

LEVEL 7 ASSESSMENT SPECIFICATION

Student name:	CHAN Kit Yu Jacqueline	Student ID number:	2429594
Programme:	DBA		
Module:	Research Principles and Philosophy		
Module code:	HKBM7017	Contribution to Overall Module Assessment (%):	100%
Lecturer:	Dr Chammy Lau	Internal Verifier:	Prof Peter Fong
Assignment Title:	Report	Word count (or equivalent):	7,500 words (+/- 10 words)
Submission deadline:	15 September 2025	Return date of provisional marks & written feedback:	15 October 2025
Submission method:	All written assessments, where practical and possible, must be submitted via Turnitin unless otherwise instructed by the Lecturer. (Please DO NOT put this assessment specification into Turnitin or it will match many similarities with other students' submissions.) Alternative submission method (if applicable): Late submission of the assessment will result in a late penalty mark: Work which is submitted up to 1 week late will be capped at 50% for the first attempt and will be awarded a mark of 0% for re-assessment. Late submission penalties may be lifted only if there is an approved extenuating circumstances claim. Work submitted more than 1 week late will be considered as a non-submission and will not be marked. The work may be considered as a submission for reassessment if offered by an Examining Board or if there is an approved extenuating circumstances claim.		
Academic honesty / referencing:	Academic honesty is required. In the main body of your <u>submission</u> you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, <u>cited</u> or quoted in order to complete this assessment.		

Table of Content

Page

1. Title.....	3
2. Introduction.....	3
3. The Research Project.....	4
4. Literature review.....	7
5. Research gap.....	14
6. Proposed methodology.....	15
7. Expected outcomes and contributions.....	21
8. Potential Limitations and Further Research.....	24
9. Bibliography.....	26

1. Title

Exploring the Impact of Food Waste Reduction Messaging on Consumer Behaviour in Blind Box Food Marketing.

2. Introduction

The global challenge of food waste has prompted innovative solutions within the food industry, with the blind box food business model emerging as a promising approach. This model packages surplus or near-expiry food items into mystery boxes sold to consumers at discounted prices. It addresses economic concerns by reducing food loss while offering consumers a unique shopping experience filled with surprise and excitement.

Increasingly, blind box food platforms are integrating sustainability – the food waste reduction messaging into their marketing strategies, highlighting their role in minimizing food waste and reducing environmental impact. This messaging targets the growing segment of environmentally conscious consumers who prioritize ethical purchasing decisions. By emphasizing commitments to reducing waste, conserving resources, and promoting sustainability, these platforms aim to build trust, enhance brand reputation, and encourage purchase intent.

However, the effectiveness of food waste reduction messaging in this context is complex. Blind box food marketing also includes elements of unpredictability and entertainment, which may clash with consumers' expectations regarding product quality and transparency. It is crucial to understand how food waste reduction claims affect consumer attitudes, purchase decisions, and brand loyalty, particularly when combined with the surprise element.

This research aims to explore the impact of food waste reduction messaging on consumer behaviour in blind box food marketing. It will focus on how different sustainability narratives resonate with consumers, influence their trust and engagement, and interact with the inherent uncertainty of blind box purchases. The insights gained from this study will provide valuable guidance for marketers seeking to balance ethical communication with compelling consumer experiences in the rapidly growing blind box food sector.

3. The Research Project

3.1 Research Objectives

- 1. To Analyse Consumer Perceptions and Purchase Intentions:**
Investigating the impact of food waste reduction and sustainability messaging incorporated into blind box food products on consumers' attitudes, perceived value, and purchasing intentions. The research will explore emotional drivers, such as feelings of guilt or pride, as well as functional aspects like product quality and utility. Additionally, it will assess social influences, including peer dynamics and community expectations, that shape consumer behaviour. By understanding these diverse drivers, the study aims to provide valuable insights into how sustainability messaging can effectively motivate consumers to engage in sustainable purchasing practices within the blind box market.

- 2. To Examine the Role of Product Features and Messaging Elements:**
Identifying the specific product attributes and messaging components that effectively motivate consumer engagement and sustainable purchasing behaviour in blind box contexts. Key attributes, such as unpredictability, collection appeal, and perceived investment potential, will be analysed alongside messaging elements that emphasize food waste reduction and environmental benefits. By understanding how these factors interact to influence consumer decisions, the research aims to uncover the most compelling aspects that drive engagement with blind box products. This insight will help marketers develop strategies that enhance the appeal of sustainability-focused offerings in the marketplace.

- 3. To Understand the Psychological and Social Mechanisms:**
Exploring the cognitive and emotional processes consumers experience when exposed to sustainability messaging in the distinct context of blind box marketing. The research will investigate key factors such as curiosity, excitement, and cultural attitudes, as well as the impact of social influence on consumer behaviour and message interpretation. By examining how these psychological and social dynamics interact, the study seeks to uncover the underlying mechanisms that drive consumer responses to sustainability initiatives. This understanding will provide valuable insights for crafting more effective messaging strategies that resonate with diverse audiences in the blind box market.

4. To Employ a Mixed Methods Framework for Holistic Insights:

Utilizing a mixed methods approach that combines structured surveys with qualitative interviews or focus groups. By integrating these methodologies, the research aims to capture both measurable behavioural patterns and the rich, contextual meaning-making processes of consumers. This comprehensive framework will allow for a deeper understanding of the impact of sustainability messaging in blind box marketing. The combination of quantitative and qualitative data will provide nuanced insights into consumer perceptions and behaviours, ultimately informing more effective marketing strategies that resonate with diverse audiences and enhance engagement with sustainable practices.

5. To Investigating Consumer Awareness and Provide Practical Marketing Insights:

Exploring how consumer awareness of food waste issues moderates the impact of waste reduction messaging on purchasing behaviour. The research will assess different levels of awareness among consumers and examine how this awareness affects their receptiveness to sustainability messages. By understanding these dynamics, the study seeks to generate actionable recommendations for marketers and policymakers. These insights will help design effective communication strategies that promote food waste reduction, enhance consumer engagement, and encourage sustainable consumption practices within the blind box food market. Ultimately, the goal is to create impactful messaging that resonates with consumers and drives positive behavioural changes.

