demographics, brands should find ways to balance sustainability and affordability. By exploring cost-saving measures through efficient SCs and partnerships, eco-friendly products can become more accessible to price-conscious consumers.

(3) **Improve availability and incentives.** The research highlights lack of availability and incentives as significant barriers to adopting sustainably packaged beauty products. To reach a broader consumer base, brands should focus on expanding refillable and reusable options beyond high-end brands. Offering incentives like discounts, loyalty programs, subscription models, or access to limited-edition products can incentivize the choice of circular packaging.

(4) **Build consumer trust through transparency.** Gen Z and Millennials expect companies to take the lead in sustainability, but trust in their claims is only moderate. To build trust, BI players should demonstrate commitment to sustainability and CE through transparent practices, certifications, and reporting. Honesty about efforts is crucial, and avoiding greenwashing is essential to maintain trust among eco-conscious consumers. **Collaborate and standardize.** Consumers' lack of trust is also attributed to the absence of an international standard for sustainability in the BI. To promote CE practices, collaboration between BI players, suppliers, manufacturers, retailers, but also institutions and policymakers is crucial. By establishing

standardized regulations and certifications, they can ensure consistency and authenticity in sustainability efforts, combat greenwashing, and drive change with greater effectiveness.

(5) **Tell the story through Marketing and Communication.** Once companies implement the recommended strategies, Marketing and Communication will play a crucial role in showcasing their efforts towards a CE and the positive impact of sustainable choices on the environment. Engage consumers through storytelling and educational content that aligns with their values, fostering a stronger connection with the brand and its sustainability mission.

2.6.3 Limitations and Further Research

This final section discusses limitations and future research directions based on the research design and outcomes obtained.

- The first identified group of limitations is centered around the choice of research method (online survey), which forms the basis to the strategic recommendations made. This method for data collection carries the risk of self-reflection bias and social desirability bias, the latter being especially common on sustainability-related topics (Gupta et al., 2006). Furthermore, it implies reliance on self-reported data, which can be subject to biases such as recall bias and response bias. The quantitative nature of the survey and the type of insights it yields could be integrated with further research based on qualitative data, e.g. interviews or focus groups, which could provide a more nuanced understanding of the RQs.
- The second identified limitation relates to sampling: 96% of respondents were European, and predominantly Italian, and the sample was relatively small (123). Hence, *Future research should aim for a larger and more diverse international sample.*
- Ultimately, a limitation of the findings is the focus that was placed on sustainable packaging within the possible manifestations of CE in the BI. Exploring the angle of ingredients could be an interesting area for further investigation.

