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Measuring the Impact of Eco-friendly Packaging on Consumer Perceptions and Purchasing Behaviour in the FMCG Sector

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E-Declaration Form



Master's Degrees by Examination and Dissertation Declaration Form.

1. This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed: Pratik Pravinkumar Patel

Date: 15/06/2024

2. This dissertation is being submitted in partial fulfilment of the requirements for the degree of Master of Business Administration.

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3. This dissertation is the result of my own independent work/investigation, except where otherwise stated.

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I am satisfied that this work is the result of the student's own efforts.

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Abstract

Food, drinks, household essentials, personal hygiene products, and products with short shelf lives are all part of the Fast-Moving Consumer Goods (FMCG) industry, which is vital to contemporary consumer culture. But the industry's emphasis on convenience and price has had a substantial negative impact on the environment, especially when it comes to packaging. Eco-friendly packaging materials are becoming more and more necessary as traditional materials like plastic, glass, and metal have contributed to global pollution. Reusable, biodegradable, and compostable materials are among the environmentally friendly packaging options that are emerging in response to customer demand for sustainability. In an effort to close a sizable research gap, this dissertation explores how consumer perceptions and purchase decisions in the UK FMCG sector are affected by eco-friendly packaging.

The study aims to evaluate the level of eco-friendly packaging adoption in the UK FMCG industry, as well as to comprehend consumer attitudes and investigate the ways in which these perceptions impact consumer behaviour. The study's thorough analysis reveals that customers place a high value on eco-friendly packaging and that many of them take the environment into account when making decisions. The results show a clear customer preference for recyclable and biodegradable packaging, which is consistent with research on how material qualities affect consumer perceptions. Furthermore, consumers who are younger and more environmentally conscious are more likely to choose products that come in sustainable packaging. Cost is still an obstacle, though, since consumers' willingness to pay more for environmentally friendly packaging is limited. The survey also emphasises how crucial it is to communicate openly and clearly on labels in order to build customer confidence in eco-friendly packaging.

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1. Introduction

1.1 Background and Context

The FMCG sector, which is distinguished by its products having limited availability and frequent buyer cycles, is fundamental to contemporary consumer society. These commodities, which consist of personal care items, household necessities, food and beverages, are indispensable components of the daily lives of billions of people around the globe (Chauhan and Parmar, 2017). Nevertheless, the ceaseless quest for affordability and convenience has frequently resulted in substantial environmental repercussions, specifically with regard to packaging. In the FMCG sector, packaging fulfils various functions that go beyond the basic functions of containing and safeguarding products. These functions also include branding, marketing, and engaging with consumers (Rundh, 2016). Throughout history, plastic, glass, and metal have been the predominant materials utilised in packaging due to their attributes of longevity, economy, and adaptability. However, the widespread use of single-use plastics and non-biodegradable materials has been a factor in the worldwide plastic pollution crisis, which has prompted an industry-wide reassessment of packaging practices.

As environmental concerns continue to escalate, there has been a notable emergence of eco-friendly packaging as a prospective alternative. This development signifies a fundamental change towards sustainability and circularity within the packaging sector (Perey et al., 2018). Environmentally sustainable packaging comprises a range of materials and design principles that are intended to reduce the harm to the environment. These include reusable containers, biodegradable polymers, and compostable materials. The current trend towards sustainable packaging is indicative of wider societal goals that prioritise resource conservation and environmental stewardship. The demand for eco-friendly packaging in the FMCG sector has been significantly influenced by consumer attitudes and behaviours. A growing number of consumers are placing a higher value on sustainability when making purchases; they are drawn to brands and products that correspond with their personal values and guiding principles (Young et al., 2009). With the increasing recognition of environmental concerns, consumers are developing a more discerning palate and examining every stage of a product's life

cycle, including its packaging. As a result, environmentally sustainable packaging has become a powerful instrument for companies aiming to distinguish themselves in a crowded marketplace.

Nevertheless, the increasing fervour for sustainability and environmental awareness, substantial deficiencies in understanding endure with respect to the influence of environmentally friendly packaging on consumer attitudes and buying patterns in the FMCG sector. Although there has been considerable research on consumer attitudes and behaviours regarding green and sustainable products, there is a scarcity of studies that specifically examine the influence of packaging on these perceptions and actions. The primary objective of this dissertation is to fill a significant void in the academic literature by conducting an exhaustive analysis of the impact that environmentally friendly packaging has on the purchasing decisions and perceptions of fashion-forward consumer goods (FMCG) manufacturers. By employing rigorous empirical analysis and providing theoretical insights, this research endeavours to furnish industry practitioners, policymakers, and other stakeholders invested in promoting sustainable consumption patterns and practices with both scholarly knowledge and actionable insights.

1.2 Research Objectives

1. To assess and quantify the level of eco-friendly packaging adoption within the UK FMCG sector by conducting a comprehensive analysis of current practices, policies, and initiatives.
2. To identify and categorize consumer perceptions of eco-friendly packaging and explore the factors influencing these perceptions.
3. To examine the impact of consumer perceptions on purchasing behavior, to identify patterns and relationships between eco-friendly packaging perceptions and actual consumer choices.

1.3 Research Questions

1. How does the extent of eco-friendly packaging adoption vary among FMCG companies in the UK?

2. What are the predominant consumer perceptions regarding eco-friendly packaging in the context of FMCG products?
3. How does consumer perception of eco-friendly packaging influence purchasing behaviour, including brand loyalty and product choices in the FMCG sector?

1.4 Significance of the Study

The study holds great importance due to the urgent requirement to fill significant knowledge voids regarding the influence of environmentally friendly packaging on consumer purchasing behaviour and perceptions in the FMCG sector. With the worldwide community becoming more cognizant of the necessity to embrace sustainable practices, there is escalating pressure on businesses to incorporate environmental factors into their operations, specifically with regard to packaging. Nevertheless, despite the increasing recognition of sustainability concerns, the extant body of literature fails to sufficiently investigate the precise influence of packaging on consumer preferences and decision-making.

This study makes a number of significant contributions to academia and industry by examining eco-friendly packaging specifically within the challenging FMCG sector. To begin with, it holds the potential to augment our comprehension of the manner in which environmentally sustainable packaging impacts consumer attitudes, an aspect that has received inadequate attention in previous investigations. Although there have been previous investigations into consumer perspectives on green and sustainable products, there is a scarcity of research that specifically explores the intricate dynamics of packaging attributes and how they influence consumer attitudes (Wandosell et al., 2021). Therefore, through the examination of this research void, this study aims to contribute to the body of knowledge by illuminating the complex interconnections that exist among packaging attributes, environmental considerations, and consumer inclinations.

Furthermore, the secondary objective of this research endeavour is to offer significant perspectives on the correlation that exists between environmentally sustainable packaging and the buying patterns of consumers. Given the growing

significance of sustainability in shaping consumer purchasing decisions, it is critical for FMCG companies to comprehend the impact that environmentally friendly packaging has on such decisions (Mazurek-Łopacińska, Sobocińska and Krupowicz, 2022). By conducting an extensive examination of consumer reactions towards different packaging materials, design components, and sustainability assertions, this study intends to provide practical recommendations for organisations seeking to harmonise their packaging approaches with changing consumer inclinations and market developments.

Furthermore, this research has practical ramifications for fast-moving consumer goods (FMCG) companies aiming to bolster their sustainability credentials and competitive standing. Through its illustration of the potential advantages that eco-friendly packaging can offer in relation to consumer loyalty, market share, and brand image, this study makes a persuasive case for allocating resources towards sustainable packaging solutions. Also, through the identification of crucial factors that influence consumer acceptability and adoption of environmentally sustainable packaging, this research provides organisations with the information required to formulate messaging campaigns and marketing strategies that are precisely designed for their intended demographic.

1.5 Dissertation Structure

Chapter 2 of the study delves into the examination of the implementation of environmentally sustainable packaging within the FMCG sector in the United Kingdom. It offers valuable perspectives on prevailing patterns, obstacles, and potential avenues for progress.

Chapter 3 provides a comprehensive account of the research methodology utilised in this study. It commences with an elucidation of the research design, sampling method, the data collection methodologies, and so forth.

Chapter 4 offers a thorough investigation of the empirical data that was gathered throughout the research investigation. This chapter employs suitable statistical and quantitative analysis methods to clarify significant patterns, trends, and correlations

pertaining to consumer purchasing behaviour and perceptions of environmentally friendly packaging in the FMCG sector.

Chapter 5, the discussion chapter provides an interpretation and contextualization of the findings that were introduced in Chapter 4, placing them in the wider theoretical framework that was established during the literature review.

In Chapter 6, a comprehensive summary of the study's principal discoveries, contributions, and ramifications concludes the dissertation. The text restates the research objectives and emphasises the manner in which the study has filled the research void that was identified in the literature review.

2. Literature Review

2.1 Eco-Friendly Packaging Adoption

Consumer Behaviour and Perception

The adoption of eco-friendly packaging by businesses is significantly influenced by consumer demand. Numerous studies have emphasised the substantial impact of consumer attitudes, preferences, and perceptions regarding sustainability on purchasing decisions. For example, (De Canio, Martinelli and Endrighi, 2021) discovered that consumers who demonstrate pro-environmental attitudes are more inclined to favour products with environmentally responsible packaging. In the same vein, Scott and Vigar-Ellis (2014) underscored the significance of perceived environmental benefits in influencing consumer perceptions of eco-friendly packaging, emphasising the necessity of transparent communication and labelling strategies to improve consumer comprehension and confidence.

In recent years, there has been a shift in consumer attitudes towards sustainability, with a greater emphasis on ethical consumption and environmental responsibility. Consumers are increasingly pursuing products and brands that are consistent with their values and beliefs as they become more knowledgeable about environmental issues. This trend is particularly apparent among younger demographics, including Generation Z and millennials, who are fueling market growth and demand for eco-friendly products (Ko and Jeon, 2024).

Policy and Regulatory Frameworks

The adoption of eco-friendly packaging practices among businesses is also significantly influenced by government regulations and policy interventions. Extended producer responsibility (EPR) and packaging waste directives are regulatory frameworks that impose legal obligations on companies to promote eco-design principles and manage packaging waste (Joltreau, 2022). For example, the Packaging and Packaging Waste Directive of the European Union establishes recycling and recovery rates as objectives, which motivates organisations to implement environmentally beneficial packaging solutions (Geissdoerfer et al., 2017). In the same vein, the implementation of plastic ban and tariffs in a variety of

countries has encouraged investment and innovation in sustainable packaging alternatives (Barrowclough and Birkbeck, 2022).

Government support for research and development (R&D) initiatives has been instrumental in fostering innovation in the eco-friendly packaging industry, in addition to regulatory mandates. The transition to more sustainable packaging solutions has been facilitated by public-private partnerships and government funding programmes, which have allowed companies to invest in new technologies and materials (Vassileva, 2022).

Innovations in Technology

The development of innovative eco-friendly packaging solutions has been facilitated by technological advancements, providing companies with the opportunity to reduce their environmental impact while preserving the integrity and functionality of their products. Biodegradable polymers, compostable materials, and renewable resources, such as plant-based plastics, have emerged as viable alternatives to traditional packaging materials (Song et al., 2009). For instance, bioplastics that are produced from renewable sources provide comparable performance characteristics to conventional plastics while simultaneously alleviating concerns regarding resource depletion and contamination (Shamsuddin, 2017). Moreover, the recovery and reuse of materials are facilitated by the development of closed-loop systems and recycling technologies, which contribute to the principles of the circular economy (Kara et al., 2022).

In recent years, there has been an increasing emphasis on the development of eco-friendly packaging, which has been influenced by regulatory pressures and consumer demand. Companies are investing in research and development initiatives to create new materials and technologies that provide superior performance and environmental benefits in comparison to conventional packaging solutions. For instance, bio-based packaging materials that are produced from agricultural residues and waste streams are becoming increasingly popular as sustainable alternatives to petroleum-based plastics (Wojnowska-Baryła, Kulikowska and Bernat, 2020).

Consumer Education and Marketing Strategies

In order to encourage the adoption of eco-friendly packaging and cultivate consumer acceptability and demand, it is imperative to implement effective marketing strategies and consumer education initiatives. Research indicates that transparent communication regarding environmental attributes and advantages is essential for improving consumer perception and confidence in environmentally friendly packaging (Scott and Vigar-Ellis, 2014). For example, consumers are guaranteed that products and packaging are sustainable through eco-labeling and certification programmes like the Forest Stewardship Council (FSC) or the Recycling Symbol (Gulbrandsen, 2005). Additionally, social marketing campaigns and green branding strategies can influence consumers' purchasing behaviour by increasing awareness and educating them about the significance of sustainable packaging choices (Govender and Govender, 2016).

Additionally, organisations are progressively employing digital marketing channels and social media platforms to engage with environmentally conscious consumers and communicate their sustainability initiatives. Companies can enhance their brand image and loyalty by sharing anecdotes and behind-the-scenes insights about their eco-friendly packaging efforts, which can help establish trust and credibility with consumers (Ottman, 2017). Furthermore, companies may capitalise on partnerships with environmental organisations and NGOs to enhance their sustainability messaging and expand their audience, thereby generating favourable social and environmental outcomes (Wassmer, Pain and Paquin, 2017).

2.2 Consumer Perceptions of Eco-Friendly Packaging

Environmental Values and Concerns

Environmental concerns and personal values are profoundly interconnected with consumer perceptions of eco-friendly packaging. Research consistently indicates that individuals who possess strong environmental values and pro-environmental attitudes are more inclined to prioritise eco-friendly packaging in their purchasing decisions (Moser, 2015). These consumers regard eco-friendly packaging as a natural extension of their values and beliefs, which are consistent with their aspiration to reduce environmental impact and advance sustainability. Ketelsen, Janssen and Hamm (2020) discovered that consumers who are pro-environmental

have a higher preference for products that are packaged in environmentally favourable materials, as they perceive them as a testament to their dedication to environmental conservation.

Product Performance and Attributes

Consumer perceptions of eco-friendly packaging are influenced by product attributes and performance characteristics, in addition to environmental considerations. Although sustainability is the primary concern, consumers also anticipate that eco-friendly packaging will satisfy their functional and aesthetic requirements (Nguyen et al., 2020). Research indicates that consumers are more likely to favour eco-friendly packaging when it provides comparable or superior performance in terms of durability, functionality, and aesthetics to conventional packaging (Vermeir & Verbeke, 2006). For instance, biodegradable polymers and compostable materials are regarded favourably when they offer comparable levels of protection and functionality to conventional plastics, thereby resolving concerns regarding usability and performance (Lambert and Wagner, 2017). Additionally, consumers prioritise packaging that improves the freshness, convenience, and efficacy of products, regardless of its environmental credentials (Koutsimanis et al., 2012).

