

Exploring the Role of Gender in Sustainable Consumption: A Moderated Mediation Model of Sustainable Marketing in the UK FMCG Industry

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ABSTRACT: This study investigates the influence of sustainable marketing activities on brand image, customer involvement, and sustainable purchase intention within the Fast-Moving Consumer Goods (FMCG) sector in England, while examining gender as a moderating variable. Grounded in Signaling Theory and the Theory of Planned Behaviour, the research adopts a positivist philosophical stance and a quantitative, deductive approach. Data were collected through a structured online survey administered to 273 FMCG consumers in England, ensuring balanced representation of male and female respondents. Structural Equation Modelling (SEM) using AMOS, along with regression analysis, was employed to test the proposed moderated-mediation model.

The findings reveal that sustainable marketing activities significantly enhance brand image, which in turn strengthens customer involvement and ultimately increases sustainable purchase intention. Brand image and customer involvement were found to act as sequential mediators in the relationship between sustainable marketing activities and sustainable purchase intention, confirming a partial serial mediation effect. The results also indicate that sustainable marketing has both direct and indirect effects on sustainable purchase intention, highlighting its significant role in shaping consumer behaviour in the FMCG sector.

However, the moderating effect of gender was found to be statistically insignificant. Although minor differences in path strengths were observed between male and female consumers, these differences did not significantly alter the overall relationships in the model. This suggests that sustainable marketing strategies are broadly effective across genders in the English FMCG context.

The study contributes to existing literature by providing empirical evidence on the integrated role of sustainability-driven marketing in shaping consumer behaviour and clarifying the limited moderating role of gender. It offers practical implications for FMCG companies, emphasising the importance of strengthening sustainable brand image and fostering consumer involvement to drive sustainable purchasing behaviour.

KEYWORDS: Brand image, Customer involvement, FMCG industry, Gender moderation, Sustainable marketing, Sustainable purchase intention

I. INTRODUCTION

A. *Background to Research*

In recent years, environmental sustainability has become a significant factor influencing consumer behaviour, especially within the Fast-Moving Consumer Goods (FMCG) sector. Businesses are increasingly embedding sustainable initiatives into their marketing strategies to respond to rising consumer expectations for environmentally responsible products. This pattern is particularly evident in England's FMCG market, where consumers are becoming increasingly aware of the environmental and social implications associated with their purchasing decisions (Mandarić et al., 2022; Gong et al., 2023). Consequently, sustainability has emerged as a key determinant of consumer preference and competitive positioning within the industry. Organisations now acknowledge the growing necessity of integrating sustainability into their marketing communications and practices (Park et al., 2022; Jia et al., 2023).

Previous studies have examined the influence of sustainable marketing on consumer decision-making processes. Marketing campaigns that emphasise environmental stewardship and social responsibility have been identified as important contributors to strengthening brand image and shaping consumer purchasing behaviour (Hota, 2024). Nevertheless, the effectiveness of such campaigns differs across consumer groups, with demographic characteristics playing a substantial role in determining consumer responses (Dragolea et al., 2023).

From an academic perspective, the increasing focus on sustainable consumption has generated considerable interest in exploring the psychological and social determinants that influence sustainable purchasing behaviour (Joshi & Rahman, 2019; Kim & Lee, 2023; Shah & Asghar, 2023). Despite the expanding literature in this field, limited attention has been given to the role of gender in influencing these relationships within the FMCG sector.

From an industry viewpoint, FMCG organisations are experiencing mounting pressure to demonstrate environmental accountability. Consumers increasingly prefer brands that align with their ethical, environmental, and social values, enabling firms with effective sustainability communication strategies to gain a competitive edge (Chen et al., 2018; Rastogi et al., 2024). Although prior research has investigated the impact of sustainable marketing activities (SMA) on brand image (BI), customer involvement (CI), and sustainable purchase intention (SPI), insufficient evidence exists regarding the moderating influence of demographic factors such as gender on these relationships (Gong et al., 2023).

To address this research gap, the present study proposes a comprehensive framework that investigates the mediating effects of BI and CI in the relationship between sustainable marketing and SPI, while also examining the moderating role of gender. This investigation is particularly relevant to the English FMCG industry, where understanding demographic differences may improve the effectiveness of sustainable marketing strategies.

B. Research Question, Aim, and Objectives

This study aims to investigate the moderating role of gender in the relationship between sustainable marketing, brand image, customer involvement, and sustainable purchase intention within the English FMCG industry.

1) *Problem:* The primary issue addressed by this study is whether sustainable marketing initiatives influence male and female consumers equally within the FMCG sector. More specifically, the study seeks to examine the extent to which gender moderates the mediating effects of BI and CI on SPI.

2) *Research Question:* How does consumer gender moderate the mediated relationship between SMA, BI, CI, and SPI within England's FMCG industry?

3) *Aim of the Research:* The purpose of this research is to evaluate how gender affects the effectiveness of sustainable marketing strategies in the FMCG sector. The study investigates the mediating influence of brand image and customer involvement in the relationship between sustainable marketing and sustainable purchase intention. Furthermore, it explores how gender moderates these mediated relationships in order to propose recommendations for FMCG firms to develop gender-sensitive sustainable marketing strategies.

4) *Research Objectives:* To accomplish the overall research aim, the study identifies the following objectives:

To investigate the impact of sustainable marketing practices on brand image and customer involvement within the FMCG industry.

To examine the mediating effects of brand image and customer involvement on the relationship between sustainable marketing and sustainable purchase intention.

To explore the moderating role of gender in the mediated relationship between sustainable marketing and purchase intention within the English FMCG context.

To provide recommendations for FMCG companies to customise their sustainable marketing strategies according to gender differences in the English consumer market.

C. Justification for Research

The growing environmental issues confronting society today require businesses to adopt sustainable practices and communicate these efforts effectively to consumers. While sustainable marketing has become an influential approach, there remains limited understanding of how gender shapes its effectiveness. This research therefore seeks to address this gap by examining the moderating effect of gender on consumer responses to sustainable marketing within the English FMCG sector.



The study holds both theoretical and practical significance. From a theoretical perspective, it contributes to the broader understanding of consumer behaviour by investigating how gender interacts with variables such as brand image, customer involvement, and purchase intention in sustainability-related contexts. By exploring these relationships, the research enhances existing knowledge regarding consumer reactions to sustainable marketing strategies within the FMCG industry.

From a practical standpoint, the findings will provide valuable guidance for FMCG firms operating in England by enabling them to refine their sustainable marketing approaches based on gender-related consumer differences. Tailored marketing strategies can improve the effectiveness of sustainability campaigns, encourage sustainable purchasing behaviour, and strengthen brand loyalty. Furthermore, promoting sustainable consumption can support wider environmental objectives, including waste reduction and resource conservation.

The investigation of gender as a moderating factor carries important implications for both academia and industry. Academically, it enriches the existing literature on sustainable consumer behaviour. Practically, it offers FMCG organisations actionable insights to encourage sustainable purchasing among both male and female consumers.

D. Outline Methodology

The growing environmental issues confronting society today require businesses to adopt sustainable practices and communicate. This study adopts a positivist research philosophy and applies a mono-method quantitative research design. Primary data will be collected through an online survey targeting FMCG consumers in England. The survey is designed to measure participants' perceptions of sustainable marketing activities, brand image, customer involvement, and sustainable purchase intention. Demographic details, including gender, will also be gathered to assess moderation effects.

A self-administered questionnaire consisting of closed-ended questions will be distributed through recognised online platforms. The intended sample size is 273 participants, including 139 females and 134 males, providing adequate statistical power at a 90% confidence level with a 5% margin of error (Sample Size Calculator, n.d.). Stratified sampling will be employed to improve sample representativeness and reduce selection bias.

The collected data will be analysed using SPSS and SPSS AMOS software. Structural Equation Modelling (SEM) will be utilised to evaluate the moderate mediation framework, including both direct and indirect relationships between sustainable marketing and sustainable purchase intention. The analysis will further assess the mediating effects of brand image and customer involvement, alongside the moderating influence of gender. Regression analysis will also be conducted to examine direct and indirect relationships among the study variables.

E. Summary

This study aims to address the existing knowledge gap regarding the moderating role of gender in the relationship between sustainable marketing, brand image, customer involvement, and sustainable purchase intention within England's FMCG industry. Through examining these relationships, the research intends to generate valuable insights for both academic researchers and FMCG practitioners. The subsequent chapters will further explore the relevant literature, research methodology, findings, and practical implications of the study.

II. LITERATURE REVIEW

A. The Fast-Moving Consumer Goods Sector and Its Behaviour Towards Sustainability

The Fast-Moving Consumer Goods (FMCG) sector consists of products that are purchased frequently, sold rapidly, and generally offered at relatively low prices. These products commonly include food, beverages, toiletries, and personal care items with short shelf lives (Dhanaraj, 2020; Helen & Darling Selvi, 2021; George & George, 2023). In recent years, sustainability concerns within the FMCG sector have gained substantial attention due to issues related to excessive resource consumption, packaging waste, and ethical sourcing practices (Roberts, 2003; Jaca et al., 2018; Abatan et al., 2024). As environmental awareness among consumers continues



to increase, there is a growing demand for transparency and environmentally responsible products, encouraging companies to implement sustainable practices throughout their operations, including sourcing, packaging, production, and waste management (Chen et al., 2023; Sujanska & Nadanyiova, 2023; Abatan et al., 2024).

Organisations often communicate these sustainability initiatives through marketing campaigns that highlight their environmental and social commitments (Jia et al., 2023; Gong et al., 2023). However, consumer reactions to these initiatives are not always consistent and may vary according to factors such as brand perception and product type (Melero & Montaner, 2016). Therefore, understanding the variables that shape consumer behaviour in the FMCG industry is essential for designing successful sustainable marketing strategies.

In the United Kingdom, the FMCG market is expected to reach USD 81.56 billion by 2024, making it one of the largest sectors of the national economy (Statista, 2023). Consumer behaviour within this sector has evolved significantly, largely influenced by rising income levels and changing lifestyles (Tyagi et al., 2014; Helen & Darling Selvi, 2021). UK consumers are increasingly conscious of sustainability-related issues and are becoming more aware of the environmental impact of their purchasing decisions (PricewaterhouseCoopers, 2008). Consequently, growing environmental awareness has encouraged both consumers and organisations to reconsider purchasing behaviour and evaluate the broader environmental consequences of consumption activities (Akisik & Gal, 2011; Rafi-UI-Shan et al., 2018; Golob & Kronegger, 2019; Panizzut et al., 2021).

The increasing emphasis on sustainability presents considerable challenges for policymakers, businesses, and marketers, while also influencing wider global consumption patterns (Rafi-UI-Shan et al., 2018). Sustainable marketing strategies may include reducing excessive production and consumption through pricing strategies, operational efficiency, and environmentally friendly innovations (Mishra et al., 2018; Gong et al., 2023). To effectively respond to these evolving market conditions, additional academic research is necessary to assist FMCG firms in understanding and adapting to changing consumer expectations (Qalati et al., 2024; Lacy et al., 2020).

