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# The Era of Buying Green: Exploring Determinants of Green Purchase Intentions

An Empirical Study

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**ABSTRACT:**

The increasing importance of environmental sustainability has led to growing interest in understanding the factors that influence consumers' green purchase intentions. As consumers are becoming more aware of environmental issues, companies in the fast-moving consumer goods (FMCG) sector are increasingly introducing environmentally friendly products and marketing strategies to address this demand. Despite the growing popularity of green products, consumers' willingness to purchase such products remains influenced by a variety of factors. Therefore, the purpose of this study is to examine the determinants of consumers' green purchase intentions and to compare these determinants between Germany and Finland. The study is based on the Theory of Planned Behaviour and incorporates twelve determinants that have been identified in previous literature as relevant predictors of green purchase intentions. These determinants include green advertising, eco-packaging and green ingredients, perceived price, environmental knowledge and concern, health consciousness, perceived value and quality, demographic characteristics, corporate green image, green self-identity, attitude towards green products, subjective norms, and prior experience with green products. A quantitative research approach has been adopted. Data have been collected through an online questionnaire distributed among consumers in Germany and Finland. After data cleaning, a final sample of 193 respondents has been obtained. The collected data have been analysed using reliability analysis and multiple regression analysis to examine the relationships between the selected determinants and consumers' green purchase intentions. The findings indicate that green purchase intentions are influenced by a combination of product-related, psychological, social, and demo-graphic factors. Environmental knowledge and concern, health consciousness, perceived price, and attitude towards green products have been identified as important determinants in both countries. At the same time, several country-specific differences have been observed. Green advertising, eco-packaging and green ingredients, and prior experience with green products have been found to influence green purchase intentions only among German consumers, whereas perceived value and quality as well as green self-identity have been found to influence green purchase intentions only among Finnish consumers. The findings further suggest that psychological and product-related factors are more influential than demographic characteristics. The study contributes to the existing literature by providing a comparative analysis of green purchase intentions in Germany and Finland and by integrating twelve determinants within a single conceptual framework. The findings also provide practical implications for companies operating in the FMCG sector.

**KEYWORDS:** green purchase intention, sustainable consumption, fast-moving consumer goods (FMCG), Theory of Planned Behaviour, environmental sustainability, consumer behaviour, Germany, Finland

Contents

## Figures



## Tables



## Abbreviations

| | |
|---|---|
| **CSR** | Corporate Social Responsibility |
| **FMCG** | Fast-Moving Consumer Goods |
| **SDGs** | Sustainable Development Goals |
| **TPB** | Theory of Planned Behaviour |

# 1 Introduction

The initial chapter of this master's thesis is dedicated to examining consumer behaviour and individual attitudes in the context of green products. This chapter outlines the framework that guides the study, emphasizing its significance and the research question that it seeks to answer. Additionally, it serves as an overview of the main concepts and research aims along with an orientation to the chapters that follow.

## 1.1 Background of the study

Being a consumer in the current world is an easy thing, as one can purchase products or services at any time of the day. But how do we choose which products or services to purchase – do we stick with our values? Do we plan our monetary situation and act accordingly? Or do we select for other factors?

As the environment faces challenges in the form of global health crises and climate change, consumer attitudes are also changing. Among the changes is an increased sensitivity and willingness to buy so-called green commodities, which is triggered by a greater awareness of environmental vulnerability (Chen & Deng, 2016). Green commodities are commonly known as commodities or services that exert fewer environmental burdens than the normal ones. This can be because they use less resources, are made in cleaner ways, or have lower emissions throughout their lifecycle (Hossain et al., 2022). These include tangible goods such as energy-efficient appliances, organic or locally grown food, and environmentally friendly cleaning supplies, all of which are increasingly recognized by consumers as contributing to a sustainable lifestyle (Chen & Deng, 2016). Green products can also mean services that have a smaller impact on the environment, like public transportation or renewable energy services. These are important for cities to grow in a way that is good for the environment, and they are often supported by eco-friendly consumer choices (Hossain et al., 2022).

The willingness of consumers to pay a premium for green products is steadily rising, and with it grows the necessity for strategic green marketing practices, such as targeted

pricing, eco-conscious advertising, and transparent communication, to drive higher sales and strengthen consumer trust (Gomes et al., 2023). As Alharthey (2019) emphasizes, green marketing efforts must be adapted to different demographic groups, with pricing and promotional strategies playing an important role in influencing green purchase intentions. Similarly, Gomes et al. (2023) found that especially among younger consumers, price acceptance for green products increases when environmental value is clearly communicated, highlighting the commercial relevance of value-based messaging. Tan et al. (2022) further reinforce this by demonstrating that brand image and green trust, often shaped by advertising and promotion, act as mediators between marketing efforts and purchase intention, thereby underlining the importance of well-designed green marketing in shaping consumer behaviour.

Another reason why green products are becoming more popular is their benefit for the environment, and this is good for all the stakeholders. Biswas and Roy (2015) observe that consumers have the tendency to link green products with economic and functional advantages in the long run, especially if they use less energy, last longer, or cost less to maintain. For the businesses this means, cost efficiency achieved through resource savings, such as less water or energy usage and more durable input materials, can offer competitive advantages. Furthermore, Braimah et al. (2022) show that many consumers feel they are contributing to environmental and societal well-being by purchasing green products, which adds an emotional and ethical dimension to their economic reasoning. This idea of "doing good" becomes an important driver in making green purchasing choices, especially when a corporation is clearly working toward sustainable development goals.

Both online and offline purchasing possibilities have been shown to influence consumer decisions regarding green products, though the processes behind these effects remain underexplored. Malhotra and Srivastava (2023) emphasize that channel-specific factors, such as the integration of environmental messaging in omnichannel retailing, can form green purchase intention, yet more empirical evidence is needed to understand how these different platforms impact behaviour.

Equally, policy and regulation are critical drivers of sustainable consumption, particularly in shaping norms and institutional support for green behaviour. However, White et al. (2019) argue that while interventions like financial incentives, eco-labelling mandates, or default green options can be effective, more research is required to determine which policy tools lead to lasting behavioural shifts rather than short-term compliance.

Examining this a bit further, several areas, in which further research is needed to better understand green purchasing behaviours, can be found. Individual and cultural variations, such as national identity, social values, and cultural norms, can moderate green purchasing, but the precise pathways and psychological mechanisms remain insufficiently understood (Chekima et al., 2016; Nguyen, Nguyen, & Nguyen, 2023). Furthermore, while marketing strategies such as green messaging, emotional appeals, and message framing have been studied, there is limited consensus on which tactics are most effective across different consumer segments. As an example, Ansar (2013) points to green marketing awareness as an influential factor, while Amatulli et al. (2019) demonstrate that emotionally charged framing (e.g., shame vs. pride) can drastically shape intention. Gu et al. (2022) add nuance by showing that exposure to green ads may sometimes backfire via the licensing effect, where consumers feel morally licensed to act less sustainably after seeing eco-friendly content, an area that calls for further clarification.

The role of perceived costs and benefits in green purchasing decisions have been studied in relation to green purchasing behaviour, but more research is required to fully grasp how these perceptions interact with other elements. The Theory of Planned Behaviour (Ajzen, 1991) offers a robust foundation, suggesting that perceived behavioural control, shaped by cost perceptions, strongly predicts intention. Bamberg and Möser (2007) decided to incorporate emotional and moral determinants into a meta-model of pro-environmental behaviour. More recently, Kumar et al. (2023) emphasized how green self-identity and ethical obligation interact with perceived value, calling for more research into how these psychological constructs mediate cost-benefit evaluations.

In summary, while there has been a vast body of literature constructed concerning green buying behaviour, much as there is still partially explained about relationships between

marketing, psychological, cultural, and policy variables. Sharma et al. (2022) and Joshi and Rahman (2015) highlight in their comprehensive reviews that upcoming studies must integrate piecemeal evidence to better capture consumer decision-making in sustainable markets as more complex and multidimensional. Therefore, a comprehensive study of different factors that could explain the consumers' intentions of buying green products is needed. This study addresses this call by comprehensively investigating the factors that drive consumers' intentions of buying green products.

## 1.2 Research question and objectives of the study

The current thesis is guided by the debate that follows. The primary objective of this thesis is to explore the factors determining the consumer intentions towards buying green products. According to that, the main research question is:

***What factors determine the consumer's intentions of buying green products?***

The following research objectives have been developed in order to better understand the main research question:

1. *To increase the understanding about the definition and characteristics of green products, and importance of green products*
2. *To understand the conceptualization of green purchasing intentions*
3. *To explore factors determining the consumer intentions towards buying green products*
4. *To empirically explore the factors determining the Finnish and German consumers' intentions of buying green products*

## 1.3 Delimitations of the study

Without focusing on issues like hunger, poverty, gender equality, or high-quality education, this study simply examines sustainability and sustainable development in the

context of consumption and production in the environment. The focus of the study is set on Fast-Moving Consumer Goods (FMCG). The target is tangible products with a short life cycle and high purchase frequency.

In addition, this study is particularly interested in green consumption intentions of consumers, not real consumer behaviour. This is significant as previous studies highlight that consumers normally state sustainable intentions not always preceded by actual consumer behaviour, a situation often referred to as the intention-behaviour gap (Carrington et al., 2010; Nguyen et al., 2019; Ali et al., 2024). By targeting intentions, this study tries to capture the motivational drivers of green consumption without being constrained by outside situational forces that might corrupt actual consumption. Furthermore, the conceptual model is constructed on the Theory of Planned Behaviour (TPB) (Ajzen, 1991), which is well established in pro-environmental behaviour studies (Armitage & Conner, 2001; Paul et al., 2016). The TPB is chosen over other models because it has high predictability of behaviour intention and because it is easy to extend to include other constructs like environmental knowledge, green trust, and self-identity that are particularly convenient to utilize in the research of green consumption (Asif et al., 2022; Kumar et al., 2023).

Furthermore, this study is conducted with an empirical approach, collecting data from German and Finnish consumers. The research is not concerned with the perspective of businesses on consumers' purchasing intentions. Instead, it concentrates on the feedback provided by consumers themselves regarding their buying habits. By gathering data exclusively from consumers, the research aims to gain a comprehensive and in-depth understanding of their behaviour, preferences, and attitudes

## 1.4 Definition of key terms

This part aims to give readers a conceptual basis for comprehending the subject of the research. Key words and concepts pertaining to green products and consumer behaviour are defined below. Establishing clear definitions for these fundamental concepts serves as a foundational framework for a more profound comprehension of the subsequent investigation into consumers' purchasing behaviour concerning Green Products.

### *Green Products*

Green products are identified by meeting customer demands regarding the reduction of ecological destruction in their lives. Ottman, Stafford, and Hartman (2006) define environmentally friendly products as those that meet consumer needs while reducing their ecological footprint. Biswas and Roy (2015) define green products in terms of materials. They should be made of ecological materials so that they conserve resources, are recyclable, and cause minimal environmental impact. Customers perceive green products as green based on various factors such as raw materials, manufacturing processes, packaging, and marketing practices (Magnier & Schoormans, 2015; Chen & Deng, 2016).

### *Determinants*

In academic research, determinants signal variables that influence the outcome of an event. These variables help us understand why something happens. Determinants are essential when it comes to clarifying causal relationships or mechanisms. These are often explored using statistical and empirical studies to determine patterns and factors (Ottman et al., 2006; Sharma et al., 2022).

In marketing, they are the key factors that influence purchasing behaviour, consumer demand, and company image. Price, customer preferences, and other competitors shape demand (Joshi & Rahman, 2015), whereas leadership, redesign, and market positioning shape company success (Chen, 2010). Understanding these factors helps create a successful marketing strategy.

### *Purchase Intentions*

Purchase intention is the likelihood or willingness of an individual to buy a product or service within a certain period of time. Purchase intention is recommended as a predictor of consumer preference research. Purchase intention is affected by many factors such as the perceived value of the product, emotional responses, the company's image and external influences including social norms, the economic environment, and marketing activities (Ajzen, 1991; Vermeir & Verbeke, 2006). However, intentions do not always

lead to the actual purchase. Aspects such as availability, price, or changing personal values can influence the intention-behaviour gap (White et al., 2019). Furthermore, it is shown that constructs such as environmental knowledge, perceived product benefits, price sensitivity, and social influences are central strands when it comes to purchasing behaviour towards green products (Joshi and Rahman, 2015). According to Ajzen's (1991) Theory of Planned Behaviour, purchase intention is determined by subjective norms, personal attitudes, and perceived effectiveness. Thus, many factors can be considered depending on the situation. According to Limbu and Ahamed (2023), general environmental awareness, eco-labelling, and ethical views are particularly important. Nguyen, Nguyen, & Nguyen (2023), on the other hand, focus on health awareness, altruism, and sustainability among younger consumers.

***Finnish Buyers***

Finnish Buyers are generally thrifty, tech-savvy, and increasingly value environmental friendliness. The financial question is undoubtedly the top priority: in 2024, almost the entire clientele in Finland cited it as a decisive factor when shopping, given the ongoing economic instability (Advertising Finland, 2024). Actual “green purchasing behaviour” is relatively low compared to the generally high level of environmental awareness, as a report by Pro Luomo (2023) shows. There has been an 8% decline in sales of organic products. This reflects the attitude-behaviour gap, where sustainable values do not always result in a purchase (Vermeir & Verbeke, 2006). Finnish customers are known for their price sensitivity and their preference for locally produced products, which they associate with quality, safety, and cultural diversity (Vehmas et al., 2024). As with German customers, great importance is attached to credible seals of approval and transparent communication. All in all, Finnish consumers are very careful to treat sustainable ideals with economic caution, placing their trust in well-known brands.

***German Buyers***

German Buyers are customers who shop in Germany. They take the time to compare the durability and value of different products. Since the durability and transparency of

products are very important to them, they rely primarily on recognized eco-labels such as the “Blue Angel,” which indicates sustainable products and therefore serves as a guide for purchases (Grankvist & Biel, 2007; Blue Angel, 2023). However, German customers are more inclined to make their purchases based on price, choosing cheaper options, especially in an unstable economy or when money is tight (Paramzina & Babazade, 2019). The e-commerce industry benefited particularly strongly, as the COVID-19 virus steered customers' purchasing behaviour in this direction. This is clearly evident in customers who attach great importance to physical interaction with products, as this can only be achieved by purchasing directly in a store (Nguyen-Viet et al., 2024). These patterns can also be found in White et al. (2019), who emphasize that the mix of personal values, social norms, and desired effects particularly influence purchasing decisions. These factors are especially important in the German market.