Socio-demographic Factors

Socio-demographic factors, including age, income, education, and cultural heritage, may influence consumer perceptions of environmentally friendly packaging. According to research, younger demographics, including Generation Z and millennials, are more environmentally aware and are more inclined to prioritise eco-friendly packaging in their purchasing decisions (Suri, 2023). Furthermore, individuals who possess higher levels of education and affluence are considerably more inclined to prioritise sustainability in their consumer decisions and to be cognizant of environmental concerns (Vermeir & Verbeke, 2006). Consumer perceptions of eco-friendly packaging may also be influenced by cultural differences, as attitudes towards environmental responsibility and sustainability differ across various regions and countries (Herbes, Beuthner and Ramme, 2018).

Emerging Trends

The landscape of sustainable packaging is being influenced by emergent trends in addition to traditional factors that influence consumer perceptions of eco-friendly packaging. Consumers are becoming more concerned about the environmental impact of packaging waste as a result of the proliferation of e-commerce and online purchasing (Chueamuangphan, Kashyap and Visvanathan, 2019). As a consequence, there is an increasing interest in minimalist and zero-waste packaging solutions, including package-free alternatives, compostable packaging, and reusable containers. Additionally, the advancement of technology, including blockchain and smart packaging, is allowing companies to monitor and trace the environmental impact of packaging throughout its lifecycle, thereby enhancing transparency and accountability for consumers (Sadeghi, Kim and Seo, 2022). Consumer perceptions of environmentally friendly packaging are being transformed by these emergent trends, which are also stimulating innovation within the packaging industry.

2.3 Purchasing Behaviour in Eco-Friendly Packaging

Brand Storytelling and Emotional Appeal

In the domain of eco-friendly packaging, emotional appeal and brand storytelling have become increasingly important components of marketing strategies in recent years. Elliott, Rundle-Thiele and Waller (2014) emphasise that consumers are not merely purchasing products; they are also investing in the brand's values and mission. Brands that effectively convey their dedication to environmental stewardship and sustainability through compelling narratives are more likely to evoke an emotional response in consumers. For instance, a brand may disseminate narratives regarding its initiatives to mitigate plastic pollution, safeguard natural habitats, or assist local communities. Finally, brands can influence purchasing behaviour by fostering emotional connections and long-term brand loyalty by positioning eco-friendly packaging initiatives within a broader narrative that aligns with consumers' values and aspirations (Abbas et al., 2024).

Interactive Packaging and Experiential Marketing

Experiential marketing and interactive packaging are innovative strategies that increase consumer engagement and interaction with environmentally responsible packaging. Groopman (2015) suggests that the integration of interactive elements,

such as QR codes, NFC technology, or augmented reality, can offer consumers immersive experiences that inspire, enlighten, and amuse them. For example, interactive packaging can allow consumers to gain insight into a product's sustainability voyage, including the sourcing of materials and the manufacturing process, or to engage in virtual eco-conscious initiatives. Brands can foster sustainable purchasing behaviour, increase brand engagement, and establish deeper connections with consumers by creating meaningful and memorable experiences through interactive packaging.

Gamification and Incentive-Based Programs

Gamification and incentive-based programmes are effective strategies for encouraging consumers to adopt sustainable practices, such as selecting products with eco-friendly packaging. (Mulcahy et al., 2021) underscore the potential of gamified experiences and loyalty programmes to motivate consumers by providing rewards, recognition, or social incentives for eco-friendly behaviours. For instance, brands may motivate consumers to accumulate packaging points for each recycled item and redeem them for exclusive eco-friendly products or discounts. In a similar vein, loyalty programmes can provide customers with exclusive rewards or privileges for consistently selecting products with eco-friendly packaging. This approach can nurture a long-term commitment to sustainability objectives and strengthen brand loyalty.

Social Platforms and Community Building

Brands are afforded valuable opportunities to establish meaningful connections and engage in dialogue regarding eco-friendly packaging initiatives through community building and social platforms. (Bedard and Tolmie, 2018) observes that consumers are increasingly turning to online communities, forums, and social media platforms to share experiences, seek advice, and collaborate on environmental initiatives, in order to seek social validation and peer support for their sustainability efforts. Brands have the opportunity to engage with consumers in genuine conversations, exchange stories, and promote their eco-friendly initiatives by utilising social platforms (Ottman, 2017). Brands can influence consumer perceptions and purchasing behaviour by actively participating in online communities and fostering a sense of belonging,

thereby building trust, credibility, and advocacy for their eco-friendly packaging efforts.

Customisation and Personalisation

Personalisation and customisation strategies allow brands to customise eco-friendly packaging solutions to the specific preferences and requirements of individual consumers, thereby increasing perceived value and engagement. (Ambrose and Harris, 2017) underscore the importance of providing consumers with products and packaging that are reflective of their distinctive identity, lifestyle, and values. Brands have the ability to provide consumers with the opportunity to express themselves while making sustainable choices by offering customisable packaging options, such as design templates, colour schemes, or personalisation features. Furthermore, personalised packaging has the potential to generate memorable and shareable experiences, which can lead to brand advocacy and word-of-mouth marketing among consumers who value considerate design and personalised attention.

Environmental Education

Consumer attitudes and behaviours towards environmentally responsible packaging are significantly influenced by environmental education and empowerment initiatives. (Young et al., 2009) suggests that consumers are more inclined to adopt sustainable practices when they are provided with the necessary knowledge, skills, and resources to make informed decisions. Brands can empower consumers by offering educational resources, tutorials, and tools that assist them in comprehending the environmental consequences of their packaging choices and making sustainable decisions. For example, brands can generate educational content regarding the significance of reducing plastic waste, recycling processes, and eco-friendly materials to assist consumers in navigating the intricacies of sustainability and making informed decisions. Brands can stimulate demand for eco-friendly packaging solutions, cultivate a sense of environmental responsibility, and inspire positive behaviour change by educating and empowering consumers.

2.4. Research Gap

A significant research gap concerns the effectiveness of environmentally sustainable packaging in mitigating environmental damage throughout the complete life cycle of a product. Although several studies have examined the environmental advantages of manufacturing packaging with sustainable materials (González-García et al., 2015), there is a scarcity of research that thoroughly evaluates the environmental impact of environmentally friendly packaging throughout its entire life cycle, from the extraction of raw materials to its eventual disposal. In order to address this disparity, it would be necessary to perform lifecycle assessments (LCAs) that quantify the environmental performance of various packaging materials and systems. These assessments would take into account carbon emissions, resource depletion, and waste generation, among other factors.

An additional domain that has received limited attention pertains to consumer behaviour and the processes by which they make decisions regarding environmentally friendly packaging. Previous studies have offered significant contributions to the understanding of consumer perceptions, attitudes, and preferences (Steenis et al., 2017). However, further comprehensive inquiries are warranted to explore the psychological, social, and cultural determinants that impact consumer decisions with respect to environmentally sustainable packaging. Gaining insight into the fundamental incentives, obstacles, and catalysts that influence consumer behaviour can provide valuable knowledge for the creation of focused marketing tactics and interventions that seek to increase the uptake of environmentally friendly packaging.

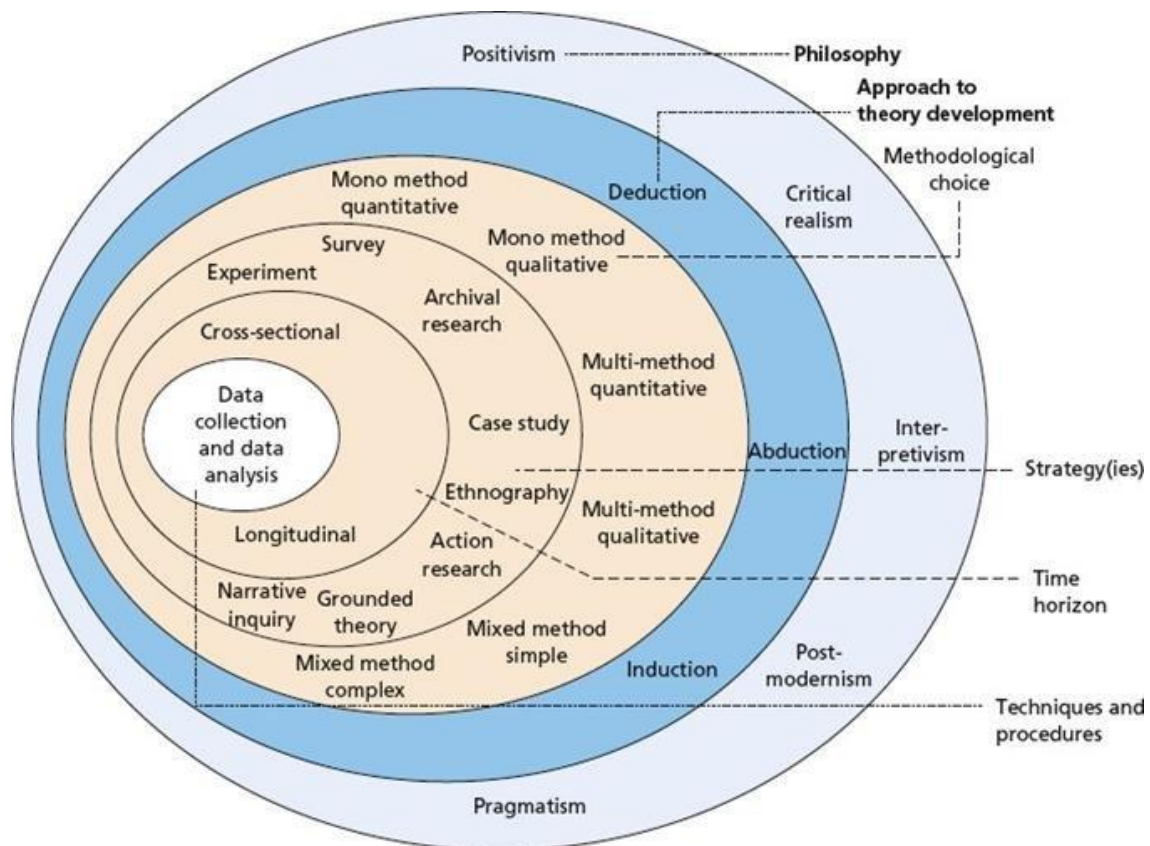
Moreover, in the FMCG sector, the economic feasibility and expandability of environmentally sustainable packaging alternatives have received insufficient consideration. Although certain research has investigated the financial ramifications of implementing sustainable packaging materials (Stoica et al., 2020), limited attention has been paid to the wider economic consequences for enterprises, which encompass supply chain expenses, market competitiveness, and long-term profitability. In order to fill this research void, it is necessary to perform economic analyses and business case studies that evaluate the financial viability and strategic ramifications of adopting environmentally friendly packaging.

Furthermore, an absence of scholarly investigations exists regarding the impact of policy interventions and regulatory frameworks on the promotion of environmentally sustainable packaging. The impact of regulations on packaging practices has been recognised in the literature (Jain and Hudnurkar, 2022). However, further empirical investigation is required to comprehensively comprehend the ways in which regulatory measures, including packaging taxes and extended producer responsibility (EPR) schemes, influence industry dynamics, incentives for innovation, and consumer behaviour.

3. Research Methodology

3.1. Research Onion

In order to holistically organise the research methodology, the study will utilise the Research Onion model, which is a conceptual framework originally introduced by Saunders, Lewis and Thornhill (2009). The Research Onion framework offers a methodical and hierarchical strategy for designing research, encompassing a range of methodological aspects such as philosophical foundations and data collection methods. In the following sections we will see how we employ the framework.



Source: Saunders, Lewis and Thornhill (2009)

3.1.1 Research Philosophy

Our research philosophy is grounded in the positivist tradition, which advocates for the empirical and objective examination of phenomena as a means to acquire knowledge. In accordance with positivism, the social world functions in a consistent manner and can be investigated employing techniques similar to those utilised in the

natural sciences(Park, Konge and Artino, 2020). Therefore, in accordance with the notion that reality exists autonomously from human perception and can be comprehended via methodical observation and quantification, our research philosophy is founded on this premise. The positivist paradigm entails an ontological position that asserts the presence of a discernible and quantifiable objective reality. Phenomena such as consumer perceptions and purchasing behaviour concerning environmentally friendly packaging are considered empirical realities amenable to study in order to ascertain universal laws or causal connections. Our research is guided by this ontological stance, which underscores the significance of amassing verifiable data in order to examine hypotheses and derive conclusions regarding the essence of the phenomenon being studied.

Our positivist research philosophy is firmly rooted in the epistemological tenet that knowledge is obtained via empirical observation and logical deduction. Our objective is to produce insights into consumer attitudes and actions regarding environmentally sustainable packaging through the methodical gathering and examination of data employing stringent scientific approaches. Our methodology places a high value on objectivity, repeatability, and generalizability, with the intention of generating results that are not influenced by the subjective biases and interpretations of the researcher. In addition, our positivist research philosophy places significant emphasis on the testing of hypotheses and the development of theories. In order to test hypotheses developed on the basis of empirical evidence and established theories, quantitative methods and statistical analysis are subsequently applied. Our objective is to make a scholarly contribution to the collective advancement of information regarding environmentally friendly packaging by expanding upon well-established theories and empirical discoveries.

3.1.2 Research Strategy

We have chosen to employ a quantitative research strategy due to the quantitative nature of our research queries and the necessity to quantify the relationships between variables. By employing this approach, it becomes possible to methodically collect empirical data, which facilitates meticulous statistical examination and enhances the applicability of results to a wider demographic(Bahari, 2012). Our objective is to obtain objective insights regarding consumer attitudes, preferences,

and behaviours regarding eco-friendly packaging through the utilisation of quantitative methods. This will enable FMCG companies to make decisions based on evidence.

Consistent with the positivist tradition, which emphasises the use of systematic observation and measurement to gain knowledge about observable phenomena, the quantitative research approach is utilised. By following this methodology, we aim to establish causal connections between variables that are independent and dependent, thereby obtaining empirical substantiation for our hypotheses and research goals. By utilising quantitative research methods, we intend to assist in the formation of industry policies and practices and to add to the corpus of knowledge regarding eco-friendly packaging through the provision of statistical analysis and quantitative data.

3.1.3 Research Approach

Expanding upon our positivist research paradigm that prioritises the impartial examination of phenomena, we employ a deductive methodology in our scientific inquiry (Soiferman, 2010). Systematic observation and measurement are utilised to test hypotheses derived from established theories or empirical evidence in this manner. The design of our study is distinguished by its reliance on quantitative approaches for data collection and analysis. Quantitative research enables the numerical measurement of variables, which is advantageous for conducting statistical analysis and hypothesis testing. By utilising surveys as our principal means of data acquisition, we are able to efficiently amass information from a substantial sample of participants. The survey instrument consists of closed-ended queries that offer predetermined response options to the respondents. By employing this methodical approach, data collection is conducted consistently, which facilitates the effective analysis of findings.