B. Sustainable Marketing and Consumer Behaviour

Sustainable marketing focuses on promoting environmentally and socially responsible practices across the entire product lifecycle while simultaneously influencing consumer purchasing decisions (Muchenje et al., 2023; Gong et al., 2023). Existing research indicates that consumers are increasingly attracted to brands that demonstrate sustainability commitments (Gong et al., 2023; Reddy, 2023). Within England's FMCG industry, there has been a noticeable transition towards sustainability as consumers become more environmentally conscious (Jain & Hudnurkar, 2022).

Sustainable marketing strategies can encourage responsible consumption in various ways. Businesses may emphasise the environmental and social advantages of their products to appeal to environmentally aware consumers (Reddy, 2023). In addition, transparent communication regarding sustainability initiatives can strengthen consumer trust and increase brand loyalty among environmentally conscious individuals (Liu et al., 2022; Sujanska & Nadanyiova, 2023; Bhat et al., 2024). Research further suggests that sustainable marketing campaigns serve as an essential mechanism through which FMCG companies communicate their environmental and social responsibility commitments (Gong et al., 2023; Park & Jiang, 2020).

The success of sustainable marketing largely depends on understanding consumer motivations and decision-making processes (Jia et al., 2023; Taktakishvili & Sachaleli, 2024). Several factors influence consumer responses in this context, including environmental concern, perceived effectiveness of sustainable products, and brand image (Jia et al., 2023; Barbu et al., 2022). As a result, sustainable marketing campaigns can positively affect brand image, customer involvement, and ultimately sustainable purchase intention (Gong et al., 2023; Eklund et al., 2020).

Jia et al. (2023) investigated the mediating role of brand image between sustainable marketing and consumer behaviour. Their findings revealed that sustainable marketing initiatives strengthen brand image, which subsequently enhances consumer trust and



preference for brands perceived as environmentally responsible. Other studies similarly indicate that sustainable advertising practices contribute positively to corporate image and reputation (Huo et al., 2022). Therefore, sustainable marketing strategies can provide firms with a competitive advantage by improving consumer perceptions and strengthening brand positioning (Porter & Kramer, 2011).

C. Gender Differences in Consumption

Previous research demonstrates that gender significantly influences consumer behaviour. Studies suggest that women generally display greater environmental concern and participate more frequently in pro-environmental activities than men (McCright & Xiao, 2014; Zhao et al., 2021). These behavioural differences have been associated with variations in social norms, perceptions of risk, and product evaluations (Mohai, 1997; Stern, 2000; McCright & Sundström, 2013).

Nevertheless, findings regarding gender differences are not always consistent. Some studies report no substantial differences between men and women in relation to sustainable consumption behaviour (Gilg et al., 2005; Chen & Chai, 2010; Zhu et al., 2013; Leong et al., 2024). For example, Gilg et al. (2005) found no significant gender-based differences within the UK context, while Chen and Chai (2010) reported similar findings in Malaysia. Conversely, Mostafa (2007) observed that Egyptian men demonstrated greater tendencies towards green purchasing compared to women.

Although research concerning sustainable marketing and consumer behaviour continues to expand, certain limitations remain evident. Much of the literature is concentrated within Western contexts, potentially overlooking cultural differences in gender roles and environmental attitudes (Dagher et al., 2015; Migheli, 2020).

Several scholars have argued for a more comprehensive understanding of the relationship between gender and sustainable consumption. Some researchers suggest that focusing solely on individual consumer behaviour neglects the broader social structures influencing consumption patterns (Schmitt et al., 2021). Furthermore, gender roles are increasingly recognised as fluid and dependent on social and cultural contexts (Migheli, 2020). Therefore, future research should adopt a more holistic perspective that considers the interaction between consumer psychology, social norms, and gender roles within specific marketing and product contexts.

Limited research has specifically explored the influence of gender on the effectiveness of sustainable marketing within the FMCG industry. Existing evidence indicates that women may be more influenced by sustainability-focused marketing messages in certain product categories, such as clothing (Brough et al., 2016; Hageman et al., 2023). However, further investigation is needed across a broader range of FMCG products to better understand the underlying mechanisms driving gender-based differences in consumer responses.

D. Promoting Responsible Sustainable Consumer Behaviour through Sustainability Marketing

The FMCG industry is under increasing pressure to encourage responsible and sustainable consumption patterns (Haider et al., 2022). Growing environmental concerns have led consumers to demand more eco-friendly products and services (Reddy, 2023; Nguyen Tran Cam, 2023). In this context, sustainability marketing has become an important mechanism through which FMCG firms can influence consumer behaviour and promote environmentally responsible choices (Jia et al., 2023).

FMCG organisations can utilise marketing strategies to educate consumers about the environmental consequences of everyday purchasing decisions (White et al., 2019). Communicating the benefits of sustainable products and enabling consumers to make informed purchasing choices are considered essential components of sustainable marketing (Turunen & Halme, 2021). Such initiatives may include emphasising product durability, maintenance possibilities, and end-of-life solutions such as recycling schemes (Hernandez et al., 2020). Collaborating with environmental non-governmental organisations (NGOs) can further improve organisational credibility and expand the reach of sustainability-related messaging (Poret, 2019).

Previous studies have also examined the effectiveness of sustainable marketing tactics, including environmentally friendly packaging and ethical sourcing strategies (Roberts, 2003; Jaca et al., 2018; Wandosell et al., 2021; Adeola & Olaniyi, 2022; Huang



et al., 2024). However, most existing research focuses on overall consumer behaviour and gives limited attention to possible gender differences in responses to sustainable marketing communications.

E. Mediation and Moderation Effects

Understanding the influence of sustainable marketing on consumer behaviour requires appropriate analytical frameworks, with mediation and moderation offering valuable approaches for examination (Baron & Kenny, 1986; MacKinnon, 2011). Mediation refers to the process through which an independent variable, such as sustainable marketing, affects a dependent variable, such as sustainable purchase intention, through an intervening variable known as the mediator, including brand image or customer involvement. Moderation, by contrast, explains how the relationship between two variables changes depending on the influence of another variable, such as gender, which may strengthen, weaken, or alter the direction of the relationship (MacKinnon, 2011; Preacher & Hayes, 2008).

This study applies both frameworks to examine how brand image and customer involvement mediate the relationship between sustainable marketing and sustainable purchase intention. In addition, gender is proposed as a moderating variable within this mediated relationship, suggesting that the influence of sustainable marketing on purchase intention may vary between male and female consumers. By integrating mediation and moderation analyses, the study aims to provide a more comprehensive understanding of consumer behaviour and contribute insights for developing targeted sustainable marketing strategies within the FMCG industry (Baron & Kenny, 1986; MacKinnon, 2011; Preacher & Hayes, 2008).

F. The English Consumer Landscape

The consumer landscape in England is undergoing significant transformation due to increasing environmental awareness and growing expectations for sustainable business practices (Consultancy UK, 2022). This shift has been supported by government initiatives such as the Climate Change Act 2008, which established legally binding targets for reducing greenhouse gas emissions (Climate Change Committee, 2022). Although surveys indicate that consumers are demonstrating greater interest in sustainable products, a noticeable gap remains between environmental awareness and actual purchasing behaviour (Liu et al., 2017; Chekima et al., 2019; Kim & Lee, 2023). While public awareness campaigns have improved environmental consciousness, achieving consistent sustainable consumption remains challenging (Bakaki et al., 2019; Manley et al., 2023).

Younger consumers, particularly Millennials and Generation Z, are leading this transition by prioritising sustainability within their purchasing decisions (Versace & Abssy, 2022; Manley et al., 2023). Government interventions, such as plastic bag charges, have also contributed to encouraging sustainable consumer practices (Ritch et al., 2009).

Gender differences remain an important aspect of sustainable consumption behaviour in England. Research suggests that women generally demonstrate stronger environmental concern and greater engagement in environmentally responsible behaviour compared to men (Mintel, 2018; Ogiemwonyi et al., 2023). These differences are often linked to socialisation processes and traditional gender roles (Zhao et al., 2021; Echavarren, 2023). However, further research is required to understand how economic inequality influences sustainable consumption behaviour across genders (Seyfang, 2004; Ruckert & Labonté, 2017). Consequently, the English FMCG industry provides an appropriate context for examining the moderating role of gender within sustainable marketing relationships (Helen & Darling Selvi, 2021).

G. Research Gap

Although considerable research has demonstrated the positive impact of sustainable marketing on consumer behaviour, limited understanding exists regarding the moderating influence of demographic variables such as gender (Gong et al., 2023). Gender significantly shapes consumer responses to marketing communications, with studies indicating that women tend to be more responsive to sustainability-focused messages, whereas men may place greater emphasis on product functionality and cost efficiency (Zhao et al., 2021; Bloodhart & Swim, 2020).



This gap in the literature suggests that sustainable marketing strategies within England's FMCG sector may fail to effectively engage diverse consumer groups if gender differences are not adequately considered. Furthermore, much of the existing research overlooks broader societal influences, including social norms, cultural beliefs, and economic inequalities, which also shape consumer behaviour in gendered contexts (Schmitt et al., 2021). Therefore, future research should adopt a more integrated perspective that incorporates these wider social factors to improve the applicability and effectiveness of sustainable marketing strategies.

H. Theoretical and Conceptual Framework

Several theoretical perspectives, including the Resource-Based View (RBV), stakeholder theory, the Theory of Planned Behaviour (TPB), and signaling theory, provide a foundation for understanding how organisations can achieve competitive advantage through sustainability initiatives. The RBV argues that a firm's unique resources and capabilities serve as sources of competitive advantage, with sustainability increasingly recognised as a valuable strategic resource (Barney, 1991). Stakeholder theory complements this perspective by emphasising the importance of maintaining positive relationships with groups affected by organisational activities, including consumers and environmental stakeholders (Freeman, 1984). Together, these frameworks explain how sustainable marketing can generate value and strengthen consumer loyalty among environmentally conscious audiences.

The Theory of Planned Behaviour (TPB), developed by Ajzen (1991), explains how attitudes, subjective norms, and perceived behavioural control shape consumer intentions towards sustainable purchasing. Within this framework, sustainable marketing practices are expected to influence consumer attitudes and brand perceptions, thereby increasing intentions to purchase sustainable FMCG products. Additionally, mediation and moderation analyses (Baron & Kenny, 1986; MacKinnon, 2011) are utilised to investigate the moderating role of gender within the relationship between sustainable marketing and purchase intention.

Signaling theory further suggests that consumers communicate their environmental values through purchasing behaviour (Spence, 2002). According to this perspective, sustainable marketing acts as a signal of a company's commitment to environmental responsibility, appealing particularly to consumers who value sustainability. However, signaling theory may not fully account for issues such as authenticity, consumer trust, and cultural influences, particularly within gender-specific contexts (Spence, 2002).

Although these theoretical frameworks contribute significantly to understanding sustainable consumer behaviour, they may not entirely explain spontaneous or habitual purchasing behaviour and may overlook the complexity of gender-related responses to sustainability marketing. Similarly, TPB may not fully capture the influence of social norms and cultural factors on consumer decision-making (Ajzen, 1991).

1) *Sustainable Marketing Activities and Brand Image*: Sustainable marketing activities (SMAs) incorporate economic, environmental, and social considerations into marketing practices in order to promote responsibility throughout a product's lifecycle (Elkington, 1998; Sheehy & Farneti, 2021). These activities are considered essential for strengthening brand image by associating brands with positive characteristics such as environmental responsibility and ethical sourcing (Roberts, 2003; Gong et al., 2023).