6. To Identify Barriers and Opportunities for Sustainable Blind Box Food Marketing:

Assessing the challenges that impede effective sustainable marketing in the blind box food sector, including consumer skepticism, concerns about product quality, and market volatility. By identifying these barriers, the research aims to provide a clear understanding of the obstacles that marketers face. Additionally, the study will explore potential opportunities for innovation, particularly in areas such as communication strategies, product design, and social engagement. By leveraging these opportunities, businesses can foster long-term sustainable growth in the blind box food market, ultimately enhancing consumer trust and encouraging wider adoption of sustainable practices.

3.2 Research Questions

- 1) How does food waste reduction messaging influence consumers' intentions to purchase blind box food products?
- 2) What impact does sustainability messaging have on consumer satisfaction and loyalty in the blind box food sector?
- 3) To what extent does consumer awareness of food waste issues affect their response to messaging in blind box food marketing?
- 4) Are there notable demographic differences in consumer behaviour regarding food waste reduction messages in blind box marketing?

3.3 Contemporary Business Problem

Food waste represents a significant global sustainability challenge, putting pressure on the food retail and marketing sectors to minimize waste and encourage responsible consumption. Blind box food marketing, characterized by mystery packaging, complicates the management of surplus and waste due to unpredictable consumer choices and inventory control. Businesses face difficulties in communicating sustainability initiatives without diminishing consumer excitement and purchase behaviour, which can lead to decreased customer engagement and increased environmental impact.

3.4 Epistemological Framework

This research adopts an interpretivist epistemology, focusing on understanding consumers' subjective experiences and interpretations of sustainability messaging related to food waste reduction. A constructivist approach is employed to examine how consumer perceptions and social awareness shape their behaviour in response to marketing communications within the context of sustainable consumption.

3.5 Potential Impact on Business and Industry

By addressing this issue through targeted research, blind box food marketers can create effective, ethical, and transparent food waste reduction messages that foster consumer trust and engagement. This approach can enhance brand loyalty, reduce food waste at the retail level, and provide a competitive advantage by aligning with the growing consumer emphasis on sustainability. Additionally, insights gained can inform industry-wide best practices for integrating sustainability messaging into innovative food marketing strategies, contributing to broader environmental and economic benefits.

4. Literature review

4.1 Theory Selection

Interpretivism is an epistemological framework focused on understanding human experiences and meanings. It in qualitative research focuses on understanding the subjective meanings and social constructs that individuals associate with various phenomena (Goldkuhl, 2012). It is widely recognized in consumer behaviour research, especially when analysing subjective consumer responses to marketing and sustainability messaging. Sihombing (2011) explores alternative paradigms beyond positivism, emphasizing interpretivism's importance in understanding the socially constructed realities of consumers and the symbolic meanings they attribute to consumption practices (Sabrina O. Sihombing, 2011).

Interpretive marketing research, particularly through ethnographic methods, provides valuable insights into the sociocultural dynamics that shape consumer behaviour in complex and evolving contexts, such as blind box marketing, where uncertainty and emotional engagement play crucial roles (Moisander, Närvänen and Valtonen, 2020). This aligns with research on food waste reduction, which highlights the importance of understanding the intention-behaviour gap influenced by emotional, social, and contextual factors, rather than relying solely on positivist measures of rational behaviour (Zhang *et al.*, 2024).

4.1. Food Loss and Waste

The Sustainable Development Goals (SDGs), also known as the Global Goals, are a set of internationally agreed targets designed to safeguard the planet's habitability, alleviate poverty, and ensure that all people live in peace and prosperity—both now and in the future (Morton *et al.*, 2017). These goals provide a comprehensive framework to address pressing global challenges and promote sustainable development across environmental, social, and economic dimensions (Morton, Pencheon and Squires, 2017).

Numerous scholars and researchers have endeavored to define the concepts of food loss and food waste. For instance, food loss was defined as ‘the decrease in edible food mass throughout the part of the supply chain that specifically leads to edible food for human consumption.’ (Meybeck *et al.*, 2021); ‘...food which is originally produced for human consumption but then directed to a non-food use or waste disposal’ (Beretta *et al.*, 2013); and food waste was defined as ‘waste that is unwanted and uneaten (Gallo 1980) by the individuals who acquired the food. Generated food waste may be recovered through composting or donations to food charities.’ (Griffin, Sobal and Lyson, 2009) and ‘...is composed of raw or cooked food materials and includes food loss before, during or after meal preparation in the household, as well as food discarded in the process of manufacturing, distribution, retail and food service activities. It comprises materials such as vegetable peelings, meat trimmings, and spoiled or excess ingredients or prepared food as well as bones, carcasses and organs.’ (Monier, Escalon and O’Connor, 2010).

Until 2014, the Food and Agriculture Organization defines food waste as the decrease in the quantity or nutritional value of food meant for human consumption (FAO, 2014). This reduction happens when food is lost, damaged, thrown away, or redirected for non-food purposes at any point in the supply chain. More specifically, food waste refers to edible food that reaches retail or consumer levels but is not consumed due to reasons like disposal or spoilage. This includes food that is still safe and nutritious but is discarded, resulting in wasted resources and negative environmental effects. The FAO categorizes food waste as a subset of food loss; food loss occurs earlier in the supply chain during stages such as production, post-harvest, and processing, while food waste happens during distribution, retail, and consumption.

The issue of food waste is a persistent concern, and extensive research has been dedicated to this problem. It was examined the substantial quantity of food waste generated by consumers in the United States, where about 30% of edible food is discarded. While food is essential not only as a primary source of nutrients and energy but also as an entity with profound emotional and cultural importance; in the U.S., individuals waste an average of about one pound of food daily, both at home in food service settings (“A National Strategy to Reduce Food Waste at the Consumer Level,” 2020).

Total food demand is projected to rise by approximately 60 percent by 2050 compared to current levels. This increase is driven by the anticipated growth of the global population, which is expected to rise from around 7.4 billion in 2015 to over 9.7 billion by 2050, along with rising per capita food consumption as incomes increase and poverty declines worldwide (Parfitt, Barthel and Macnaughton, 2010; Alexandratos and Bruinsma, 2012).

More concerningly, around 1.3 billion tons of food are lost or discarded worldwide every year during production and consumption, which accounts for about one-third of all food produced. This troubling statistic underscores the urgent global challenge of food waste, with significant implications for food security, resource use, and environmental sustainability (Aschemann-Witzel Jessica *et al.*, 2023).