Moreover, the research methodology we employ entails the discernment of suitable statistical methods for the purpose of scrutinising the gathered data. Descriptive statistics are utilised to offer concise summaries of the attributes of the sample and significant variables, thereby revealing trends regarding central tendencies and variability. In the realm of statistics, inferential methods are utilised to analyse

hypotheses and investigate the relationships between variables via correlation and regression. By applying these statistical methods, it is possible to extract significant findings from the data and formulate strong hypotheses regarding the determinants that impact consumer attitudes and actions concerning environmentally sustainable packaging.

3.1.4 Sampling Method

Our research methodology is based on a random sampling strategy. A random sampling procedure is employed to select participants from the target population in a way that guarantees an equal opportunity for each individual in the population to be chosen (Lavrakas et al., 2019). By employing this approach, we are able to acquire a sample that accurately reflects the larger population, thus augmenting the applicability of our results. We utilise a straightforward random sampling method in the execution of random sampling. Participant selection is conducted in a random manner from the population, devoid of any predetermined criteria or stratification. By ensuring that every individual in the population has an equal opportunity of being selected, sampling bias is reduced and the resulting sample is impartial and representative of the characteristics of the entire population.

Our objective is to acquire a varied and representative sample that faithfully mirrors the attributes and fluctuations inherent in the target population through the utilisation of random sampling. By utilising the attributes of our sample, we are able to draw dependable conclusions regarding consumer perceptions and behaviours regarding eco-friendly packaging in the FMCG sector, thereby bolstering the external validity of our findings. Furthermore, the implementation of random sampling ensures the integrity and credibility of our research outcomes through the reduction of potential sources of bias and extraneous influences. Through the random selection of participants, the probability of systematic errors that may undermine the validity of our findings is diminished, thus bolstering the study's credibility and robustness.

3.1.5 Data Collection Techniques

In the course of our investigation, we utilise online data capture methods, with Microsoft Forms serving as our principal instrument. Microsoft Forms provides an

intuitive and streamlined interface that facilitates the creation and dissemination of surveys, rendering it highly suitable for the collection of data from a wide variety of participants. The rationale behind our selection of online data collection methods is multifaceted. In the first place, online surveys provide participants with accessibility and convenience, permitting them to respond from any location with internet access and at their own discretion. The enhanced accessibility contributes to a greater probability of amassing an adequate quantity of responses within the designated time period. In addition, Microsoft Forms provides the capability to generate surveys comprising closed-ended inquiries, which is consistent with our research goals and methodological framework. Closed-ended queries offer a systematic framework for responses, which facilitates the efficient quantitative analysis and measurement of participant opinions. This methodology enables the methodical gathering of data and guarantees uniformity in the responses provided by all participants.

Our target sample size for this study is approximately sixty to seventy-five responses. The determination of this sample size is predicated upon factors such as feasibility, statistical power, and precision. Although increasing the sample size could potentially improve the dependability and applicability of our results, our objective is to find an intermediate ground between sample size and pragmatic limitations, including time and resources. The survey instrument we have developed consists of a sequence of closed-ended inquiries that have been specifically crafted to obtain responses pertaining to the attitudes and actions of consumers concerning environmentally friendly packaging within the FMCG sector. The inquiries have been meticulously designed to encompass pertinent variables of significance, including inclinations towards environmentally friendly packaging materials, intentions to make purchases, and attitudes towards sustainability.

3.1.6 Data Analysis Method

In the course of our data analysis, we employ various graphical representations such as bar charts, pie charts, and others to visually illustrate significant discoveries and patterns. Bar charts and pie charts are highly advantageous instruments for visually representing descriptive statistics. They enable the depiction of patterns, distributions, and comparisons among various categories or variables. When

illustrating frequency distributions and contrasting the relative frequencies of various response categories within a single variable, bar charts are especially useful.

As an illustration, bar charts could be employed to illustrate the dispersion of participants' inclinations towards different varieties of environmentally sustainable packaging materials or their degrees of concurrence with particular assertions pertaining to sustainability. In the same way that pie charts effectively depict the proportional distribution of categorical variables—for instance, the distribution of responses to Likert-scale items or the percentage of respondents belonging to various demographic categories (e.g., age, gender)—pie charts serve this purpose admirably. Pie charts offer a lucid graphical depiction of the proportional abundance of distinct categories within a given dataset, facilitating observers in promptly comprehending the comprehensive dispersion of responses.

3.2 Ethical Considerations

Our research endeavour places utmost importance on ethical considerations. We are fully dedicated to maintaining the utmost standards of ethical conduct at every stage of the research process. In light of this, we shall comply with the protocols delineated by pertinent institutional ethics committees and regulatory entities to safeguard the rights, privacy, and confidentiality of participants. We will obtain ethical sanction from the relevant institutional review board or ethics committee prior to initiating our research. An ethics application form shall be duly completed and submitted, providing comprehensive information regarding the study's objectives, research methodologies, potential benefits and risks to participants, as well as the safeguards implemented to ensure their well-being.

Furthermore, prior to their involvement in the research, all participants will be required to provide informed consent. All participants will be furnished with thorough and unambiguous information pertaining to the research's characteristics, their entitlements as participants, and any possible hazards or unease that may be encountered during their involvement. Participants will be afforded the chance to pose inquiries and make well-informed judgements regarding their potential involvement in the research. Conversely, anonymity and confidentiality will be preserved during the entire process of data collection, analysis, and reporting. In

order to safeguard the confidentiality of individual identities, participant responses will be anonymized. Furthermore, to ensure adherence to data protection regulations, all data will be securely stored. Personal information will be maintained in the strictest of confidence and will only be accessible to members of the research organisation.

Participants may disengage from the research at any point without incurring any penalties or repercussions. Our organisation will uphold the participants' autonomy and decision-making power by guaranteeing their freedom to withdraw from the research without apprehension of retaliation or prejudice. We will also implement measures to mitigate any potential damage or discomfort that participants may experience. This encompasses guaranteeing that survey inquiries are unambiguous, non-intrusive, and considerate of the privacy and sensitivities of participants. Additionally, we will furnish suitable support and referrals to participants who may encounter distress or necessitate additional aid.

4. Data Analysis

4.1 Statistical Analysis

The following table shows the mean median and mode for the survey response:

Question	Option	Frequency	Percentage (%)	Mean	Median	Mode
1. Environmental friendliness consideration	Always	33	60.00	4.45	Always	Always (33)
	Often	16	29.09			
	Sometimes	5	9.09			
	Rarely	0	0.00			
	Never	1	1.82			
2. Valued eco-friendly packaging features	Biodegradability	20	36.36	N/A	N/A	Recyclability (21)
	Recyclability	21	38.18			
	Use of sustainable materials	3	5.45			
	Simple packaging design	3	5.45			
	All of the above	8	14.55			
3. Likelihood of choosing eco-friendly packaging	Very likely	28	50.91	4.20	Very likely	Very likely (28)
	Likely	13	23.64			
	Neutral	11	20.00			
	Unlikely	3	5.45			
	Very unlikely	0	0.00			
4. Perception of availability of eco-friendly packaging	Yes, a lot more	35	63.64	3.47	Yes, a lot more	Yes, a lot more (35)
	Yes, somewhat more	14	25.45			
	No change	3	5.45			
	Less	3	5.45			
	Not sure	0	0.00			
5. Influences on decision to buy eco-friendly	Concern for the environment	28	50.91	N/A	N/A	Concern for the environment (28)

packaging	Brands known for being eco-friendly	13	23.64			
	Price	6	10.91			
	Convenience	3	5.45			
	All of the above	5	9.09			
6. Most important aspect of eco-friendly packaging	Material biodegradability	24	43.64	N/A	N/A	Material biodegradability (24)
	Recyclability	21	38.18			
	Reduced use of plastic	7	12.73			
	Use of sustainable materials	3	5.45			
7. Contribution of eco-friendly packaging to pollution	Significantly	38	69.09	3.56	Significantly	Significantly (38)
	Moderately	10	18.18			
	Slightly	7	12.73			
	Not at all	0	0.00			
	Unsure	0	0.00			
8. Perception of products with eco-friendly packaging	They are of higher quality	22	40.00	N/A	N/A	They are of higher quality (22)
	They are more expensive	11	20.00			
	They are better for the environment	18	32.73			
	They are difficult to find	4	7.27			
9. Influence on brand perception	A lot	29	52.73	4.29	A lot	A lot (29)
	Somewhat	18	32.73			
	Neutral	4	7.27			
	Very little	3	5.45			
	Not at all	1	1.82			
10. Encouraging adoption of eco-friendly	Government regulations	22	40.00	N/A	N/A	Government regulations (22)
	Consumer	15	27.27			

packaging	demand					
	Financial incentives	6	10.91			
	Public awareness campaigns	5	9.09			
	All of the above	7	12.73			
11. Conscious choice for eco-friendly packaging	Yes, frequently	26	47.27	2.38	Yes, frequently	Yes, frequently (26)
	Yes, occasionally	25	45.45			
	No, never	3	5.45			
	Not sure	1	1.82			
12. Willingness to pay more for eco-friendly packaging	Up to 10% more	26	47.27	1.47	Up to 10% more	Up to 10% more (26)
	10-20% more	12	21.82			
	20-30% more	5	9.09			
	More than 30% more	4	7.27			
	Not willing to pay more	8	14.55			
13. Likelihood to recommend eco-friendly packaged products	Very likely	28	50.91	4.20	Very likely	Very likely (28)
	Likely	11	20.00			
	Neutral	15	27.27			
	Unlikely	1	1.82			
	Very unlikely	0	0.00			
14. Factors encouraging choice of eco-friendly packaging	Clear labeling indicating eco-friendliness	24	43.64	N/A	N/A	Clear labeling indicating eco-friendliness (24)
	Positive reviews about the product	19	34.55			
	Discounts or promotions on eco-	5	9.09			

	friendly products					
	Availability of eco-friendly packaging	2	3.64			
	All of the above	5	9.09			
15. Switching brands for eco-friendly packaging	Yes	43	78.18	N/A	N/A	Yes (43)
	No	8	14.55			
	Not sure	4	7.27			

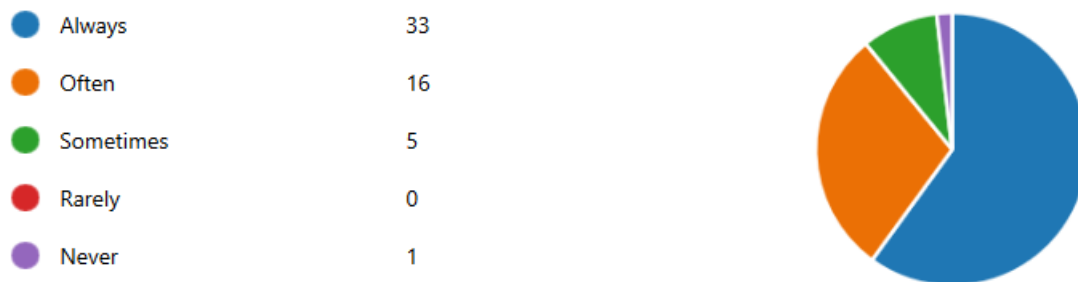
The survey data's statistical analysis reveals distinct patterns and trends in consumer attitudes towards eco-friendly packaging. A robust dedication to sustainability is evident in the fact that a substantial majority of respondents (60%) consistently evaluate the environmental friendliness of packaging. Recyclability (38.18%) and biodegradability (36.36%) are among the most highly regarded attributes of eco-friendly packaging, which indicate a preference for materials that can be safely decomposed or reused. Furthermore, 50.91% of respondents are extremely likely to select eco-friendly packaging, and 63.64% anticipate a significant increase in its availability. The significance of sustainable practices is underscored by the fact that environmental concern is the primary influence on purchasing decisions (50.91%), and material biodegradability is the most critical aspect (43.64%).

The perception that eco-friendly packaging substantially contributes to pollution reduction is another notable trend, with 69.09% of respondents supporting this view. This is consistent with the discovery that 52.73% of respondents believe that eco-friendly packaging has a positive impact on their perception of the brand. The selection of eco-friendly packaging is significantly influenced by clear labelling that indicates its eco-friendliness (43.64%). Additionally, a substantial majority (78.18%) are willing to transfer brands in favour of eco-friendly alternatives. Furthermore, 50% of the respondents (50.91%) are extremely likely to endorse products that are packaged in an environmentally responsible manner. These findings suggest that consumers are not only cognizant of and appreciative of sustainable packaging, but

they are also prepared to take action based on their preferences, which suggests a strong market trend towards environmental responsibility.

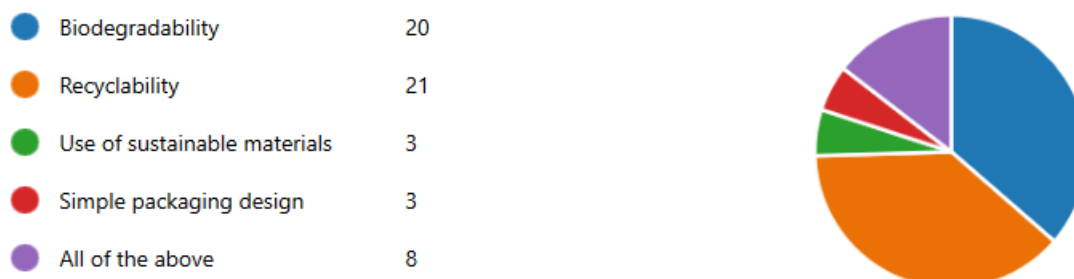
4.2 Quantitative Analysis

1. Frequency of Considering Environmental Friendliness



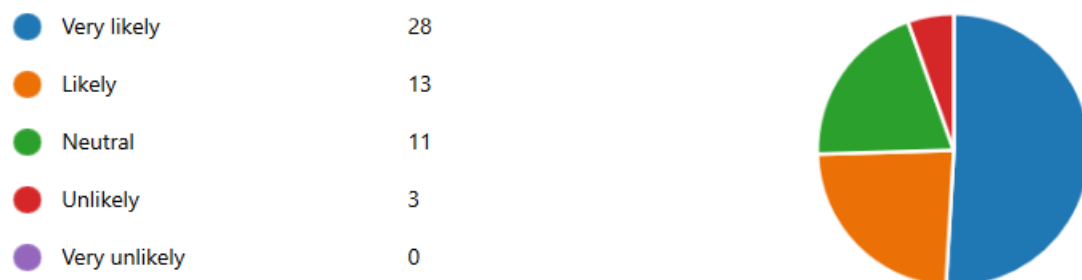
The data indicates that a substantial majority of respondents prioritise the environmental sustainability of packaging, with the "Always" and "Often" categories being the most prevalent. This suggests a generalised cognizance or concern regarding environmental concerns associated with packaging materials. The consistent attention paid to this aspect is underscored by the absence of respondents in the "Rarely" category. Furthermore, the solitary respondent who does not take into account the environmental benevolence of packaging is a negligible minority, which reinforces the widespread awareness of sustainable packaging practices. In general, the results underscore a widespread trend of prioritising eco-friendly packaging solutions, which is indicative of a heightened societal consciousness and dedication to environmental conservation initiatives.