## 1.5 Previous studies

Key studies related to the topic of this thesis are summarized below:

**Table 1.** Relevant previous studies

| Author(s) / Year | Focus of the study | Methodology | Findings of the study |
|---|---|---|---|
| Joshi & Rahman (2015) | Comprehensive review identifying key factors influencing green purchase behaviour across global studies | Systematic literature review | Attitude, environmental concern, and subjective norms are strong predictors of green purchasing behaviour |
| Sharma et al. (2022) | Systematic review of factors affecting green purchase behaviour | Systematic literature review (meta-analysis) | Green attitude, environmental concern, and health consciousness significantly increase |

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|---|---|---|---|
| | | | green purchase intentions |
| Nguyen, Nguyen, & Nguyen (2023) | Interplay of health consciousness, altruism, and sustainability in green purchase intentions | Quantitative survey | Health consciousness and prior experience with green products positively affect purchase intentions |
| Chen & Deng (2016) | Examines the impact of environmental knowledge on green product purchase intentions | Quantitative survey | Environmental knowledge positively influences green purchase intentions through perceived product sustainability |
| Zhuang et al. (2021) | Meta-analysis on factors influencing green purchase intention across contexts | Meta-analysis | Attitude, perceived value, and prior experience are robust predictors of green purchase intention |
| Chen (2010) | Green brand equity and its components' effect on consumer trust and purchase intentions | Quantitative survey | Perceived quality, green brand image, and trust enhance green purchase intentions |
| Laroche et al. (2001) | Determinants of willingness to pay for environmentally friendly products | Quantitative survey | Environmental concern, knowledge, and |

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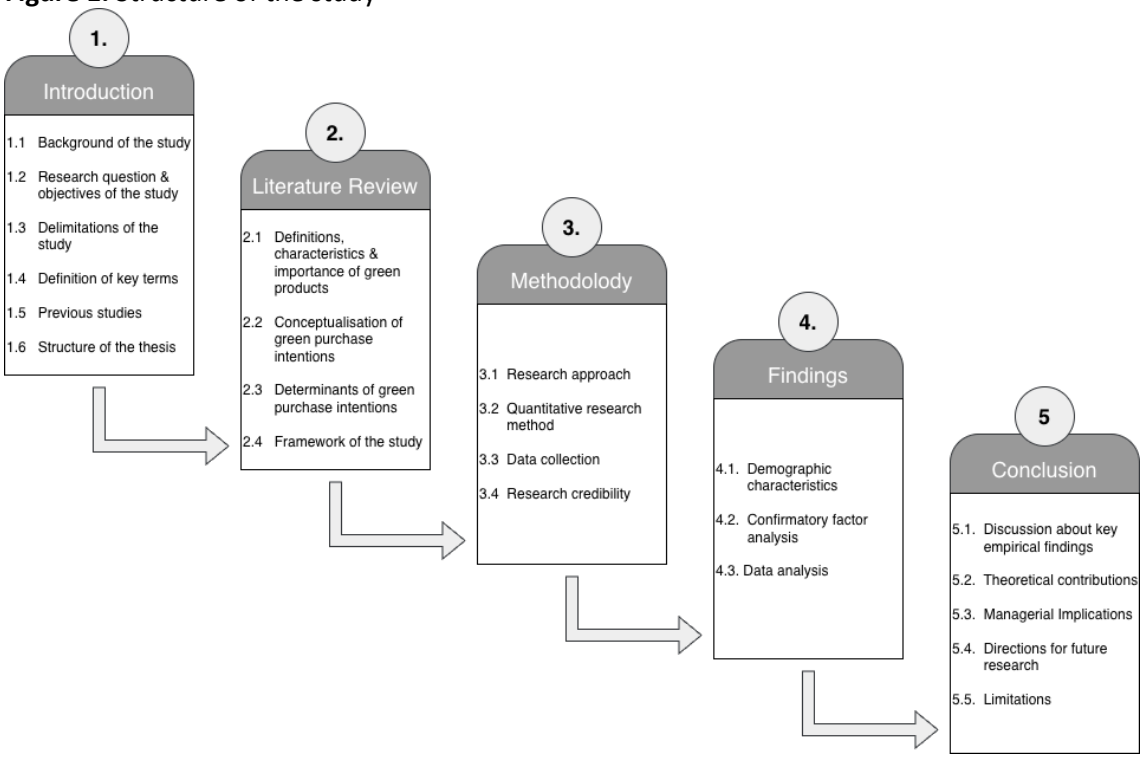
|---|---|---|---|
| | | | demographic factors like income and education predict green product preference |
| Tan et al. (2022) | Role of green advertising in shaping brand image and purchase intention | Quantitative study | Green advertising enhances brand trust and image, which increase green purchase intention |
| Kabir (2023) | Health consciousness and organic food purchasing behaviour in Gen Y and Z | Longitudinal quantitative study | Health awareness moderates the relationship between green attitudes and sustainable consumption |
| Biswas & Roy (2015) | Explores how consumption values influence sustained green buying | Structural equation modelling | Perceived value, quality, and ethical concern drive green product purchase decisions |
| Paramzina & Babazade (2019) | Cross-country study on green consumption and market maturity in Finland and Germany | Comparative quantitative study | Affordability and prior experience shape green purchase behaviour |
| Nguyen-Viet et al. (2024) | Corporate social responsibility's impact on green trust and brand image in emerging markets | Quantitative survey | Positive Corporate Social Responsibility image enhances |

| | | | |
|---|---|---|---|
| | | | brand trust and purchase intention |
| Chekima et al. (2016) | Effect of knowledge, values, advertising, and demographics on green behaviour | Quantitative study | Education, environmental concern, and cultural values influence green buying behaviour |
| White et al. (2019) | Review of behaviour change mechanisms for sustainable consumption | Conceptual literature review | Social norms, identity alignment, and ease-of-action improve sustainable behaviours |
| Gomes et al. (2023) | Gen Z's willingness to pay for green products | Quantitative survey | Willingness to pay is strongly linked to perceived value and environmental concern |

## 1.6 Structure of the study

This thesis evolves through five chapters. The first chapter introduces the background of the story, research questions, and objectives. The second chapter defines green products and purchasing intentions, and reviews twelve key factors that may influence green purchasing behaviour. The chapter ends with the development of the study's framework. The third chapter describes the research approach, design, measurement, data collection, and methods for testing the impact of the twelve factors. Chapter four presents and analyses the collected data in the relation to the twelve identified determinants. Lastly, Chapter five summarizes findings, highlights theoretical and practical implications, and offers suggestions for future research.

**Figure 1.** Structure of the study



# 2 Literature review

This chapter provides a comprehensive overview of the literature on green products, beginning with the definitions, characteristics, and importance of environmentally friendly and sustainable products. It then analyses the conceptualization of green products and various factors that influence consumer purchasing behaviour. These factors are explored based on existing empirical and theoretical studies, and further hypotheses for this study are developed from them. This lays the foundation for the theoretical framework, which structures the variables found and thus prepares them for analysis.

## 2.1 Definitions, characteristics and importance of green products

### 2.1.1 Definition of green goods

Green products, also known as environmentally friendly products, are goods and services whose negative impact on the environment is minimized. This includes their entire life cycle, from production and extraction of raw materials to their disposal and everything in between. These products try to meet people's needs while causing as little harm to the environment as possible. More and more, they are seen as not only functional alternatives to regular goods, but also as ways to show that you care about the environment and want to live a more sustainable life (Chen & Deng, 2016; Biswas & Roy, 2015).

Green products are usually made from materials that are safe for people, can be recycled or broken down, use less energy, produce less pollution, and are made in a way that doesn't harm the environment. According to Chen and Deng (2016), green products must simultaneously meet environmental standards and consumer expectations, making them viable choices for eco-conscious markets. These products are often associated with consumer environmental awareness and product knowledge, which influence the perception of environmental benefits and purchasing decisions.

Joshi and Rahman (2015) point out that green products are also within a broader pattern of green purchase behaviour, where environmental concern, product quality, and

personal responsibility are entwined. Along similar lines, Chen (2010) suggests the concept of green brand equity, arguing that green products can help support the image, satisfaction, and consumer trust of a brand significant antecedents of loyalty in sustainability-driven markets.

Paramzina and Babazade's (2019) empirical study contributes to this body of knowledge as it specifically examines green products within the domain of FMCGs in two market settings. Their article demonstrates that perceived consumer effectiveness, price sensitivity, and environmental knowledge are essential determinants of consumer engagement with green products, especially for the new generation of consumers. This means that green products are not only good for the environment, but they also have social and symbolic meaning and can be used to show that you care about the environment.

Ottman et al. (2006), on the other hand, warn against "green marketing myopia," which is the danger of focusing too much on environmental features and ignoring important consumer needs like price, ease of use, and performance. For green products to do well in the mainstream, they need to find a balance between being good for the environment and being competitive in the market. In short, green products are products that are better for the environment and provide value in terms of their function, their meaning, and their impact on the environment. Their importance comes not only from their physical properties, but also from their ability to reflect and promote sustainable values in how people act.

### 2.1.2 Characteristics of green products

Green products possess a set of interrelated characteristics that differentiate them from conventional products and determine their value in the market for sustainability. At the core of these characteristics is their environmental intention in design, emphasizing resource efficiency, minimum emissions, and less environmental harm throughout the product's life cycle (Chen & Deng, 2016). Green products typically comprise biodegradable, recyclable, or renewable content and lack toxic materials, strongly appealing to consumer health and environmental ethics.

Yet, green products are not defined solely on the basis of physical or technical attributes. Biswas and Roy (2015) explain that green products have symbolic meaning and are used by consumers to externalize their identity, values, and commitment to sustainability. This is especially applicable in markets where purchases represent social status and environmental awareness.

Green perceived value is a key psychological attribute. It is a multidimensional evaluation by consumers that includes functional performance, ethical implications, and emotional benefits (Chen, 2010). People often think that green products are safe, reliable, and good for society. They may also carry a higher perceived quality when supported by credible eco-labels or sustainability certifications (Grankvist & Biel, 2007). According to Paramzina and Babazade (2019), core characteristics such as product quality, environmental knowledge, perceived consumer effectiveness, and price play critical roles in influencing green consumption. The cross-country study shows that in developed markets like Sweden, environmentally friendly products are associated with extensive product availability and in-depth product knowledge, while in emerging markets like Russia, characteristics such as price sensitivity and accessibility are more important. The concept of eco-friendly products is also shaped by marketing and packaging. Visual aspects may, according to Magnier and Schoormans (2015), influence the purchasing habits and attitudes of consumers towards a product. For instance, colours; simple design or brown colour communicates to the consumer that the product is "100% biodegradable." However, to make customers purchase products aside from this category, one must blend green attributes and regular product values (Ottman et al., 2006).

Briefly, green products are beneficial to the environment, psychologically impactful, and marketable. These characteristics cumulatively establish their acceptability, brand equity, and long-term influence in the promotion of sustainable consumption.

### 2.1.3 Importance of green products

The importance of green products is shown by the increasing role they are playing, not only in science but also in the real markets. Especially when it comes to promoting

sustainable consumption and protecting the environment. In the face of worsening global problems such as climate change, resource scarcity and pollution, green products offer people a real opportunity to live in harmony with greater environmental values (Sharma et al., 2022).

Green products are important for individuals because people are more and more looking for products that not only serve a purpose but also fit with their values, like being aware of the environment, being responsible, and being health-conscious (Chen, 2010; Nguyen, Nguyen, & Nguyen, 2023).

Purchasing green products can thus generate functional satisfaction and emotional support, facilitating the subject as a green actor. Paramzina and Babazade's (2019) study illustrates that green products facilitate the expression of care for the environment into action, particularly among young consumers who believe their behaviour matters. They confirm perceived consumer effectiveness, which refers to the belief that individual consumer activities can contribute to a difference, as a robust predictor of green purchasing. This makes it clear that green products are not only valuable as consumer goods, but also as drivers of behavioural change and identity formation.

On a more abstract level, green products enhance corporate innovation and competitive differentiation. Both Biswas and Roy (2015) and Nguyen-Viet et al. (2024) show that it is possible to tap into market segments characterized by sustainability values. This can be achieved especially if the company offers credible and advantageously positioned green products. This opens up the possibility of transforming production and supply chains toward a more sustainable solution for the segment.

Green products also help the government reach its goals and make public policy. When a lot of people use them, they help the country meet its sustainability goals and the Sustainable Development Goals (SDGs), which are international agreements. Ottman et al. (2006), on the other hand, warn that green Products won't reach their full potential unless they meet consumer expectations for the interplay of performance, cost, and

ease of use. Otherwise, they will only appeal to a small group of people, who encourage environmental consciousness.

In conclusion, the importance of green products lies in their multifaceted contribution to ecological sustainability, consumer empowerment, and market transformation. They serve as pivotal connectors between individual behaviour, corporate responsibility, and systemic environmental progress.

## 2.2 Conceptualization of green purchase intentions

Drawing on definitions of green products, determinants, and purchase intentions, this section integrates the foregoing constructs into a rational foundation for developing the conceptual framework. For the purposes of this thesis, green purchase intention was defined here as the conscious and intentional choice of a consumer to make environmentally related or sustainable purchases in the future. It ranks as one of the psychological antecedents of green purchasing behaviour (Ajzen, 1991; Joshi & Rahman, 2015; Ali et al., 2024).

This study adopts the TPB as its primary theoretical lens. According to TPB, intention is determined by three components: attitude toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991). This model is widely used in environmental behaviour research, as it captures the interaction of personal beliefs, social influences, and perceived ability to act. Interconnected frameworks, like the Value-Belief-Norm Theory and the Attitude–Behaviour–Context Model, also bolster this idea. They suggest that our intentions to act pro-environmentally are molded by a blend of both internal motivations and external circumstances (Vermeir & Verbeke, 2006; White et al., 2019).
To operationalize this concept, the present study focuses on twelve determinants frequently cited in the literature as influencing green purchase intention. These include Green Advertising, Ecological Packaging and Green Ingredients, Perceived High Price of Green Products, Environmental Knowledge and Concern, Health Consciousness, Perceived Value and Quality, Demographic Characteristics, Corporate Image,

Green Self-Identity, Attitude Towards Green Products, Subjective Norms and Prior Experience with Green Products.

These determinants, chosen for their strong conceptual relevance and empirical backing in sustainability research (see, for instance, Sharma et al., 2022; Chen & Deng, 2016; and Biswas & Roy, 2015), offer a varied perspective. They encompass cognitive, emotional, social, and situational elements, all of which play a role in influencing green purchasing decisions.