Within the English FMCG industry, SMAs are positively associated with brand image, as consumers increasingly prefer brands that reflect their personal values and environmental concerns (Fournier, 1998; Aziz, 2020). Sustainable marketing strategies highlight the ecological and social benefits of products, potentially increasing perceived product value (Jung et al., 2020; Muchenje et al., 2023). Moreover, effective sustainable marketing can build consumer trust and loyalty by demonstrating a genuine organisational commitment to sustainability (Sujanska & Nadanyiova, 2023; Duttgupta et al., 2023). Such practices can strengthen emotional relationships with consumers and improve overall brand perception, particularly among environmentally conscious individuals (Bulmer et al., 2024; Park et al., 2022).

H1: Sustainable marketing activities will positively influence brand image.



2) *Brand Image and Customer Engagement*: Brand image reflects how consumers perceive themselves in relation to a specific brand. When a brand aligns with a consumer's self-concept, stronger emotional attachments are likely to develop (Sirgy, 1985). A favourable brand image promotes trust and loyalty, encouraging consumers to become more actively involved with the brand (Cardoso et al., 2022; Wang et al., 2024).

This heightened engagement is reflected through increased customer involvement, where consumers demonstrate stronger interest in a brand's sustainability initiatives (Gong et al., 2023; Ray & Nayak, 2023). Abbas et al. (2018) describe customer involvement as encompassing cognitive, emotional, and behavioural dimensions. A positive brand image encourages consumers to identify with the brand, thereby increasing their involvement with its products and activities (Godfrey et al., 2009). Consistent with previous research on brand-consumer relationships, the proposed model suggests a positive association between brand image and customer engagement within the English FMCG industry (Islam & Rahman, 2016; Yaran Ögel, 2021; Gong et al., 2023).

H2: Positive brand image will positively influence customer involvement.

3) *Customer Involvement and Sustainable Purchase Intention*: Consumer engagement generally refers to the development of strong relationships between consumers and businesses (Glavee-Geo et al., 2019). Both direct and indirect customer interactions can strengthen purchase intention (Huerta-Álvarez et al., 2020). Similarly, customer involvement has been shown to positively influence purchase intention (Bilal et al., 2020; Park & Jiang, 2020; Huerta-Álvarez et al., 2020).

Consumers who are highly involved with a brand are more likely to consider its products during purchasing decisions, especially when sustainability is an important consideration. Accordingly, the proposed framework suggests that customer involvement positively affects sustainable purchase intention within the English FMCG industry (H3). This assumption is supported by prior studies indicating that greater involvement leads to stronger intentions to purchase specific products (Park & Jiang, 2020; Gong et al., 2023).

H3: Customer involvement will positively influence sustainable purchase intention.

4) *A Mediated Relationship in Sustainable Consumption*: Sustainable marketing practices can improve brand image by associating organisations with environmental and social responsibility, thereby increasing consumer trust and credibility (Gong et al., 2023; Sujanska & Nadanyiova, 2023). A positive brand image subsequently enhances customer involvement, as consumers are more likely to interact with brands, they perceive as trustworthy and valuable (Van Doorn et al., 2010; Hollebeek, 2011; Islam & Rahman, 2016).

Greater customer involvement strengthens emotional attachment to the brand and motivates consumers to seek further information regarding sustainability initiatives. Increased involvement ultimately enhances sustainable purchase intention, as engaged consumers are more inclined to consider sustainability practices when making purchasing decisions (Bilal et al., 2020; Park & Jiang, 2020; Huerta-Álvarez et al., 2020; Gong et al., 2023). Therefore, sustainable marketing is expected to influence purchase intention indirectly through the sequential mediating effects of brand image and customer involvement.

H4: Brand image and customer involvement act as serial mediators between sustainable marketing and sustainable purchase intention.

5) *Gender as a Moderator*: The moderating role of gender within sustainable marketing relationships highlights differences in how male and female consumers respond to sustainability initiatives in the FMCG sector. Existing research suggests that women are generally more responsive to sustainable marketing communications because they often exhibit stronger concern for environmental protection and social responsibility, resulting in deeper emotional connections with sustainable brands (Kalamas et al., 2014; McCright & Xiao, 2014; Zhao et al., 2021).

This stronger emotional connection tends to increase customer involvement, as women are more likely to seek information about sustainability initiatives and incorporate these considerations into purchasing decisions (Kol & Levy, 2023; Zhao et al., 2021). In

contrast, men may respond more positively to practical sustainability benefits such as efficiency and cost reduction (Bloodhart & Swim, 2020). Consequently, Hypothesis 5 proposes that gender moderates the relationships within the proposed model, offering important implications for the development of gender-specific sustainable marketing strategies (Khan & Trivedi, 2015)

H5: Gender will act as a moderator.

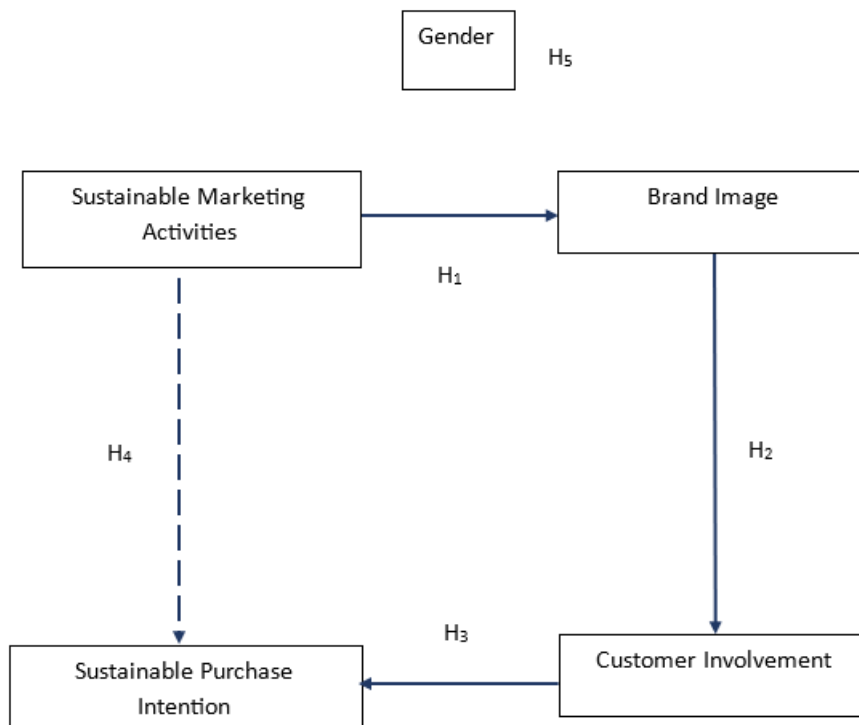


Figure III-1: Conceptual model (Author Generated)

III. METHODOLOGY

A. Introduction

This chapter presents the methodological framework adopted for this study, which aims to investigate the moderating role of gender in sustainable consumption behaviour within the English FMCG industry. The study is based on a positivist philosophical stance and applies a quantitative research design to examine the proposed moderated mediation model. The chapter begins by explaining and justifying the selected research philosophy and methodological approach, followed by a detailed discussion of the research design, data collection methods, and analytical procedures. Ethical considerations are also discussed to ensure the credibility and integrity of the research process.

B. Research Philosophy and Principle

Research philosophy provides the foundation for the methodological approach adopted in a study. It shapes the researcher’s understanding of knowledge, reality, and the methods through which knowledge can be acquired (Saunders et al., 2009). Research philosophies influence how researchers interpret phenomena and guide the selection of appropriate research methods. Among the most commonly discussed philosophies are positivism, interpretivism, and critical realism.

Positivism assumes that reality is objective, measurable, and independent of human perception. This philosophy emphasises empirical observation, hypothesis testing, and scientific measurement to generate knowledge (Park et al., 2020). Although positivism

offers a systematic and structured research approach, critics argue that it may fail to capture the subjective experiences and interpretations of individuals (Park et al., 2020).

Interpretivism, in contrast, focuses on understanding the meanings and interpretations individuals attach to social phenomena. It rejects the assumption of a single objective reality and instead seeks to understand reality through participants' perspectives (Chowdhury, 2018). While interpretivism enables rich and detailed insights, it is often criticised for limited generalisability and increased subjectivity (Pervin & Mokhtar, 2022).

Critical realism occupies a position between positivism and interpretivism. It acknowledges the existence of an objective reality while recognising the importance of social systems and human interpretations in shaping experiences (Koopmans & Schiller, 2022). Critical realism aims to identify the underlying mechanisms influencing social phenomena. Despite offering a balanced perspective, applying this philosophy can be methodologically complex.

Each research philosophy possesses distinct strengths and limitations. The selection of a philosophy depends on the research objectives, the nature of the phenomenon under investigation, and the researcher's epistemological assumptions. Although interpretivist approaches could provide valuable insight into consumers' personal experiences and perceptions regarding sustainable consumption (Saunders et al., 2009), this study prioritises measuring and quantifying the moderating influence of gender within a specific conceptual model. Consequently, interpretivism is considered less appropriate for testing the hypothesised relationships proposed in this research.

Accordingly, this study adopts a positivist philosophy, which assumes that an objective reality exists and can be examined through systematic observation and empirical analysis (Park et al., 2020). Positivism is particularly suitable for studies emphasising objectivity, quantification, and causal relationships. This philosophical position aligns with the objectives of the present study, which seeks to examine measurable relationships between sustainable marketing, brand image, customer involvement, and sustainable purchase intention. Although positivism enhances rigor and generalisability, it may overlook the subjective dimensions of consumer perceptions and experiences (Chowdhury, 2018). In addition, concentrating solely on measurable variables may neglect important contextual factors influencing consumer behaviour. To overcome these limitations, future studies may consider combining quantitative approaches with qualitative methods to provide a more comprehensive understanding of the phenomenon.

C. Development of Selected Approach and Construction of Methodology

Research approaches provide the methodological structure that guides data collection, analysis, and interpretation. The three most widely recognised approaches are quantitative, qualitative, and mixed methods research.

Quantitative research focuses on the collection and analysis of numerical data (Ghanad, 2023). It commonly employs structured instruments such as surveys and experiments to gather measurable information. This approach is particularly effective for hypothesis testing, examining causal relationships, and generalising findings across larger populations (Verhoef & Casebeer, 1997). However, quantitative research may fail to fully capture the complexity and depth of human experiences (Rahman, 2020).

Qualitative research, by comparison, seeks to explore meanings, interpretations, and experiences through unstructured methods such as interviews and observations (Tenny et al., 2022). This approach is valuable for generating in-depth insights into complex social phenomena and understanding diverse perspectives. Nevertheless, qualitative research is frequently criticised for its subjective nature and limited generalisability (Leung, 2015).

Mixed methods research integrates both quantitative and qualitative approaches to combine the strengths of each methodology. This approach enables researchers to explore phenomena from multiple perspectives and achieve a more comprehensive understanding (Dawadi et al., 2021). Despite these advantages, integrating different forms of data while maintaining methodological consistency can be challenging.

The choice of research approach depends on the research objectives, the nature of the phenomenon being studied, and the researcher's epistemological perspective. A critical understanding of these approaches assists researchers in selecting the most suitable methodological framework.