Naturally, numerous factors and stakeholders contribute to the significant issue of food waste. For instance, food waste occurs at every phase of the food supply chain, encompassing edible crops that remain unharvested in the fields, losses incurred during transportation, and items thrown away due to packaging problems or inadequate inventory management (Parfitt, Barthel and Macnaughton, 2010). The study also highlights that retail and distribution in the UK generate about 366,000 tonnes of food waste annually. Smaller grocery stores produce more waste relative to their size due to unpredictable consumer demand from "top-up" shopping, while larger supermarkets benefit from more stable sales. Large retailers often have significant market power over suppliers, leading to overproduction, especially for private label brands, resulting in unsold surplus. However, the sector effectively reuses much of this waste, such as converting by-products into animal feed.

However, a study argues that food waste and loss are often perceived as unavoidable consequences of unpredictable events that cannot be effectively prevented or mitigated. This

viewpoint suggests that the issue of food waste and loss has not been adequately explored (Muriana, 2017). Most existing research tends to focus on optimizing supply chain costs and profits through operational strategies, as well as the management, quantification, and characterization of waste. This indicates a substantial gap in academic research, underscoring the urgent need for comprehensive information to inform decision-makers (Kibler *et al.*, 2018).

4.2 Food Waste Reduction Messaging

Today, food waste is recognized not only as an environmental issue but also as a significant ethical concern due to its injustice, environmental harm, and social costs. It is morally troubling that vast amounts of edible food are discarded while millions face hunger and malnutrition, highlighting inequity in resource distribution. Food waste also contributes to environmental damage through wasted land, water, and greenhouse gas emissions, undermining sustainability for future generations. Economically and socially, it burdens households and societies, exacerbating poverty and limiting access to affordable food. Overall, food waste represents a misuse of valuable resources and a failure to act responsibly, calling for collective efforts to promote fairness, sustainability, and respect for human dignity (FAO, 2019).

Recent research highlights the significant impact of the impact of message framing on consumer perceptions and actions regarding food waste reduction. Researchers reveal that gain-framed messages, which emphasize the benefits of reducing waste, can effectively enhance consumers' purchase intentions, especially when they relate to the perceived controllability of food attributes, such as "ugly produce." This illustrates how targeted messaging can mitigate waste caused by consumer aversion to aesthetic imperfections. This issue parallels the challenges in blind box food marketing, where product uncertainty influences consumption choices (Xiao *et al.*, 2024).

For the reasons stated above, governments are setting ambitious targets, such as halving food loss and waste by 2030, in line with the United Nations Sustainable Development Goal 12.3. This is backed by national strategies that emphasize prevention, rescue, recycling, and policy incentives. Innovative solutions, ranging from community food-sharing initiatives and composting programs to advancements in storage and supply chain technology, are showing global effectiveness. Researchers also emphasize the critical need for collaboration among

businesses, consumers, and policymakers to audit food waste, enhance food handling practices, redistribute surplus, and implement supportive regulations. They stress that these collective efforts are vital for reducing greenhouse gas emissions, conserving resources, alleviating hunger, and promoting a circular economy that treats food as a valuable resource rather than disposable waste (Yoğun and Yıldırım, 2025).

Studies suggest Excessive purchasing and the failure to reuse food leftovers are the most prominent behaviours associated with food waste. Additionally, fruits, vegetables as well as bread are the most commonly wasted food items (Santos *et al.*, 2022). In addition, a recent study explores the intention-behaviour gap in food waste reduction among Chinese consumers, focusing on factors that promote consistent behaviours. Many consumers intend to reduce food waste, but turning these intentions into practice is challenging. Food loss mainly stems from infrastructure issues, poor handling, inadequate storage, and market inefficiencies, especially in developing countries. At the consumer and retail levels, waste is driven by over-purchasing, excess cooking, confusion over date labels, cosmetic standards, and behavioural factors like impulsive buying. Socioeconomic factors and cultural norms also significantly influence food waste patterns (Shan, Lu and Tong, 2024).

4.3 The Leftover Blind Box Marketing

It is suggested that the concept of selling blind boxes originated from Japan's lucky bags. Introduced during the Meiji period, lucky bags were created to clear inventory by offering goods at discounted prices (FDA, 2024). Eventually, lucky bags became a well-known retail institution, not just in Japan but also in many other countries in East and Southeast Asia. They were commonly used during New Year sales to dispose of unwanted stock at significantly discounted prices (Nuryakin and Munro, 2018).

Researchers highlight that certain products, such as snacks and other fast-moving consumer goods (FMCG) are ideal candidates for this approach. Although these products tend to have higher prices, they often lack specific consumer preferences. Utilizing blind boxes can enhance consumer interest in purchasing, aligning with the psychology of uncertain rewards (He, Lu and Zhou, 2008). This indicates that unsold leftover food is a suitable candidate for "blind box marketing." The main difference between blind box marketing and traditional marketing is the unpredictability involved in opening a blind box. These trendy blind boxes primarily contain

fashionable toys that offer aesthetic and collectible value, along with the potential for appreciation. During the purchasing process, consumers undergo a stimulus-response experience similar to probabilistic marketing, which fuels their desire to buy (Yang, 2023).

To reduce food waste, restaurants, cafes, bakeries, and supermarkets collect surplus or near-expiration food products and package them into blind boxes, selling them at discounts of typically 30% to 50% off the regular retail price. Highlighted by Halloran et al. (2019), This approach effectively reduces food waste by diverting edible food from disposal while providing consumers with value and helping businesses minimize losses. This concept is being adopted worldwide through various food rescue apps and platforms, such as Too Good To Go and Karma, which connect consumers with discounted surplus food packaged as mystery or surprise boxes. These platforms not only mitigate food waste but also encourage sustainable consumption habits by ensuring surplus food is available and affordable, with the element of surprise and savings serving as additional incentives for consumers. A key feature of this blind box concept is that leftover meals can be packaged and sold at a low price, helping to reduce waste. This innovative approach to food delivery is influenced by environmental, economic, and social factors, and it can also enhance consumers' purchase intentions .

Furthermore, food providers and retailers stand to gain from selling blind boxes, as participating in the leftover blind box economy can improve a food provider's corporate social responsibility (CSR) reputation. In an era where consumers are increasingly aware of a company's environmental and social impact, alignment with waste-reduction initiatives can improve brand reputation and foster customer loyalty. A survey of Australian consumers showed that 80% were more inclined to support a food business that actively engaged in food waste reduction initiatives, such as the leftover blind box system. (Liu, 2025).