Moreover, this conceptualization takes into account the market context of the study, which focuses on two developed European countries: Germany and Finland. In these settings, consumers exhibit high levels of environmental awareness and digital literacy, yet purchasing decisions remain influenced by economic pragmatism, trust in domestic brands, and the credibility of sustainability claims (Paramzina & Babazade, 2019; Vehmas et al., 2024; Blauer Engel, 2023). In summary, purchase intention for environmentally friendly products is conceptualized as a multi-determined construct influenced by both internal values and external conditions.

## 2.3 Determinants of green purchase intentions

According to conceptualization of green purchase intention, the following section elaborates a review of twelve determinants selected for the research. For each determinant, an explanation is provided based on theoretical background and empirical observations, and then a particular hypothesis regarding its expected influence on green purchase intention is developed.

### 2.3.1 Green Advertising

Green advertising refers to marketing communication that highlights the environmental benefits and sustainability-related features of a product, brand, or company (Tan et al., 2022). It typically promotes environmentally responsible practices, product attributes, or corporate values with the intention of influencing consumer perception and behaviour. Ottman et al. (2006) say that good green advertising needs to find a balance between

environmental messages and clear benefits for customers. They also warn that focusing too much on eco-claims without thinking about price or function could lead to "green marketing myopia." This means that green advertising needs to connect with its target audience on both an emotional and practical level.

Recent research emphasizes the critical role of green advertising in shaping green purchase intentions. Tan et al. (2022) demonstrate that green advertising influences consumer trust and purchase intention through its effect on perceived brand image. Their findings indicate that credibility, clarity, and the emotional tone of green messages substantially influence consumer evaluation, particularly when advertising material is congruent with overarching sustainability narratives. Similarly, Ansar (2013) found that awareness created through green advertising campaigns enhances consumers' environmental concern, which in turn increases their willingness to engage in eco-conscious purchasing. Furthermore, Amatulli et al. (2019) show that emotional framing (e.g., pride or guilt) in green advertisements can activate different consumer motivations, affecting both mental and affective responses to sustainability messaging.

Green advertising is particularly relevant because it serves as a primary communication interface between companies and consumers. In markets where environmental awareness is growing but not always paired with action, green advertising can help, by bridging the attitude–behaviour gap by offering consumers concrete reasons to prefer green products (Vermeir & Verbeke, 2006). It also contributes to build a green brand image and trust, both of which are significant predictors of green purchase intention (Chen, 2010). Given its ability to educate, motivate, and shape perceptions, green advertising is an important player not only attracting eco-conscious consumers but also reinforcing pro-environmental behaviour among less engaged segments. Based on the above discussion, following hypothesis is developed:

**H1:** *Green advertising has a positive effect on consumers' green purchase intentions.*

### 2.3.2 Ecological Packaging and Green Ingredients of Products

Green ingredients and green packaging are product features and design solutions reducing environmental impact across the product's life cycle. Green packaging is typically made of materials recycled, biodegradable, reusable, or sustainably derived, whereas green ingredients are organic, non-toxic, plant-based, or ethically sourced inputs to the actual product itself (Magnier & Schoormans, 2015; Chen & Deng, 2016). As shown by Nguyen-Viet et al. (2024), consumers see eco-packaging as a visual and moral cue indicating a firm's eco-friendliness, whereas Magnier and Schoormans (2015) demonstrate that visual (e.g., colour, design) and text cues (e.g., claims of sustainability) significantly impact perceived environmental friendliness.

Several studies also highlight the psychological impact of environmental packaging and ingredients on consumer behaviour. Magnier & Schoormans (2015) found that green packaging builds consumer trust in the sense that it reflects brand transparency and sustainability concerns. It has a positive impact on perceived product credibility, which is crucial to enhance the possibility of green purchasing behaviour. Similarly, Nguyen, Nguyen, & Nguyen (2023) established that packaging signalling health and environmental value contributes to customer satisfaction and brand choice, particularly among more youthful, health-conscious customers. Additionally, Asif et al. (2022) note that with increased greenwashing, transparent labelling and reliable packaging signals are important in establishing authenticity and trust in brands, which drive green buying intention. In addition to perception, ecological packaging also helps in the provision of consumer demands for reducing waste and increasing resource use efficiency in accordance with extensive sustainable consumption trends. Suphasomboon and Vassanadumrongdee (2022) argue that open, verifiable green information on packaging can activate consumers' ethical orientations and boost the perceived value of the product. Also, within FMCGs, Igbomor (2024) illustrates that environmentally friendly packaging not only improves product evaluation but also significantly influences consumers' purchasing decisions, highlighting the im-portance of sustainable packaging as a marketing and communication tool.

Generally, green ingredients and environmental packaging are central touch points to describe consumer beliefs about the sustainability of a product. Both influence the cognitive evaluation of a product (e.g., perceived greenness, value, trust) and the affective feeling (e.g., pride, guilt reduction, satisfaction). They are especially relevant in food, cosmetics, and household product categories where consumers are highly senstive to health, environmental, and ethical concerns. Thus, this determinant is a central one to convert environmental attitude to real buying behaviour. Based on the above discussion, following hypothesis is developed:

**H2:** *Eco-packaging and green ingredients have a positive effect on green purchase intentions.*

### 2.3.3 Perceived High Price of Green Products

The price of green products is the amount consumers pay for sustainable goods and services, usually higher than that of traditional alternatives because eco-certified materials, ethical supply chains, or sustainable production processes are used (Malhotra & Srivastava, 2023). The perceived premium price can be both a quality and ethical standards signal, as well as an adoptability barrier. As Biswas and Roy (2015) point out, while some customers find higher prices acceptable due to the enhanced environmental value, others find them as hindrances, especially when green benefits fail to be appropriately communicated.

A number of studies have also shown the two-edged nature of price in green consumerism. Malhotra and Srivastava (2023) showed that price sensitivity is a foremost barrier of omnichannel retail settings even among environmentally aware consumers. Laroche et al. (2001) supported that although a significant number of consumers expressed readiness to pay a premium for eco-friendly products, their buying behaviour is moderated by perceived value, trust, and affordability. Paramzina and Babazade (2019), employing cross-country investigation, established that among high-income countries like Sweden and Germany, green consumption is less constrained by afford-ability of sustainable

choices rather than by unawareness. Arnoldussen et al. (2022) followed up to affirm this, demonstrating European consumers' openness to social sustainability but willingness to pay being highly responsive to perceived economic benefit.

These findings suggest that while price can symbolize environmental and ethical quality, it remains a decision-making factor in the consumer decision process. Zhuang et al. (2021) culminated their meta-analysis by affirming that price always lies among the primary green buying obstacles, especially during periods of economic instability or inflation. Gomes et al. (2023) also point out that younger consumers, despite maintaining sustainability values, are likely to need a trade-off between ecological value and cost. As a whole, price for green products is a central facilitator or limiting factor of sustainable consumption. Not just a utilitarian attribute, but a symbolic one, influencing evaluations of value, fairness, and trustworthiness. Consequently, price must be managed strategically and visibly signalled so that the intention–behaviour gap could be bridged and broader adoption of green alternatives encouraged. Based on the above discussion, following hypothesis is developed:

**H3:** *Perceived high prices can negatively influence consumers' green purchase intentions, especially when affordability or economic benefit is unclear.*

### 2.3.4 Environmental Knowledge and Concern

Environmental awareness has been described as the extent to which individuals are aware of environmental issues, understand their causes and consequences, and understand the actions necessary to resolve them (Chekima et al., 2016). Environmental concern, on the other hand, is the affective and cognitive evaluation of environmental issues by an individual and his/her willingness to act upon them. Together, these indexes form a building block of pro-environmental behaviour. Joshi and Rahman (2015) rank environmental concern and awareness as one of the most commonly mentioned factors influencing green consumption behaviour, influencing not only attitudes but also the perceived importance of sustainability in consumer choices.

Different studies confirm the significant role of these factors. Chen and Deng (2016) found that consumers with more product-related environmental knowledge have more powerful green purchase intentions when they perceive the product to be actually sustainable. Chekima et al. (2016) also found environmental concern to be a key mediator between cultural values and green buying behaviour in emerging and developed economies. Through a systematic review, Sharma et al. (2022) also provided evidence that consumers' perceptions of effectiveness are improved by environmental awareness, implementing the feeling that their actions are having an impact on the environment. Furthermore, Zhuang et al. (2021) make it clear that information alone is not always sufficient to change behaviour. For a long-term effect, it must be combined with emotional involvement and the feeling of being able to control one's own behaviour.

The relevance of environmental awareness and concern is that they have the ability to overcome the values-action gap. In nations like Germany and Finland, where consumers would often say that they are very aware but not necessarily persistent green behaviour (Paramzina & Babazade, 2019), these measures explain variations in motivation and intention to green consumption. Since environmentally conscious and well-educated consumers tend to identify their consumption behaviour more with their environmental beliefs if they believe that their actions matter (Vermeir and Verbeke, 2006), encouraging knowledge and raising concern are key to the activation of green intentions as well as increasing the credibility and efficacy of green marketing strategies. Based on the above discussion, following hypothesis is developed:

**H4:** *Environmental knowledge and concern have a positive effect on green purchase intentions.*

### 2.3.5 Health Consciousness

Health consciousness includes the extent to which individuals are aware of and consider their own health and well-being, as well as the impact of this awareness on their lifestyle and purchasing decisions (Vasan, 2018). When it comes to environmentally conscious consumer behaviour, health awareness is one of the key psychological factors that

motivates people to choose environmentally friendly products, especially those they perceive as safer, more natural, or less harmful to their health. According to Yadav and Pathak (2016), health consciousness is a good determinant of green purchase intention, especially when environmental attributes of a product are in line with perceived health benefit.

Some studies have pointed out the co-dependency of health consciousness and sustainable purchasing. Nguyen, Nguyen, & Nguyen (2023) claim that it is increasingly likely that health-seeking consumers view eco-products as functionally superior and ethically superior. It can be inferred from their study that health motivation amplifies the influence of environmental concern on purchase intention, particularly among urban young consumers. Similarly, Paul et al. (2016) believe that health consciousness not only in-fluences buying food but also preferences for cosmetics and domestic products, where chemical exposure is a key area of concern. Nguyen, Nguyen, & Nguyen (2023) similarly found that consumers with higher levels of health consciousness are more likely to develop favourable attitudes towards sustainable products, which in turn increases their purchase intentions.

The potential of health awareness to connect environmental responsibility with personal well-being makes it valuable, offering a dual argument for eco-friendly purchase. When actions towards sustainability can be made to align with self-interest, e.g., improving personal health, they are more likely to be adopted, as White et al. (2019) observe. When backed by genuine labelling and open ingredient disclosure, green consumers prefer to view green products as safer, higher-quality, and more sustainable (Hossain et al., 2022). Health consciousness is therefore a highly effective motivational driver in marketing campaigns aimed at encouraging consumer engagement with green products. Based on the above discussion, following hypothesis is developed:

**H5:** *Health consciousness has a positive effect on green purchase intentions.*

### 2.3.6 Perceived Value and Quality of Green Products

Perceived value refers to a consumer's assessment of the value or benefit of a product in relation to what they gain (e.g., an improvement in the environment or health, a service) and what they lose (e.g., costs or effort) (Braimah et al., 2022). Perceived quality describes how a customer feels about a product's overall excellence or superiority. In green products, such judgments are subject to not only physical characteristics (e.g., strength, usability) but also intangible ones like environmental attributes, ethical origin, or brand reputation (Chen, 2010). Green products are likely to be evaluated in terms of the degree to which they deliver not only functional performance but symbolic value in the guise of personal ethics or sustainable lives (Biswas & Roy, 2015).

Some studies underscore the significance of perceived quality and value as strong predictors of green purchase intention. Chen (2010) suggested the concept of green brand equity, which considers perceived quality, satisfaction, and brand image as factors of trust and intention. When customers find these green products to be not only environmentally friendly but also comparable to or even better in quality to conventional products, they are likely to opt for green brands. In their meta-analysis, Zhuang et al. (2021) confirm this, demonstrating that perceived quality and value are consistently powerful motivators of green purchasing across all product categories and cultural contexts. This is further supported by Nguyen, Nguyen, & Nguyen (2023), who note that customers assess the quality of eco-friendly products based on perceived health advantages, ingredient transparency, and eco-labels—aspects that increase confidence and decrease risk perception.

The importance of this determinant is that it has the ability to balance consumer expectation and product performance. If green products do not perceive as low quality or too costly relative to their conventional counterparts, consumers despite ecologism will not choose them (Paramzina & Babazade, 2019). However, customers are prepared to pay more, though, if sustainability is combined with great functional value (Gomes et al., 2023). Therefore, companies that want to sell environmentally sustainable products

must emphasize valid signs of quality, affective benefits, and transparency of communication to enhance perceived value. The determinant ultimately determines whether green products are seen as a rational and attractive choice in the marketplace. Based on the above discussion, following hypothesis is developed:

**H6:** *Perceived Value or Quality of Green Product has a positive effect on green purchase intentions.*

### 2.3.7 Demographic Characteristics

Demographic characteristics are socio-economic and individual characteristics such as age, gender, education, income, and occupation that are frequently studied as background variables to understand consumer behaviour (Examining Demographic Factors Impacting Green Marketing Strategies and Consumer Choices, 2023). Demographics for environmentally responsible consumption may influence environmental concern, perceived behavioural control, and purchase intention through access to resources, cognitive involvement, and value orientation (Joshi & Rahman, 2015). For instance, age may affect innovation receptiveness, while income would decide the price of green products.

Demographic effects on green purchasing behaviour have been studied intensively with inconsistent but enlightening results. Sharma et al. (2022) point out that while individual demographic factors shouldn't be viewed as categorical predictors on their own, they do appear to work in tandem with situational and psychological factors to influence green intentions. Additionally, Chekima et al. (2016) determined that a higher education correlates with greater environmental concern and buying intentions, due to a higher involvement with sustainability related information. In a meta-analysis Zhuang et al. (2021) determined that income and gender do tend to moderate the impact of other determinants, like environmental concern and perceived value. Especially, women and higher-income consumers will be more extreme in their green attitudes, though this could vary with product category and culture.