Although qualitative methods may be beneficial for future studies exploring consumer perceptions in greater depth, they are less appropriate for the present research because the primary objective is to test hypotheses and quantify relationships between variables. Therefore, a quantitative approach is considered the most suitable method for this study. Quantitative research enables the collection of numerical data that can be statistically analysed to identify patterns, relationships, and trends among variables. It is particularly effective for theory testing and drawing generalisable conclusions about a population. However, quantitative methods may not fully explain complex behavioural phenomena and may overlook contextual influences affecting variable relationships. Furthermore, despite efforts to minimise bias, some degree of bias may still arise during data collection and analysis.

Theory development approaches also guide the research process. The three major approaches include deductive, inductive, and abductive reasoning. Deductive reasoning begins with existing theories and tests hypotheses derived from them (DeCarlo, 2019). This approach is useful for validating established theories but may overlook unexpected findings. Inductive reasoning, on the other hand, develops theories from observations and identified patterns (Borgstede & Scholz, 2021). While inductive reasoning supports theory generation, its conclusions may be limited by the scope of observations. Abductive reasoning combines elements of both deduction and induction by proposing the most plausible explanation for observed phenomena (Vila-Henninger et al., 2022). Although abductive reasoning facilitates innovative explanations, it may involve subjective interpretation.

The selection of a theory development approach depends on the research objectives, existing theoretical knowledge, and epistemological assumptions. Consequently, this study adopts a deductive approach, whereby existing theories, specifically Signaling Theory and the Theory of Planned Behaviour, are utilised to develop hypotheses that are empirically tested. This approach aligns closely with the positivist philosophy through its emphasis on theory testing and generalization.

1) *Justification for the Methodology*: The quantitative methodology is appropriate for this study because it enables the measurement and analysis of relationships among sustainable marketing, brand image, customer involvement, and sustainable purchase intention. Statistical techniques can be applied to test the proposed hypotheses and evaluate the conceptual model. In addition, the deductive approach is suitable because the study aims to examine how Signaling Theory and the Theory of Planned Behaviour explain the relationships between the identified variables.

2) *Rejected Methodologies and Methods*: Qualitative methods, including interviews and focus groups, were considered during the research design stage but were ultimately rejected. The primary reason for this decision was that the research objectives focus on measuring relationships between variables and producing findings that can be generalised to a broader population. Although qualitative research can generate detailed and meaningful insights, it is less appropriate for hypothesis testing and examining causal relationships.

D. Research Design

Research designs are commonly categorised as either longitudinal or cross-sectional. Longitudinal research involves repeated observations of the same individuals or groups over an extended period, allowing researchers to identify changes and trends over time (Shah et al., 2023). In contrast, cross-sectional research collects data at a single point in time, providing a snapshot of the phenomenon being investigated.

While longitudinal studies offer valuable insights into behavioural changes and development, cross-sectional designs are generally more practical and cost-effective, especially for large-scale research. Therefore, this study adopts a cross-sectional research design. This design allows data to be collected from a representative sample at one specific point in time. Although causal relationships



cannot be established definitively, cross-sectional research is effective for examining relationships among variables and identifying trends within the data.

E. Research Methods/Procedures

1) *Data Collection*: Sampling techniques are used to select representative subsets of a population for research purposes. Common sampling methods include simple random sampling, stratified sampling, cluster sampling, quota sampling, and snowball sampling. The selection of a sampling technique depends on research objectives, population characteristics, and available resources.

This study employed a stratified sampling technique to ensure adequate representation of English FMCG consumers. This method helped minimise selection bias, improve generalisability, and facilitate a robust examination of the moderating influence of gender on sustainable consumption behaviour. The target population consisted of English residents aged 18 years and above who regularly purchase FMCG products.

According to population statistics, England's population in 2021 was approximately 59,597,540, including 30,420,195 females and 29,177,345 males (Office for National Statistics, 2023). Based on power analysis calculations, a sample size of 273 participants was selected, consisting of 139 females and 134 males, to achieve a 90% confidence level and a 5% margin of error (Sample Size Calculator, n.d.). This sample size was considered sufficient for estimating population proportions, conducting hypothesis testing, and generating reasonably generalisable findings.

Primary data was collected using a self-administered online survey developed through Microsoft Forms and distributed via reputable online survey platforms. The questionnaire included items measuring sustainable marketing practices, brand image, customer involvement, sustainable purchase intention, and demographic information. Measurement scales were adapted from existing literature and refined through pilot testing.

The dependent variable, sustainable purchase intention, was measured using a five-point Likert scale ranging from "strongly disagree" to "strongly agree" and "very unlikely" to "very likely." Similarly, independent and mediating variables were measured using five-point Likert scales because the constructs under investigation are well-established and can be effectively captured through this format. Furthermore, five-point scales provide respondents with a simple and manageable method for expressing opinions without introducing excessive complexity. The scale also supports both parametric and non-parametric statistical analysis techniques, offering flexibility during data analysis.

2) *Qualitative Sampling*: A pilot study involving ten participants was conducted to evaluate the clarity, reliability, and comprehensiveness of the survey instrument. Feedback obtained during the pilot phase was used to refine the questionnaire before the main data collection process commenced.

The pilot study identified several issues relating to ambiguous wording and survey length. Some participants indicated that certain questions were difficult to understand, while others considered the survey excessively lengthy. Consequently, unclear questions were revised to improve clarity, and several items were removed to shorten the questionnaire. These modifications were intended to improve respondent experience while strengthening the reliability and validity of the collected data.

Several measures were implemented to ensure research validity. Content validity was established by ensuring that the survey items adequately represented the constructs under investigation. Construct validity was assessed through confirmatory factor analysis to determine the extent to which observed variables accurately reflected the intended constructs.

Reliability refers to the consistency and stability of measurement procedures. Internal consistency was evaluated using Cronbach's alpha (Bujang et al., 2018). Reliability was further enhanced through the use of clear survey items and by minimising potential measurement errors. Triangulation was achieved through the application of multiple analytical methods, including descriptive statistics, correlation analysis, regression analysis, and Structural Equation Modelling (SEM), thereby improving the credibility of the research findings (Bhandari, 2022).

3) *Administration of Instruments or Procedures*: The online survey was distributed to a representative sample of English consumers through email invitations and social media platforms. Participants were given one month to complete the survey, and reminder messages were sent periodically to improve response rates.

To minimise non-response bias, the demographic characteristics of respondents were compared with broader population statistics to assess representativeness. Response rates were continuously monitored, and efforts were made to encourage participation throughout the data collection period.

4) *Limitations of the Methodology*: The methodology adopted in this study contains several limitations associated with cross-sectional research designs. Since data were collected at a single point in time, definitive causal relationships cannot be established. Furthermore, reliance on self-reported data may introduce social desirability bias, where respondents provide answers, they perceive to be socially acceptable rather than entirely accurate. Similar response patterns across survey items may also affect the findings. Additionally, the generalisability of the results may be restricted to the context of the English FMCG industry.

5) *Data Analysis*: The collected data were analysed using SPSS and SPSS AMOS software. SPSS was utilised to conduct descriptive statistics, reliability testing, confirmatory factor analysis, and regression analysis. Descriptive statistics summarised participant characteristics and examined variable distributions, while correlation analysis assessed relationships among the variables.

Structural Equation Modelling (SEM) using SPSS AMOS was applied to evaluate the proposed moderated mediation model. This analysis examined both direct and indirect effects of sustainable marketing on sustainable purchase intention, while considering brand image and customer involvement as mediating variables and gender as a moderating variable. Additional regression analysis was also conducted to further investigate the direct and indirect relationships between sustainable marketing activities and purchase intention.

F. Ethical Considerations

Ethical considerations were prioritised throughout the entire research process. Participants provided informed consent before participating in the study and were informed of their right to withdraw at any stage without consequence. Confidentiality and privacy were maintained through data anonymisation procedures. Furthermore, all collected data were used exclusively for academic research purposes and managed in accordance with relevant data protection regulations.

G. Summary

This chapter discussed the methodological framework used to investigate the moderating role of gender in sustainable consumption behaviour within the English FMCG industry. The study adopted a positivist philosophical perspective and a quantitative research design to address the research objectives. Data collection involved a stratified sampling strategy and an online survey questionnaire. Statistical analysis was conducted using SEM and regression analysis to evaluate the proposed moderated mediation model. Ethical considerations were carefully addressed to ensure the protection of participant rights and the integrity of the research process.

IV. RESULTS

A. Introduction

This chapter presents the findings obtained from the quantitative analysis conducted to examine the impact of sustainable marketing practices on brand image, customer involvement, and sustainable purchase intention within the English FMCG industry, with particular emphasis on the moderating role of gender. The study utilised a moderated mediation framework grounded in Signaling Theory and the Theory of Planned Behaviour. Primary data were gathered through an online survey distributed to a representative sample of consumers in England.

The chapter begins by outlining the demographic profile of the respondents, followed by the presentation of descriptive statistics relating to the key study variables. It then discusses the results generated from the Structural Equation Modelling (SEM) analysis.

These findings provide empirical support for addressing the research objectives and contribute to a broader understanding of how gender influences sustainable consumption behaviour within the English FMCG sector.

B. Application of Methodology

This research applied Structural Equation Modelling (SEM) through AMOS software to evaluate the proposed hypotheses. SEM was considered an appropriate analytical technique because it enables the simultaneous examination of complex relationships involving multiple mediating and moderating variables.

The conceptual framework included sustainable marketing activities (SMA) as the independent variable, brand image (BI) and customer involvement (CI) as mediating variables, and sustainable purchase intention (SPI) as the dependent variable. Gender was incorporated into the model as a moderating variable to determine whether the relationships among SMA, BI, CI, and SPI differed between male and female consumers. The relationships within the model were assessed using standardised regression weights alongside several model fit indices, including CMIN/DF, Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA).

To further examine the moderating role of gender, a multi-group analysis was conducted by comparing unconstrained and constrained models. The unconstrained model allowed parameters to vary freely across male and female groups, whereas the constrained model imposed equal path coefficients across both genders. This comparison enabled the identification of significant gender-based differences in the relationships between SMA, BI, CI, and SPI.

Data for the study were collected from consumers within England's FMCG sector, focusing on their perceptions of sustainability and their sustainable purchasing intentions. The sample was categorised according to gender in order to evaluate the moderating influence of gender within the proposed framework. AMOS software was used to analyse the data, and the results from both unconstrained and constrained models were compared to determine whether meaningful differences existed between male and female respondents.

The final sample consisted of 273 English consumers aged 18 years and above, with a relatively balanced gender distribution of 134 males and 139 females. Most respondents were between 25 and 44 years old, representing a key consumer demographic within the FMCG market (Figure IV-1). Regarding educational background, the majority of participants possessed at least a high school qualification or its equivalent, indicating a relatively educated respondent group. Additionally, most participants reported household incomes within the middle-income category, reflecting a reasonably diverse representation of economic backgrounds (Figure IV-2).