There are limitation of selling blind boxes. Research offers strong experimental evidence that consumers may undervalue uncertain products, sometimes even below their worst possible outcome, and prefer certainty. This insight is crucial for understanding behaviours in risk-laden purchases, such as blind box marketing (Benzion, Shahrabani and Shavit, 2013).

Additionally, research on blind box consumption is still developing. Although many scholars have thoroughly explored consumer markets and psychology in the context of the blind box economy, most studies concentrate on analysing phenomena or theories, resulting in a lack of

systematic empirical testing. Current empirical research mainly investigates the internal mechanisms of blind box purchases by looking at consumption experiences and motivations. (Yan and Wu, 2021).

4.4 Consumer Behaviour in Blind Box

There are various motivations for purchasing blind boxes. Purchasing blind boxes can provide the thrill of anticipation, from the time spent waiting in line to the moment of revealing the contents inside (Caplin and Leahy, 2021). Studies suggested that blind box products serve as vessels for emotional experiences. The attractive design and distinctive sales model of these products enhance consumers' consumption experiences and emotional appeal, which in turn directly affect their purchasing behaviours (Zeng and Yang, 2021), since positive uncertain events have been shown to stimulate creativity, increasing the chances of cultivating and maintaining positive feelings (Lee and Qiu, 2009). Blind box marketing leverages consumers' psychological motives, including curiosity, excitement, loss aversion, and herd behaviour. It enhances "irrational" consumption, as consumers chase the thrill of unpredictability and potential rewards, often resulting in repeated purchases and speculative buying .

Research employing the Stimulus–Organism–Response (SOR) framework indicates that uncertainty enhances emotional value by fostering anticipation, surprise, and pleasure upon resolving the unknown. Typically, consumers prefer to minimize risk by knowing exactly what they are purchasing. However, blind box products challenge this preference by presenting an unknown item in a sealed package, generating excitement and anticipation. Despite the prevailing belief that consumers are motivated by a desire for certainty, the rising popularity of blind box products prompts inquiries into the psychological and behavioral factors that drive consumers to repeatedly engage in this type of consumption (Zhang and Zhang, 2022). Consumers often participate in blind box purchases for the excitement of uncovering rare or unexpected items, which boosts social value through shared experiences and a sense of luck. This uncertainty further promotes repeat purchasing behaviour by stimulating hedonic consumption and fostering social interactions (Cruz, Ong, and Dhonn Q. Tomas, 2025).

A study suggests that younger consumers, particularly those aged 18-35, are the primary purchasers of blind boxes. Their buying behavior is driven by curiosity, a desire for novelty, and social conformity, often referred to as the "herd effect." Marketing strategies aimed at this

demographic typically highlight exclusivity, collectible appeal, and interactive purchasing experiences (Ke, 2024).

Many studies examine the key psychological drivers on buying blind boxes. Ketelaar et al. (2018) demonstrate in their study that positive uncertainty boosts consumers' favourable feelings when evaluating products, particularly those that are high-involvement or of significant interest. This type of uncertainty encourages consumers to engage in imagination and speculate about the potential excitement and enjoyment a product may offer, thereby heightening their interest and positive anticipation. When uncertainty is associated with positive outcomes, consumers tend to favour uncertain products and services, as the possibility of delightful surprises and optimistic expectations fosters greater emotional engagement (Ketelaar *et al.*, 2016).

Despite the popularity of blind boxes, there are still issues that need to be addressed at this stage. Research on the blind box economy emphasizes how social media and youth subculture have driven its popularity, while also pointing out risks like addictive consumption and impulsive buying behaviours (Hu, 2024). Moreover, blind box marketing leverages uncertainty and gambling-like psychology, potentially fostering addictive behaviours, particularly among minors and vulnerable consumers. Reports have connected excessive engagement with blind boxes to negative psychological outcomes, including an elevated risk of suicide due to compulsive spending. Additionally, the distribution of questionable items, such as sick pets, through blind boxes raises significant ethical concerns (Feng, 2025).

5. Research gap

Despite the increasing focus on food waste reduction in food marketing and the rapid growth of the blind box food industry, several key research gaps persist:

5.1. Inadequate Emphasis on Food Waste Reduction Messaging in the Blind Box Context

While existing research examines the environmental benefits of blind box food models, such as reducing food waste, there is insufficient targeted investigation into how food waste reduction messaging specifically affects consumer behaviour in this marketing context. Most

studies tend to analyse sustainability or blind box marketing separately, with few integrating both aspects to evaluate the effectiveness of sustainability messaging.

5.2. Interaction Between Food Waste Reduction and Surprise Marketing Not fully investigated

The blind box model uniquely combines elements of uncertainty and surprise as core marketing strategies. Current literature indicates a tension between consumers' excitement over unpredictability and their need for trust in product quality and food safety, which can affect their acceptance of food waste reduction claims. The dynamics of how sustainability messaging interacts with this uncertainty remain underexplored.

5.3. Limited Exploration of Consumer Segmentation in Food Waste Reduction Messaging

Few studies differentiate how demographic or psychographic factors, such as age, environmental attitudes, and cultural background influence sensitivity to food waste reduction messaging in the blind box food sector. This limits marketers' ability to tailor sustainability communications to specific consumer groups effectively.

5.4. Scarcity of Empirical and Experimental Research

Much of the current research is qualitative or conceptual, with a notable lack of robust quantitative and experimental evidence evaluating different food waste reduction message frames and their effects on consumer trust, purchase intent, and loyalty in blind box food marketing.

6. Proposed methodology

6.1 Mixed-methods approach

This study will employ a mixed-methods approach that combines both qualitative and quantitative research to provide comprehensive insights into how food waste reduction messaging affects consumer behaviour in the context of blind box food products. By integrating these methods, the research will capture measurable effects as well as in-depth consumer perceptions, offering a holistic understanding of the issue.

Harrison and Reilly (2011) advocate for the mixed-methods approach in marketing and product research. By combining qualitative and quantitative methods, researchers can achieve a richer, more comprehensive understanding of marketing phenomena. Quantitative data yield generalizable findings, while qualitative data capture context, meaning, and consumer perspectives. Additionally, mixed methods effectively address both "what" and "how/why" questions, accommodating various research objectives in marketing. The integration of numerical evidence with narrative explanations often results in findings that are more useful and actionable for marketing managers14/9/2025 7:44:00 PM (Harrison and Reilly, 2011).