Demographics are very valuable for clustering consumer markets and adjusting green marketing campaigns. Understanding how variables like income, education, and gender effect green buying can help companies develop targeted campaigns and pricing schemes. For example, high cost could be a more pronounced barrier for young or poorer consumers, while conveying ethical or health benefits could be more attractive to female or older consumers (Laroche et al., 2001; Gomes et al., 2023). According to Paramzina and Babazade (2019), demographic data are particularly important when comparing countries, such as Finland and Germany, where structural differences in consumer trust, education systems, and income inequality can affect how effective green marketing initiatives are. Based on the above discussion, following hypothesis is developed:

**H7a:** *Demographic characteristics such as education, gender, and income moderate the relationship between environmental concern and green purchase intention. Consumers' age, education, and income have a positive effect on green purchase intentions.*

**H7b:** *Consumers' gender has an effect on green purchase intentions.*
*Figures and images must include alternative text, known as alt text.*

### 2.3.8 Corporate Green Image

Corporate image is the overall perception that consumers have of a corporation, based on its conduct, communication, values, and public image (Nguyen-Viet et al., 2024). For green marketing and sustainability purposes, corporate green image is umbilically linked with how a firm's environmental and ethical conduct is perceived. Positive green corporate image can stimulate trust, develop perceived brand credibility, and enhance customer loyalty thus, influence consumers' purchasing intentions of green offerings (Chen, 2010; Nguyen-Viet et al., 2024).

Multiple studies confirm the pivotal role of corporate image in shaping green purchase behaviour. Chen (2010) sets corporate image as a component of green brand equity,

along with satisfaction and trust. The study suggests companies with an eco-friendly image will be more inclined to establish consumer trust and encourage green purchase intention. Nguyen-Viet et al. (2024) also show how a successful corporate social responsibility image enhances the green brand image of a company, which in turn positively affects green brand trust and behavioural intentions. It is significant for those markets where there is high scepticism regarding green claims and consumers are concerned about transparency. Ansar (2013) also subscribes to this view, with the fact that environmental marketing messages work best when aligned with the corporate identity and values of the firm.

The relevance of corporate image lies in its ability to reduce consumer doubt and mitigate greenwashing apprehension. A favourable, valid image can act as a quality and truth heuristic clue, particularly when consumers have multiple comparable options. It is especially important in the green market, where consumers themselves can't always authenticate environmental claims and therefore must rely on the company reputation as a proxy for product credibility (Zhuang et al., 2021; Asif et al., 2022). Establishing a credible green company reputation is, therefore, not an exercise in branding, it is a strategic imperative for companies that must influence sustainable consumption behaviours and create long-term customer relationships. Based on the above discussion, following hypothesis is developed:

**H8:** *A positive green corporate image increases green purchase intentions.*

### 2.3.9 Green Self-Identity

Self-identity refers to the way individuals construct and define themselves and the roles they take on to express through their behaviour, values, and lifestyle (Kumar et al., 2023). Self-identity lies at the center of consumer behaviour research as the prime mover of preferences and purchase intentions, especially for products with ethical or symbolic meaning. In green consumption, green self-identity refers to the extent to which individuals see themselves as environmentally conscious consumers. As Nguyen, Nguyen, &

Nguyen (2023) explain, the purchase intentions for green products is often influenced by this form of identity, since it invites individuals to behave according to their self-image.

Self-identity has been consistently shown to be salient in the development of green purchase intention (e.g., Mohasuweerachai and Suttikun, 2022). Mohasuweerachai and Suttikun (2022) found that green self-identity had a positive and significant impact on consumers' willingness to purchase environmentally friendly products. Consumers who incorporate environmentalism in their identity are more likely to act upon pro-environmental values despite barriers such as price or convenience (Paul et al., 2016). Self-identity can also serve as a motivator and transform attitudes into actions by increasing the cognitive consistency (Paul et al., 2016). White et al. (2019) also state that consumers are more likely to adopt sustainable behaviour when consumers perceive such behaviours to be consistent with their personal and social identity.

The strength of self-identity in green consumption lies in its symbolic and emotional potency. Contrary to situational factors like price or packaging, identity-motivated behaviour is internal, stable, and therefore a powerful long-term indicator of sustainable behaviour. For policymakers and marketers, appealing to self-identity, i.e., presenting green action as a demonstration of being responsible, up-to-date, or healthy, can promote participation and loyalty. In developed markets such as Germany and Finland, where sustainability becomes increasingly normalized, self-identification may be a key driver between consumers who are already environmentally aware and concerned (Paramzina & Babazade, 2019). Based on the above discussion following hypothesis is developed:

**H9:** *Strong green self-identity has a positive effect on green purchase intention.*

### 2.3.10 Attitude towards Green Products

Green product attitude is a general positive or negative judgment by a consumer of purchasing environmentally friendly products (Sharma et al., 2022). Attitude formation draws upon a combination of cognitive beliefs (e.g., usefulness, quality, and concern for

the environment), emotional reactions (e.g., pride, guilt), and moral evaluations. In theories of behaviour such as the TPB, attitude is possibly the strongest predictor of behavioural intention (Ajzen, 1991). In the field of sustainable consumption, a positive attitude towards environmentally friendly products is usually a premise for intention and subsequent purchase behaviour.

Empirical evidence shows the strong and direct attitude-green purchase intention relationship. According to a systematic review by Sharma et al. (2022), one of the most highly validated and statistically important aspects of green purchasing behaviour is mindset. Similarly, Joshi and Rahman (2015) note, if people have favourable opinions about green products, such as believing they are healthier or of greater quality, this influences their intention to buy. From their meta-analysis, Zhuang et al. (2021) as well concluded that attitude has a consistently strong effect size regardless of product category or area. These findings suggest that attitude is generalizable across contexts and strongly predictive if combined with sufficient knowledge and motivation.

This determinant's significance stems from its ability to capture the consumer's evaluative assessment, which often consists of both emotional appeal and rational judgement. Attitudes are, however, internalized and stable in nature, as opposed to extrinsic determinants such as price or availability, and therefore a strong predictor of habitual green behaviour. Moreover, green attitudes can be reinforced and evoked with the help of communication strategies like credible labelling, social norms, and emotional appeals (White et al., 2019). The marketers need to understand and shape consumer attitudes in order to guide preference in the direction of green alternatives and close the intention–behaviour gap. Based on the above discussion, following hypothesis is developed:
**H10:** *A positive attitude toward green products has a positive effect on green purchase intentions.*

### 2.3.11 Subjective Norms

Subjective norms are the social pressure to do or not do a certain behaviour that a person perceives (Ajzen, 1991). In green consumerism, they are the extent to which individuals believe others they value—i.e., family, friends, society, would desire that they act in an eco-friendly manner while making a purchase. This is one of the three main determinants of Ajzen's (1991) Theory of Planned Behaviour, alongside to attitude and perceived behaviour control.

Many studies highlight the extent to which consumers' intentions to make environmentally friendly purchasing decisions can be influenced by subjective norms. Social influence is referred to as a deciding criterion in the review by Joshi and Rahman (2015), claiming that normative beliefs can influence the intention and behaviour, especially in collectivist or culture-based societies. Sharma et al. (2022) also confirm this relationship, proving subjective norms have a strong indirect influence through evoking positive attitudes and behavioural control. Subjective norms are particularly relevant when consumers lack personal experience or knowledge and therefore react to peer cues, social norms, or public opinion, as Zhuang et al. (2021) are pointing out. Subjective standards may be an indirect way to approach more widespread behaviour change in communities or emerging markets where sustainability is just beginning to become visible.

The visibility of subjective norms is that they can inhibit green behaviour depending on dominant cultural or peer pressures. Customers will adopt green norms and behave accordingly if they think that being environmentally conscious is rewarded by society. Evoking normative behaviour, such as "most in your community recycle", is a tried-and-true behaviour modification strategy for sustainability initiatives, as explained by White et al. (2019). Businesses and policymakers may motivate individuals towards sustainable consumption and shift societal expectations, by applying subjective norms through influencer marketing, public statements, or community programs. Based on the above discussion, following hypothesis is developed:

**H11:** *Subjective norms have a positive effect on green purchase intentions.*

### 2.3.12 Prior Experience of using Green Products

Green product prior experience refers to a consumer's previous exposure to environmentally friendly products, either by buying, consuming, or evaluation and how such exposures influence future behaviour (Ali et al., 2024). The experiences do not only guide cognitive evaluation like perceived value and quality but also affective reactions like trust and satisfaction. Previous experience with behavioural models is also typically thought to be a background determinant that moderates or enhances the influence of other determinants like attitude, trust, or perceived behavioural control (Joshi & Rahman, 2015).

Empirical evidence confirms that consumers with prior positive experiences of consumption of green products are expected to engage in repeat purchase and possess greater green purchase intentions. Sharma et al. (2022) identified prior experience as a facilitator dimension of sustainable consumption: after using green products before and they perceived that they were trustworthy or handy, perceived risk decreases and confidence increases. Likewise, Zhuang et al. (2021) note that knowledge of green substitutes reduces uncertainty generally associated with sustainability claims, particularly if consumers can verify the effectiveness or health value of the product. Nguyen, Nguyen, & Nguyen (2023) also underline this by showing that experience with green products enhances trust and leads to increased satisfaction, which are two powerful predictors of long-term consumer loyalty.

The worth of experience is the cumulative effect on intention formation. Green product consumers who have had past experiences with green products and found them to be useful tend to develop positive attitudes, perceive brand promises, and influence others to buy the products. However, a negative initial experience, e.g., for price, quality, or performance, deters future purchases, even when environmental concern is intense (Nguyen et al., 2019). Therefore, green marketers must make initial experiences with green products enjoyable enough to lead to further interaction and word-of-mouth communications. That is, experience is a learning process which settles or does not settle

into long-term sustainable behaviour. Based on the above discussion, following hypothesis is developed:

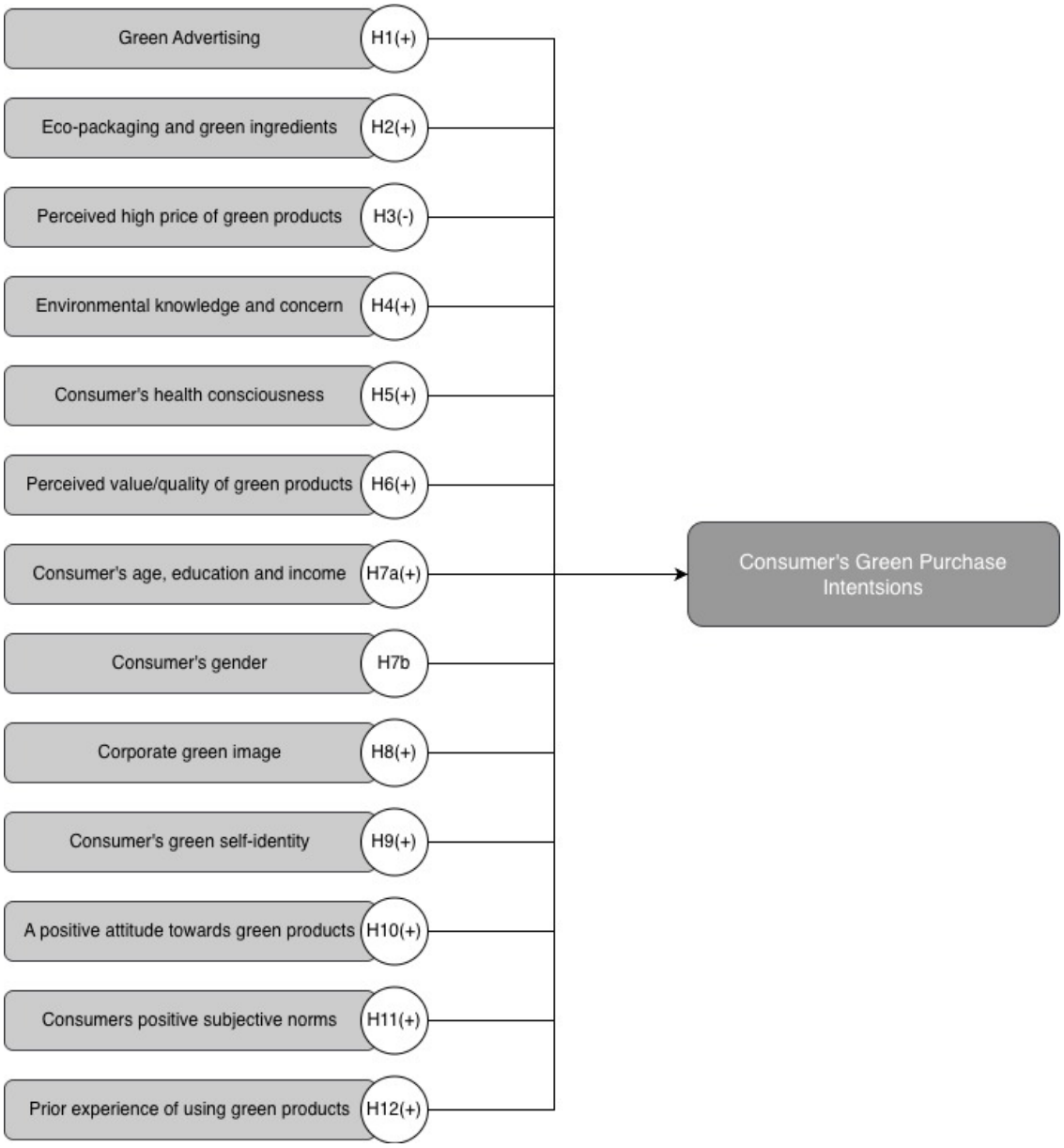
**H12:** *Positive prior experience with green products has a positive effect on green purchase intentions.*

## 2.4 Framework of the study

The framework of the study presented in Figure 2 summarizes the relationships between the determinants identified in the literature and consumers' green purchase intentions. Based on the Theory of Planned Behaviour (Ajzen, 1991) and previous empirical research, the framework illustrates the proposed effects of the twelve determinants on consumers' green purchase intentions.

The arrows represent the hypothesized relationships between the independent variables and consumers' green purchase intentions. While most relationships are expected to be positive, the perceived high price of green products is expected to negatively influence consumers' green purchase intentions. The framework provides the theoretical basis for the empirical investigation conducted in this study.

**Figure 2.** Framework of the study


Green Advertising
H1(+)
Eco-packaging and green ingredients
H2(+)
Perceived high price of green products
H3(-)
Environmental knowledge and concern
H4(+)
Consumer's health consciousness
H5(+)
Perceived value/quality of green products
H6(+)
Consumer's age, education and income
H7a(+)
Consumer's gender
H7b
Corporate green image
H8(+)
Consumer's green self-identity
H9(+)
A positive attitude towards green products
H10(+)
Consumers positive subjective norms
H11(+)
Prior experience of using green products
H12(+)
Consumer's Green Purchase Intentsions

# 3 Research methodology

This chapter covers research methodology and rationale for adopting a certain method. It also provides information about sampling of data, development of questionnaires, definition of variables, data collection process, responses to questions, and data analysis techniques. The chapter concludes with an evaluation of the reliability and validity of this study.