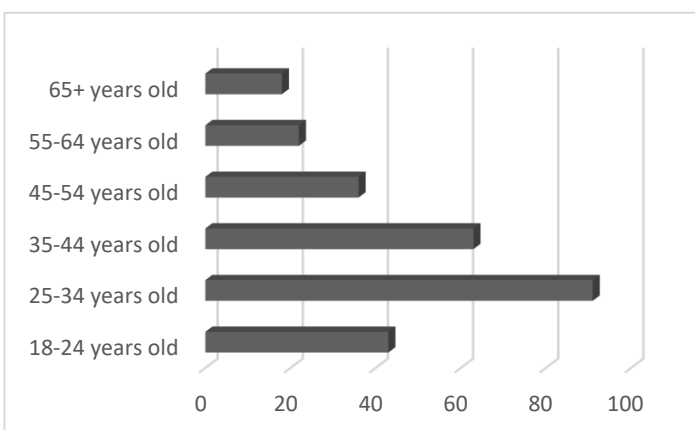


Figure IV-1: Age Distribution (Microsoft Forms Generated)

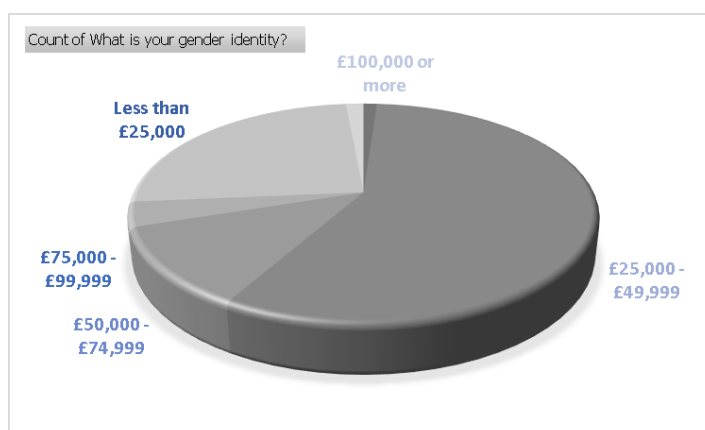


Figure IV-2: Income Distribution (MS Forms Generated)



C. Findings

1) *Factor Loadings, Reliability, and Validity*: Factor loadings and confirmatory factor analysis (CFA) were conducted using SPSS AMOS, while Cronbach’s alpha values were calculated using SPSS 29.0 software. The factor-loadings obtained were statistically significant, ranging from 0.589 and above, exceeding the acceptable threshold value of 0.4 recommended by Hulland (1999). This indicates that the measurement items adequately represented their respective constructs.

Reliability refers to the consistency and stability of a measurement instrument or research procedure. Hair et al. (2013) suggest that a Cronbach’s alpha value of 0.7 or above is generally regarded as acceptable for research purposes. In this study, the overall Cronbach’s alpha coefficient was 0.944, indicating a very high degree of internal consistency among the measurement items used to assess the constructs. This finding demonstrates that the items were strongly correlated and consistently measured the intended underlying constructs. Additionally, the individual Cronbach’s alpha values for the separate constructs ranged from 0.825 to 0.924, further confirming the reliability of the measurement scales employed in the study (Table IV.I).

Composite reliability (CR) was also examined to evaluate construct reliability. The CR values ranged between 0.83 and 0.92, exceeding the recommended minimum threshold of 0.7 and thereby demonstrating acceptable convergent validity (Hair et al., 2010) (Table IV.I). Composite reliability measures the overall reliability of a construct by considering both the reliability of individual items and the correlations among them (Khine & Afari, 2018).

In addition to reliability testing, convergent validity was assessed using Average Variance Extracted (AVE). The AVE values ranged from 0.50 to 0.66, indicating a moderate yet acceptable level of convergent validity. These findings suggest that the items associated with each construct shared a substantial proportion of variance and effectively measured the same underlying concept (Fornell & Larcker, 1981) (Table IV.I).

Table IV.I: Factor Loadings, Reliability, and Validity Assessment

Construct	Factor Loadings	Cronbach α	AVE	CR
Sustainable Marketing Activities		0.924	0.50	0.922
Environmental3	0.751			
Environmental2	0.716			
Environmental1	0.701			
Cultural3	0.776			
Cultural2	0.619			
Cultural1	0.592			
Social3	0.617			
Social2	0.734			
Social1	0.589			
Economic3	0.766			
Economic2	0.8			
Economic1	0.773			



Brand Image		0.844	0.61	0.826
BI1	0.723			
BI2	0.858			
BI3	0.763			
Customer Involvement		0.825	0.56	0.833
CI1	0.75			
CI2	0.741			
CI3	0.668			
CI4	0.815			
Sustainable Purchase Intention		0.91	0.66	0.907
SPI1	0.78			
SPI2	0.841			
SPI3	0.837			
SPI4	0.791			
SPI5	0.815			

According to the Fornell-Larcker criterion, discriminant validity is established when the square root of the Average Variance Extracted (AVE) for each construct exceeds its correlations with other constructs in the model (Fornell & Larcker, 1981). In this study, constructs such as sustainable marketing activities (SMA) and sustainable purchase intention (SPI) satisfied this requirement, as their square roots of AVE, 0.707 and 0.813 respectively, were higher than their correlations with the remaining variables (Hair et al., 2010).

However, brand image (BI) and customer involvement (CI) did not fully satisfy the Fornell-Larcker criterion because the correlation between these two constructs (0.901) was greater than their respective square roots of AVE, which were 0.783 for BI and 0.745 for CI (Table IV.II). This strong correlation can be expected because BI and CI function as serial mediators within the proposed model, where BI directly influences CI as part of the causal pathway (Hayes, 2013). Consequently, the close association between these constructs results in substantial shared variance, which may weaken conventional discriminant validity measures. Nevertheless, this high correlation should not necessarily be interpreted as evidence of conceptual overlap or redundancy, but rather as an indication of their interconnected roles within the same mediating process.

Table IV.II: Correlations and squared root of AVE of variables

	SMA	BI	CI	SPI
SMA	0.707			
BI	0.486	0.783		
CI	0.647	0.901	0.745	
SPI	0.672	0.552	0.723	0.813

The results of the Confirmatory Factor Analysis (CFA) demonstrate that the proposed measurement model achieved an overall satisfactory fit with the observed data. The Chi-square to degrees of freedom ratio (CMIN/DF) was 2.316, which is below the commonly recommended threshold value of 3, indicating an acceptable level of model fit.

The Goodness of Fit Index (GFI) was reported as 0.868. Although slightly below the preferred threshold of 0.90, the value still suggests a reasonably acceptable model fit with some opportunity for further improvement. In addition, the Comparative Fit Index (CFI) was 0.941, exceeding the recommended minimum value of 0.90 and therefore indicating that the proposed model demonstrated a strong fit when compared with the baseline model. Similarly, the Tucker-Lewis Index (TLI) value of 0.920 further supports the adequacy of the model fit.

The Root Mean Square Error of Approximation (RMSEA) was 0.070, with a 90% confidence interval ranging from 0.061 to 0.078. Although this value is marginally above the ideal cutoff value of 0.06, it remains within an acceptable range for models with moderate complexity. The measurement model further indicates that sustainable marketing activities (SMA) significantly influence brand image (BI), customer involvement (CI), and sustainable purchase intention (SPI) (Figure IV-3).

Furthermore, the Standardised Root Mean Square Residual (SRMR) value was 0.0723, which falls within the acceptable threshold of 0.08 suggested by Hu and Bentler (1999). The SRMR measures the average difference between the observed and predicted correlations; therefore, this result suggests that the model successfully explains a substantial proportion of the covariance within the dataset (Byrne, 2014) (Table IV.III).

Table IV.III: Fit indices summary

Fit Indices	CMIN/df	GFI	CFI	TLI	RSMR	RMSEA
Recommended Value	<3	>0.9	>0.9	>0.9	>0.08	>0.08
In the Model	2.316	0.868	0.941	0.920	0.072	0.07

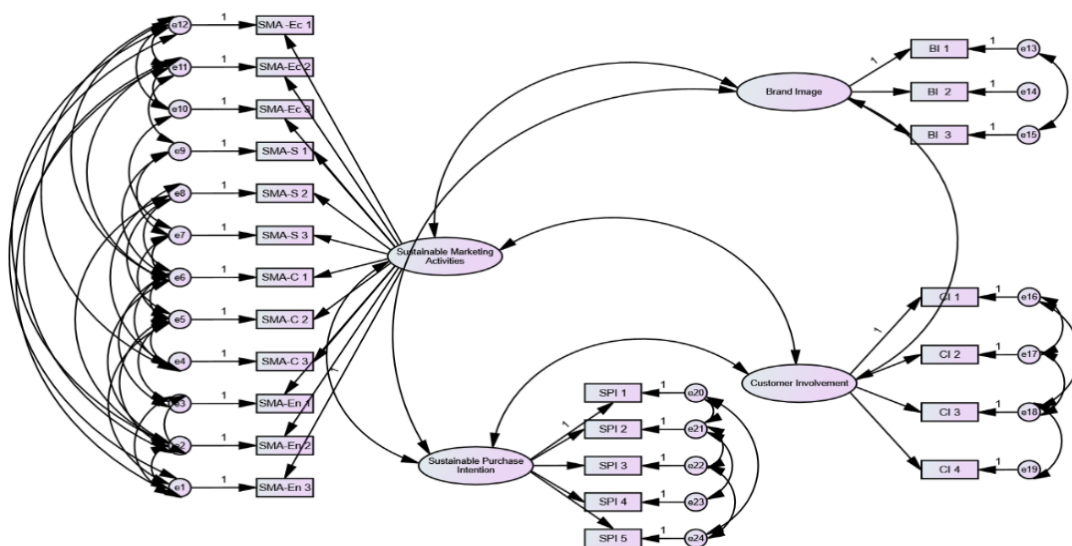


Figure IV-3: Measurement Model (AMOS Generated)

2) *Descriptive statistics and correlation:* The descriptive statistics indicate that the mean scores for the key constructs, namely sustainable marketing activities (SMA), brand image (BI), customer involvement (CI), and sustainable purchase intention (SPI), range approximately between 3.5 and 4.0. This suggests that respondents generally expressed agreement with the statements

presented in the survey questionnaire. The standard deviation values ranged from 0.50 to 0.89, reflecting a moderate level of variability in participant responses.

The correlation analysis revealed that all relationships among the study variables were statistically significant at the 0.01 significance level. The strongest correlation was identified between brand image (BI) and customer involvement (CI) ($r = 0.749$), indicating a strong interrelationship between these two constructs. Although this correlation is relatively high, it remains below the commonly accepted multicollinearity thresholds of 0.80 or 0.90 and therefore does not suggest serious multicollinearity concerns (Kim, 2019). In addition, sustainable marketing activities (SMA) demonstrated significant positive relationships with both customer involvement (CI) and sustainable purchase intention (SPI), highlighting the important role of sustainable marketing practices in improving customer engagement and encouraging sustainable purchasing behaviour.

3) *Hypothesis Testing:* The findings from the Model Summary and ANOVA tables indicate that the relationship between sustainable marketing activities (SMA) and brand image (BI) is positive and statistically significant. The R-value of 0.438 reflects a moderate positive association between the two variables, while the R^2 value of 0.192 suggests that 19.2% of the variance in brand image is explained by sustainable marketing activities. Although this represents a reasonable proportion of explained variance, it also indicates that additional factors may contribute to brand image beyond sustainable marketing practices alone. Furthermore, the F-statistics were significant at $p < 0.001$, and the beta coefficient $\beta = 0.438$ confirms that SMA has a significant positive influence on BI. Therefore, Hypothesis 1 (H1) is supported (Table IV.IV).