6.2 Quantitative Component

The quantitative phase will involve using structured surveys targeting consumers who have purchased or are familiar with blind box food products that incorporate sustainability and food waste reduction messaging. The survey will measure key constructs such as message recall, perceived message credibility, consumer attitudes toward food waste, purchase intentions, and actual purchase behaviour. To ensure robustness, validated scales measuring perceived value—including functional, emotional, and social dimensions—message effectiveness, and sustainability awareness will be employed (Zhang and Zhang, 2022). These scales draw inspiration from recent research on blind box consumer behaviour which emphasizes the mediating role of perceived value in purchase intention, and established literature in food waste reduction messaging. Quantitative analysis, likely using methods such as Structural Equation Modelling (SEM), will test the relationships between messaging, perceived consumer values, and consequent buying behaviour, enhancing understanding of how sustainability messaging drives consumer decisions in blind box food marketing.

6.3 Qualitative Component

The qualitative phase will consist of in-depth semi-structured interviews or focus groups conducted with a purposive sample of consumers selected from the quantitative phase, focusing on those who have experienced blind box food purchases with sustainability messaging. This phase aims to uncover nuanced perceptions, motivations, attitudes, emotional responses, and cognitive meaning-making processes related to food waste messaging. Additionally, it will explore cultural influences and social sharing behaviours, revealing how consumers internalize

and communicate the sustainability aspects of blind box food products within their social networks. This rich, contextual data will complement quantitative findings by providing insight into how consumers interpret messaging, experience uncertainty and surprise in blind box purchases, and incorporate values around food waste reduction into their consumption practices (Qi, 2022) (Pu, 2023).

6.4 Sampling

Sampling Frame:

The sampling frame will consist of consumers who have experience purchasing blind box food products. To effectively reach this target audience, purposive online recruitment will be employed. This will involve engaging with blind box communities, social media groups, and sustainable food interest groups. By leveraging these platforms, the research aims to attract a diverse range of participants who can provide valuable insights into their experiences and perceptions related to blind box food products.

Sample Size:

For the quantitative component, the study will aim to collect responses from at least 300 participants. This sample size will ensure sufficient statistical power and enhance the generalizability of the findings across the broader population of consumers interested in blind box food products.

In the qualitative component, the research will conduct in-depth interviews with 15 to 20 participants. This sample size is designed to achieve thematic saturation, allowing for a comprehensive exploration of nuanced perceptions and attitudes related to food waste messaging within blind box purchases. The combination of these sample sizes will provide a balanced dataset, capturing both broad trends and detailed individual insights.

By utilizing this structured approach to sampling, the study will effectively gather both quantitative and qualitative data, enriching the understanding of consumer behaviour in the context of sustainability messaging.

6.5 Data Collection

Data collection will consist of two primary methods: online self-administered surveys and in-depth interviews.

Online Surveys:

The surveys will be designed to gather quantitative data from consumers who have experience with blind box food products. Participants will complete these surveys at their convenience, ensuring a higher response rate. The surveys will include various sections aimed at measuring key constructs such as message recall, perceived credibility, attitudes toward food waste, purchase intentions, and actual purchasing behaviour.

To enhance the engagement and relevance of the surveys, stimuli presentation will incorporate both actual messaging samples from existing blind box products and simulated messages crafted for research purposes. This approach will allow researchers to gauge consumer responses to real-world examples as well as hypothetical scenarios, providing a comprehensive understanding of how different messaging strategies resonate with consumers.

In-Depth Interviews:

In addition to the surveys, in-depth interviews will be conducted to collect qualitative data. These interviews can be conducted either virtually or face-to-face, depending on the geographical location and preferences of the participants. This flexibility will facilitate a wider reach and accommodate individuals who may feel more comfortable in one format over the other.

The interviews will focus on exploring participants' nuanced perceptions, emotional reactions, and attitudes toward food waste messaging in the context of their blind box purchases. By employing open-ended questions, the interviews will encourage participants to share their thoughts and experiences in detail, thereby enriching the qualitative data collected.

Overall, the combination of online surveys and in-depth interviews will provide a robust dataset, enabling a comprehensive analysis of consumer behavior and attitudes related to food waste reduction messaging in the blind box food market.

6.6 Data Analysis

Quantitative:

The quantitative data collected will be analysed using Structural Equation Modelling (SEM) to rigorously examine the hypothesized relationships among food waste reduction messaging, perceived consumer values, and purchasing behaviours. SEM is particularly well-suited for this analysis as it allows for the simultaneous estimation of multiple dependent relationships and the incorporation of latent variables. This capability enables the capture of abstract constructs such as perceived value and message effectiveness (Pang *et al.*, 2023).

The analysis will be framed within the Stimulus-Organism-Response (SOR) theory, which suggests that external stimuli (in this case, messaging) influence internal consumer perceptions and emotional states (the organism), ultimately affecting behavioural responses like purchase intentions and actual purchasing behaviour (Zhang and Zhang, 2022).

Additionally, perceived value will be evaluated across functional, emotional, and social dimensions, aligning with established frameworks in the literature on blind box consumption and food waste reduction. Model fit indices (e.g., GFI, CFI, RMSEA) will be used to assess the adequacy of the SEM model and the strength and significance of direct and indirect pathways will be evaluated.

Qualitative:

Qualitative data obtained through semi-structured interviews or focus groups will be subjected to thematic analysis to uncover recurring themes and patterns related to consumer emotions, values, social meaning, and interpretations of food waste messaging within the context of blind box purchases (Braun and Clarke, 2006). This methodological approach allows for the extraction of rich, contextual insights that can contextualize and deepen the understanding of the quantitative findings.

By exploring how consumers internally process sustainability messages and derive meaning from their experiences with blind box food products, the analysis will reveal the complexities of consumer behaviour. It will highlight not only individual perceptions but also the broader social dynamics at play when consumers engage with sustainability narratives.