## 3.1 Research approach

This research employs a deductive approach, relying on established theory and prior research rather than open-ended investigation. Deductive reasoning starts with theoretical hypotheses and tests it in some specific context (Saunders et al., 2016). Ajzen's (1991) TPB provides the underlying framework, which describes how attitudes, subjective norms, and perceived behavioural control affect behavioural intentions. TPB has been widely applied in green consumer research (Joshi & Rahman, 2015; Sharma et al., 2022).

Based on this theoretical foundation, in the study twelve hypotheses were developed to examine the impact of marketing-, consumer-, and demographic-related factors on green purchase intentions in FMCG. The deductive strategy allows for systematic hypothesis testing and allows for the integration of additional constructs, such as health consciousness, perceived value, or corporate image, that enhance the explanatory power of TPB (Braimah et al., 2022; Nguyen-Viet et al., 2024; Vasan, 2018). Recent literature also highlights the value of extending the TPB with contextual elements like previous experience (Ali et al., 2024) and environmental knowledge (Chekima et al., 2016). Deduction therefore provides a theory-driven approach to analysing the determinants of sustainable consumption in Germany and Finland.

## 3.2 Quantitative research method

For this study, a quantitative research approach was chosen. Quantitative research generates numerical data, which can be examined and interpreted using statistical methods. Surveys are especially suitable for intention-based theories such as the TPB, where psychological constructs such as attitudes, norms, and self-identity are commonly measured through multi-item Likert scales (Ajzen, 1991; Sharma et al., 2022). Saunders et al. (2016) note that surveys enable the collection of standardized information from large data sets, enabling hypothesis testing and comparisons between groups.

This method is generally applied in green consumer research, where questionnaires provide reliable and valid measures of consumer attitudes and purchasing intentions (Tan et al., 2022; Joshi & Rahman, 2015). Furthermore, quantitative questionnaires are particularly effective in cross-national settings because standardized questions facilitate comparability of green consumption drivers across countries (Ali et al., 2024; Chekima et al., 2016).

## 3.3 Data collection

This study employed a survey-based research strategy to collect and analyse quantitative data. According to Saunders et al. (2016), the survey method is greatly used in deductive research because it provides an economical means of collecting standardized quantitative data. The data were collected through a questionnaire, which is traditionally used in research that explores and describes the relationship between variables (Saunders et al., 2016). Questionnaires were a successful data-gathering tool in previous research on sustainable consumption and environmentally friendly purchasing behaviour (e.g., Chekima et al., 2016; Sharma et al., 2022; Ali et al., 2024). Questionnaires are also the most widely used technique in consumer research because they allow for systematic hypothesis testing and comparative analysis across respondent groups (Joshi & Rahman, 2015).

Moreover, the questionnaires for this thesis were administered online (Saunders et al., 2016). The survey was created with Webropol for receiving feedback from the participants in Finland and Germany. An online questionnaire was utilized due to the geographical spread of the population. The aim of the research was to get complete data from Finnish and German FMCG consumers, and an online survey provided access to participants from different regions of both countries.

### 3.3.1 Data sampling

In view of the impossibility to conduct a survey among the whole population of FMCG consumers in Germany and Finland, it became necessary to use a sample taken from the target population. Saunders et al. argue that a sample in research represents all cases associated with this research, whereas a sample refers to a subset used for generalizing about the former one. In our case, the target population comprises adult FMCG consumers in Germany and Finland, which can be considered the countries with comparatively strong awareness of sustainability issues but with different cultural and consumption environments. As for sampling methodology, a non-probability self-selection sample design was employed, which means that the participants were selected voluntarily after being invited to take part in the online survey via social media networks, university networks, and email lists. This type of sampling strategy is often used by scholars trying to recruit many people to perform efficient research and avoid unnecessary expenses (Saunders et al.). However, this methodology may decrease the generalizability of results since those who are interested in ecological matters will tend to volunteer in research. However, receiving answers from the participants with different demographic characteristics may increase the validity of the data (Chekima et al.; Sharma et al.).

### 3.3.2 Questionnaire development

To ensure the validity and reliability of the constructs, the questionnaire was developed based on the scales created and validated in prior academic research. The scales were modified from existing research and were suitable for the FMCG context. For this

research, the green advertising constructs were developed based on the scale developed by Tan et al. Eco-packaging constructs were adapted from Magnier and Schoormans (2015) study, green product attribute constructs were based on Chen and Deng (2016) study, and perceived value constructs were adapted from Braimah et al. (2022). Furthermore, the health consciousness constructs were adapted from Vasan (2018). The constructs measuring corporate green image were based on the studies of Chen (2010) and Nguyen-Viet et al. (2024) and the previous experience constructs were adapted from Ali et al. (2024). The application of the scales developed from previous academic studies enhanced the validity of the study and maintained the comparability of the results with previous studies. All constructs were measured on a five-point Likert scale from 1 = strongly disagree to 7 = strongly agree.

The questionnaire was introduced with a cover letter that provided an explanation of the research and an assurance of voluntary and confidential participation. The estimated time required to complete the questionnaire was also provided, as well as the contact details of the researcher in case of further clarification (Saunders et al., 2016).

To ensure the clarity and logical flow of the questions, the questionnaire was divided into four sections. Section A was designed as a screening question that asked whether the respondent had purchased FMCG products in the past three months. Section B asked the respondents about the country of residence, i.e., Germany or Finland. These two countries were chosen as they had relatively high levels of sustainability awareness, although the cultural settings differed. Section C contained the main questions that measured the dependent variable as well as the twelve independent factors identified in the conceptual framework. These questions used the Likert scale method of questioning, which is used to measure the attitudes, perceptions, and intentions of the respondent. Finally, Section D contained the demographic questions, i.e., age, gender, education level, income level, and occupation. Some of the demographic questions in the questionnaire provided the option of 'other' with an open text field, making the questionnaire more inclusive in nature (Laroche et al., 2001; Saunders et al., 2016).

### 3.3.3 Operationalization of variables

The variables in this study were operationalized by translating theoretical constructs from the literature into measurable questionnaire items. Operationalization refers to the process of converting abstract concepts into observable indicators that can be measured empirically (Saunders et al., 2016).

The constructs used in this research were adapted from previously validated measurement scales in the fields of green consumption and consumer behaviour. Minor wording adjustments were made to ensure that the items were suitable for the FMCG context. Using established scales helps improve the validity and reliability of the measurements. All constructs were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), which is widely used in studies examining consumer attitudes and behavioural intentions (Ajzen, 1991; Sharma et al., 2022).

The constructs, measurement items, and literature sources used for the operationalization of the variables is presented in Table 2:

**Table 2**. Operationalization of variables

| **Construct** | **Questions** | **Item/Source** |
|---|---|---|
| Green Purchase Intention (Dependent Variable) | a) I intend to buy environmentally friendly products in the next month. | Ajzen (1991); Joshi & Rahman (2015); Sharma et al. (2022); Ali et al. (2024) |
| | b) I will make an effort to choose green alternatives when available. | Ajzen (1991); Sharma et al. (2022) |
| | c) I am likely to purchase green products whenever possible. | Ajzen (1991); Joshi & Rahman (2015); Ali et al. (2024) |
| | d) I plan to actively seek out environmentally friendly products in the future. | Ajzen (1991); Sharma et al. (2022) |

| | | |
|---|---|---|
| Green Advertising | e) I kook for brand that communicates clear environmental benefits.<br>f) The brand's green ads improve my trust in its products.<br>g) The brand's green ads make me more willing to buy its products.<br>h) The brand's green ads convince me that it cares about the environment. | Tan et al. (2022) |
| Eco-Packaging and Green Ingredients of Products | i) I ensure that the product's packaging looks environmentally friendly.<br>j) It is important that the packaging information convinces me of its sustainability. | Magnier & Schoormans (2015) |
| | k) It is important that the product uses ethically or sustainably sourced inputs. | Chen & Deng (2016) |
| Perceived High Price of Green Products | l) I think that green products are more expensive than conventional ones. | Laroche et al. (2001) |
| | m) I think that green products are over-priced | Malhotra & Srivastava (2023) |
| Environmental Knowledge and Concern | n) I know how my purchase choices impact the environment. | Chekima et al. (2016); Sharma et al. (2022) |
| | o) I know about environmental issues caused by products. | Chekima et al. (2016) |

| | | |
|---|---|---|
| Health Consciousness | p) I pay attention to how products affect my health.<br>q) I avoid products that I believe could harm my health. | Vasan (2018) |
| Perceived Value and Quality of Green Products | r) Choosing this green product benefits me (e.g., performance/health).<br>s) The overall quality of green products is high. | Braimah et al. (2022) |
| Corporate Green Image | t) I intend to buy products from company who has a positive environmental image. | Nguyen-Viet et al. (2024) |
| | u) I intend to buy products from company that acts responsibly toward the environment. | Nguyen-Viet et al. (2024); Chen (2010) |
| Green Self-Identity | v) I feel proud to see myself as a consumer who buys green products.<br>w) Being “green” is an important part of who I am. | Kumar et al. (2023) |
| Attitude Towards Green Products | x) For me, buying green products is a wise decision. | Ajzen (1991); Sharma et al. (2022) |
| | y) I like the idea of buying green products. | Ajzen (1991) |
| Subjective Norms | z) My family/friends expect me to choose green products. | Ajzen (1991); Yadav & Pathak (2016) |

| | | |
|---|---|---|
| | aa) People around me think buying green products is the right thing to do. | |
| Prior Experience of using Green Products | ab) I have previously bought green products.<br>ac) My past experiences with green products were positive. | Ali et al. (2024) |

### 3.3.4 Data gathering process and responses

An online questionnaire was used to collect the data for this study. A pilot test was done on October 8, 2025, to make sure the survey was clear and worked properly before the main data collection. Following minor adjustments, the final questionnaire was distributed on 9 October 2025. The survey was conducted through several online channels, which included posting it on the author's personal social media accounts and LinkedIn profile as well as sending direct messages to his/her family and friends. Thanks to this method, it became possible for the researcher to gather information from a broad range of respondents, especially from Germany. As far as Finland is concerned, the survey was distributed through multiple channels, including the author's personal network as well as through the supervisor, who shared the survey with students at a Finnish university. The collection of the data occurred within a specified period of time; all respondents took part in it voluntarily and anonymously. The survey closed on 30 November 2025, and then the data was exported for further analysis. In total, there were 193 responses. It should be mentioned that the dataset was reviewed and prepared for analysis; in particular, it was checked for outliers. However, no response had to be eliminated; all received responses were analysed. Consequently, the total number of respondents amounts to 128 respondents from Germany and 65 respondents from Finland. The next step consisted in organizing and structuring the data, i.e., separating the dataset by countries and preparing variables for further analysis.

### 3.3.5 Method of data analysis

As noted above, the data used in this study are quantitative and were collected using a questionnaire. In order to make the data ready for empirical analysis, the responses in the questionnaire were coded and structured for statistical calculations. This corresponds to the principles of quantitative data analysis, according to which data need to be processed and structured before being analysed empirically (Saunders et al., 2016). As a result of such processing, all questionnaire questions were aggregated into level measures by calculating the average for each variable.

The process of empirical analysis was divided into two major steps, as well as the process of analysing quantitative data (Saunders et al., 2016). Factor analysis was performed first to validate the measurement of the constructs and the appropriateness of the underlying questions in terms of the corresponding variables. Multiple regression analysis was then used to verify the hypotheses and evaluate the impact of the independent variables on consumers' green purchase intention. Regression analysis is especially useful when studying the association between one dependent and several independent variables, making it popular among quantitative researchers (Saunders et al., 2016).

For this study, separate regression models were estimated for the German and Finnish samples. Furthermore, the regression analysis was conducted using two models due to multicollinearity issues within the dataset. As indicated in the regression out-put, the constructs corporate green image and consumer’s positive subjective norms were excluded from the regression models because of their high correlation with other independent variables (own calculation).

## 3.4 Research credibility

For the credibility of this study, it is necessary to establish both validity and reliability of the collected data. In surveys, the credibility of the research process depends on the degree to which the respondent perceives the question as meant by the researcher and vice versa (Saunders et al., 2016). It is particularly significant in the research that uses multiple Likert scales to examine constructs like attitudes, self-concept, or environment

concern. Based on previous measurements of the construct found in the literature (Ajzen, 1991; Sharma et al., 2022; Ali et al., 2024), the content validity of the instrument used is enhanced, while the pilot test guaranteed its clarity and usability. Hence, the following paragraphs elaborate on the validity and reliability of this thesis.

### 3.4.1 Validity

Validity is defined as how accurately the research tool used in measuring the concept of interest measures what it was designed to measure (Saunders et al., 2016). For this research, validity is assured by using the constructs in previous literature. The constructs have been measured using instruments which have previously been validated (e.g., Ajzen, 1991; Sharma et al., 2022).

With regards to content validity, efforts were made to develop the questionnaire for the measurement of constructs within the context of FMCG industry, as far as green purchase behaviour was concerned. With respect to internal validity, there has been an effort to validate the relationship among the variables by means of regression analysis. Regarding external validity, inclusion of data from participants from both Germany and Finland strengthens it. However, the lack of probability sampling affects its generalizability.

### 3.4.2 Reliability

By definition, reliability is associated with the consistency of results achieved through measurement (Saunders et al., 2016). For the purposes of conducting quantitative analysis, it is crucial to ensure that the measurement of the concepts under study achieves consistent results.

The reliability of this research study was ensured through the use of standardized measuring items adopted from credible literature. To ensure consistency, each concept was measured by several items, reducing chances of random errors during the measurement and improving internal consistency. Additionally, the choice of items used for the

measurement is guided by ensuring that they make sense to respondents and maintain consistency with the source material.

Another aspect of ensuring reliability involved adopting a structured questionnaire where uniform scales (i.e., Likert scale) were used for all the concepts. This ensures that responses are obtained in a consistent fashion.

All the above measures have helped to ensure that findings can be repeated.

# 4 Empirical analysis

The current chapter provides an empirical analysis of the collected data and highlights some of the most important results obtained during the course of the study. The paper begins with a review of the demographics of the participants in the research. Next, the results of the factor analysis performed to measure the constructs are discussed. Lastly, the findings of the regression analysis are presented here.

## 4.1 Demographic characteristics

This section presents the demographic characteristics of the respondents. The analysis includes country of residence, gender, age, education, employment status, income level, and city of residence. The results are illustrated using descriptive statistics and corresponding figures.