The results further demonstrate that brand image (BI) significantly predicts customer involvement (CI), exhibiting a strong positive effect. The regression model indicates that brand image explains a substantial proportion of the variance in customer involvement ($F = 346.803$, $p < 0.001$, $R^2 = 0.561$). The standardised beta coefficient $\beta = 0.749$ suggests that a one standard deviation increase in brand image leads to a 0.749 standard deviation increase in customer involvement, representing a large effect size. In addition, the correlation between customer involvement (CI) and sustainable purchase intention (SPI) was positive and statistically significant ($r = 0.608$, $p < 0.001$), indicating that individuals with higher levels of involvement are more likely to demonstrate stronger sustainable purchase intentions. Consequently, Hypothesis 2 (H2) is supported (Table IV.IV).

The ANOVA results also reveal that the regression model using customer involvement (CI) as a predictor of sustainable purchase intention (SPI) is statistically significant ($p < 0.001$). The F-value of 159.139 and R^2 value of 0.37 indicate that the model provides a strong fit to the data. The Regression Sum of Squares value (42.281) represents the amount of variance in sustainable purchase intention explained by customer involvement. Additionally, customer involvement demonstrated a strong, positive, and statistically significant effect on sustainable purchase intention ($B = 0.772$, $\beta = 0.608$, $p < 0.001$). This finding indicates that higher levels of customer involvement significantly increase the likelihood of sustainable purchasing intentions. Therefore, Hypothesis 3 (H3) is supported (Table 0.4).

Overall, the results indicate that brand image is a strong and significant predictor of customer involvement, while customer involvement is moderately and positively associated with sustainable purchase intention. These findings support the proposed relationships suggesting that brand image positively affects customer involvement, which in turn contributes to sustainable purchase intention.

The model fit statistics for the Hypothesis 4 (H4) analysis indicate that the proposed serial mediation model achieved an acceptable level of fit with the data (Figure 0.5). The Chi-square to degrees of freedom ratio (CMIN/DF) was 2.398, which falls within the recommended range of 1 to 3, indicating a satisfactory model fit. The Comparative Fit Index (CFI) and Incremental Fit Index (IFI) were 0.936 and 0.937 respectively, both exceeding the recommended threshold value of 0.90 and therefore suggesting that the model fits the data well relative to the independence model. Similarly, the Tucker-Lewis Index (TLI) value of 0.915 further confirms a good overall model fit.

The Root Mean Square Error of Approximation (RMSEA) was 0.072, with a 90% confidence interval ranging between 0.064 and 0.080. Although slightly higher than the ideal cutoff value of 0.06, the RMSEA remains within the acceptable range below 0.08,

indicating a moderate but acceptable level of approximation error within the population. In addition, the Standardised Root Mean Square Residual (SRMR) value was 0.0817, which is marginally above the ideal threshold value of 0.08 suggested by Hu and Bentler (1999).

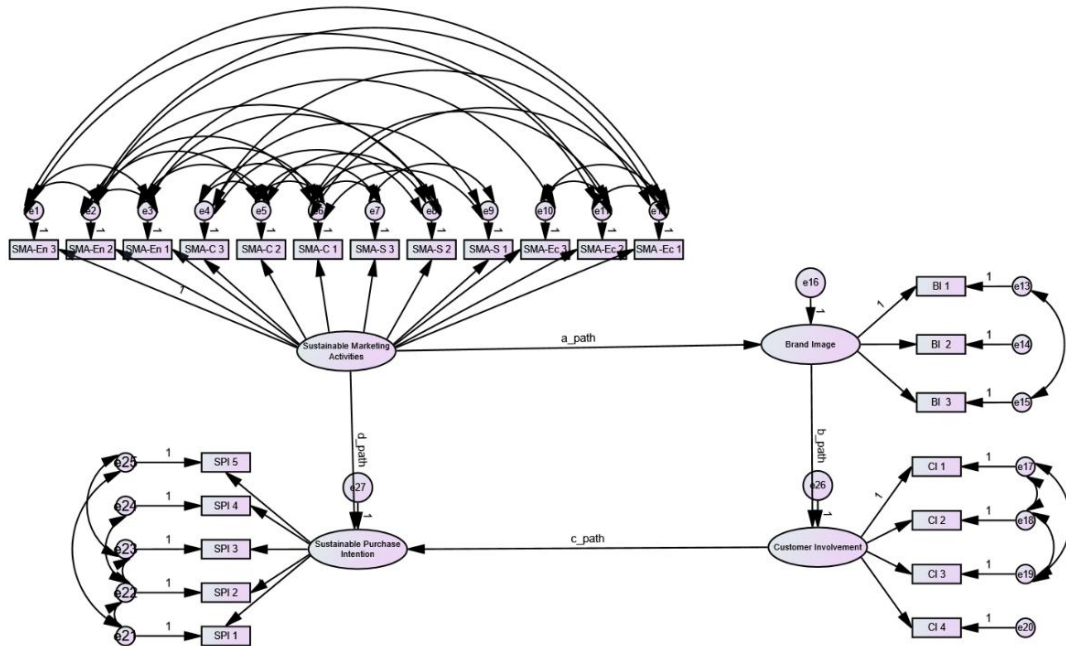


Figure IV-4: Structural Model (AMOS Generated)

The path analysis examining the relationships among Sustainable Marketing Activities (SMA), Brand Image (BI), Customer Involvement (CI), and Sustainable Purchase Intention (SPI) revealed significant direct and indirect effects, thereby supporting the proposed hypotheses. The direct influence of SMA on BI was positive and statistically significant ($\beta = 0.491, p < 0.001$), while BI also demonstrated a highly significant positive effect on CI ($\beta = 0.986, p < 0.001$). Furthermore, customer involvement significantly influenced sustainable purchase intention ($\beta = 0.527, p < 0.001$), confirming the mediating role of customer involvement in the relationship between brand image and sustainable purchase intention.

In addition, Sustainable Marketing Activities exhibited a direct positive influence on Sustainable Purchase Intention ($\beta = 0.530, p < 0.001$), suggesting that sustainable marketing independently contributes to consumers' intention to purchase sustainable products beyond the mediating effects of brand image and customer involvement. This finding is further reinforced by the indirect effects, where SMA positively influenced SPI through both BI and CI, with an indirect effect value of 0.255. These results indicate the existence of a serial mediation model involving partial mediation, where both brand image and customer involvement serve as mediating variables between sustainable marketing activities and sustainable purchase intention. Consequently, Hypothesis 4 (H4) is supported.

The total effects of the independent variables on the outcome variables were also substantial. Specifically, Sustainable Marketing Activities demonstrated a total effect of 0.786 on Sustainable Purchase Intention through both direct and indirect pathways. These findings suggest that sustainable marketing initiatives not only strengthen brand image and increase customer involvement but also directly and indirectly encourage sustainable purchasing behaviour among consumers.

The indirect effects analysis further provided insight into how the study constructs influence Sustainable Purchase Intention (SPI) through intermediary variables. The confidence intervals and significance levels demonstrated the strength and statistical significance of these indirect relationships. The confidence intervals for the indirect effects from SMA to CI and SPI were

considerable, with lower bounds beginning at 0.264 and upper bounds extending to 1.232. This indicates a statistically significant indirect effect of sustainable marketing activities on both customer involvement and sustainable purchase intention. The two-tailed significance values ($p < 0.05$) further confirmed the positive influence of SMA on CI and SPI.

Although the indirect effect of SMA on BI was found to be non-significant, customer involvement demonstrated a significant influence on brand image. The lower confidence interval bounds ranged from 0.774 for CI1 to 0.919 for CI4, while upper bounds reached as high as 1.477. These findings indicate that customer involvement positively contributes to the enhancement of brand image, although SMA does not directly affect brand image within this specific indirect framework.

Customer involvement also played a significant role in influencing Sustainable Purchase Intention. The lower bounds for the indirect effects from CI to SPI ranged between 0.196 and 0.455, while the upper bounds reached 1.044. All corresponding p-values were statistically significant ($p < 0.05$), indicating that higher levels of customer involvement substantially increase sustainable purchase intention. Overall, the findings demonstrate that Sustainable Marketing Activities primarily influence Sustainable Purchase Intention through customer involvement, while customer involvement itself positively affects both brand image and sustainable purchase intention. These strong and statistically significant indirect effects highlight the critical mediating role of customer involvement within the proposed framework.

The Squared Multiple Correlations (SMC) estimates further demonstrate the predictive strength of the model. Variables such as customer involvement (CI) and sustainable purchase intention (SPI) recorded high estimates of 0.866 and 0.543 respectively, indicating strong predictive relationships. Among the SPI indicators, SPI3 and SPI2 exhibited the highest estimates, approximately 0.703, suggesting that these indicators are particularly strong predictors within the sustainable purchase intention construct.

Similarly, the customer involvement indicators demonstrated strong predictive power, especially CI4 with an estimate of 0.694, indicating that customer involvement was effectively captured through these variables. The brand image indicators also displayed strong estimates, with BI2 recording the highest value at 0.682. Economic indicators consistently showed strong predictive values ranging from 0.612 to 0.669, whereas social and cultural indicators demonstrated moderate predictive ability, particularly Cultural 3 with an estimate of 0.605. Environmental indicators also showed moderate predictive strength, with Environmental 3 emerging as the strongest environmental predictor at 0.551. Overall, the model demonstrated satisfactory predictive capability across most constructs, with all p-values indicating statistical significance ($p < 0.05$).

The standardised regression weights revealed the strength of the relationships between the latent variables and their observed indicators, as well as the relationships among the latent constructs themselves. Notably, the relationship between brand image (BI) and customer involvement (CI) was extremely strong, with a standardised estimate of 0.930, indicating that brand image is a highly significant predictor of customer involvement. In addition, the relationships between Sustainable Marketing Activities and Brand Image, as well as Sustainable Marketing Activities and Sustainable Purchase Intention, demonstrated moderate strengths with estimates of 0.557 and 0.439 respectively. These findings suggest that sustainable marketing activities play a significant role in shaping both brand image and sustainable purchasing intentions (Table IV.IV).

Hypothesis 5 (H5) proposed that gender acts as a moderating variable within the model by influencing the relationships among the key constructs. To evaluate this hypothesis, a multi-group analysis was conducted comparing the unconstrained model, in which path coefficients were allowed to vary freely across male and female groups, with several constrained models where parameters were restricted to equality across groups.

The unconstrained model produced a CMIN/DF value of 2.188, indicating an acceptable model fit. The RMSEA value of 0.066 and the CFI value of 0.898 also suggested a reasonable fit to the observed data. As additional constraints were progressively applied, including measurement weights, structural weights, structural covariances, and structural residuals, the fit indices remained

relatively stable. The CMIN/DF values ranged from 2.132 to 2.148, while the RMSEA consistently remained between 0.065 and 0.066. These findings suggest that gender did not substantially affect the overall structure of the model.

The constrained model (constraint_1) showed only minimal differences in fit compared with the unconstrained model, with a CMIN/DF value of 2.186 and RMSEA of 0.066. Furthermore, the chi-square difference test comparing the unconstrained and constrained structural weights models revealed no statistically significant deterioration in model fit ($\Delta\text{CMIN} = 30.991$, $\Delta\text{DF} = 24$, $p = 0.154$). This indicates that constraining the path coefficients across gender groups did not significantly worsen the model fit. Similar results were observed for the other nested models involving measurement weights, structural covariances, and structural residuals, all of which reported p-values greater than 0.05.