2. Valued Features in Environmentally Friendly Packaging



The survey results demonstrate a distinct preference for packaging features that are associated with environmental sustainability, with recyclability and biodegradability being the most highly prioritised attributes. This implies that respondents prioritise packaging materials that are readily recyclable or biodegradable, which is consistent with the overarching environmental conservation objectives. The relatively lower number of respondents who valued the use of sustainable materials and uncomplicated packaging design indicates that, although these factors are acknowledged, they may not be as critical in the decision-making process as recyclability and biodegradability. It is important to acknowledge that a significant number of respondents selected "All of the above," suggesting that there is a subset of the population that prioritises a comprehensive approach to environmentally friendly packaging that includes the use of sustainable materials, recyclability, biodegradability, and a straightforward design.

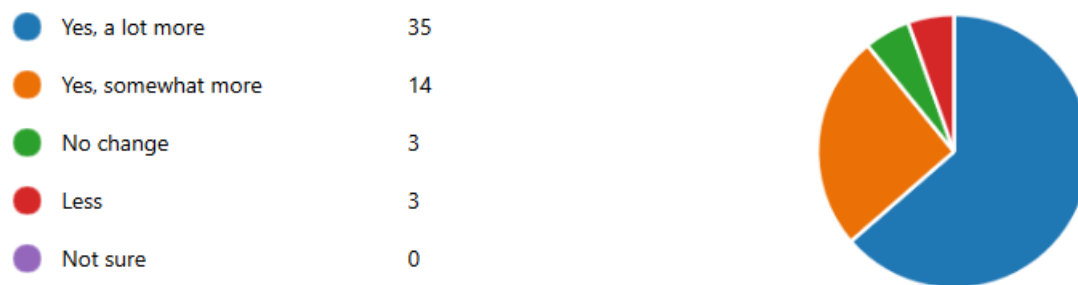
3. Likelihood of Choosing Eco-friendly Packaging



The data indicates that a significant number of respondents exhibited a strong preference for products with eco-friendly packaging, with a significant plurality falling into the categories of "Very likely" (28 respondents) and "Likely" (13 respondents). This suggests that there is a widespread consumer preference for environmentally conscious packaging solutions, which is likely driven by a desire to make sustainable choices and heightened awareness of environmental issue. The overwhelming positive sentiment towards eco-friendly packaging options is underscored by the absence of respondents in the "Very unlikely" category. Despite the fact that a small number of respondents (11 respondents and 3 respondents, respectively) expressed neutrality or indicated that they were unlikely to choose such packaging, they are a

minority in comparison to the substantial number of individuals who are inclined towards eco-friendly options.

4. Perception of Availability of Eco-friendly Packaging



A prevalent perception among respondents regarding the availability of eco-friendly packaging options is revealed by the survey data. There was a substantial increase in the availability of products packaged in an environmentally conscious manner, as observed by a significant majority of 35 respondents, which suggests a positive trend towards sustainability in the market. Furthermore, 14 respondents reported that the availability of these packaging options was somewhat increased. The small number of respondents who reported a decrease in availability (3 respondents) or indicated "No change" (3 respondents) suggests that, in general, there is a general perception of improvement or at least maintenance in the accessibility of eco-friendly packaging. It is important to note that no respondents expressed uncertainty regarding this trend. This collective perception highlights a heightened awareness and demand for environmentally friendly packaging solutions among consumers, which may indicate a potential transition to more sustainable practices within the industry.

5. Influences on Decision to Buy Eco-friendly Packaged Products

Concern for the environment	28
Brands known for being eco-frie...	13
Price	6
Convenience	3
All of the above	5



The survey results suggest that environmental concern is the most significant factor influencing consumers' decisions to purchase products with eco-friendly packaging, with 28 respondents identifying it as their primary influence. This emphasises the pervasive dedication of consumers to environmental conservation, which influences their purchasing decisions. Furthermore, the decisions of 13 respondents were significantly influenced by the reputation of brands that are recognised for their environmentally responsible practices. Although a lesser number of respondents took into account factors such as price and convenience, their impact appears to be relatively minor in comparison to environmental and brand-related factors. Additionally, a significant number of respondents (5 respondents) acknowledged that collectively, all of these factors influence their decision-making process, indicating that a comprehensive approach to purchasing eco-friendly packaged products is suggested.

6. Most Important Aspect of Eco-friendly Packaging

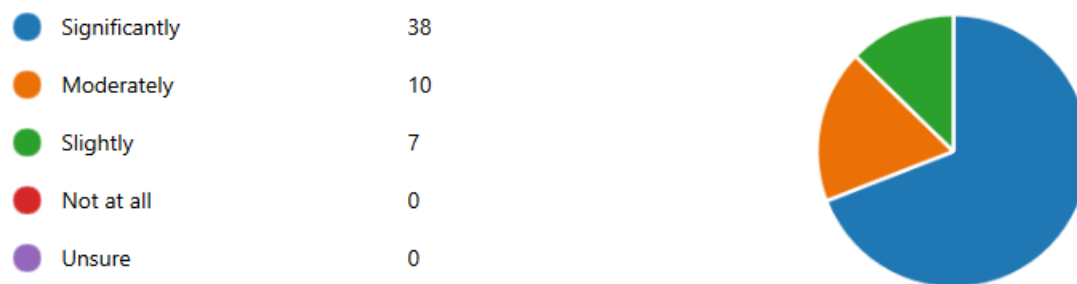
Material biodegradability	24
Recyclability	21
Reduced use of plastic	7
Use of sustainable materials	3
Other	0



The survey data suggests that the most critical aspects of eco-friendly packaging are material biodegradability and recyclability, with 24 and 21 respondents, respectively, prioritising these attributes. This underscores the importance of packaging materials that can decompose naturally or be readily recycled, which is consistent with the overarching environmental sustainability objectives. Furthermore, a significant

number of respondents (7 respondents) regard the decreased use of plastic as a critical factor, which is indicative of their apprehensions regarding the environmental consequences of plastic pollution. Nevertheless, the proportion of respondents who prioritise the use of sustainable materials is relatively low, with only three respondents in favour of this approach. This implies that, although sustainability is acknowledged, it may not be as critical to their decision-making process as material biodegradability and recyclability in the context of eco-friendly packaging.

7. Contribution of Eco-friendly Packaging to Reducing Pollution



The survey results suggest that respondents have reached a strong consensus on the extent to which eco-friendly packaging contributes to the reduction of pollution. 38 respondents, a substantial majority, are of the opinion that eco-friendly packaging has a substantial effect on the reduction of environmental contamination. This is indicative of the pervasive acknowledgement of the significance of sustainable packaging solutions in addressing pollution concerns. Furthermore, 10 respondents believe that eco-friendly packaging has a moderate impact, while 7 respondents believe that it has a modest impact. It is important to note that no respondents expressed the opinion that eco-friendly packaging does not at all contribute to the reduction of pollution, indicating a unanimous recognition of its beneficial impact. Additionally, there were no respondents who expressed any uncertainty regarding this matter, which suggests a high level of confidence in the environmental benefits of eco-friendly packaging.

8. Perception of Products with Eco-friendly Packaging

● They are of higher quality.	22
● They are more expensive.	11
● They are better for the environ...	18
● They are difficult to find.	4
● Other	0



The survey results indicate that there are widespread beliefs regarding products that are packaged in an environmentally sustainable manner. A significant number of respondents (22 respondents) believe that eco-friendly packaging is indicative of a higher quality product, suggesting that they believe that eco-conscious packaging reflects a superior product standard. Furthermore, 18 respondents believe that this packaging is more environmentally friendly, which indicates that they are cognizant of the beneficial environmental effects of sustainable packaging options. Although 11 respondents perceive products with eco-friendly packaging as more costly, this perception may suggest apprehension regarding potential cost implications. Nevertheless, it is important to mention that a lesser number of respondents (4 respondents) find it challenging to locate eco-friendly products, which indicates that there may be accessibility issues.

9. Influence on Brand Perception

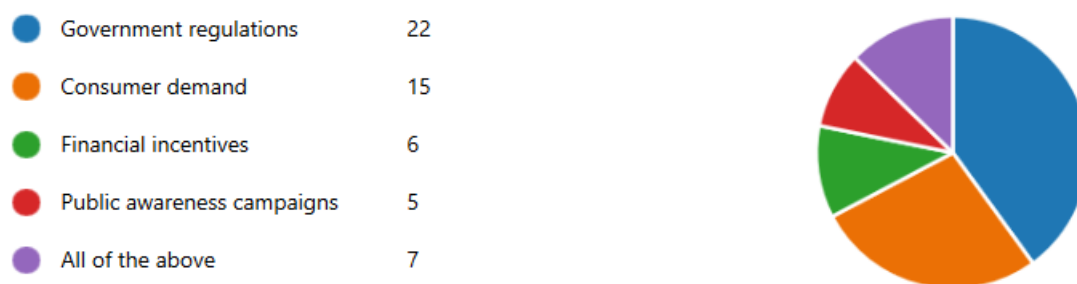
● A lot	29
● Somewhat	18
● Neutral	4
● Very little	3
● Not at all	1



The survey results suggest that the perception of a brand is significantly influenced by eco-friendly packaging. The vast majority of respondents (29 respondents) are of the opinion that eco-friendly packaging has a significant impact on brand perception. This implies that environmentally conscious packaging has a positive impact on their overall perception of a brand. Furthermore, 18 respondents consider this influence to

be somewhat significant, which emphasises the significance of eco-friendly packaging in influencing consumer perceptions. Although a small number of respondents (4 respondents and 3 respondents, respectively) expressed neutrality or indicated minimal influence, the overwhelming majority of respondents who acknowledged the impact suggest a pervasive recognition of the value of sustainability in brand image. Furthermore, just one respondent asserted that eco-friendly packaging has no impact on brand perception, suggesting an uncommon dissenting opinion.

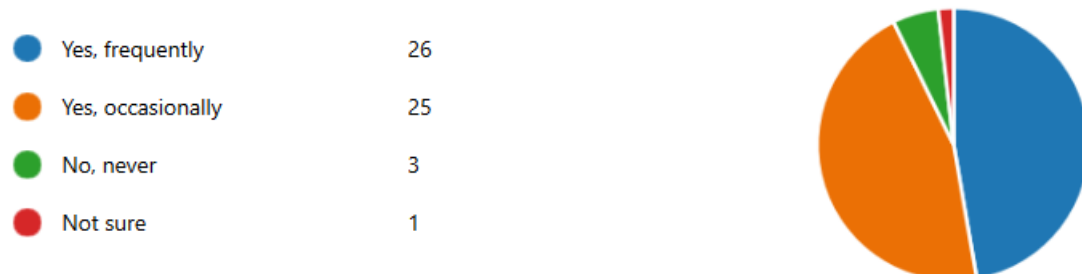
10. Factors Encouraging Adoption of Eco-friendly Packaging



The survey responses emphasise the primary factors that motivate companies to implement environmentally responsible packaging. Government regulations were identified as a significant driver by a significant portion of respondents (22 respondents), suggesting that legal mandates are essential in motivating businesses to prioritise sustainability in their packaging practices. Furthermore, consumer demand emerged as an additional influential factor, with 15 respondents acknowledging the influence of consumer preferences in motivating companies to implement environmentally responsible packaging solutions. Although financial incentives and public awareness campaigns were also acknowledged, their perceived impact was comparatively lower, as evidenced by the limited number of respondents (6 respondents and 5 respondents, respectively) who identified them as motivators. Additionally, the multifaceted nature of the incentives that motivate the adoption of eco-friendly packaging was underscored by the recognition of the

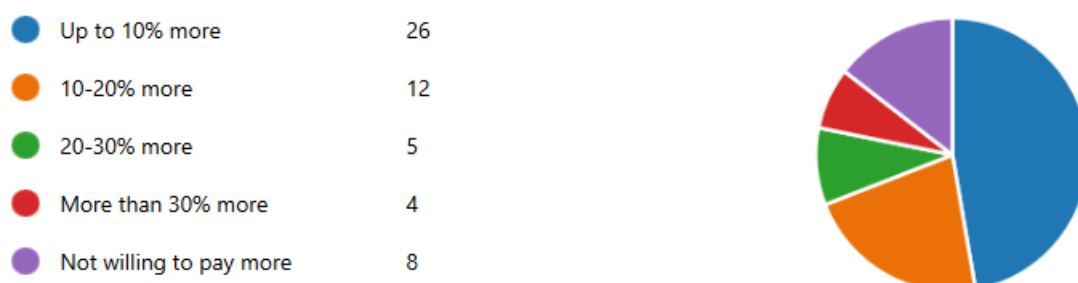
collective influence of all these factors by a significant number of respondents (7 respondents).

11. Conscious Choice for Eco-friendly Packaging



The survey data suggests that a significant number of respondents deliberately select products with eco-friendly packaging, with the majority engaging in this behaviour at least occasionally. A substantial number of respondents (26 respondents) reported that they frequently select products with environmentally friendly packaging, which indicates a consistent dedication to sustainability in their purchasing decisions. Furthermore, 25 respondents reported that they occasionally make conscious decisions in favour of environmentally friendly packaging, which further emphasises the pervasive adoption of environmentally responsible consumer behaviour. Despite the fact that a small number of respondents (3 respondents) stated that they never consciously choose eco-friendly packaging and one respondent expressed uncertainty, these instances are not representative of the majority of respondents who actively prioritise sustainability.