Key qualitative themes expected to emerge in research exploring the impact of food waste reduction messaging on consumer behaviour in blind box food marketing, expanded with sustainability considerations, include:

- **Curiosity:** The element of surprise and unpredictability associated with blind box products generates significant consumer intrigue. This curiosity can enhance engagement not only with the product itself but also with the sustainability messages embedded within. As a result, consumers may become more attentive to messages about food waste reduction and sustainable practices, improving message recall and overall impact
- **Excitement:** The thrill generated by the uncertainty of blind box contents heightens emotional involvement and enriches the consumer experience. This excitement positively influences attitudes toward the products, making consumers more receptive to sustainability messaging and fostering an enjoyable connection with eco-friendly consumption. Ultimately, this heightened emotional engagement encourages eco-conscious purchasing behaviours.
- **Cultural Attitudes Toward Sustainability:** Consumers' cultural backgrounds significantly shape their perceptions and responses to food waste reduction messaging, as cultural norms and values mediate environmental awareness and sustainable consumption behaviors. Variations in environmental values and traditions influence how sustainability messages are interpreted and acted upon, highlighting the need for culturally sensitive marketing strategies in promoting blind box food products.
- **Social Influence Effects:** Peer dynamics, social sharing, and community engagement play critical roles in shaping consumer attitudes and behaviours regarding purchasing and sustainability. The sharing and discussion of blind box experiences within social

networks contribute to social validation and identity formation, enhancing the diffusion of food waste messages and reinforcing sustainable consumption norms.

Together, these themes underscore the complex interplay of emotional, cognitive, cultural, and social factors that shape consumer responses to sustainability messaging within the unique context of blind box food marketing. By integrating these qualitative findings with quantitative outcomes, the study aims to provide a holistic and nuanced understanding of consumer behaviour in the emerging market of blind box food products. This comprehensive approach will illuminate individual consumer experiences and highlight potential implications for marketing strategies designed to promote sustainability in food consumption.

7. Expected outcomes and contributions

The study aims to demonstrate that integrating sustainability and food waste reduction messaging into blind box food marketing has a positive influence on consumer attitudes, enhances purchase intention, and encourages behaviours that support sustainable consumption.

It is anticipated that consumers' perceived value, which includes functional, emotional, and social dimensions, will play a mediating role in how messaging impacts purchasing decisions. This expectation is supported by recent research in the fields of blind box marketing and sustainability, underscoring the critical role that perceived value plays in shaping how consumers respond to marketing efforts.

Qualitative insights are expected to uncover rich themes that include curiosity, excitement, cultural attitudes toward sustainability, and the influence of peers. These themes will provide valuable context for understanding how sustainability messaging resonates emotionally and socially with consumers, offering a deeper appreciation of their motivations and decision-making processes.

The novelty and uncertainty intrinsic to blind box marketing are likely to enhance consumer engagement with sustainability messaging. This dynamic creates new and innovative pathways for promoting responsible consumption within contemporary retail environments, encouraging consumers to embrace sustainability in their purchasing choices while enjoying the thrill of surprise in their shopping experiences.

Theoretical Contributions

This study significantly advances marketing theory by extending the Stimulus-Organism-Response (SOR) framework to encompass sustainability messaging within experiential and uncertain consumption contexts, such as blind boxes. By doing so, it broadens the application of the SOR model, illustrating how external stimuli—like sustainability messages—can influence internal consumer states and subsequently drive behavioral responses. This extension allows for a more nuanced understanding of how consumers process and react to marketing communications in settings characterized by surprise and novelty.

Moreover, the research enriches perceived value theory by empirically elucidating how the interplay among functional, emotional, and social values interacts with sustainability concerns to shape consumer behavior. By examining these dimensions in tandem, the study reveals how consumers evaluate products not only based on practical benefits but also through emotional connections and social influences. This holistic perspective helps clarify the mechanisms by which sustainability messaging can enhance perceived value, ultimately affecting purchasing decisions.

Additionally, the study integrates insights from behavioral economics, psychology, and sustainability literature, providing a multidisciplinary perspective on consumer responses to innovative marketing strategies. This approach highlights the complexity of consumer behavior in the context of blind box marketing, where hedonic experiences—such as excitement and curiosity—are intertwined with ethical considerations related to sustainability. By grounding the research in diverse theoretical frameworks, the study offers a richer understanding of how consumers navigate the tension between enjoyment and responsibility.

Furthermore, the study contributes to research methodology by demonstrating the effectiveness of mixed methods designs for investigating complex and emergent marketing phenomena. By combining quantitative and qualitative approaches, the research captures a comprehensive view of consumer attitudes and behaviours, allowing for deeper insights that might be overlooked in single-method studies. This methodological innovation not only enhances the validity of the findings but also sets a precedent for future research in marketing, encouraging scholars to adopt similar integrative approaches when exploring multifaceted consumer behaviours.

Practical Contributions

For marketers, the findings from this study will provide valuable guidance on crafting impactful food waste reduction messaging strategies specifically tailored to blind box consumers. By understanding the unique motivations and emotional responses of this target audience, marketers can create messages that resonate deeply, enhancing the overall effectiveness of their campaigns. This tailored approach not only drives eco-friendly behaviours but also ensures that the excitement and engagement associated with blind box purchases are maintained, creating a balanced relationship between sustainability and consumer enjoyment.

The research will yield actionable insights that extend beyond messaging alone. It will inform product design by highlighting features that align with sustainability goals while appealing to consumer preferences for novelty and surprise. Additionally, communication strategies will be refined to emphasize storytelling elements that engage consumers on an emotional level, making sustainability relatable and inspiring. Social engagement tactics will also be explored, focusing on how curiosity and the joy of sharing blind box experiences within social networks can amplify sustainability messages, fostering a community-oriented approach to responsible consumption.

Furthermore, the implications of this research extend to informing policy and industry standards surrounding transparency, food safety assurance, and ethical marketing practices in blind box food sales. By establishing clear guidelines that promote sustainable practices, the study can help create a more responsible industry framework, encouraging companies to adopt ethical marketing strategies that resonate with consumers' growing demand for transparency and integrity in their purchasing decisions.

Ultimately, this work aspires to advance sustainable consumption practices within an evolving retail landscape that increasingly prioritizes experiential and ethical alignment. As consumers seek meaningful connections with brands that reflect their values, the insights gained from this research will equip marketers with the tools needed to navigate this shift effectively. By fostering a culture of sustainability in the marketing of blind box food products, companies can contribute to a broader movement toward responsible consumption that benefits both consumers and the environment.