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4 Appendices

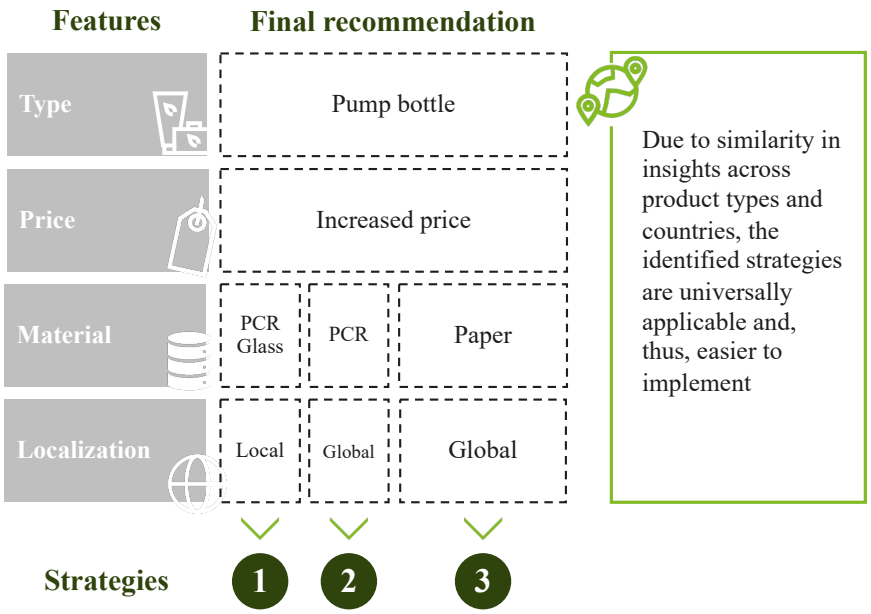
List of Appendices

Appendix 1: List of abbreviations

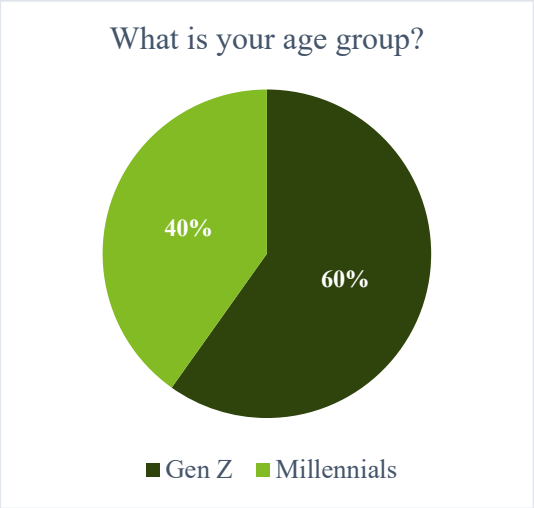
BI	Beauty industry
CE	Circular Economy
GG	Gabor Granger analysis
HP	Hypothesis
IBP	International Business Project
RQ	Research Question
SC	Supply chain
WP	Work Project
WTP	Willingness to pay

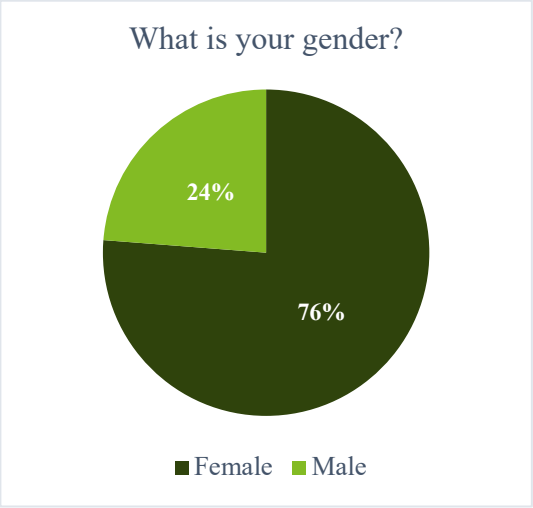
Appendix 2: IBP overview of benchmarked companies

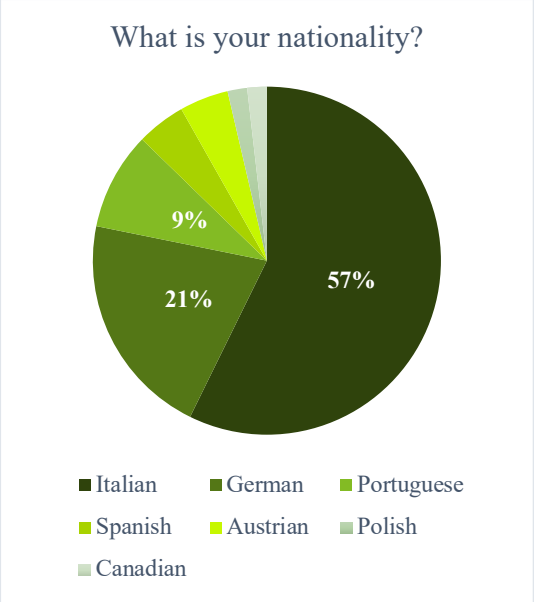
Appendix 3: IBP overview of strategic recommendations