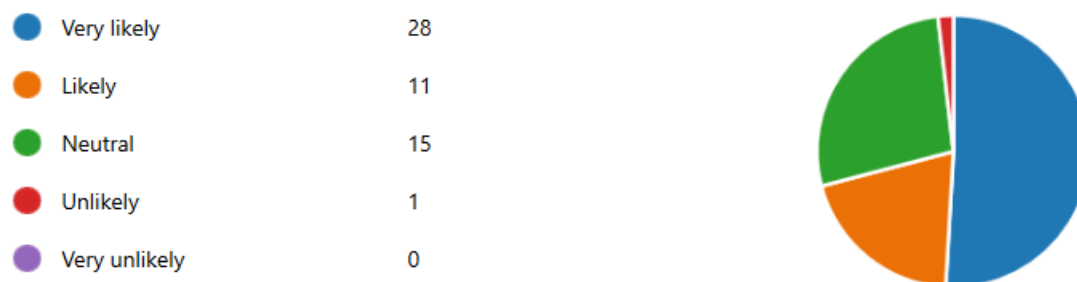
12. Willingness to Pay More for Eco-friendly Packaging



The survey data suggests that respondents' propensity to pay an additional fee for environmentally friendly packaging varies. A moderate willingness to invest in

sustainability is indicated by the fact that a significant majority of respondents (26 respondents) are willing to pay up to 10% more for products packaged in an environmentally conscious manner. Furthermore, 12 respondents are prepared to pay an additional 10% to 20%, indicating a slightly greater level of dedication to environmentally responsible packaging, within a reasonable price range. Although a comparatively small number of respondents are prepared to pay premiums that are 20-30% higher (5 respondents) or more than 30% higher (4 respondents), these individuals are a minority in comparison to those who favour smaller price increments. In contrast, eight respondents indicated that they were averse to pay a premium for environmentally friendly packaging, which implies that their willingness to prioritise sustainability over price considerations is restricted.

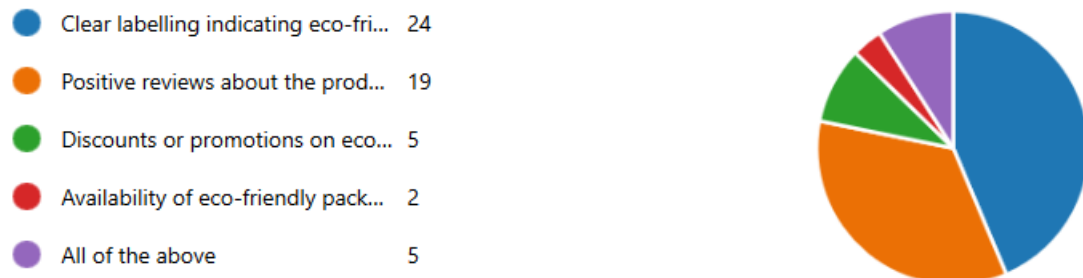
13. Likelihood to Recommend Eco-friendly Packaged Products



The survey data suggests that respondents are highly likely to recommend eco-friendly packaged products to others. A high level of satisfaction and confidence in the environmental benefits of eco-friendly packaging was demonstrated by a significant majority of respondents (28 respondents) who expressed that they are very likely to recommend such products. Furthermore, 11 respondents expressed their willingness to recommend these products, which further emphasises their favourable stance on sustainability advocacy. Although a small number of respondents (15 respondents) expressed a neutral stance on the likelihood of recommending eco-friendly packaging, only one respondent stated that it was doubtful that they would do so. No respondents expressed a very unlikely stance. This overwhelmingly positive inclination to recommend eco-friendly packaged products indicates that consumers have a strong conviction in the importance and

value of sustainability, and they are prepared to actively advocate for environmentally responsible choices.

14. Factors Encouraging Choice of Eco-friendly Packaging



The survey data indicates that the most influential factors in promoting the adoption of eco-friendly packaging are positive reviews about the product and unambiguous labelling that indicates eco-friendliness. A substantial majority of respondents (24 respondents) identified plain labelling as a compelling factor, indicating that transparent communication regarding a product's environmental credentials is a critical factor in their decision-making process. Furthermore, 19 respondents regarded favourable reviews as influential indicators of eco-friendliness, indicating that they hold substantial influence. Although discounts or promotions on eco-friendly products were mentioned by a lesser number of respondents (5 respondents) and the availability of eco-friendly packaging (2 respondents), their influence appears to be relatively minor. Additionally, the multifarious nature of incentives that motivate the adoption of environmentally friendly packaging was underscored by the recognition of the collective influence of all these factors by a significant number of respondents (5 respondents).

15. Switching Brands for Eco-friendly Packaging



The survey data suggests that a substantial number of respondents have switched brands solely due to eco-friendly packaging. The overwhelming majority of respondents (43%) indicated that they have indeed transferred brands as a result of this, indicating a strong consumer preference for environmentally conscious packaging options. In contrast, a relatively small minority of respondents (8 respondents) reported that they have not transferred brands for eco-friendly packaging, suggesting that this factor has a relatively minor impact on their brand loyalty. Furthermore, a small number of respondents (4 respondents) expressed uncertainty regarding whether they had transferred brands due to this reason.

5. Discussion of Findings

RO1: To assess and quantify the level of eco-friendly packaging adoption within the UK FMCG sector by conducting a comprehensive analysis of

The survey findings suggest that consumers have a strong preference for environmental benevolence when making purchasing decisions. The majority of respondents reported that they always or often consider the environmental impact of packaging. This is consistent with the literature, which underscores the substantial impact of consumer attitudes and perceptions on the adoption of eco-friendly packaging by businesses (De Canio, Martinelli, and Endrighi, 2021). The significance of sustainability in influencing consumer preferences is underscored by the consistent consideration of environmental factors, which underscores the necessity for businesses to prioritise eco-friendly packaging practices in order to satisfy consumer demands.

In addition, the survey results indicate that consumers place a high value on eco-friendly packaging features, including biodegradability and recyclability, which is in line with the literature that underscores the significance of material characteristics in shaping consumer perceptions (Scott and VigarEllis, 2014). The emphasis on biodegradability and recyclability suggests that consumers prioritise packaging materials that are consistent with their sustainability objectives. This suggests that

there is a potential market demand for businesses to implement more environmentally friendly packaging solutions.

In terms of consumer behaviour, the survey results suggest that there is a high probability of selecting products packaged in an environmentally conscious manner, with the majority of respondents expressing a high likelihood of doing so. The literature consistently emphasises the increasing consumer preference for eco-friendly products and the influence of environmental concern on purchasing decisions, which is consistent with this trend (Ko and Jeon, 2024). A potential market opportunity for businesses to differentiate themselves by offering sustainable packaging options that appeal to environmentally conscious consumers is suggested by the high likelihood of choosing eco-friendly packaging.

Additionally, the survey results suggest that consumers have a favourable opinion of the availability of eco-friendly packaging, with the majority reporting a significant increase in the availability of these products. This is consistent with the literature, which underscores the importance of government regulations and policy interventions in encouraging businesses to implement eco-friendly packaging practices (Joltreau, 2022). Regulatory frameworks and industry initiatives may be effective in promoting the adoption of sustainable packaging solutions within the UK FMCG sector, as indicated by the perceived increase in availability.

Nevertheless, the survey results also underscore certain obstacles and impediments to the widespread adoption of eco-friendly packaging, despite the favourable attitudes towards this approach. For instance, consumers are willing to pay a premium for environmentally friendly packaging; however, there is a threshold to their willingness, as a substantial number of them indicate a preference for price increases of up to 10%. This implies that consumer purchasing decisions may still be influenced by cost considerations, emphasising the necessity for businesses to maintain a balance between cost-effectiveness and sustainability objectives (Wojnowska-Baryła, Kulikowska and Bernat, 2020). Furthermore, the survey results suggest that the selection of eco-friendly packaging is significantly influenced by the presence of clear labelling that indicates eco-friendliness. This underscores the significance of transparent communication and labelling strategies in the establishment of consumer trust and confidence (Scott and Vigar-Ellis, 2014).

In conclusion, the survey results compared to the existing literature indicate that, despite the increasing consumer demand for eco-friendly packaging in the UK FMCG sector, there are still challenges and barriers to adoption that must be overcome. In terms of offering more environmentally responsible packaging options, addressing cost considerations, and enhancing transparency and communication strategies, businesses have made progress in promoting sustainability and driving consumer behaviour change. However, there is still room for improvement.

RO2: To identify and categorize consumer perceptions of eco-friendly packaging and explore the factors influencing these perceptions.

The survey results corroborate the literature's emphasis on environmental values and concerns as significant influencers of consumer perceptions of eco-friendly packaging. Consistent with the findings of Moser (2015) and Ketelsen, Janssen, and Hamm (2020), the survey indicates that consumers who express pro-environmental attitudes are more inclined to prioritise products with environmentally responsible packaging. This alignment emphasises the significance of environmental consciousness and personal values in influencing consumer preferences for sustainable packaging alternatives.

Secondly, the survey results confirm the literature's assertion that product performance and attributes are critical factors in shaping consumer perceptions of eco-friendly packaging. The survey results suggest that consumers anticipate that eco-friendly packaging will satisfy their functional and cosmetic needs, in addition to sustainability considerations. This is consistent with research that suggests consumers prioritise packaging that provides comparable or superior performance characteristics to traditional packaging materials (Nguyen et al., 2020; Vermeir & Verbeke, 2006). The significance of addressing consumers' practical concerns in addition to environmental considerations when developing eco-friendly packaging solutions is emphasised by the emphasis on functionality and usability.

Furthermore, the survey results demonstrate the impact of socio-demographic factors on consumer perceptions of eco-friendly packaging, as emphasised in the literature. The survey results indicate that younger demographics, such as

Generation Z and millennials, are more inclined to prioritise sustainability in their purchasing decisions, which is in line with the research that suggests a greater level of environmental awareness among younger consumers (Suri, 2023). Furthermore, the survey results suggest that consumer attitudes towards eco-friendly packaging are influenced by education, income, and cultural background, which is consistent with the literature's on socio-demographic factors as determinants of environmental consciousness (Vermeir& Verbeke, 2006; Herbes, Beuthner, and Ramme, 2018).

Additionally, the survey results are consistent with the literature's examination of the emerging trends that influence consumer perceptions of eco-friendly packaging. The survey suggests that there is a burgeoning interest in minimalist and zero-waste packaging solutions, which is consistent with the growing concern of consumers regarding the environmental consequences of packaging waste, as discussed in the literature (Chueamuangphan, Kashyap, and Visvanathan, 2019). Furthermore, the survey results indicate a heightened awareness of technological advancements, including blockchain and smart packaging, which are enhancing transparency and accountability in the packaging industry. This is consistent with the literature's examination of the role of technology in transforming consumer perceptions of sustainable packaging (Sadeghi, Kim, and Seo, 2022).

In general, the survey results and the literature review section on consumer perceptions of eco-friendly packaging are in agreement, indicating that the survey effectively identified and categorised consumer perceptions and investigated the factors that influence these perceptions. The findings offer significant insights into consumer attitudes and preferences regarding eco-friendly packaging in the UK FMCG sector, thereby contributing to a comprehensive understanding of the factors that motivate the adoption of sustainable packaging practices.

RO3: To examine the impact of consumer perceptions on purchasing behaviour, to identify patterns and relationships between eco-friendly

The survey results are consistent with the literature review on the role of brand storytelling and emotive appeal in influencing consumer purchasing behaviour towards eco-friendly packaging. The survey suggests that consumers are more

inclined to interact with brands that effectively communicate their dedication to environmental stewardship and sustainability through captivating narratives, which is in line with the findings of Elliott, Rundle-Thiele, and Waller (2014). Brands that establish emotional connections with consumers by aligning their eco-friendly packaging initiatives with their values and aspirations are more likely to positively impact their purchasing behaviour. The survey results indicate that emotional resonance is a substantial factor in the development of consumer preferences for eco-friendly packaging options in the UK FMCG sector.

Secondly, the survey results are consistent with the literature's discussion of interactive packaging and experiential marketing as effective strategies for promoting sustainable purchasing behaviour and increasing consumer engagement. The survey suggests that consumers are increasingly interested in interactive elements, such as QR codes and augmented reality, which provide immersive experiences and insights into a product's sustainability journey. This is in line with the research that emphasises the potential of interactive packaging to establish deeper connections with consumers (Groopman, 2015). Interactive packaging, which employs experiential marketing strategies, is expected to increase brand engagement and promote sustainable purchasing behaviour among consumers.

Also, the survey results corroborate the literature's investigation of incentive-based programmes and gamification as effective strategies for encouraging consumers to adopt sustainable practices, such as selecting products with eco-friendly packaging. Consistent with the research that emphasises the potential of gamification to induce sustainable behaviour change, the survey results indicate that consumers respond favourably to loyalty programmes and gamified experiences that provide rewards or incentives for eco-friendly behaviours (Mulcahy et al., 2021). Gamification and incentive-based programmes are likely to foster a long-term commitment to sustainability objectives and enhance brand loyalty among consumers for brands that implement them.

Additionally, the survey results are consistent with the literature's discussion of social platforms and community building as valuable tools for promoting meaningful connections and dialogue regarding eco-friendly packaging initiatives. The survey suggests that consumers are increasingly utilising online communities and social

media platforms to exchange experiences and seek guidance on sustainability initiatives. This is consistent with the research that emphasises the influence of social platforms on consumer perceptions and behaviours (Bedard and Tolmie, 2018). Brands that actively engage with consumers through social platforms and community building initiatives are more likely to establish trust, credibility, and advocacy for their eco-friendly packaging initiatives, thereby positively influencing purchasing behaviour.

Furthermore, the survey results substantiate the literature's investigation of customisation and personalisation strategies as effective methods for enhancing the perceived value and engagement with eco-friendly packaging solutions. The survey suggests that consumers prioritise personalised packaging options that are reflective of their identity and values, which is in line with the research that emphasises the significance of customisation in shaping consumer preferences (Ambrose and Harris, 2017). Brands that provide customisable packaging options are more likely to cultivate brand advocacy and create memorable experiences among consumers who appreciate thoughtful design and personalised attention.

In addition, the survey results are consistent with the literature's emphasis on environmental education as a critical factor in shaping consumer attitudes and behaviours towards eco-friendly packaging. Consistent with the research that emphasises the importance of environmental education in promoting behaviour change (Young et al., 2009), the survey suggests that consumers are more likely to adopt sustainable practices when they are provided with educational resources and tools that aid them in making informed decisions. It is probable that brands that promote environmental education initiatives to empower consumers will increase demand for eco-friendly packaging solutions and encourage positive behaviour change among consumers.

In general, the survey results effectively investigate the influence of consumer perceptions on purchasing behaviour and establish patterns and relationships between eco-friendly packaging and consumer behaviour in the UK FMCG sector. Valuable insights into the factors that influence sustainable purchasing behaviour and strategies for promoting eco-friendly packaging initiatives among consumers are

provided by the alignment between the survey results and the themes emphasised in the literature review section.