8. Potential Limitations and Further Research

8.1 Potential limitations

- **Self-Reported Data Bias:** This study heavily relies on self-reported data gathered through surveys and interviews, which may be prone to biases such as social desirability and issues with recall. These biases could potentially compromise the accuracy of measures related to purchase intentions and consumer behaviours.
- **Dynamic Market Environment:** The blind box market is undergoing rapid evolution, particularly with the rise of digital formats and shifts in consumer preferences. This fast-paced change limits the generalizability of the findings over time and highlights the need for ongoing reassessment of the effects of messaging strategies.
- **Cultural and Contextual Specificity:** Responses to sustainability messaging are significantly influenced by cultural and socioeconomic factors. To better understand how diverse populations perceive and react to food waste messages in blind box contexts, future cross-cultural comparative research is essential.
- **Limited Focus on Digital and Virtual Formats:** The scope of this study does not include a thorough examination of digital or virtual blind box products which are becoming increasingly popular. This represents a significant research gap in understanding how sustainability messaging functions within technologically mediated consumer markets.
- **Cross-Sectional Design Constraints:** The current research utilizes a cross-sectional design, capturing only brief snapshots of consumer attitudes and behaviours. To establish causal relationships and investigate the long-term effects of messaging, longitudinal and experimental methods are recommended.

8.2 Future Research Directions

Future research could explore several key areas to build upon the findings of this study. These include:

- **Longitudinal Tracking of Behaviour Changes:** Conducting studies that follow consumer behaviours over an extended period to identify trends and shifts in responses to sustainability messaging in blind box marketing.

- **Experimental Testing of Message Framing and Uncertainty Effects:** Experimenting with different messaging strategies to determine how various approaches and the element of surprise influence consumer responses and purchasing behaviour.
- **Expanded Cross-Cultural and Socioeconomic Analyses:** Investigating how different cultural and socioeconomic backgrounds impact consumer perceptions of sustainability messaging, leading to more tailored marketing strategies.
- **Integration of Neuroscience and Behavioural Economics Approaches:** Utilizing insights from neuroscience and behavioural economics to gain a deeper understanding of the cognitive processes that drive consumer decision-making regarding sustainability.
- **Investigation of Sustainability Communication in Emerging Virtual Marketplaces:** Exploring how sustainability messaging can be effectively communicated in digital environments, particularly as virtual marketplaces and digital collectibles gain prominence.

By pursuing these avenues, future research can provide a more comprehensive understanding of consumer behaviour in relation to sustainability messaging, ultimately leading to more effective marketing strategies and promoting responsible consumption practices.

Bibliography

- “A National Strategy to Reduce Food Waste at the Consumer Level” (2020) in *National Academies of Sciences, Engineering, and Medicine*. Washington, DC: The National Academies Press.
- Alexandratos, N. and Bruinsma, J. (2012) “World Agriculture towards 2030/2050: The 2012 Revision,” *ESA Working Paper*, 12(3).
- Aschemann-Witzel Jessica *et al.* (2023) “Defining upcycled food: The dual role of upcycling in reducing food loss and waste,” *Trends in Food Science & Technology*, 132, pp. 132–137. Available at: <https://doi.org/10.1016/j.tifs.2023.01.001>.
- Benzion, U., Shahrabani, S. and Shavit, T. (2013) “Retesting the Uncertainty Effect Using Lotteries with Real Products and Money,” *Bulletin of Economic Research*, 65, pp. 175–186. Available at: <https://doi.org/10.1111/j.14678586.2011.00429.x>.
- Beretta, C. *et al.* (2013) “Quantifying food losses and the potential for reduction in Switzerland,” *Waste Management*, 33(3), pp. 764–773. Available at: <https://doi.org/10.1016/j.wasman.2012.11.00>.
- Braun, V. and Clarke, V. (2006) “Using thematic analysis in psychology,” *Qualitative Research in Psychology*, 3(2), pp. 77–101. Available at: <https://doi.org/10.1191/1478088706qp063oa>.
- Caplin, A. and Leahy, J. (2021) “Psychological Expected Utility Theory and Anticipatory Feelings,” *The Quarterly Journal of Economics*, 116(1), pp. 55–79.
- Cruz, E.L.L., Ong, A.K.S., and Dhonn Q. Tomas (2025) “Analyzing the causal effects of product uncertainty and product appeal on repurchase intention in blind box toys,” *Cogent Business & Management*, 12(1). Available at: <https://doi.org/10.1080/23311975.2025.2506613>.
- FAO (2014) “Background paper on the economics of food loss and waste,” *The economics of food loss and waste (unedited working paper)* [Preprint].
- FAO (2019) *The State of Food Security and Nutrition in the World: Safeguarding against Economic Slowdowns and Downturns*. Rome, Italy: Food and Agriculture Organization of the United Nations (State of the World).
- Feng, X. (2025) “The Loss Aversion Effect in Blind Box Purchases: Why Are Consumers More Willing to Make Additional Purchases?,” *Studies in Social Science & Humanities*, 4(2), pp. 58–66. Available at: <https://doi.org/10.56397/SSSH.2025.03.08>.
- Goldkuhl, G. (2012) “Pragmatism vs interpretivism in qualitative information systems research,” *European journal of information systems*, 21(2), pp. 135–146. Available at: <https://doi.org/10.1057/ejis.2011.54>.
- Griffin, M., Sobal, J. and Lyson, T.A. (2009) “An analysis of a community food waste stream,” *Agriculture and Human Values*, 26, pp. 67–81. Available at: <https://doi.org/10.1007/s10460-008-9178-1>.
- Harrison, R.L. and Reilly, T.M. (2011) “Mixed methods designs in marketing research,” *An International Journal*, 14(1), pp. 7–26. Available at: <http://dx.doi.org/10.1108/13522751111099300>.

He, D., Lu, Y. and Zhou, D. (2008) “Empirical Study of Consumers’ Purchase Intentions in C2C Electronic Commerce,” *Tsinghua Science & Technology*, 13(3), pp. 287–292.

Hu, P. (2024) “Analysis of Blind Box Marketing Strategy in China,” *Advances in Economics, Management and Political Sciences*, Advances in Economics Management and Political Sciences(97), pp. 116–121. Available at: <https://doi.org/10.54254/2754-1169/97/20231503>.