For the female group, the path coefficient from SMA \rightarrow BI was 0.615 ($p < 0.001$), while the path from BI \rightarrow CI was 0.964 ($p < 0.001$). The paths from SMA \rightarrow SPI and CI \rightarrow SPI were also significant, although smaller in magnitude, with coefficients of 0.475 and 0.280 respectively. For the male group, the SMA \rightarrow BI path coefficient was 0.517 ($p < 0.001$), and the BI \rightarrow CI relationship was 0.876 ($p < 0.001$). The paths from SMA \rightarrow SPI and CI \rightarrow SPI were 0.429 and 0.527 respectively.

Although some differences in path coefficients were observed between male and female respondents, these differences were not statistically significant according to the chi-square difference tests. Therefore, the findings indicate that gender does not significantly moderate the relationships between Sustainable Marketing Activities, Brand Image, Customer Involvement, and Sustainable Purchase Intention. As a result, Hypothesis 5 (H5) is not supported.

Nevertheless, the results suggest slight variations in the strength of the relationships between genders. Female consumers demonstrated a relatively stronger relationship between Sustainable Marketing Activities and Brand Image, whereas male consumers exhibited a stronger relationship between Customer Involvement and Sustainable Purchase Intention. Despite these variations, the overall structural relationships remained consistent across genders (Table IV.IV).

Table IV.IVV: Hypothesis testing results

Hypothesis	p-value	Result
H1	<0.001	Statistically Significant. Supported
H2	<0.001	Statistically Significant. Supported
H3	<0.001	Statistically Significant. Supported
H4	<0.001	Statistically Significant. Supported
H5	0.088	Statistically Not Significant. Not Supported

4) *Findings in the light of literature:* The findings of the analysis support the hypothesis that Sustainable Marketing Activities (SMA) positively influence Brand Image (BI), as evidenced by the significant effect of SMA on BI identified in the regression analysis ($R^2 = 0.192$, $p < 0.001$). This result is consistent with previous literature suggesting that consumers increasingly prefer brands that reflect their environmental and social values (Elkington, 1998; Sheehy & Farneti, 2021). Sustainable marketing campaigns that effectively communicate environmental responsibility and ethical commitment can strengthen a brand’s reputation and enhance consumer perceptions (Park et al., 2022; Jia et al., 2023).

Therefore, Hypothesis 1 (H1) is supported, as the findings confirm that Sustainable Marketing Activities significantly improve Brand Image. This outcome aligns with earlier studies highlighting the importance of sustainability initiatives in shaping positive brand perceptions and increasing brand credibility (Roberts, 2003; Duttagupta et al., 2023). The results further support theoretical

perspectives suggesting that sustainability-oriented practices strongly resonate with modern consumers and contribute to enhanced brand value (Fournier, 1998; Aziz, 2020).

The findings also provide strong support for Hypothesis 2 (H2), demonstrating that Brand Image has a substantial positive influence on Customer Involvement ($R^2 = 0.561$, $p < 0.001$). This result is in line with existing literature, which argues that a favourable brand image encourages trust, loyalty, and emotional attachment between consumers and brands (Sirgy, 1985; Wang et al., 2024). Brands that are positively perceived, particularly those associated with sustainability, are more likely to attract and engage consumers, motivating them to become more involved with the brand and its offerings (Gong et al., 2023).

Similarly, the results support Hypothesis 3 (H3), as Customer Involvement (CI) was found to have a significant positive relationship with Sustainable Purchase Intention (SPI) ($r = 0.608$, $p < 0.001$). This finding is consistent with previous research suggesting that higher levels of customer involvement lead to stronger purchasing intentions, especially within sustainability-related contexts (Park & Jiang, 2020; Huerta-Álvarez et al., 2020). Consumers who are actively engaged with a brand are more likely to make informed and environmentally responsible purchasing decisions (Bilal et al., 2020).

With regard to Hypothesis 4 (H4), the findings indicate that both Brand Image and Customer Involvement act as significant serial mediators in the relationship between Sustainable Marketing Activities and Sustainable Purchase Intention. This outcome is consistent with prior literature demonstrating that sustainability initiatives strengthen brand image and customer engagement, which subsequently enhance sustainable purchasing intentions (Gong et al., 2023). The serial mediation effect illustrates how these variables operate together to influence consumer purchasing behaviour, emphasising the importance of developing both a positive brand image and strong customer involvement to encourage sustainable consumption (Sujanska & Nadanyiova, 2023).

In contrast, the results of the multi-group analysis did not support Hypothesis 5 (H5), which proposed that gender moderates the relationships among the key constructs. Although some variations in the strength of the relationships were identified between male and female respondents, these differences were not statistically significant. This finding differs from certain previous studies that reported significant gender differences in sustainability-related attitudes and behaviours (McCright & Xiao, 2014; Zhao et al., 2021). However, the result is consistent with other studies that found limited or inconsistent evidence regarding gender differences in sustainable consumer behaviour (Gilg et al., 2005; Chen & Chai, 2010). Therefore, while gender may influence how individuals perceive sustainability issues, it does not significantly moderate the relationships between Sustainable Marketing Activities, Brand Image, Customer Involvement, and Sustainable Purchase Intention within the context of this study.

D. Summary

This study aimed to investigate the effect of gender on sustainable consumption behaviour within the FMCG industry in England by examining the relationships among Sustainable Marketing Activities (SMA), Brand Image (BI), Customer Involvement (CI), and Sustainable Purchase Intention (SPI). A moderated mediation framework was employed to test five proposed hypotheses.

H1: Sustainable Marketing Activities positively influence Brand Image.

The findings provided strong support for this hypothesis. Sustainable marketing practices significantly improved brand image among consumers, with a comparatively stronger effect observed among female respondents.

H2: Brand Image positively influences Customer Involvement.

The results confirmed that a favourable brand image significantly increased customer involvement for both male and female consumers. This suggests that sustainability-related brand reputation is an important driver of customer engagement within the FMCG sector.

H3: Customer Involvement positively influences Sustainable Purchase Intention.



The analysis demonstrated that customer involvement positively affects sustainable purchase intention. Although this relationship existed for both genders, the effect was comparatively stronger among male consumers. This suggests that when male consumers become highly engaged with a brand's sustainability efforts, they are more likely to convert that involvement into actual purchasing intentions.

H4: Brand Image and Customer Involvement act as serial mediators between Sustainable Marketing Activities and Sustainable Purchase Intention.

The findings supported the existence of serial mediation, indicating that Sustainable Marketing Activities influence Sustainable Purchase Intention indirectly through Brand Image and Customer Involvement. This highlights that sustainability initiatives are more effective when they first strengthen brand image and subsequently encourage deeper customer involvement.

H5: Gender acts as a moderator in these relationships.

Although some differences in relationship strengths were identified between male and female consumers, the multi-group analysis revealed that these differences were not statistically significant. The overall structural relationships remained consistent across genders, despite certain paths showing slightly stronger effects for one gender over the other, such as SMA to BI among females and CI to SPI among males.

Overall, the study highlights the significant role of sustainable marketing in shaping brand image, customer involvement, and sustainable purchase intentions within the FMCG sector. While some gender-based differences in sustainable consumption behaviour were observed, these differences were insufficient to establish gender as a significant moderating factor within the proposed model. The findings therefore emphasise the broad and universal importance of sustainability in influencing consumer behaviour, while also acknowledging subtle differences in how male and female consumers respond to sustainability-related initiatives.

For FMCG companies, the findings suggest that enhancing sustainable brand image and increasing customer involvement through targeted sustainable marketing strategies can effectively encourage sustainable purchasing behaviour across both genders. By strengthening consumer engagement and trust in sustainability efforts, brands can more successfully translate sustainability initiatives into positive purchasing outcomes.

V. DISCUSSION

A. Introduction

This chapter integrates and interprets the key findings of the study, critically reviews the methodological approach, and draws conclusions aligned with the research objectives and questions. It also outlines limitations of the study and identifies areas for future research. The study examined how sustainable marketing activities influence brand image, customer involvement, and sustainable purchase intention within the English FMCG sector, with particular attention to gender as a moderating factor. The discussion situates the findings within existing literature and highlights their broader theoretical and practical implications.

B. Critical Evaluation of Adopted Methodology

The research adopted a positivist philosophical stance and employed a quantitative, deductive design to test hypotheses derived from established theories. A cross-sectional survey method was used to collect data efficiently from English FMCG consumers, while Structural Equation Modeling (SEM) enabled the examination of complex relationships among sustainable marketing activities, brand image, customer involvement, and purchase intention, including mediation and moderation effects.

The survey-based quantitative approach was appropriate for achieving generalisable findings across a broad consumer population. The use of statistical analysis enabled precise hypothesis testing, while stratified sampling ensured balanced representation of male and female respondents, reducing sampling bias and strengthening external validity. SEM further enhanced



analytical depth by allowing simultaneous testing of direct and indirect relationships. The pilot study improved the clarity and reliability of the survey instrument.

However, limitations exist. The cross-sectional design restricts causal interpretation and does not capture changes over time, which a longitudinal approach could better address. Self-reported data may also introduce social desirability bias, where respondents overstate sustainable behaviours. Future research could incorporate behavioural data to improve accuracy. Additionally, although gender was examined as a moderator, results indicated no significant moderating effect, suggesting that more nuanced methods (e.g., qualitative approaches) may be needed to explore gender complexity. The focus on the English FMCG market also limits generalisability to other cultural contexts.

Despite these limitations, methodological rigor was maintained through validated measurement scales, a sufficient sample size, and strong statistical techniques. Reliability and validity were confirmed through Cronbach's alpha and CFA results, supporting the robustness of the measurement model.

C. Conclusions on Research Objectives

1) *Objective 1:* Findings strongly support that sustainable marketing activities significantly enhance brand image. Practices such as eco-friendly communication and corporate sustainability initiatives improve consumer perceptions of brands, aligning with prior research highlighting sustainability as a reputational driver (Elkington, 1998; Roberts, 2003). The significant relationship ($R^2 = 0.192$, $p < 0.001$) confirms that consumers increasingly favour brands aligned with environmental values.

Additionally, a strong positive relationship was found between brand image and customer involvement ($R^2 = 0.561$, $p < 0.001$). This indicates that sustainability-enhanced brand perception fosters stronger emotional and cognitive engagement, supporting previous findings that brand image plays a central role in consumer involvement (Wang et al., 2024).

2) *Objective 2: Mediating Role of BI and CI:* The results confirm that customer involvement significantly influences sustainable purchase intention ($r = 0.608$, $p < 0.001$), supporting H3. This aligns with research suggesting that engaged consumers are more likely to convert involvement into purchasing behaviour, especially in sustainability contexts.

Furthermore, H4 is supported, confirming that brand image and customer involvement jointly act as serial mediators between sustainable marketing activities and sustainable purchase intention. This demonstrates that sustainable marketing first strengthens brand perception, which then increases engagement and ultimately leads to sustainable purchasing behaviour (Gong et al., 2023). The results highlight the importance of sequential psychological mechanisms in shaping consumer decisions.

3) *Objective 3: Gender as a Moderator:* The hypothesis that gender moderates the relationships among sustainable marketing, brand image, customer involvement, and purchase intention is not supported. Although minor differences in path strengths were observed, they were not statistically significant.