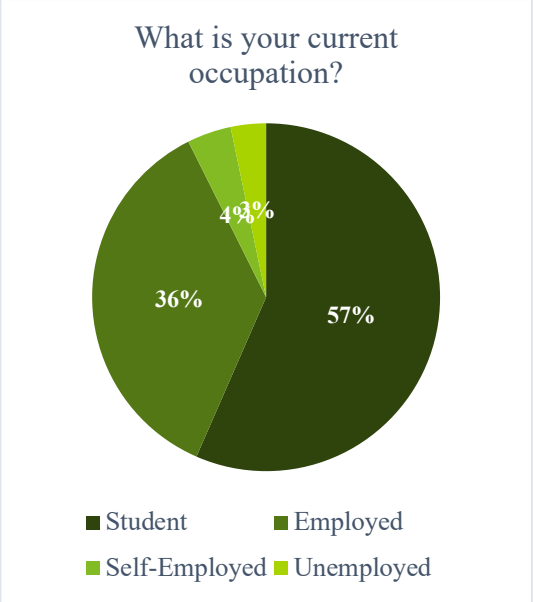


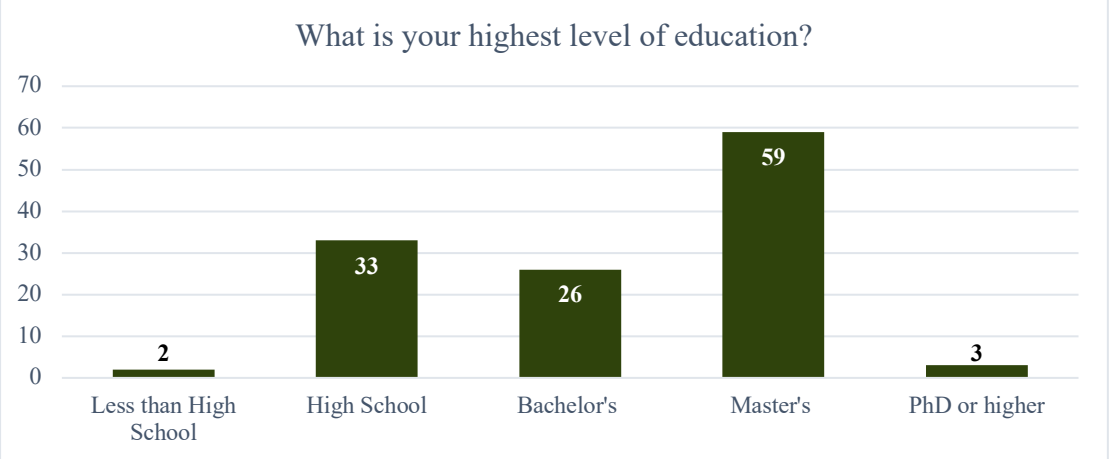
Appendix 4: General demographics insights