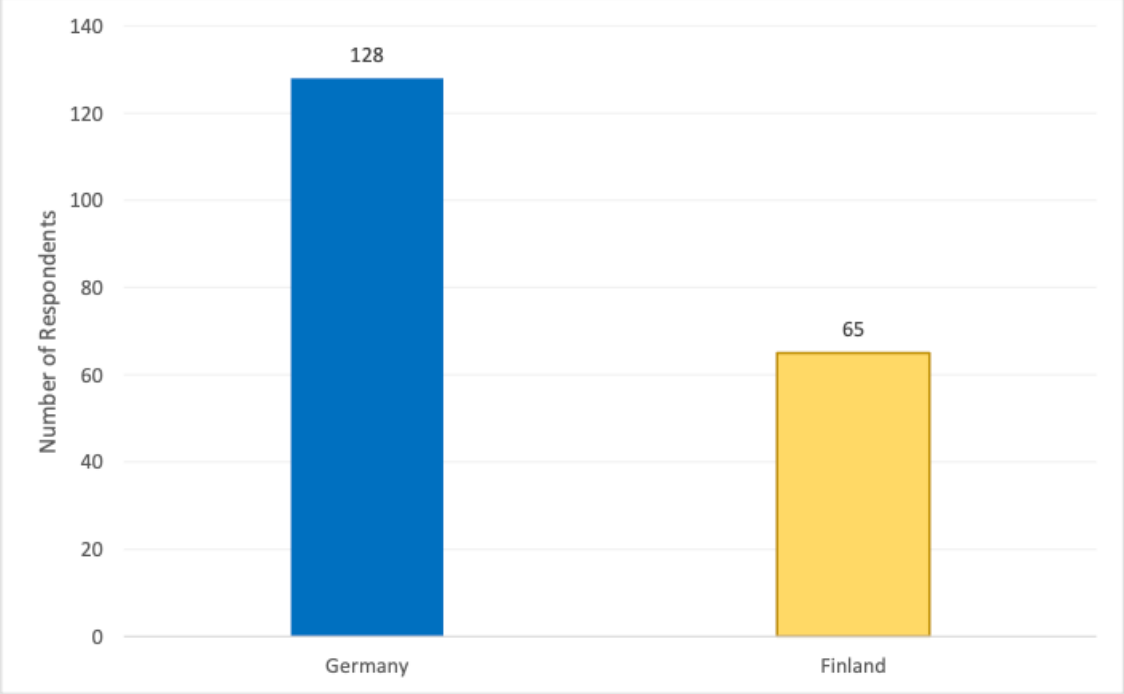



**Figure 3.** The country distribution of respondents.

The country of residence of the respondents is presented in Figure 3. The majority of participants are from Germany (n=128), while a smaller share originates from Finland

(n=65). This distribution reflects the data collection process and indicates a stronger representation of German respondents in the sample.

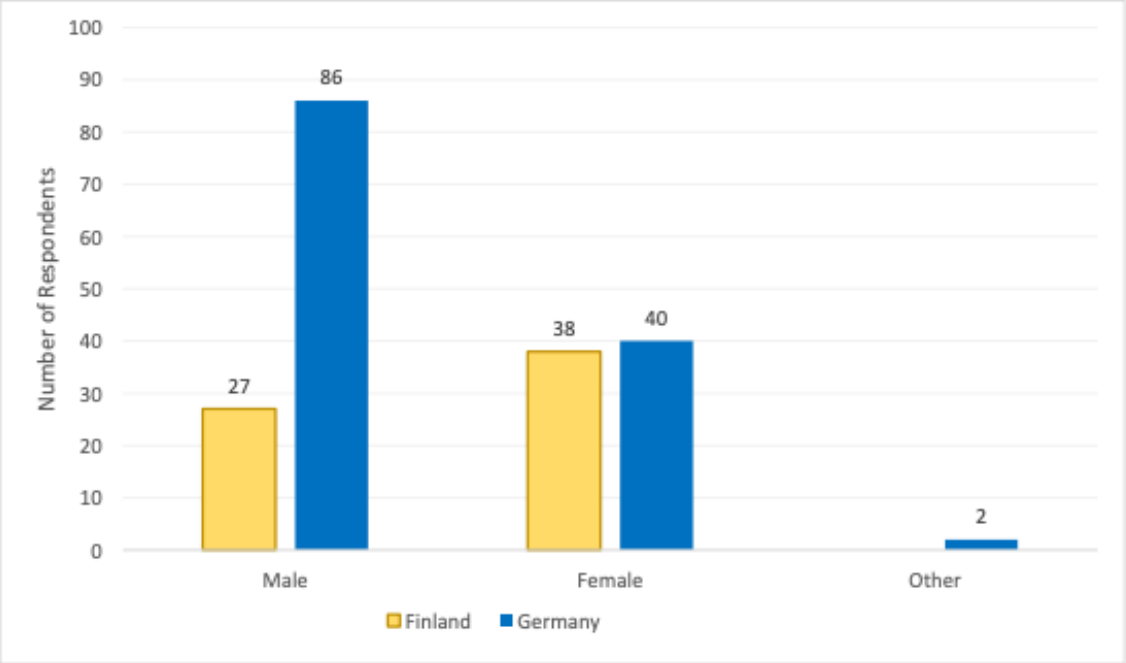



**Figure 4.** The gender distribution of respondents.

The gender distribution of the respondents is illustrated in Figure 4. In the German sample, the majority of respondents are male (n=86), followed by female respondents (n=40), while only a very small number identified as other (n=2). For the Finnish sample, there are more women than men, with 38 women and 27 men in total, and no other. In general, the gender ratio is quite evenly distributed in both samples, with slight variations between the two countries.

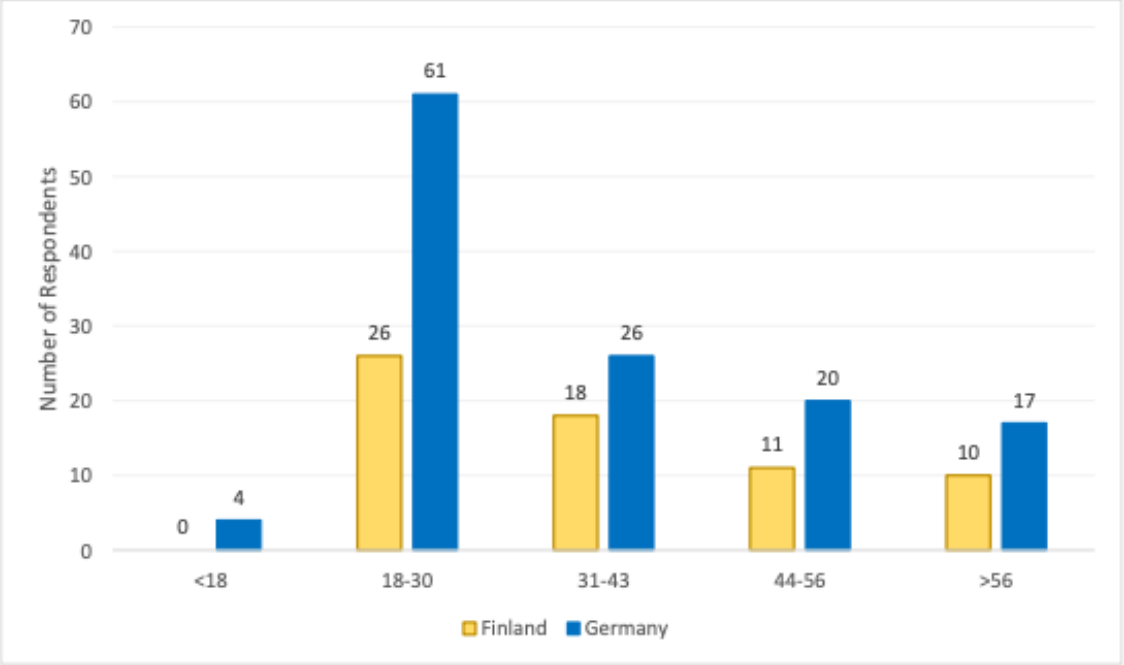



**Figure 5.** The age distribution of respondents.

The age distribution of respondents is presented in Figure 5. The largest group of participants in both countries falls within the 18–30 age group, with 61 respondents from Germany and 26 from Finland. The second largest group is the 31–43 category (Germany: n=26; Finland: n=18). Older age groups (44–56 and >56) are represented to a lesser extent, while only a negligible number of respondents are under 18 (Germany: n=4; Finland: n=0). Overall, the sample is predominantly composed of young adults.

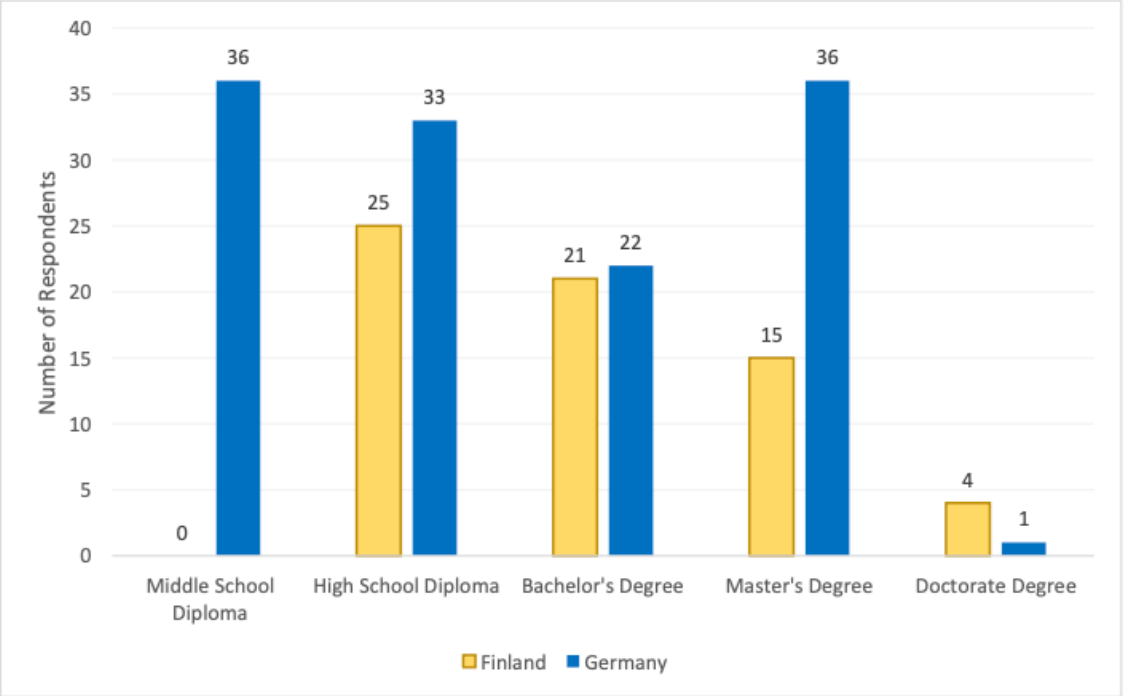



**Figure 6.** The educational level of respondents.

The educational background of respondents is shown in Figure 6. The majority of participants in both countries hold a Bachelor's degree (Germany: n=36; Finland: n=21) or a Master's degree (Germany: n=33; Finland: n=15). A smaller number of respondents reported having a high school diploma (Germany: n=22; Finland: n=15) or middle school education. Higher academic qualifications, such as a doctorate degree, are only represented by a very small number of respondents. Overall, the sample is relatively highly educated.

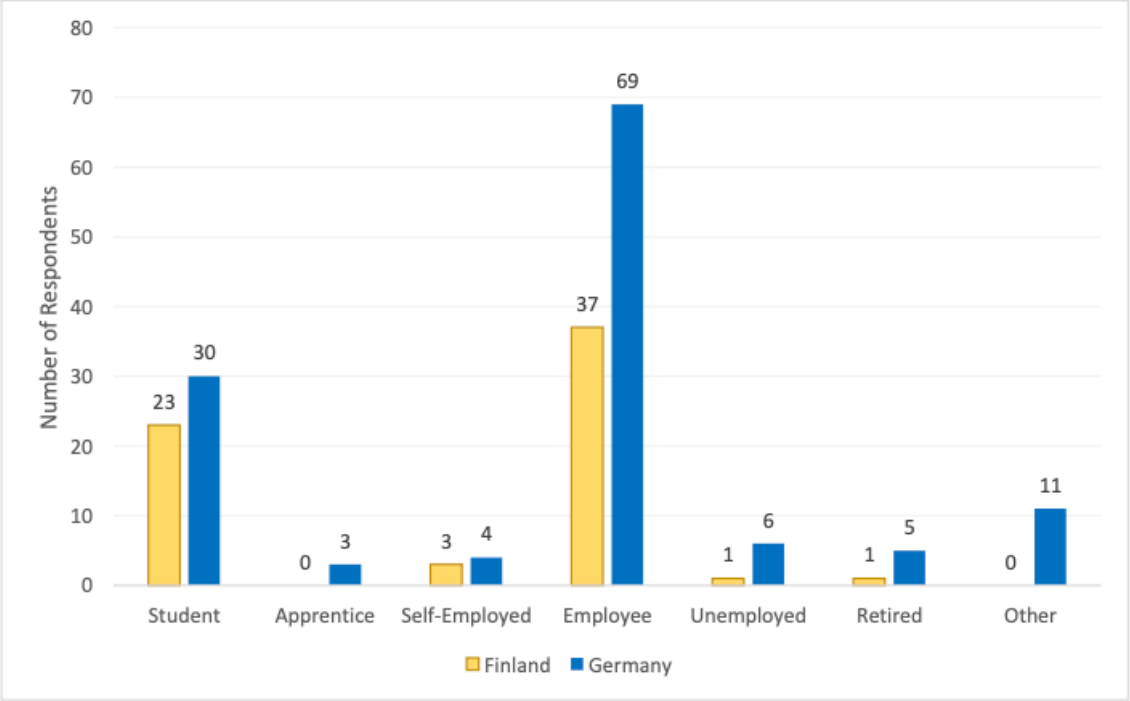



**Figure 7.** The employment status of respondents.

The employment status of respondents is illustrated in Figure 7. Most participants are employed (Germany: n=69; Finland: n=37), followed by students (Germany: n=30; Finland: n=23). Other employment categories, like self-employment (Germany: n=4; Finland: n=3), unemployment (Germany: n=6; Finland: n=1), and retirement (Germany: n=5; Finland: n=1), are present in the sample but to a lesser extent, implying that the sample consists mostly of economically active persons.