6. Recommendations

The survey results we could suggest the following recommendations:

- **Enhance Environmental Messaging and Packaging Features:** The survey results suggest that consumers place a high value on eco-friendly packaging features, including biodegradability and recyclability, and environmental benevolence. Consequently, it is imperative that businesses prioritise the improvement of their environmental messaging and the integration of these valued features into their packaging designs. This may involve conspicuously displaying eco-friendly labels, emphasising the use of sustainable materials, and providing clear instructions on how the packaging can be disposed of responsibly. Businesses can enhance the appeal of their products and attract environmentally conscious consumers by aligning packaging features with consumer preferences.
- **Improve Product Availability and Accessibility:** According to the survey, consumers perceive a substantial increase in the availability of eco-friendly packaging. Nevertheless, there is still space for improvement in the provision of these products to a wider audience. Businesses should persist in broadening their selection of environmentally responsible packaging across a variety of product categories and retail channels. In an additional effort to increase the visibility and accessibility of eco-friendly alternatives to

consumers, it is recommended that they be strategically placed in stores and online platforms. Businesses can satisfy the increasing demand of consumers and promote the adoption of eco-friendly packaging by enhancing accessibility and availability.

- **Consumer Education and Price Sensitivity:** Although consumers are willing to pay a premium for environmentally responsible packaging, there is a threshold to their willingness, with a significant number of them expressing a preference for price increases of up to 10%. In order to surmount price sensitivity barriers, businesses should implement strategies such as education consumers about the long-term environmental and societal advantages of selecting sustainable packaging, offering competitive pricing for eco-friendly alternatives, and offering discounts or promotions. Businesses can encourage a greater number of consumers to make eco-friendly purchasing decisions by addressing price concerns and providing transparent pricing information.
- **Implement Transparent Communication and Clear Labelling:** The survey results underscore the significance of clear labelling that indicates eco-friendliness as a significant factor that influences the selection of eco-friendly packaging. It is imperative that businesses include transparent information regarding the environmental attributes of their products and prominent eco-friendly labels on their packaging. This can assist in the development of consumer trust and confidence by ensuring that they are making sustainable decisions. Furthermore, it is imperative that businesses implement transparent communication strategies, including the provision of comprehensive product information on websites and the utilisation of social media platforms to interact with consumers and address inquiries regarding environmentally friendly packaging.
- **Invest in Government Regulations and Consumer Demand:** The survey suggests that the adoption of eco-friendly packaging is significantly influenced by government regulations and consumer demand. Businesses should persist in their advocacy for government policies and regulations that encourage sustainable practices and promote eco-friendly packaging. In addition, they should address consumer demand by providing a diverse selection of

environmentally responsible alternatives and actively soliciting consumer feedback to pinpoint areas that require enhancement. Businesses can establish themselves as sustainability leaders and obtain a competitive advantage in the market by adhering to consumer preferences and regulatory requirements.

7. Conclusion

7.1 Summary of Findings

Research Objective 1

In the UK FMCG sector, the survey results eloquently elucidate the burgeoning consumer demand for eco-friendly packaging solutions, which is consistent with the existing literature. Businesses are confronted with a clear imperative to adopt sustainable packaging practices, as the majority of respondents consistently prioritise environmental considerations in their purchasing. This convergence between sustainability imperatives and consumer preferences not only confirms the accomplishment of our objective but also emphasises the industry's changing landscape. RO1. Our research offers a thorough examination of the increasing significance of sustainability in influencing consumer behaviour within the FMCG sector by meticulously evaluating and quantifying the extent of the adoption of eco-friendly packaging.

Nevertheless, our research reveals that, despite the promising trajectory towards eco-conscious practices, there are significant challenges and barriers to their widespread adoption. The delicate equilibrium between cost considerations and

sustainability objectives presents a nuanced dilemma for businesses, despite the fact that consumers have shown a propensity to pay premiums for eco-friendly packaging. Additionally, the impact of transparent communication strategies, as demonstrated by explicit labelling, is a critical factor in the formation of consumer trust and confidence. The perceived increase in the availability of eco-friendly products, despite these challenges, represents progress towards the realisation of sustainability objectives. Therefore, although our research represents a substantial advancement in the comprehensive assessment of the adoption of eco-friendly packaging, it is imperative to continue making efforts to resolve these obstacles and to further advance sustainability initiatives within the FMCG sector.

Research Objective 2

The survey results eloquently reaffirm the profound influence of consumer perceptions on the adoption of eco-friendly packaging, echoing the themes elucidated in the literature. Our research, which is in line with previous research, indicates that consumer preferences for sustainable packaging alternatives are significantly influenced by environmental values and concerns. Moreover, the emphasis on product performance attributes underscores the multidimensional expectations of consumers, who require eco-friendliness to be in harmony with their functional and aesthetic needs. These observations emphasise the successful attainment of our objective RO2, which is the intricate interplay between consumer perceptions and packaging attributes. Our research effectively isolates and categorises the factors that influence perceptions of eco-friendly packaging through a meticulous examination of consumer attitudes, thereby enriching our comprehension of consumer behaviour within the FMCG sector.

Our findings also reveal significant disparities and challenges, despite the alignment between the literature and survey results. The necessity of customised marketing strategies is underscored by the fact that socio-demographic factors, such as age, education, and income, are significant determinants of consumer perceptions. Furthermore, the industry must perpetually adapt due to the dynamic nature of consumer preferences, which is emphasised by the emergence of technological advancements and minimalist packaging trends. Although our research provides valuable insights into consumer perceptions of eco-friendly packaging, it is essential

to continue making efforts to effectively engage diverse consumer segments and navigate the evolving landscape. Consequently, our research underscores the necessity of consumer-centric approaches and sustained innovation to advance eco-friendly packaging in the FMCG sector, in addition to attaining our objective RO2.

Research Objective 3

Our survey's thorough examination of consumer perceptions and purchasing behaviour is in close alignment with the insights obtained from the literature, thereby effectively addressing our objective RO3. Our results emphasise the critical role of brand storytelling and emotive appeal in shaping consumer purchasing behaviour towards eco-friendly packaging. Our study substantiates the significance of emotive connections in influencing sustainable purchasing decisions by clarifying consumers' propensity to interact with brands that prioritise environmental sustainability. Furthermore, the investigation of experiential marketing strategies and interactive packaging demonstrates promising opportunities for promoting sustainable behaviour and increasing consumer engagement. The potential to foster long-term brand loyalty and incentivize eco-friendly choices is underscored by the positive response to incentive-based programmes and gamified experiences.

Additionally, our research underscores the importance of community building initiatives and social platforms in fostering meaningful discourse and advocating for environmentally responsible packaging initiatives. The results emphasise the necessity for brands to actively engage with consumers in these spaces, as consumers are increasingly relying on online communities and social media platforms to seek guidance and validation for their sustainability efforts. Additionally, the examination of personalisation and customisation strategies underscores the significance of accommodating individual preferences and values, which in turn improves brand engagement and perceived value. Lastly, the significance of consumer empowerment in the promotion of sustainable behaviour change is emphasised by the emphasis on environmental education initiatives. Brands can foster demand for eco-friendly packaging solutions and empower consumers to make informed decisions by providing them with the requisite knowledge and resources. Therefore, our research effectively addresses objective RO3 by conducting a thorough analysis of consumer perceptions and behaviour, thereby

elucidating the most effective strategies for promoting eco-friendly packaging in the UK FMCG sector.

7.2 Limitations of the Research

Our investigation into consumer attitudes and behaviours regarding environmentally friendly packaging has provided valuable insights; however, it is imperative to acknowledge the constraints of our investigation. The sample size of our survey is one of the primary constraints. Although our sample was representative of the UK FMCG sector, capturing a variety of perspectives, it may not completely capture the breadth of consumer attitudes and behaviours. For example, the distribution across demographic categories may not be proportional, despite the fact that 60% of respondents reported consistently taking the environmental impact of packaging into account. Assume that the preponderance of respondents are from urban areas or higher-income brackets. The survey results may overrepresent environmentally conscious urbanites while underrepresenting rural or lower-income consumers in that scenario, thereby restricting the generalizability of our findings across diverse consumer segments.

Additionally, the potential for response bias is introduced by our dependence on self-reported data. Although 50.91% of respondents indicated that they were extremely likely to select eco-friendly packaging, their self-reported intentions may not always correspond with their actual actions. Product availability, pricing, and convenience are among the numerous factors that influence purchasing decisions, in addition to stated intentions. Furthermore, the reported frequency of environmentally friendly behaviours may be inflated by respondents' tendency to respond to survey queries in a socially desirable manner. For example, the 47.27% of respondents who stated they were prepared to pay up to 10% more for eco-friendly packaging may have overstated their willingness to pay, which could potentially distort consumer demand for sustainable products.

Furthermore, the accuracy and reliability of responses may have been compromised by the introduction of ambiguity or confusion in specific queries due to the design of our survey instrument. For instance, although 43.64% of respondents identified clear labelling that indicates eco-friendliness as a factor that influenced their selection of

eco-friendly packaging, the definition of "clear labelling" may differ among participants. In the absence of explicit definitions or examples in the survey, respondents may have interpreted the question differently, resulting in inconsistent responses and potentially inaccurate conclusions. The validity of the findings and the utility of the data for informing actionable insights for businesses and policymakers could be compromised by this lack of clarity in survey design.

The absence of longitudinal data is another substantial limitation of our research, as it would have allowed us to monitor the evolution of consumer perceptions and behaviours over time. A survey that is conducted once only offers a snapshot of consumer attitudes and behaviours at a specific point in time, without taking into consideration potential fluctuations or trends. For example, although 63.64% of respondents perceived a substantial increase in the availability of eco-friendly packaging, this perception may change over time in relation to evolving market dynamics, consumer preferences, and regulatory developments. Longitudinal studies would provide a more comprehensive understanding of the dynamics that influence consumer preferences for eco-friendly packaging and the efficacy of sustainability initiatives over time, thereby enabling more robust conclusions and strategic interventions.

7.3 Closing Statements

By acknowledging the constraints of our research, we establish a foundation for future endeavours to expand upon our discoveries and resolve these deficiencies. We not only exhibit intellectual honesty but also emphasise the intricacy of consumer behaviour in the context of sustainability by recognising the constraints inherent in our study. In the future, researchers can use our insights as a foundation for more nuanced investigations, utilising larger sample sizes, longitudinal designs, and refined survey instruments to gain a more profound understanding of consumer attitudes and behaviours towards eco-friendly packaging.

Although our research provides valuable insights into the current state of consumer perceptions and behaviours, it also underscores the ongoing necessity for exhaustive and robust research in this field. Future research can explore the complexities of socio-demographic influences, psychological factors, and external

variables that influence consumer preferences for eco-friendly packaging by embracing the multifaceted nature of sustainability and consumer decision-making. By empowering consumers to make informed choices and driving positive change across the FMCG sector, we can cultivate a more sustainable future through collaborative efforts between academia, industry, and policymakers.

In summary, our research functions as a preliminary stage in the process of establishing a society that is more environmentally conscious and sustainable. Despite the limitations of our study, we are optimistic about the potential for future research to resolve these constraints and advance our understanding of consumer behaviour in relation to eco-friendly packaging. Collectively, we can strive for a future in which sustainability is not merely an option, but a fundamental component of our daily existence, by encouraging innovation, collaboration, and continuous inquiry.

References

Abbas, N.A. *et al.* (2024) 'Enhancing Sustainable Consumer Behavior through Eco-Friendly Packaging Innovations: A Case Study of Dairy industry,' *International Journal of Social Science and Entrepreneurship*, 4(1), pp. 313–333.

<https://doi.org/10.58661/ijssse.v4i1.267>.

Ambrose, G. and Harris, P. (2017) *Packaging the brand: The Relationship Between Packaging Design and Brand Identity*. Bloomsbury Publishing.

Bahari, S.F. (2012) 'Qualitative versus quantitative research strategies: Contrasting epistemological and ontological assumptions,' *Jurnal Teknologi* [Preprint].

<https://doi.org/10.11113/jt.v52.134>.

Barrowclough, D. and Birkbeck, C.D. (2022) 'Transforming the Global Plastics Economy: The role of economic policies in the global governance of plastic pollution,' *Social Sciences*, 11(1), p. 26. <https://doi.org/10.3390/socsci11010026>.

Bedard, S.A.N. and Tolmie, C.R. (2018) 'Millennials' green consumption behaviour: Exploring the role of social media,' *Corporate Social-responsibility and Environmental Management*, 25(6), pp. 1388–1396. <https://doi.org/10.1002/csr.1654>.

Chauhan, J. and Parmar, G. (2017) 'A Study on Consumer Buying Behaviour for Selected FMCG Products,' *International Journal of Education and Management Studies*, 7(3), pp. 396–399. <https://www.questia.com/library/journal/1P4-1964427543/a-study-on-consumer-buying-behaviour-for-selected>.

Chueamuangphan, K., Kashyap, P. and Visvanathan, C. (2019) 'Packaging Waste from E-Commerce: Consumers' Awareness and Concern,' in *Springer eBooks*, pp. 27–41. https://doi.org/10.1007/978-981-13-7071-7_3.

D'Souza, C., Taghian, M. and Lamb, P. (2006) 'An empirical study on the influence of environmental labels on consumers,' *Corporate Communications: An International Journal*, 11(2), pp. 162–173. <https://doi.org/10.1108/13563280610661697>.

De Canio, F., Martinelli, E. and Endrighi, E. (2021) 'Enhancing consumers' pro-environmental purchase intentions: the moderating role of environmental concern,' *International Journal of Retail & Distribution Management*, 49(9), pp. 1312–1329. <https://doi.org/10.1108/ijrdm-08-2020-0301>.

Elliott, G., Rundle-Thiele, S. and Waller, D. (2014) *Marketing*. Wiley.

Geissdoerfer, M. *et al.* (2017) 'The Circular Economy – A new sustainability paradigm?' *Journal of Cleaner Production*, 143, pp. 757–768. <https://doi.org/10.1016/j.jclepro.2016.12.048>.

González-García, S. *et al.* (2015) 'Sustainable design of packaging materials,' in *Environmental footprints and eco-design of products and processes*, pp. 23–46. https://doi.org/10.1007/978-981-287-913-4_2.

González-García, S. *et al.* (2015) 'Sustainable design of packaging materials,' in *Environmental footprints and eco-design of products and processes*, pp. 23–46. https://doi.org/10.1007/978-981-287-913-4_2.

Govender, J.P. and Govender, T.L. (2016) 'The influence of green marketing on consumer purchase behavior,' *Environmental Economics*, 7(2), pp. 77–85.
[https://doi.org/10.21511/ee.07\(2\).2016.8](https://doi.org/10.21511/ee.07(2).2016.8).

Groopman, J. (2015). Customer Experience in the Internet of Things.