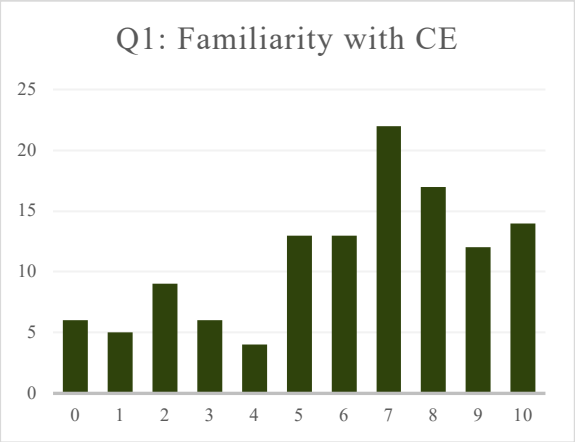


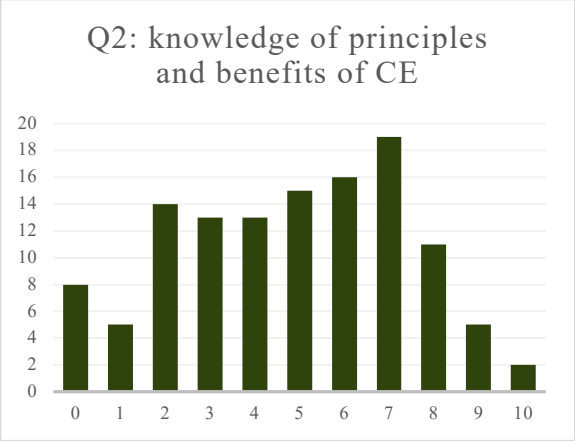


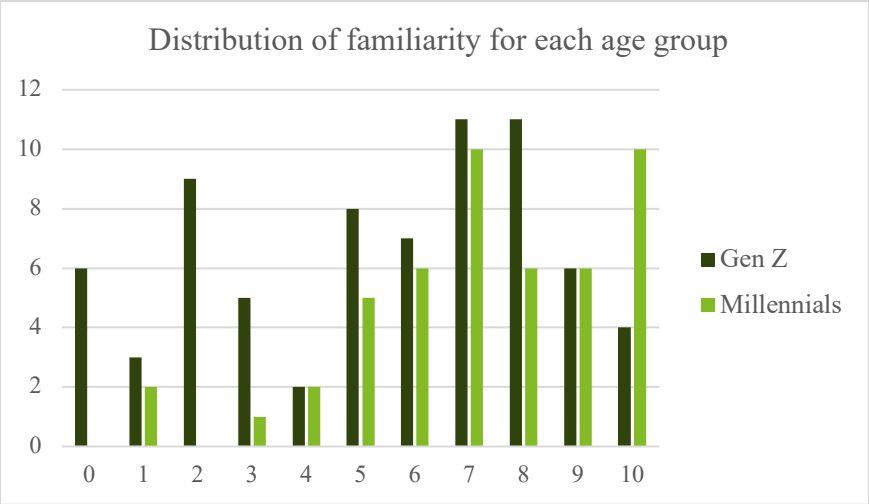




Appendix 5: HP1 key survey findings







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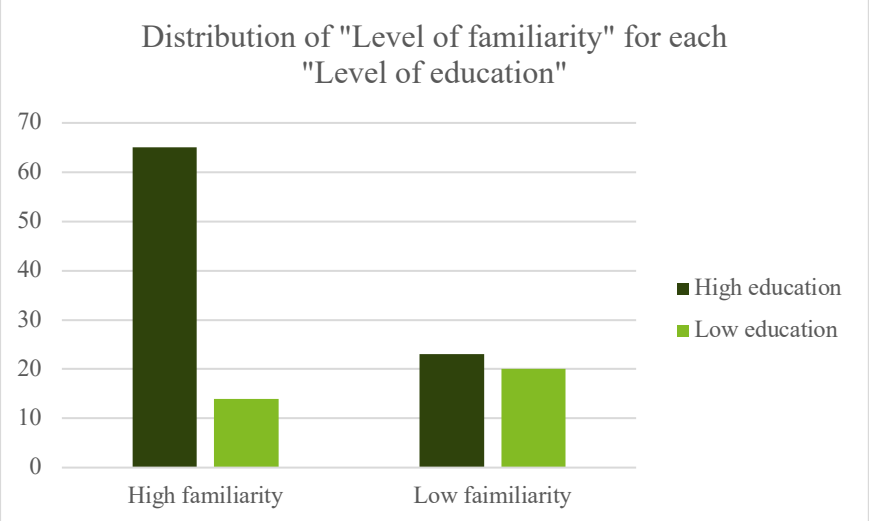