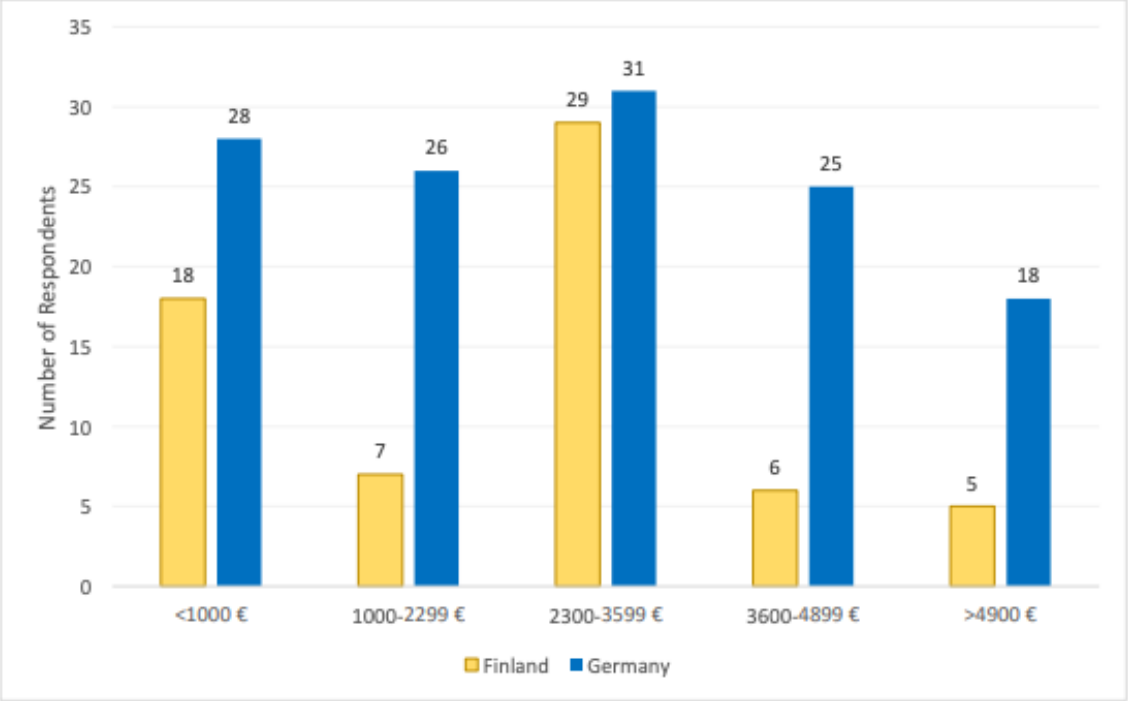



**Figure 8.** The monthly income of respondents.

The income distribution of the respondents is shown in Figure 8. The highest number of respondents belong to the income category of 2300 – 3599 € (Germany: n=31; Finland: n=29). Lower income categories, such as less than 1000 € (Germany: n=28; Finland: n=18), are also present. More affluent income categories such as 3600 – 4899 € (Germany: n=25; Finland: n=6) and above 4900 € (Germany: n=18; Finland: n=5) are less commonly present. There appears to be a slight difference in income categories between the two countries in favour of Germany.

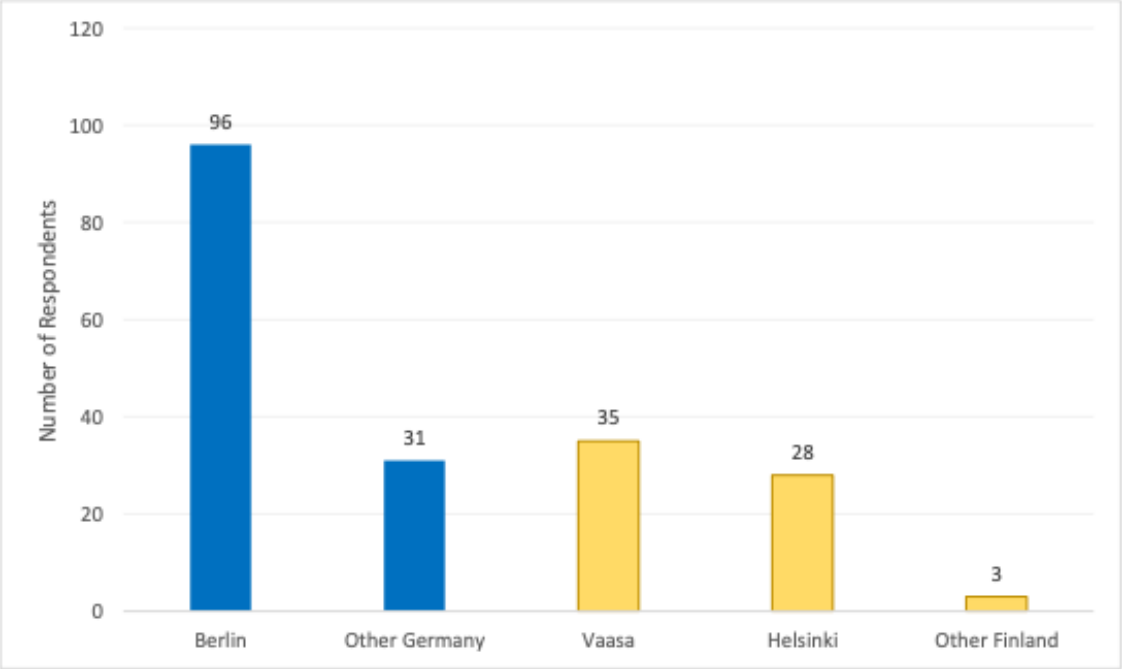



**Figure 9.** The city of living of respondents.

The distribution of respondents by their place of living is shown in Figure 9. Most respondents live in Berlin (n=96), followed by Vaasa (n=35) and Helsinki (n=28). Other German (n=31) and Finnish (n=3) cities have fewer residents. Thus, the sample represents few major cities, with an especially high number of respondents residing in Berlin.

## 4.2 Confirmatory factor analysis

Instead of exploratory factor analysis, confirmatory factor analysis was performed because the measures of the constructs in this study were adopted from prior empirical studies. Hence, confirmatory factor analysis was conducted to assess the internal consistency of the borrowed measurement items. Table 3 presents the Cronbach's alpha values for all constructs for both the German and Finnish samples.

All multi-item constructs exceeded the minimum recommended Cronbach's alpha threshold of 0.6 (Götz et al., 2010), suggesting adequate reliability and internal consistency. Most of the constructs had values above 0.7 and some constructs even reached above 0.8, which indicates good to excellent reliability. The highest reliability values were observed for CGPI, GA, and CGI in both samples.

For the German sample, the first item of the PHPGP construct was removed because its inclusion reduced the internal consistency of the construct. Consequently, only the second item was retained for further analysis. Since the construct was thereafter measured using a single item, Cronbach's alpha was no longer applicable. Similarly, reliability analysis was not applicable for the single-item constructs CA, CE, CI, and CG, as internal consistency cannot be assessed for constructs measured by only one indicator.

Overall, the results indicate that the measurement model demonstrates satisfactory reliability and is suitable for the subsequent regression analysis.

**Table 3.** Confirmatory factor analysis

| Germany | | | | Finland | | | |
|---|---|---|---|---|---|---|---|
| **Constructs** | **Items** | **Included/Removed** | **Alpha** | **Constructs** | **Items** | **Included/Removed** | **Alpha** |
| CGPI | 1 | Inc. | 0.912 | CGPI | 1 | Inc. | 0.955 |
| CGPI | 2 | Inc. | | CGPI | 2 | Inc. | |
| CGPI | 3 | Inc. | | CGPI | 3 | Inc. | |
| CGPI | 4 | Inc. | | CGPI | 4 | Inc. | |
| GA | 1 | Inc. | 0.845 | GA | 1 | Inc. | 0.944 |
| GA | 2 | Inc. | | GA | 2 | Inc. | |
| GA | 3 | Inc. | | GA | 3 | Inc. | |
| GA | 4 | Inc. | | GA | 4 | Inc. | |
| EPGI | 1 | Inc. | 0.806 | EPGI | 1 | Inc. | 0.858 |
| EPGI | 2 | Inc. | | EPGI | 2 | Inc. | |
| EPGI | 3 | Inc. | | EPGI | 3 | Inc. | |
| PHPGP | 1 | Rem. | | PHPGP | 1 | Inc. | 0.834 |
| PHPGP | 2 | Inc. | - | PHPGP | 2 | Inc. | |
| EKC | 1 | Inc. | 0.78 | EKC | 1 | Inc. | 0.82 |
| EKC | 2 | Inc. | | EKC | 2 | Inc. | |
| CHC | 1 | Inc. | 0.732 | CHC | 1 | Inc. | 0.85 |
| CHC | 2 | Inc. | | CHC | 2 | Inc. | |
| PQGP | 1 | Inc. | 0.744 | PQGP | 1 | Inc. | 0.921 |
| PQGP | 2 | Inc. | | PQGP | 2 | Inc. | |
| CGI | 1 | Inc. | 0.871 | CGI | 1 | Inc. | 0.968 |
| CGI | 2 | Inc. | | CGI | 2 | Inc. | |
| CGSI | 1 | Inc. | 0.767 | CGSI | 1 | Inc. | 0.879 |
| CGSI | 2 | Inc. | | CGSI | 2 | Inc. | |
| PAGP | 1 | Inc. | 0.858 | PAGP | 1 | Inc. | 0.936 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| PAGP | 2 | Inc. | | PAGP | 2 | Inc. | |
| CPSN | 1 | Inc. | 0.745 | CPSN | 1 | Inc. | 0.86 |
| CPSN | 2 | Inc. | | CPSN | 2 | Inc. | |
| PEGP | 1 | Inc. | 0.734 | PEGP | 1 | Inc. | 0.888 |
| PEGP | 2 | Inc. | | PEGP | 2 | Inc. | |
| CA | 1 | Inc. | - | CA | 1 | Inc. | - |
| CE | 1 | Inc. | - | CE | 1 | Inc. | - |
| CI | 1 | Inc. | - | CI | 1 | Inc. | - |
| CG | 1 | Inc. | - | CG | 1 | Inc. | - |

Notes: CGPI = Consumer Green Purchase Intention; GA = Green Advertising; EPGI = Eco-Packaging and Green Ingredients; PHPGP = Perceived High Price of Green Products; EKC = Environmental Knowledge and Concern; CHC = Consumer Health Consciousness; PQGP = Perceived Quality and Value of Green Products; CGI = Corporate Green Image; CGSI = Consumer Green Self-Identity; PAGP = Positive Attitude Towards Green Products; CPSN = Consumer Positive Subjective Norms; PEGP = Prior Experience with Green Products; CA = Consumer Age; CE = Consumer Education; CI = Consumer Income; CG = Consumer Gender.

## 4.3 Data analysis

To test the proposed hypotheses and examine the factors influencing consumers' green purchase intentions, multiple regression analysis was conducted separately for the German and Finnish samples. The results of the regression analysis are presented in Table 4.

**Table 4.** Multiple regression analysis results of hypotheses testing (Standardized beta coefficients and p-values).

| | **Consumer's Green Purchase Intentions (Germany)** | | | **Consumer's Green Purchase Intentions (Finland)** | | |
|---|---|---|---|---|---|---|
| | **Model 1** | **Model 2** | | **Model 1** | **Model 2** | |
| **Independent Variables** | Beta (P-value) | Beta (P-value) | Result | Beta (P-value) | Beta (P-value) | Result |
| Green Advertising | .322 (.001)*** | | H1: S | .199 (.214) | | H1: NS |
| Eco-Packaging and Green Ingredients | .464 (.001)*** | | H2: S | -.073 (.510) | | H2: NS |

| | | | | | | |
|---|---|---|---|---|---|---|
| Perceived High Price of Green Products | | -1.32 (.001)*** | H3: S | | -.117 (.104)* | H3: S |
| Environmental knowledge and concern | | .410 (.002)*** | H4: S | | .203 (.001)*** | H4: S |
| Consumer's health consciousness | | .616 (.014)*** | H5: S | | .138 (.124)* | H5: S |
| Perceived value/quality of green products | .144 (.663) | | H6: NS | .226 (.074)* | | H6: S |
| Consumer's age | .167 (.012)*** | | H7a: S | -1.00 (.371) | | H7a: NS |
| Consumer's education | .083 (.098)* | | H7b: S | .195 (.069)* | | H7b: S |
| Consumer's income | -.035 (.536) | | H7c: NS | -.172 (.088)* | | H7c: NS |
| Consumer's gender | .380 (.006)*** | | H7d: S | -.031 (.845) | | H7d: NS |
| Corporate green image | | | H8: Excluded | | | H8: Excluded |
| Consumer green self-identity | -.192 (.019)** | | H9: NS | .345 (.030)** | | H9: S |
| A positive attitude towards green product | | .363 (.116)* | H10: S | | .66 (.001)*** | H10: S |
| Consumer's positive subjective norms | | | H11: Excluded | | | H11: Excluded |
| Prior experience of using green products | .201 (.019)** | | H12: S | .061 (.617) | | H12: NS |
| **Construct $R^2$** | .627 | .417 | | .692 | .693 | |

*** p ≤ 0.01, ** p ≤ 0.05, * p ≤ 0.1

**Notes: (1)** Data was run in two separate models due to multicollinearity issues, **(2)** Two constructs (corporate green image and consumer's positive subjective norms) are not included in regression model because of their high correlation with rest of independent variables.

The $R^2$ values for the dependent variable in all four models are .627, .417, .692 and .693, which suggests that the independent variables explain 62.7%, 41.7%, 69.2% and 69.3% of the variance in the dependent variable across the four models.

H1 and H2 find partial support as they are only supported in the context of Germany. This shows that green advertising and eco-packaging and green ingredients only enhance German consumers' green purchase intentions. As expected in H3, H4 and H5, the high price of green products reduces, while environmental knowledge and concern and consumers' health consciousness enhance German and Finnish consumers' green purchase intentions, thus indicating support for H3, H4 and H5. The results for H6 only support the notion that perceived value/quality of green products enhances Finnish consumers' green purchase intentions, thus indicating partial support. In addition, H7 is partially supported. German consumers' age, education, and gender (i.e. female) have a positive impact on green purchase intentions, while income has no impact. However, among Finnish consumers, only education enhances green purchase intentions, whereas the remaining demographic factors have no significant effect. H8 and H11 are excluded from the model because of multicollinearity issues. Similarly, H9 is partially supported as it is only supported in the context of Finland. Thus, Finnish consumers' green self-identity enhances their green purchase intentions. Moreover, H10 is fully supported, showing that Finnish and German consumers' positive attitudes towards green products enhance their green purchase intentions. Finally, H12 is only supported in the context of the German sample, showing that German consumers' prior experience of buying green products enhances their green purchase intentions.

Overall, the results show similarities and differences between German and Finnish consumers. In both countries, environmental knowledge and concern, health consciousness, perceived price and attitude towards green products were found to significantly influence green purchase intentions. On the other hand, green advertising, eco-packaging and green ingredients, consumer green self-identity and prior experience with green products had country-specific effects. These findings indicate that the determinants of green purchase intentions differ between Germany and Finland.