This finding contrasts with studies suggesting stronger environmental responsiveness among women (McCright & Xiao, 2014) but aligns with research reporting inconsistent or non-significant gender differences in sustainable consumption (Gilg et al., 2005; Zhao et al., 2021). Therefore, gender does not significantly alter how consumers respond to sustainable marketing in this context.

4) *Objective 4: Managerial Recommendations:* Based on the findings, FMCG companies should prioritise strengthening sustainable brand image and enhancing customer involvement rather than relying on gender-based segmentation. A consistent sustainability-focused strategy is likely to be effective across both male and female consumers.

However, slight message tailoring may still be beneficial for example, emphasising brand credibility for female consumers and engagement-driven initiatives for male consumers. Overall, the findings suggest a broadly inclusive marketing approach centred on sustainability values.



D. Gender Moderation Conclusion in the FMCG Context

The study concludes that gender does not significantly moderate the relationships between sustainable marketing activities, brand image, customer involvement, and sustainable purchase intention in the English FMCG sector. While minor differences exist in effect strength, they are not statistically meaningful.

This suggests that sustainable marketing has a broadly universal influence on consumers, regardless of gender. Therefore, FMCG companies should focus on general sustainability-driven strategies rather than gender-specific targeting, while still acknowledging subtle behavioural differences where relevant.

E. Limitations of the Study

Several limitations must be acknowledged. The cross-sectional design restricts causal interpretation and prevents analysis of behavioural changes over time. Future longitudinal studies would provide stronger causal insights.

Self-reported survey data may also introduce social desirability bias, potentially inflating reported sustainable behaviours. Incorporating behavioural or transactional data would improve validity.

Although the sample was representative of English FMCG consumers, findings may not be generalisable to other countries or cultural contexts. Additionally, the study focused solely on gender as a moderator, excluding other potentially influential variables such as age, income, and education.

F. Opportunities for Further Research

Future studies should adopt longitudinal designs to examine how sustainable marketing influences consumer behaviour over time, as cross-sectional data limits causal inference.

Research should also explore additional demographic variables such as age, income, education, and lifestyle, as different consumer segments (e.g., Gen Z) may respond differently to sustainability messaging. Income and education may further shape perceptions of sustainable consumption relevance.

Future work should incorporate behavioural data such as actual purchase behaviour, website analytics, or social media engagement to overcome limitations of self-reported data and improve accuracy.

Qualitative approaches such as interviews and focus groups could also provide deeper insight into emotional and psychological drivers of sustainable consumption behaviour.

Further research may also explore psychological constructs such as environmental concern, social identity, and perceived behavioural control to better explain sustainability-driven decision-making. Additionally, segmentation studies could help identify distinct consumer clusters based on sustainability attitudes.

Finally, emerging technologies such as AI-driven personalised marketing and predictive analytics present opportunities to examine how digital tools can enhance sustainable marketing effectiveness.

G. Conclusion

This study provides valuable insights for FMCG companies seeking to strengthen brand image, customer involvement, and sustainable purchase intention through sustainable marketing practices. The findings emphasise that sustainability-oriented marketing plays a critical role in shaping consumer behaviour.

FMCG firms should focus on building authentic and transparent sustainability strategies that reinforce brand credibility and encourage meaningful consumer engagement. Strong sustainable brand positioning fosters trust, loyalty, and long-term consumer relationships.

While gender does not significantly moderate these relationships, companies may still consider broader segmentation factors such as age, lifestyle, and cultural context when designing marketing strategies. Collaboration with policymakers, NGOs, and industry stakeholders can further strengthen sustainability initiatives and enhance their impact.

Overall, the study contributes to understanding sustainable consumer behaviour and highlights the importance of integrated marketing strategies that combine brand building with consumer engagement to drive sustainable purchasing decisions across the FMCG sector.



VI. CONCLUSION

A. Introduction

This final chapter presents the overarching conclusion of the dissertation by synthesising the key insights derived from the entire research process. The study investigated the influence of sustainable marketing activities (SMA) on brand image (BI), customer involvement (CI), and sustainable purchase intention (SPI) within the English Fast-Moving Consumer Goods (FMCG) sector, with a specific focus on the moderating role of gender.

The research was grounded in Signaling Theory and the Theory of Planned Behaviour (TPB), providing a structured framework to understand how sustainability-oriented marketing efforts shape consumer perceptions and behavioural intentions. Through a quantitative, cross-sectional research design and Structural Equation Modelling (SEM), the study tested a moderated-mediation model to examine both direct and indirect relationships between key constructs.

This chapter provides a final synthesis of the findings, highlights the theoretical and practical contributions of the study, reflects on its limitations, and outlines final recommendations for FMCG organisations and future research.

B. Summary of Key Findings

The findings of this research demonstrate that sustainable marketing plays a critical role in shaping consumer behaviour within the FMCG industry. Specifically, SMA was found to have a significant positive influence on brand image, indicating that sustainability-focused communication and corporate responsibility initiatives enhance how consumers perceive a brand.

In turn, brand image was shown to strongly influence customer involvement, suggesting that consumers are more likely to engage cognitively and emotionally with brands they perceive as ethical, responsible, and aligned with their personal values. This reinforces the idea that brand perception acts as a psychological gateway to deeper consumer engagement.

Customer involvement was also found to positively influence sustainable purchase intention, indicating that engaged consumers are more likely to translate interest into actual purchasing decisions. This highlights the importance of consumer engagement as a behavioural bridge between perception and action.

Importantly, the study confirmed a serial mediation effect, where SMA influences SPI indirectly through BI and CI. This demonstrates that sustainable marketing does not operate in isolation but rather through a structured psychological pathway that moves from perception to engagement and ultimately to behavioural intention.

However, gender was found not to significantly moderate these relationships. Although minor differences in effect strength were observed between male and female consumers, these differences were not statistically significant. This suggests that sustainability-driven marketing strategies have a broadly universal impact across gender groups in the English FMCG context.

C. Achievement of Research Aim and Objectives

The primary aim of this research was to examine the impact of sustainable marketing on consumer behaviour in the FMCG sector, while exploring the mediating roles of brand image and customer involvement and the moderating effect of gender.

This aim has been successfully achieved through the empirical testing of four key objectives:

Sustainable marketing significantly influences brand image and customer involvement.

Brand image and customer involvement act as sequential mediators between SMA and SPI.

Gender does not significantly moderate the relationships within the model.

Practical insights were developed for FMCG firms to improve sustainability-driven marketing strategies.

Overall, the research confirms that sustainable marketing is a powerful strategic tool that indirectly drives consumer purchasing behaviour through psychological and relational mechanisms.

D. Theoretical Contributions

This study makes several important contributions to existing literature.

Firstly, it extends Signaling Theory by demonstrating that sustainable marketing acts as a credible signal of brand values, which influences consumer perception and trust. The findings confirm that consumers interpret sustainability messaging as an indicator of brand authenticity and responsibility.



Secondly, the research strengthens the Theory of Planned Behaviour by highlighting the importance of brand image and customer involvement as intermediary constructs shaping purchase intention. This shows that attitudes and engagement processes are essential in translating sustainability awareness into behavioural outcomes.

Thirdly, the study contributes to the growing literature on moderated-mediation models in consumer behaviour research by testing gender as a moderating variable. The finding that gender is not statistically significant challenges traditional assumptions about gender-based differences in sustainability consumption behaviour.

Finally, the research contributes to sustainable marketing literature by confirming that sustainability effects are largely universal rather than strongly segmented by gender in developed markets such as England.

E. Practical Implications for FMCG Industry

The findings of this study provide several actionable insights for FMCG managers and marketers.

First, companies should prioritise building a strong and credible sustainable brand image. Consumers respond positively to brands that demonstrate transparency, ethical sourcing, and environmental responsibility. Therefore, sustainability should not be treated as a secondary message but as a core brand identity.

Second, FMCG firms should actively focus on increasing customer involvement through interactive engagement strategies. This may include sustainability education campaigns, digital storytelling, social media engagement, and community-based initiatives that allow consumers to feel emotionally connected to the brand.

Third, since gender was not found to be a significant moderator, companies may not need to develop highly segmented gender-based sustainability strategies. Instead, a unified sustainability communication strategy is likely to be effective across consumer groups.

However, subtle tailoring can still enhance effectiveness. For example, emotionally driven sustainability messaging may appeal more strongly to some consumers, while functional or cost-related sustainability benefits may resonate with others.

Finally, FMCG companies should recognise that sustainable purchase intention is not driven directly by marketing alone, but through a sequential process involving perception (brand image) and engagement (customer involvement). Therefore, integrated marketing strategies are essential.

F. Limitations of the Research

Although the study provides valuable insights, several limitations must be acknowledged.

The cross-sectional design restricts the ability to infer causality or observe behavioural changes over time. A longitudinal approach would provide stronger evidence of how sustainable marketing influences consumer behaviour in the long term.

The use of self-reported survey data introduces the possibility of bias, particularly social desirability bias, where respondents may overstate their sustainable behaviours or intentions.

The study is geographically limited to England, which restricts the generalisability of the findings to other cultural or economic contexts. Consumer attitudes toward sustainability may differ significantly across countries.

Additionally, the study focused solely on gender as a moderating variable. Other important factors such as age, income, education, cultural values, and environmental awareness were not included but may also influence sustainable consumption behaviour.

G. Recommendations for Future Research

Future research should adopt longitudinal designs to examine how sustainable marketing influences consumer behaviour over time, providing stronger causal evidence.

Further studies should expand the demographic scope by including additional moderating variables such as age, income, education level, and lifestyle. This would allow for a more nuanced understanding of consumer segmentation.

Future research should also incorporate behavioural data (e.g., actual purchase records, digital engagement metrics, or loyalty programme data) to complement self-reported intentions and reduce bias.

Qualitative methods such as interviews and focus groups are recommended to explore deeper psychological and emotional drivers of sustainable consumption behaviour.



Additionally, future studies could examine the role of psychological constructs such as environmental concern, moral identity, and social norms to strengthen theoretical understanding.

Finally, emerging technologies such as artificial intelligence, predictive analytics, and personalised digital marketing should be explored to understand how they can enhance the effectiveness of sustainable marketing strategies.

H. Final Concluding Statement

In conclusion, this research demonstrates that sustainable marketing is a powerful driver of consumer behaviour in the FMCG sector, operating through a structured pathway involving brand image and customer involvement. The findings confirm that while sustainable marketing does not directly translate into purchase intention, it significantly influences consumer behaviour through psychological and relational mechanisms.

The absence of a significant gender moderation effect suggests that sustainability-oriented marketing strategies have broad applicability across consumer groups in England. This highlights the growing universal importance of sustainability in shaping modern consumption behaviour.

From a theoretical perspective, the study strengthens existing frameworks by integrating signaling processes with behavioural intention models. From a practical perspective, it provides FMCG companies with clear guidance on how to design effective sustainability strategies that enhance brand value and consumer engagement.

Ultimately, this research contributes to a deeper understanding of how sustainability influences consumer decision-making and reinforces the importance of integrating environmental responsibility into core marketing strategies. As sustainability continues to gain global importance, FMCG companies that successfully align their brand identity with consumer values will be best positioned for long-term competitive advantage and market relevance.

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