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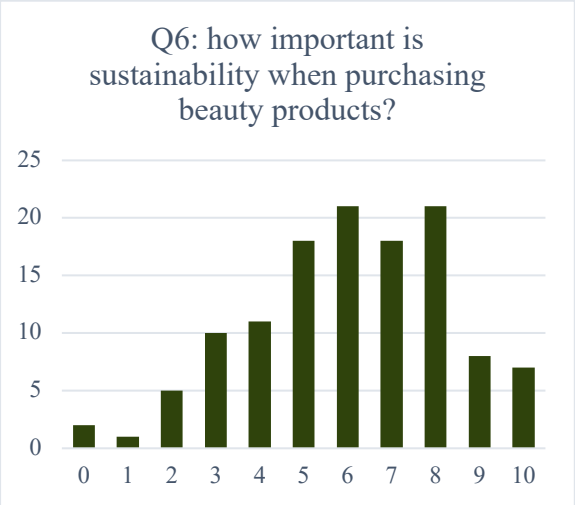
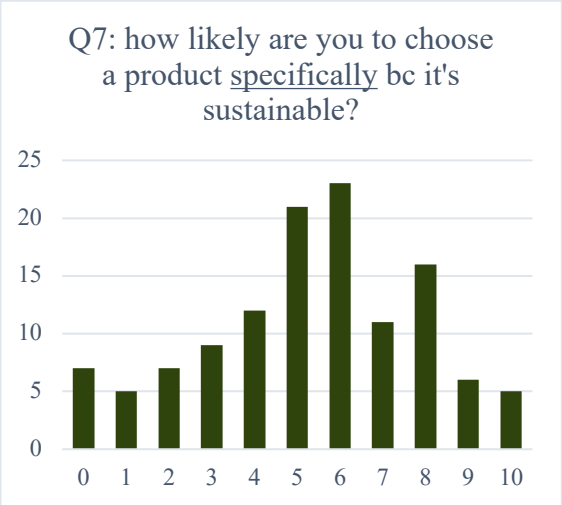
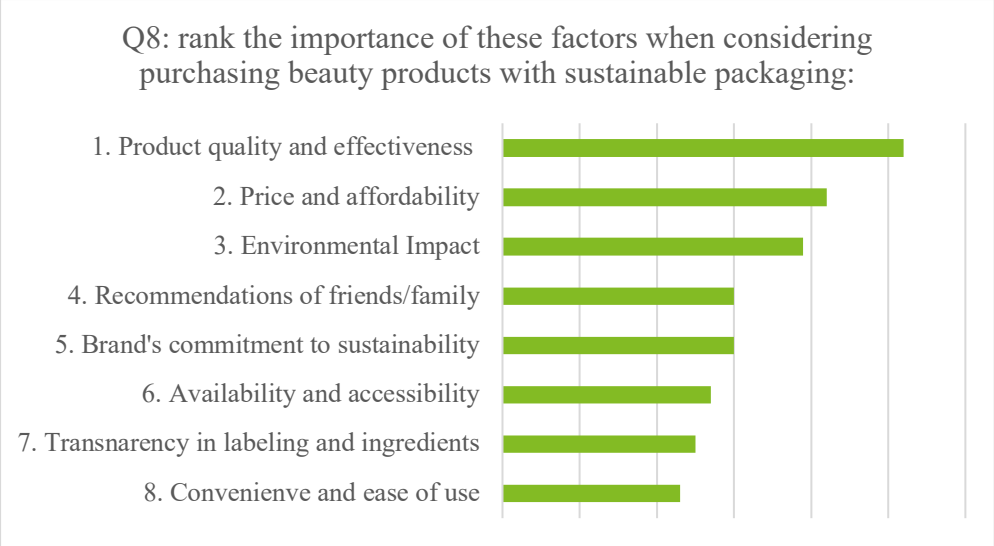
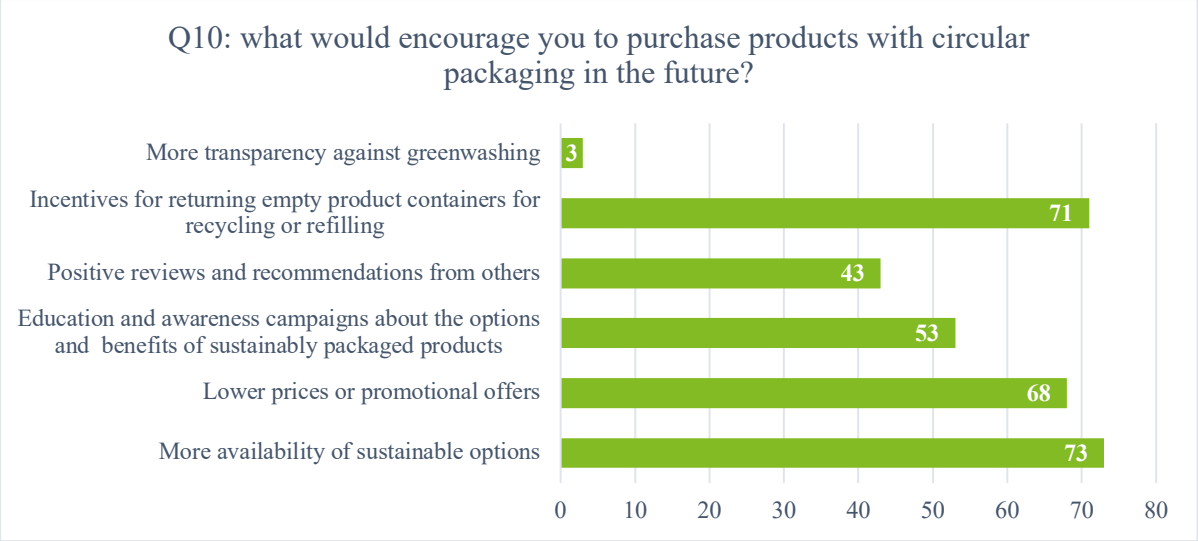