Gulbrandsen, L.H. (2005) 'Mark of Sustainability? Challenges for Fishery and Forestry Eco-labeling,' *Environment*, 47(5), pp. 8–23.
<https://doi.org/10.3200/envt.47.5.8-23>.

Herbes, C., Beuthner, C. and Ramme, I. (2018) 'Consumer attitudes towards biobased packaging – A cross-cultural comparative study,' *Journal of Cleaner Production*, 194, pp. 203–218. <https://doi.org/10.1016/j.jclepro.2018.05.106>.

Jain, P. and Hudnurkar, M. (2022) 'Sustainable packaging in the FMCG industry,' *Cleaner and Responsible Consumption*, 7, p. 100075.
<https://doi.org/10.1016/j.clrc.2022.100075>.

Joltreau, E. (2022) 'Extended producer responsibility, packaging waste reduction and eco-design,' *Environmental & Resource Economics*, 83(3), pp. 527–578.
<https://doi.org/10.1007/s10640-022-00696-9>.

Kara, S. et al. (2022) 'Closed-loop systems to circular economy: A pathway to environmental sustainability?' *CIRP Annals*, 71(2), pp. 505–528.
<https://doi.org/10.1016/j.cirp.2022.05.008>.

Ketelsen, M., Janssen, M. and Hamm, U. (2020) 'Consumers' response to environmentally-friendly food packaging - A systematic review,' *Journal of Cleaner Production*, 254, p. 120123. <https://doi.org/10.1016/j.jclepro.2020.120123>.

Ko, J.-H. and Jeon, H.-M. (2024) 'The impact of Eco-Friendly practices on Generation Z's green image, brand attachment, brand advocacy, and brand loyalty in coffee shop,' *Sustainability*, 16(8), p. 3126. <https://doi.org/10.3390/su16083126>.

Koutsimanis, G. et al. (2012) 'Influences of packaging attributes on consumer purchase decisions for fresh produce,' *Appetite*, 59(2), pp. 270–280.
<https://doi.org/10.1016/j.appet.2012.05.012>.

Lambert, S. and Wagner, M. (2017) 'Environmental performance of bio-based and biodegradable plastics: the road ahead,' *Chemical Society Reviews*, 46(22), pp. 6855–6871. <https://doi.org/10.1039/c7cs00149e>.

Lavrakas, P.J. *et al.* (2019) *Experimental methods in survey research: Techniques that Combine Random Sampling with Random Assignment*. John Wiley & Sons.

Mazurek-Łopacińska, K., Sobocińska, M. and Krupowicz, J. (2022) 'Purchase Motives and Factors Shaping Consumer behaviour on the Ecological Product Market (Poland Case Study),' *Sustainability*, 14(22), p. 15274. <https://doi.org/10.3390/su142215274>.

Moser, A.K. (2015) 'Thinking green, buying green? Drivers of pro-environmental purchasing behavior,' *the Journal of Consumer Marketing/Journal of Consumer Marketing*, 32(3), pp. 167–175. <https://doi.org/10.1108/jcm-10-2014-1179>.

Mulcahy, R.F. *et al.* (2021) "'Game on!' Pushing consumer buttons to change sustainable behavior: a gamification field study,' *European Journal of Marketing*, 55(10), pp. 2593–2619. <https://doi.org/10.1108/ejm-05-2020-0341>.

Nguyen, A.T. *et al.* (2020) 'A consumer definition of eco-friendly packaging,' *Journal of Cleaner Production*, 252, p. 119792. <https://doi.org/10.1016/j.jclepro.2019.119792>.

Ottman, J. (2017) *The new rules of green marketing: Strategies, Tools, and Inspiration for Sustainable Branding*. Routledge.

Park, Y.S., Konge, L. and Artino, A.R. (2020) 'The positivism paradigm of research,' *Academic Medicine*, 95(5), pp. 690–694. <https://doi.org/10.1097/acm.0000000000003093>.

Perey, R. *et al.* (2018) 'The place of waste: Changing business value for the circular economy,' *Business Strategy and the Environment*, 27(5), pp. 631–642. <https://doi.org/10.1002/bse.2068>.

Phelan, A. *et al.* (2022) 'Plastic pollution and packaging: Corporate commitments and actions from the food and beverage sector,' *Journal of Cleaner Production*, 331, p. 129827. <https://doi.org/10.1016/j.jclepro.2021.129827>.

Rundh, B. (2016) 'The role of packaging within marketing and value creation,' *British Food Journal*, 118(10), pp. 2491–2511. <https://doi.org/10.1108/bfj-10-2015-0390>.

Sadeghi, K., Kim, J. and Seo, J. (2022) 'Packaging 4.0: The threshold of an intelligent approach,' *Comprehensive Reviews in Food Science and Food Safety*, 21(3), pp. 2615–2638. <https://doi.org/10.1111/1541-4337.12932>.

Saunders, M., Lewis, P. and Thornhill, A. (2009) *Research methods for business students*. Pearson Education.

Scott, L. and Vigar-Ellis, D. (2014) 'Consumer understanding, perceptions and behaviours with regard to environmentally friendly packaging in a developing nation,' *International Journal of Consumer Studies*, 38(6), pp. 642–649. <https://doi.org/10.1111/ijcs.12136>.

Shamsuddin, I.M. (2017) 'Bioplastics as better Alternative to petroplastics and their role in national sustainability: A review,' *Advances in Bioscience and Bioengineering*, 5(4), p. 63. <https://doi.org/10.11648/j.abb.20170504.13>.

Soiferman, L.K. (2010) 'Compare and Contrast Inductive and Deductive Research Approaches.,' *ERIC* [Preprint]. <http://files.eric.ed.gov/fulltext/ED542066.pdf>.

Song, J.H. *et al.* (2009) 'Biodegradable and compostable alternatives to conventional plastics,' *Philosophical Transactions - Royal Society. Biological Sciences*, 364(1526), pp. 2127–2139. <https://doi.org/10.1098/rstb.2008.0289>.

Steenis, N.D. *et al.* (2017) 'Consumer response to packaging design: The role of packaging materials and graphics in sustainability perceptions and product evaluations,' *Journal of Cleaner Production*, 162, pp. 286–298. <https://doi.org/10.1016/j.jclepro.2017.06.036>.

Stoica, M. *et al.* (2020) 'The financial impact of replacing plastic packaging by biodegradable biopolymers - A smart solution for the food industry,' *Journal of Cleaner Production*, 277, p. 124013. <https://doi.org/10.1016/j.jclepro.2020.124013>.

Suri, G.K.Dr.S. (2023) *EXPLORING GEN Z'S PERCEPTION TOWARDS SUSTAINABLE PACKAGING*. <http://journalra.org/index.php/jra/article/view/945>.

Vassileva, A. (2022) 'Green Public-Private Partnerships (PPPs) as an instrument for sustainable development,' *Journal of World Economy, Transformations & Transitions* [Preprint]. <https://doi.org/10.52459/jowett25221122>.

Vermeir, I. and Verbeke, W. (2006) 'Sustainable Food Consumption: Exploring the consumer "Attitude – Behavioral Intention" gap,' *Journal of Agricultural and Environmental Ethics*, 19(2), pp. 169–194. <https://doi.org/10.1007/s10806-005-5485-3>.

Wandosell, G. *et al.* (2021) 'Green Packaging from Consumer and Business Perspectives,' *Sustainability (Basel)*, 13(3), p. 1356. <https://doi.org/10.3390/su13031356>.

Wassmer, U., Pain, G. and Paquin, R.L. (2017) 'Taking environmental partnerships seriously,' *Business Horizons*, 60(1), pp. 135–142. <https://doi.org/10.1016/j.bushor.2016.09.009>.

Wojnowska-Baryła, I., Kulikowska, D. and Bernat, K. (2020) 'Effect of Bio-Based products on waste management,' *Sustainability*, 12(5), p. 2088. <https://doi.org/10.3390/su12052088>.

Young, W. *et al.* (2009) 'Sustainable consumption: green consumer behaviour when purchasing products,' *Sustainable Development*, 18(1), pp. 20–31. <https://doi.org/10.1002/sd.394>.

Young, W. *et al.* (2009) 'Sustainable consumption: green consumer behaviour when purchasing products,' *Sustainable Development*, 18(1), pp. 20–31. <https://doi.org/10.1002/sd.394>.

Appendices

Ethics Form



PG2 / E1 FORM

APPLICATION FOR ETHICAL APPROVAL

RESEARCH STUDENTS

This form is to be completed by the student within **SIX** months for full-time students and **TWELVE** months for part time students, after the commencement of the research degree or following progression to Part Two of your course.

Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).

This document is also available in Welsh.

RESEARCH STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

1	Full Name:	PRATIK PRAVINKUMAR PATEL			
2	Tick all boxes that apply:	Member of staff:	☐	Honorary research fellow:	☐
	Undergraduate Student	☐	Taught Postgraduate Student	☒	Postgraduate Research Student
3	Institute/Academic Discipline/Centre:	UWTSD, LONDON CAMPUS			
4	Campus:	LONDON			
5	E-mail address:	2221502@student.uwtsd.ac.uk			
6	Contact Telephone Number:	07767569348			

For students:		
7	Student Number:	2221502
8	Programme of Study:	MBA general management
9	Director of Studies/Supervisor:	Dr Hossein Shokri

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☐	NO	☒
		Date			
2	If Yes, please indicate source of approval (and date where known): Approval in principle must be obtained from the relevant source prior to seeking ethical approval	Research Degrees Committee	☐	N/A	
		Institute Research Committee	☐		
		Other (write in)	☐		

SECTION C: Internal and External Ethical Guidance Materials

Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, location-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines. You may add rows to this table if needed.	
1	UWTSD Research Ethics & Integrity Code of Practice ☒
2	UWTSD Research Data Management Policy ☒
3	[List any other relevant documents here] ☐

SECTION D: External Collaborative Research Activity

If there are external collaborators then you should gain consent from the contact persons to share their personal data with the university. If there are no external collaborators then leave this section blank and continue to section E.

1	Institution	
2	Contact person name	
3	Contact person e-mail address	
4	Is your research externally funded?	YES ☐ NO ☐
5	Are you in receipt of a KESS scholarship?	YES ☐ NO ☐
6	Are you specifically employed to undertake this research in either a paid or voluntary capacity?	Voluntary YES ☐ NO ☐
7		Employed YES ☐ NO ☐
8	Is the research being undertaken within an existing UWTSD Athrofa	If YES then the permission question YES ☐ NO ☐

	Professional Learning Partnership (APLP)?	below does not need to be answered.				
9	Has permission to undertake the research has been provided by the partner organisation?	(If YES attach copy) If NO the application cannot continue	YES	☐	NO	☐

Where research activity is carried out in collaboration with an external organisation

10	Does this organisation have its own ethics approval system?	YES	☐	NO	☒
	If Yes, please attach a copy of any final approval (or interim approval) from the organisation (this may be a copy of an email if appropriate).				

SECTION E: Details of Research Activity

1	Indicative title:	Measuring the Impact of Eco-friendly Packaging on Consumer Perceptions and Purchasing Behaviour in the FMCG Sector		
2	Proposed start date:	26 February 2024	Proposed end date:	14 June 2024
	Introduction to the Research (maximum 300 words per section) Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the points below: <i>Purpose of Research Activity</i> <i>Proposed Research Question</i> <i>Aims of Research Activity</i> <i>Objectives of Research Activity</i> Demonstrate, briefly, how Existing Research has informed the proposed activity and explain <i>What the research activity will add to the body of knowledge</i> <i>How it addresses an area of importance.</i>			
3	Purpose of Research Activity The purpose of this research is to address a significant gap in the academic literature by thoroughly examining the impact of environmentally friendly packaging on consumer attitudes and purchasing behaviours within the Fast-Moving Consumer Goods (FMCG) sector, particularly focusing on fashion-forward consumer goods. By conducting a comprehensive analysis, this study aims to assess the current level of eco-friendly packaging adoption among FMCG companies in the UK, categorize consumer perceptions of such packaging, and explore the factors influencing these perceptions. Furthermore, the research seeks to investigate how consumer perceptions of eco-friendly packaging influence their purchasing behaviour, including brand loyalty and product choices. <i>(this box should expand as you type)</i>			
4	Research Questions 1. How does the extent of eco-friendly packaging adoption vary among FMCG companies in the UK? 2. What are the predominant consumer perceptions regarding eco-friendly packaging in the context of FMCG products? 3. How does consumer perception of eco-friendly packaging influence purchasing behaviour, including brand loyalty and product choices in the FMCG sector? <i>(this box should expand as you type)</i>			
5	Aims of Research Activity			

	The aims of this research are threefold: firstly, to evaluate and quantify the extent of eco-friendly packaging adoption within the UK FMCG sector through an in-depth analysis of current practices, policies, and initiatives; secondly, to categorize and understand consumer perceptions regarding eco-friendly packaging for FMCG products, identifying the factors that influence these perceptions; and thirdly, to investigate the impact of consumer perceptions on purchasing behaviour within the FMCG sector, discerning patterns and relationships between eco-friendly packaging perceptions and actual consumer choices, including considerations of brand loyalty and product selection. (this box should expand as you type)
6	Objectives of Research Activity 1. To assess and quantify the level of eco-friendly packaging adoption within the UK FMCG sector by conducting a comprehensive analysis of current practices, policies, and initiatives. 2. To identify and categorize consumer perceptions of eco-friendly packaging and explore the factors influencing these perceptions. 3. To examine the impact of consumer perceptions on purchasing behaviour, to identify patterns and relationships between eco-friendly packaging perceptions and actual consumer choices. (this box should expand as you type)
	Proposed methods (maximum 600 words) Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. You do not need to justify the methods here, but should instead describe how you intend to collect the data necessary for you to complete your project.
7	The research employs a positivist methodology, predicated on the notion that reality is objective and amenable to measurement and observation. By endorsing the utilisation of quantitative data to reveal patterns and correlations, this philosophy furnishes the investigation with a scientific and empirical underpinning. Primary research methods are utilised in this study, specifically surveys administered via Microsoft Forms. Primary research is of the utmost importance as it gathers data directly from respondents, thereby guaranteeing that the information pertains to eco-friendly packaging and is pertinent and specific to the research inquiries. Quantitative research methods are utilised, with an emphasis on numerical data analysis. This methodology is appropriate for the research aims of the study as it enables the quantification of consumer attitudes and actions via statistical techniques, thereby yielding insights that are unambiguous, organised, and applicable to a wide audience. Microsoft Forms is selected as the survey instrument on account of its intuitive interface, streamlined data organisation functionalities, and simplicity of data collection. It enables the generation of multiple-choice inquiries and guarantees the efficient and precise gathering and examination of data. Put simply, the study will employ a positivist methodology, which entails gathering and examining numerical data in order to gain insights into consumer behaviour. The surveys, which will be developed utilising Microsoft Forms, will consist of fifteen to twenty multiple-choice questions. The purpose of these surveys is to collect quantitative data regarding the perceptions of FMCG consumers regarding eco-friendly packaging. In order to identify significant findings and trends concerning the adoption of eco-friendly packaging, consumer perceptions, and the impact of such perceptions on purchasing behaviour, the responses will be analysed utilising tables and pie charts. The primary objective of this approach is to furnish unambiguous and systematic insights pertaining to the research goals, thereby facilitating a thorough comprehension of the correlation between environmentally sustainable packaging and consumer conduct in the fast-moving consumer goods (FMCG) industry. The intended sample size will consist of 50-75 participants, chosen at random in order to guarantee a varied representation of consumer viewpoints. (this box should expand as you type)
	Location of research activity Identify all locations where research activity will take place.
8	London (this box should expand as you type)

	Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants. If you live in the country where you will do the research then please state this.
9	N/A <i>(this box should expand as you type)</i>

10	Use of documentation not in the public domain: Are any documents NOT publicly available?	<table border="1"> <tr> <td>NO</td> <td>☒</td> </tr> <tr> <td>YES</td> <td>☐</td> </tr> </table>	NO	☒	YES	☐
NO	☒					
YES	☐					
11	If yes, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with the current data protection law of the country in question and that of England and Wales. <i>(this box should expand as you type)</i>					

	Does your research relate to one or more of the seven aims of the Well-being of Future Generations (Wales) Act 2015?	YES	NO
12	A prosperous Wales	☐	☒
13	A resilient Wales	☐	☒
14	A healthier Wales	☐	☒
15	A more equal Wales	☐	☒
16	A Wales of cohesive communities	☐	☒
17	A Wales of vibrant culture and thriving Welsh language	☐	☒
18	A globally responsible Wales	☐	☒
19	If YES to any of the above, please give details:		
	<i>(this box should expand as you type)</i>		

SECTION F: Scope of Research Activity

	Will the research activity include:	YES	NO
1	Use of a questionnaire or similar research instrument?	☒	☐
2	Use of interviews?	☐	☒
3	Use of focus groups?	☐	☒
4	Use of participant diaries?	☐	☒

5	Use of video or audio recording?	☐	☒
6	Use of computer-generated log files?	☐	☒
7	Participant observation with their knowledge?	☐	☒
8	Participant observation without their knowledge?	☐	☒
9	Access to personal or confidential information without the participants' specific consent?	☐	☒
10	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
11	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
12	Investigation of participants involved in illegal activities?	☐	☒
13	Use of procedures that involve deception?	☐	☒
14	Administration of any substance, agent or placebo?	☐	☒
15	Working with live vertebrate animals?	☐	☒
16	Procedures that may have a negative impact on the environment?	☐	☒
17	Other primary data collection methods. Please indicate the type of data collection method(s) below.		
	Details of any other primary data collection method:	☐	☒
(this box should expand as you type)			

If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

If there are no participants then do not complete this section, but go directly to section H.

	Who are the intended participants:	YES	NO
1	Students or staff at the University?	☐	☒
2	Adults (over the age of 18 and competent to give consent)?	☒	☐
3	Vulnerable adults?	☐	☒
4	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☐	☒
5	Prisoners?	☐	☒
6	Young offenders?	☐	☒
7	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒
8	People engaged in illegal activities?	☐	☒
9	Others. Please indicate the participants below, and specifically any group who may be unable to give consent.	☐	☒
	Details of any other participant groups:		

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(this box should expand as you type)

Participant numbers and source Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?		
10	How many participants are expected?	50 <i>(this box should expand as you type)</i>
11	Who will the participants be?	People from the UK <i>(this box should expand as you type)</i>
12	How will you identify the participants?	Random Sampling. The participants are experienced in using both eco-friendly and non-eco-friendly packaged products in their daily life for years, which will enable them to provide valuable insights for the survey questions. I am planning to capture at least 50 responses. <i>(this box should expand as you type)</i>

Information for participants:		YES	NO	N/A
13	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
14	Will you tell participants that their participation is voluntary?	☒	☐	☐
15	Will you obtain written consent for participation?	☒	☐	☐
16	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☐	☐	☒
17	If the research is observational, will you ask participants for their consent to being observed?	☐	☐	☒
18	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
19	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
20	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
21	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☐	☒	☐
22	If NO to any of above questions, please give an explanation			
<i>(this box should expand as you type)</i>				

Information for participants:		YES	NO	N/A
24	Will participants be paid?	☐	☒	☐
25	Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
26	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
27	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
28	If YES to any question, please provide full details			

	(this box should expand as you type)
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SECTION H: Anticipated Risks

	Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them. If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.			
1	Full risk assessment completed and appended?	Yes ☐ No ☒		
2	Risks to participants For example: sector-specific health & safety, emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information			
	Risk to participants: NONE (this box should expand as you type)	How you will mitigate the risk to participants: NONE (this box should expand as you type)		
3	If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities			
	N/A (this box should expand as you type)			
4	Risks to the investigator For example: personal health & safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest			
	N/A (this box should expand as you type)	How you will mitigate the risk to the investigator: N/A (this box should expand as you type)		
5	University/institutional risks For example: adverse publicity, financial loss, data protection			
	Risk to the University: NONE (this box should expand as you type)	How you will mitigate the risk to the University: NONE (this box should expand as you type)		
6	Environmental risks For example: accidental spillage of pollutants, damage to local ecosystems			
	Risk to the environment: NONE (this box should expand as you type)	How you will mitigate the risk to environment: NONE (this box should expand as you type)		
	Disclosure and Barring Service			
	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A

7	Does your research require you to hold a current DBS Certificate?	☐	☐	☒
8	If YES, please give the certificate number. If the certificate number is not available please write "Pending"; in this case any ethical approval will be subject to providing the appropriate certificate number.			

SECTION I: Feedback, Consent and Confidentiality

1	Feedback What de-briefing and feedback will be provided to participants, how will this be done and when? N/A <i>(this box should expand as you type)</i>
2	Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation. The first page of the online survey will contain a section seeking consent. It will include the detailed ethical considerations and consent sections. No personal data is collected or recorded. <i>(this box should expand as you type)</i>
3	Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case. Participant identities will be fully anonymized in all outputs of this research. No personal information or identifying details will be collected, recorded, or published. The email addresses used to send research invitations will not be linked to the submitted surveys and will be deleted after the invitations have been sent. <i>(this box should expand as you type)</i>

SECTION J: Data Protection and Storage

	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 "GDPR" and the Data Protection Act 2018 "DPA")?	YES	NO
1	"Personal data" means any information relating to an identified or identifiable natural person ('data subject'). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. Any video or audio recordings of participants is considered to be personal data.	☐	NO
	If YES, provide a description of the data and explain why this data needs to be collected:		
2	<i>(this box should expand as you type)</i>		
	Does it involve special category data (as defined by the GDPR)?	YES	NO
3	"Special category data" means sensitive personal data consisting of information as to the data subjects' – (a) racial or ethnic origin, (b) political opinions, (c) religious beliefs or other beliefs of a similar nature, (d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) physical or mental health or condition,	☐	NO

	(f) sexual life, (g) genetics, (h) biometric data (as used for ID purposes).		
	If YES, provide a description of the special category data and explain why this data needs to be collected:		
4	(this box should expand as you type)		

	Will data from the research activity (collected data, drafts of the thesis, or materials for publication) be stored in any of the following ways?	YES	NO
5	Manual files (i.e. in paper form)?	☐	☒
6	University computers?	☐	☒
7	Private company computers?	☐	☒
8	Home or other personal computers?	☐	☒
9	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☒	☐
10	"Cloud" storage or websites?	☒	☐
11	Other – specify:	☐	☒
12	Every piece of primary data gathered via the surveys will be stored in a secure manner within the Microsoft Forms cloud. To safeguard the privacy and confidentiality of the gathered information, a number of precautions will be taken. Robust and distinct credentials will be implemented to restrict access to the data contained within Microsoft Forms, thereby averting unauthorised entry. In addition, encryption will be applied to all transmitted and stored data to prevent interception and unauthorised access.		
	(this box should expand as you type)		

Data Protection			
	Will the research activity involve any of the following activities:	YES	NO
13	Electronic transfer of data in any form?	☐	☒
14	Sharing of data with others at the University outside of the immediate research team?	☐	☒
15	Sharing of data with other organisations?	☐	☒
16	Export of data outside the UK or importing of data from outside the UK?	☐	☒
17	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
18	Publication of data that might allow identification of individuals?	☐	☒
19	Use of data management system?	☐	☒
20	Data archiving?	☐	☒
21	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and Data Protection Act (2018) (and any international equivalents, where appropriate):		
	(this box should expand as you type)		
22	List all who will have access to the data generated by the research activity:		
	Supervisor (this box should expand as you type)		

23	List who will have control of, and act as custodian(s) for, data generated by the research activity:		
	The student researcher <i>(this box should expand as you type)</i>		
24	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.		
	Data storage in university cloud , use of data files, until the date afterwards the data will be discarded <i>(this box should expand as you type)</i>		
25	Please indicate if your data will be stored in the UWTSD Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. <i>(Most relevant to academic staff)</i>		
	N/A <i>(this box should expand as you type)</i>		
26	Confirm that you have read the UWTSD guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	YES	☒
27	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	YES	☒

SECTION K: Declaration

	The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants.	
	In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/	
1	Signature of applicant:	PRATIK PRAVINKUMAR PATEL Date:09/05/2024

For STUDENT Submissions:

2	Director of Studies/Supervisor:	Dr Hossein Shokri	Date:30/05/2024
3	Signature:		

For STAFF Submissions:

4	Academic Director/ Assistant Dean:		Date:
5	Signature:		

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☐	I confirm that the research activity has received approval in principle
☐	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (where appropriate) ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT
☒	I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.

RESEARCH STUDENTS ONLY

Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).

RESEARCH STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

Survey Questions

Eco-friendly Packaging, Consumer Perceptions and Purchasing Behaviour

<https://forms.office.com/Pages/DesignPageV2.aspx?prevorigin=Marke...>



Consent for Participation

I, Pratik Pavankumar Patel, studying MBA at University of Wales Trinity Saint David, invite you to participate in this survey for my dissertation on the Impact of Eco-friendly Packaging on Consumer Perceptions and Purchasing Behaviour. Your participation is crucial for the success of this research. Please take a moment to review the following ethical considerations.

1. **Voluntary Participation:** Your participation in this survey is entirely voluntary. You have the right to withdraw at any time without any penalty or need to provide a reason.
2. **Optional Responses:** You are free to omit any questions you do not wish to answer. Your comfort and consent are paramount.
3. **Anonymity and Confidentiality:** No personal data will be collected during this survey. Your responses will remain anonymous and confidential.
4. **Time Commitment:** The survey is designed to take only 3 to 5 minutes of your time.
5. **Data Security:** All data collected will be securely stored and will only be accessible to the research team. Upon completion of the study, all data will be permanently deleted.

By agreeing to participate, you acknowledge that you have read and understood the information above and consent to take part in this survey.

Your input is invaluable to this research, and we appreciate your time and effort in participating. If you have any questions or concerns, please do not hesitate to contact me on 2221502@student.uwtsd.ac.uk.

Thank you for your participation!

Survey Questions

1. How often do you consider the environmental friendliness of packaging when buying everyday household items like groceries, personal care products, or cleaning supplies?

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

2. Which environmentally friendly packaging features do you value most when choosing products?

- ☐ Biodegradability
- ☐ Recyclability
- ☐ Use of sustainable materials
- ☐ Simple packaging design
- ☐ All of the above

3. How likely are you to pick a product with environmentally friendly packaging over a similar product without it?

- ☐ Very likely
- ☐ Likely
- ☐ Neutral
- ☐ Unlikely
- ☐ Very unlikely

4. Have you noticed more products with environmentally friendly packaging available for purchase in stores or online in the past year?

- ☐ Yes, a lot more
- ☐ Yes, somewhat more
- ☐ No change
- ☐ Less
- ☐ Not sure

5. What influences your decision to buy products with environmentally friendly packaging?

- ☐ Concern for the environment
- ☐ Brands known for being eco-friendly
- ☐ Price
- ☐ Convenience
- ☐ All of the above

6. When you think of eco-friendly packaging, which aspect do you find most important?

- ☐ Material biodegradability
- ☐ Recyclability
- ☐ Reduced use of plastic
- ☐ Use of sustainable materials
- ☐ Other

7. How much do you believe eco-friendly packaging contributes to reducing environmental pollution?

- ☐ Significantly
- ☐ Moderately
- ☐ Slightly
- ☐ Not at all
- ☐ Unsure

8. Which statement best describes your perception of products with eco-friendly packaging?

- ☐ They are of higher quality.
- ☐ They are more expensive.
- ☐ They are better for the environment.
- ☐ They are difficult to find.
- ☐ Other

9. How much does the eco-friendliness of packaging influence your overall perception of a brand?

- ☐ A lot
- ☐ Somewhat
- ☐ Neutral
- ☐ Very little
- ☐ Not at all

10. What factors do you think could encourage more companies to adopt eco-friendly packaging?

- ☐ Government regulations
- ☐ Consumer demand
- ☐ Financial incentives
- ☐ Public awareness campaigns
- ☐ All of the above

11. Have you ever consciously chosen a product with eco-friendly packaging over a similar product without eco-friendly packaging?

- ☐ Yes, frequently
- ☐ Yes, occasionally
- ☐ No, never
- ☐ Not sure

12. How much more are you willing to pay for a product with eco-friendly packaging compared to a similar product without eco-friendly packaging?

- ☐ Up to 10% more
- ☐ 10-20% more
- ☐ 20-30% more
- ☐ More than 30% more
- ☐ Not willing to pay more

13. How likely are you to recommend a product with eco-friendly packaging to friends or family?

- ☐ Very likely
- ☐ Likely
- ☐ Neutral
- ☐ Unlikely
- ☐ Very unlikely

14. Which of the following factors would make you more likely to choose a product with eco-friendly packaging?

- ☐ Clear labelling indicating eco-friendliness
- ☐ Positive reviews about the product's eco-friendly packaging
- ☐ Discounts or promotions on eco-friendly products
- ☐ Availability of eco-friendly packaging options for all products
- ☐ All of the above

15. Have you ever switched brands solely because one brand offered eco-friendly packaging while the other did not?

- ☐ Yes
- ☐ No
- ☐ Not sure

This content is neither created nor endorsed by Microsoft. The data you submit will be sent to the form owner.