Ke, Y. (2024) “To What Extent Does Blind Box Marketing Affect People’s Consuming Behavior?,” *Journal of Applied Economics and Policy Studies* [Preprint]. Available at: <https://doi.org/10.54254/2977-5701/10/2024092>.

Ketelaar, P.E. *et al.* (2016) “Positive uncertainty: the benefit of the doubt in advertising,” *International Journal of Advertising*, 37(2), pp. 256–269. Available at: <https://doi.org/10.1080/02650487.2016.1231163>.

Kibler, K.M. *et al.* (2018) “Food waste and the food-energy-water nexus: A review of food waste management alternatives,” *Waste Management*, 74, pp. 52–62.

Lee, Y.H. and Qiu, C. (2009) “When uncertainty brings pleasure: the role of prospect imageability and mental imagery,” *Journal of Consumer Research*, 36(4), pp. 624–633. Available at: <https://doi.org/10.1086/599766>.

Lindlof, T.R. and Taylor, B.C. (2017) *Qualitative Communication Research Methods*. 4th ed. SAGE Publications.

Liu, F. (2025) “The Green Revolution in Blind Boxes: When the ‘Leftover Food Economy’ Rewrites the Script of Sustainable Consumption,” *Advances in Economics Management and Political Sciences*, 189(1), pp. 183–188. Available at: <https://doi.org/10.54254/2754-1169/2025.bl24133>.

Meybeck, A. *et al.* (2021) *Global food losses and food waste*. Rome, Italy: FAO.

Moisander, J., Närvänen, E. and Valtonen, A. (2020) “Interpretive marketing research: Using ethnography in strategic market development,” in *Marketing Management: A Cultural Perspective*. 2nd ed. London: Routledge, pp. 237–253.

Monier, V., Escalon, V. and O’Connor, C. (2010) *Preparatory study on food waste across EU 27*. EU publications.

Morton, S., Pencheon, D. and Squires, N. (2017) “Sustainable Development Goals (SDGs), and their implementation: A national global framework for health, development and equity needs a systems approach at every level,” *British Medical Bulletin*, 124(1), pp. 81–90. Available at: <https://doi.org/10.1093/bmb/ldx031>.

Muriana, C. (2017) “A focus on the state of the art of food waste/losses issue and suggestions for future researches,” *Waste Management*, 68, pp. 557–570. Available at: <https://doi.org/10.1016/j.wasman.2017.06.047>.

Nuryakin, C. and Munro, A. (2018) “Experiments on lotteries for shrouded and bundled goods: investigating the economics of fukubukuro,” *The Japanese Economic Review* [Preprint]. Available at: <https://doi.org/10.1111/jere.12194>.

Pang, K. *et al.* (2023) “Empirical Research on How Product Features of Blind Box Affect Consumers’ Purchase Intention—Based on Structural Equation Modeling,” in G. Vilas Bhau, Y.

Shvets, and H. Mallick (eds.) *Proceedings of the 2022 International Conference on Mathematical Statistics and Economic Analysis (MSEA 2022)*. Dordrecht: Atlantis Press International BV (Advances in Computer Science Research), pp. 849–856. Available at: https://doi.org/10.2991/978-94-6463-042-8_121.

Parfitt, J., Barthel, M. and Macnaughton, S. (2010) “Food waste within food supply chains: quantification and potential for change to 2050,” *The Royal Society Philosophical Transactions B*, 365(1554). Available at: <https://doi.org/10.1098/rstb.2010.0126>.

Pu, Y. (2023) “Analysis of the Sales of Surplus Food Blind Box,” *Advances in Economics Management and Political Sciences*, 48(1), pp. 134–141. Available at: <https://doi.org/10.54254/2754-1169/48/20230436>.

Qi, Y. (2022) “Research on the Marketing Methods of the Blind Box Sales Model— A Case Study of POP MART,” *Advances in Economics, Business and Management Research* [Preprint], (ICEDBC 2022). Available at: https://doi.org/10.2991/978-94-6463-036-7_111.

Sabrina O. Sihombing (2011) “Paradigms in consumer behavior,” *Gadjah Mada International Journal of Business* [Preprint]. Available at: <https://doi.org/10.22146/gamaijb.5635>.

Santos, J.I.A.S. dos *et al.* (2022) “Consumer behaviour in relation to food waste: a systematic literature review,” *British Food Journal*, 124(12), pp. 4420–4439. Available at: <https://doi.org/10.1108/BFJ-09-2021-1075>.

Shan, L., Lu, Q. and Tong, X. (2024) “How to improve the consistency of consumers’ food waste reduction intentions and behaviors? An analysis based on the expanded Motivation–Opportunity–Ability framework,” *Humanities and Social Sciences Communications*, 11(1530).

Xiao, M. *et al.* (2024) “Reducing food waste and promoting sustainable consumption: the role of message framing and controllability attributions in ugly produce marketing,” *Frontiers in Sustainable Food Systems*, 8. Available at: <https://doi.org/10.3389/fsufs.2024.1416142>.

Yan, X. and Wu, J.F. (2021) “The effect of blind box customer experience on repeated purchase intention,” *China Business Market*, 35, pp. 85–95.

Yang, Y. (2023) “Analysis on the Marketing Strategy of Blind Box,” *Advances in Economics Management and Political Sciences*, 27(1), pp. 26–30. Available at: <https://doi.org/10.54254/2754-1169/27/20231206>.

Yoğun, K. and Yıldırım, N. (2025) “Research and Conceptual Landscape of Food Waste and Business Models in the Context of the Circular Economy: A Literature Review at the Intersection of SDG 2 – Zero Hunger and SDG 12 – Responsible Consumption and Production,” *SDGs Review*, 5(e04757), pp. 1–28.

Zeng, H. and Yang, L. (2021) “Research on the factors affecting the emotional experience of blind box product consumers,” *Packaging Engineering*, 22, pp. 221–230.

Zhang, Y. *et al.* (2024) “How real-time interaction and sentiment influence online sales? Understanding the role of live streaming danmaku,” *Journal of Retailing and Consumer Services*, 78(1). Available at: <https://doi.org/10.1016/j.jretconser.2024.103793>.

Zhang, Y. and Zhang, T. (2022) “The effect of blind box product uncertainty on consumers’ purchase intention: The mediating role of perceived value and the moderating role of purchase intention,” *Frontiers in Psychology*, 13. Available at: <https://doi.org/10.3389/fpsyg.2022.946527>.