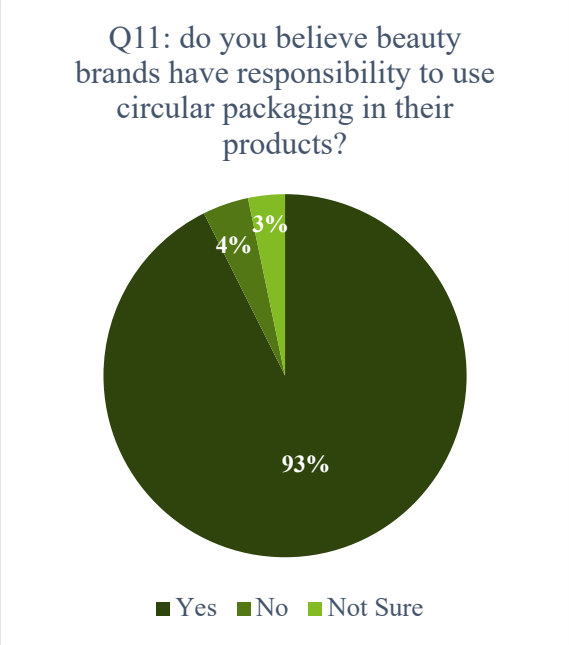


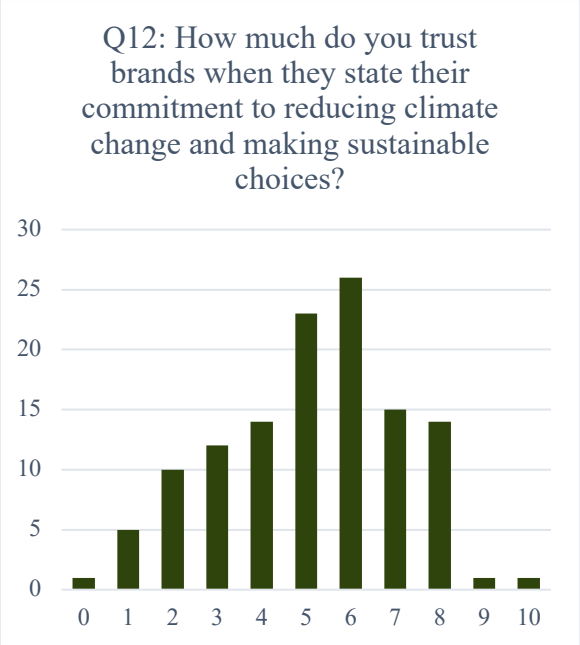


Appendix 8: HP4 key survey findings

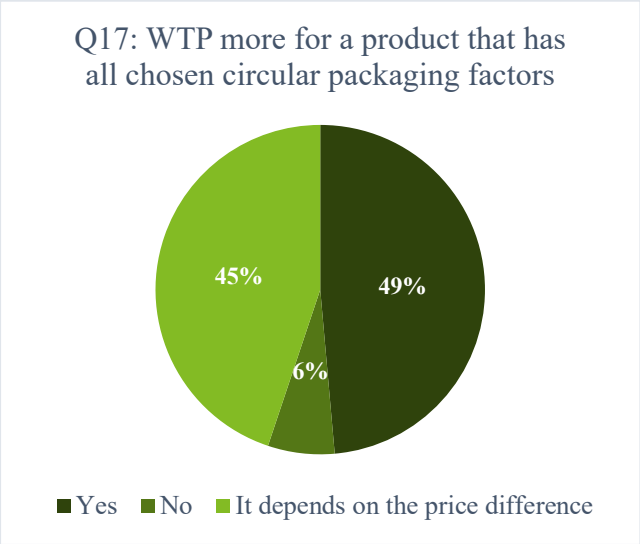


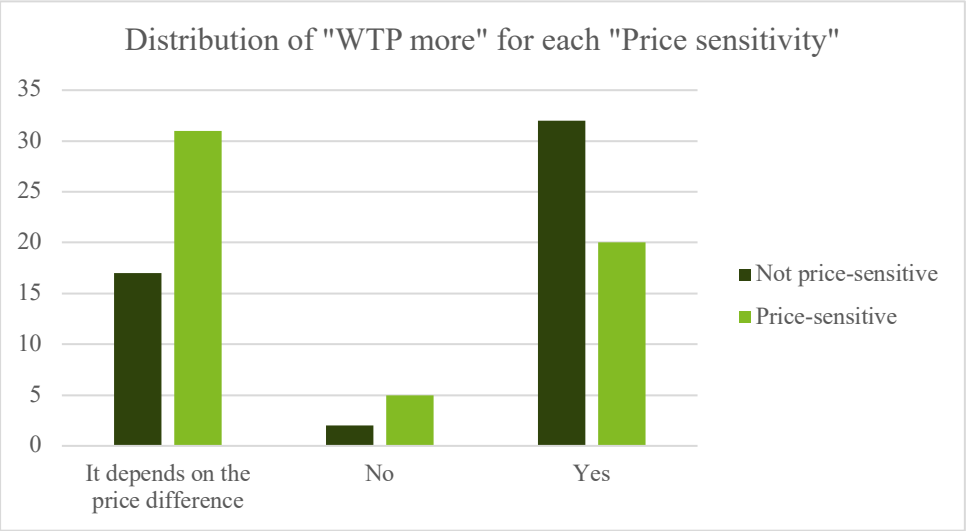
Appendix 9: HP5 key survey findings





Appendix 10: HP6 key survey findings





Appendix 11: HP7 key survey findings