# 5 Discussion and conclusion

In this chapter the results of the empirical analysis are discussed in light of the existing literature and the theoretical framework of this study. The chapter is structured according to the key empirical findings, then the theoretical contributions, managerial implications, directions for future research and limitations of the study. The aim of this discussion is to develop a better understanding of the factors influencing consumers' green purchase intentions in Germany and Finland and to highlight the contributions of this study to both research and practice.

## 5.1 Discussion about key empirical findings

### 5.1.1 Product related factors

The initial results indicated that the impact of product-related variables on consumers' green purchase intentions was different across the countries, but they still might have an impact on consumers' green purchase intentions. In Germany, green advertising, eco-packaging, and green ingredients have a positive impact on consumers' purchase intentions, but this study could not find any impact on consumers' attitudes in Finland. As Tan et al. (2022), Wandosell et al. (2021), and Wang & Li (2022) stated, green marketing practices and sustainability-related product features are important predictors of consumers' positive attitudes and willingness to purchase environmentally friendly products. Furthermore, Feng et al. (2022) stated that sustainability-related cues in advertisements impact consumers' preference for green products. Finally, Magnier and Schoormans (2015) underlined the important role of sustainable packaging in shaping consumer evaluations. Therefore, German consumers emphasize more these variables when they decide to buy environmentally friendly products.

Second, this research revealed that the high price of green products negatively affects consumers' purchase intentions in both countries. As was found in numerous previous studies, price remains one of the most influential barriers for green consumption (Connell, 2010; Malhotra & Srivastava, 2023). Gomes et al. (2023) also state that consumers

might refuse to purchase green products, as they think that they are costlier than normal products. Thus, despite the fact that consumers know about the benefits of sustainable products and have a positive attitude towards them, they avoid selecting green products because of pricing issues.

Third, perceived value and quality of green products were shown to affect consumers' decision-making process in Finland but not in Germany. According to previous studies, consumers are prone to purchase green products if they believe they would benefit from them and if they provide higher quality compared to regular products (Braimah et al., 2022; Luo et al., 2022). In particular, Hudayah et al. (2023) found that perceived value increases the probability that consumers will decide to purchase environmentally friendly products. It appears that German consumers are paying more attention to product attributes than to quality or value.

### 5.1.2 Psychological and social factors

As shown above, psychological and social variables appear to have a substantial impact on explaining consumers' green purchase intentions. For example, environmental knowledge, environmental concern, health consciousness, consumer green self-identity and positive attitude towards green products were found to positively influence consumers' purchase intentions towards environment-friendly products. In particular, environmental knowledge and environmental concern, and health consciousness were found to significantly improve green purchase intentions in both countries. This result is consistent with previous research findings that indicated that environmentally concerned individuals with high levels of environmental knowledge would be more likely to engage in sustainable consumption behaviour (Chekima et al., 2016; Chen & Deng, 2016; Hossain et al., 2022). Similarly, Asif et al. (2022) found that environmental knowledge has a positive effect on the intention to purchase environment-friendly products. Therefore, the significance of this factor in both countries suggests that the level of awareness and concerns regarding environmental issues remains highly relevant for motivating consumers to engage in environmentally responsible activities.

Second, health consciousness turned out to positively influence consumers' green purchase intentions in both countries. This finding supports the assertion made by Vasan (2018) according to which health-oriented individuals would be more likely to buy environmentally friendly goods because they perceive them as healthier. Similarly, Liang et al. (2024) and Nguyen, Nguyen, & Nguyen (2023) contend that health-related motivations play a major role in consumers' sustainable purchase intentions. Consequently, this common feature suggests that consumers' concerns associated with personal health should be taken into account in the context of their decision-making process.

As far as consumer green self-identity is concerned, it was revealed to positively impact only Finnish consumers' purchase intentions related to green products. This finding is consistent with results obtained by Mohasuweerachai & Suttikun (2022) and Kumar et al. (2023) who stated that individuals who consider themselves to be environmentally responsible would be more prone to consume sustainably. Hence, the lack of any impact of this factor on German consumers may suggest that consumers in this country pay less attention to personal characteristics compared to Finnish consumers.

Positive attitude toward green products was shown to significantly increase the likelihood of engaging in environmentally responsible buying behaviour in both studied countries. As stated by Ajzen (1991), it is an essential element of the Theory of Planned Behaviour. This finding further corroborates previous studies claiming that attitude toward green products is the strongest predictor of green purchase intentions (Yadav & Pathak, 2016; Paul et al., 2016). Ali et al. (2024) also argue that people's positive perception of sustainability must be taken into account in the study of factors influencing consumers' purchasing behaviour.

Lastly, consumers' experience with green products positively affected their purchase intentions only in Germany. The current finding is supported by the literature according to which consumers tend to buy products based on their previous positive experiences (Sharma et al., 2022). Thus, German consumers who had already bought environmentally friendly products would be more likely to repeat such actions in the future.

### 5.1.3 Demographic factors

Regarding the demographic factors' effect on the green purchase intention, contradictory conclusions have been drawn from the study. The findings show that among German respondents, such demographic factors as age, education, and gender had a positive impact on green purchase intentions, while income did not demonstrate any effect on the consumers' behaviour in Germany. As for Finnish consumers, education was the only demographic factor that positively influenced the green purchase intention. Thus, demographic factors are less predictable than product-related factors and psychological traits when explaining the green purchase intention.

The positive influence of education is supported by other research according to which educated consumers have more chances to know about the negative consequences of their behaviour, including environmental damage, and make their choice in favour of sustainable consumption (Chekima et al., 2016; Examining Demographic Factors Impacting Green Marketing Strategies and Consumer Choices, 2023). Moreover, environmental knowledge has been proved to have positive effects on consumers' attitude to environmentally friendly products.

The positive effect of age on green purchasing decisions of German consumers agrees with previous research showing that consumers tend to develop more pro-environmental behavioural patterns with age due to environmental awareness and financial stability (Tanner & Kast, 2003). However, lack of the effect of age on Finnish consumers' green purchase intention makes researchers doubt whether the effect of age should be considered universal or dependent on the particularities of the national context.

According to the findings, only German consumers' gender had an impact on the green purchase intention, meaning that female consumers made greener choices more frequently than men. Similar trends have been discovered before according to which women expressed their concern for environmental issues more often than men and tended to choose environmentally friendly products (Chekima et al., 2016). Lack of the effect of gender on Finnish consumers' purchasing behaviour demonstrates, however, that gender roles and stereotypes can vary significantly between nations.

Summarizing the observations, one can say that demographic factors contribute less to explaining consumers' green purchase intention than psychological and product-related variables. This conclusion agrees with recent investigations according to which individual values and attitudes are better predictors of consumers' green behaviour than demographic characteristics (Joshi & Rahman, 2015; Ali et al., 2024).

## 5.2 Theoretical contributions

In addition to the contributions outlined above, this study adds new insights to the existing literature regarding green purchase intentions in several aspects. Firstly, unlike the majority of the previous research studies conducted in this field, the current research paper provides empirical evidence related to the determinants of consumers' green purchase intentions in the FMCG market by comparing the attitudes of German and Finnish respondents. In particular, this paper proves that the factors affecting individuals' green purchase intentions may differ in different countries. For instance, the results obtained in this study demonstrate that the factors of environment-related knowledge and concern, health consciousness, and attitudes towards green products exert a positive influence on green purchase intentions in both countries. Green advertising, eco-packaging and green ingredients, consumer green self-identity, and prior green product experience were found to have country-specific impacts.

The second contribution made by this research study is related to its focus on multiple determinants of green purchase intentions. While most researchers consider only one aspect at a time when analysing consumers' sustainable consumption behaviour, the current paper integrates twelve different determinants in a unified conceptual framework. It was shown that consumers’ green purchase intentions are influenced by different interconnected factors instead of a single determinant. This result supports the discussions presented by researchers in earlier research papers who stress the need to look for more advanced explanations of sustainable consumerism (Ali et al., 2024). Additionally, the findings underscore the intricacy of green purchase intentions and provide further support that sustainable consumption behaviour is impacted by a mix of product-related, psychological, social, and demographic factors.

Finally, this paper makes an important contribution to the TPB (Ajzen, 1991) as its theoretical foundation. Indeed, this research study proves that attitude towards green products positively influences consumers' green purchase intentions. However, this study also demonstrates that there is a need to develop an extended version of the TPB in order to include some cognitive and contextual factors, namely the factors of environment-related knowledge and concern, health consciousness, perceived price, and prior experience.

Overall, the findings reveal that consumers' green purchase intentions are influenced by a combination of product-related, psychological, social and demographic factors. Thus, the study contributes to a better understanding of sustainable consumption behaviour and stresses the importance of considering both universal and country-specific determinants in the study of green purchase intentions.

## 5.3 Managerial implications

There are numerous practical implications drawn from this study for organizations operating in the FMCG industry. With increasing consumer consideration of environmental issues, there is a need for the development of strategies that take into account the factors influencing green purchase intentions.

First, it can be seen that environmental awareness, health consciousness, and green attitude have a positive impact on green purchase intentions in Germany and Finland. Therefore, marketers have to pay attention to promoting the environmental and health effects of green products. It might be useful to ensure transparency and provide detailed information about the ingredients, the manufacturing process and the potential environmental impact of the product. Such an approach has been discussed in other empirical research as a factor that positively influences consumers' willingness to purchase green products (Chekima et al., 2016; Asif et al., 2022).

Next, it can be observed that in both Germany and Finland, the high cost of green products constitutes a barrier to green consumption. To make consumers less sensitive to the price of the product, companies need to find ways to lower their price sensitivity. For instance, they may emphasize the long-term value of the product, organize promotions,

provide discounts, and introduce cheaper options of green products. In addition, highlighting the value that consumers will receive in return for the extra money spent can increase willingness to purchase green products. Previous studies point at price as one of the main barriers to green consumption (Malhotra & Srivastava, 2023; Gomes et al., 2023).

Moreover, it can be said that marketing strategies must be developed in accordance with the country's specific features. Green advertising, green packing, and green ingredients turned out to be influential factors affecting green purchase intentions in Germany. Therefore, for companies operating in Germany, it is necessary to place emphasis on promoting environmentally friendly features of the product using marketing campaigns and eco-packing. Environmental claims, eco-labelling, and sustainability features of packaging can lead consumers to prefer green products. Earlier other studies have highlighted the significance of green advertising and sustainable packaging (Wang & Li, 2022; Magnier & Schoormans, 2015; Wandosell et al., 2021).

In Finland, perceived value and quality, as well as green self-identity, had a positive effect on green purchase intentions. Hence, marketers should place their primary focus on the quality of the product and the benefits it provides and simultaneously appeal to the values and beliefs of the consumer. Creating marketing messages that allow consumers to identify themselves with environmentally responsible persons may help to attract the consumers' attention. These recommendations are based on other studies showing the impact of perceived value and green self-identity on green consumption behaviour (Braimah et al., 2022; Mohasuweerachai & Suttikun, 2022).

Lastly, the effect of previous experience found in Germany implies that marketers need to facilitate product trials. Offering samples or other promotions to test the green product could help to achieve this goal.

## 5.4 Directions for future research

The above findings offer useful insights into the drivers of consumers' green purchase intentions. However, there are still several aspects for further research and analysis. First of all, future studies can extend the geographic coverage of the current study by

including more countries. In the current study, the impact of selected factors on German and Finnish consumers' green purchase intentions was investigated. Future studies can analyse these relationships in relation to other countries and cultural and economic backgrounds.

Second, further studies can test other factors that might influence consumers' green purchase intentions but have not been considered in the current analysis. In the current study, researchers have examined 12 different determinants based on the TPB model and its extensions. These include factors such as attitude towards consumption of sustainably produced products and perceived behavioural control over green purchase. However, future research may consider other factors that may have an effect on consumer behaviour such as green trust or government support for sustainable consumption. Sustainable consumption behaviours can be influenced by a variety of factors other than those incorporated in the original model of the TPB (Ali et al., 2024; Joshi & Rahman, 2015).

Third, future studies can employ longitudinal research designs to understand better how the investigated variables may change and how it can influence consumers' green purchase intentions over time. This recommendation is based on the design used in the current study, which can capture respondents' opinions only at one point in time. A longitudinal approach allows to analyse consumers' opinions and attitudes over time, and their purchasing intentions.

Finally, future research can explore consumers' actual purchase behaviour instead of green purchase intention. Green purchase intention has been extensively researched and widely recognized as one of the most dependable predictors of consumer behaviour. At the same time, previous studies have shown that there is a gap between consumer behaviour and intentions related to sustainable products (Vermeir & Verbeke, 2006; Nguyen et al., 2019).

## 5.5 Limitations

This study offers important insights into the determinants of consumers’ green purchase intentions, but some limitations need to be recognised.

First, the data collection was conducted through an online survey, and non-probability sampling was used, therefore the sample may not be fully representative of the wider populations of Germany and Finland. Therefore, caution should be exercised when generalising the findings beyond the respondents included in this study.

Secondly, the research used a cross-sectional research design, where consumers' perceptions and intentions are measured at the same time point. Therefore, the results do not allow conclusions about causal relationships or changes in green purchase intentions over time. Consumer attitudes and perceptions of sustainability may change as environmental issues, market conditions and societal expectations continue to evolve.

Third, the study focused on consumers' green purchase intentions, not the actual purchasing behaviour. Although purchase intentions are widely recognised as important predictors of behaviour, intentions do not always translate into actual purchases. Therefore, the findings should be interpreted as reflecting consumers' stated intentions rather than their observed purchasing behaviour.

Finally, while the study incorporated twelve determinants identified in previous literature, other potentially relevant factors were not included in the research model. As a result, additional variables may exist that could further explain consumers' green purchase intentions. Nevertheless, the selected determinants provide a comprehensive framework for understanding the factors influencing green purchase intentions in the FMCG sector.

## References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-t

Alam, M. (2023). A study on the selection motives and challenges faced by consumers concerning green packaged products. *TEM Journal*, *12*(4), 2138–2145. https://doi.org/10.18421/tem124-38

Alharthey, B. K. (2019). Impact of green marketing practices on consumer purchase intention and buying decision with demographic characteristics as moderator. *International Journal of Advanced and Applied Sciences*, *6*(3), 62–71. https://doi.org/10.21833/ijaas.2019.03.010

Ali, T., Heiniemi, H. E., Shahzad, K., Ojala, A., Saleem, U., & Rahman, R. (2024). Beyond attitude-behaviour debate on sustainable consumption: Factors driving sustainable consumption in the fashion industry. *International Journal of Export Marketing*. https://doi.org/10.1504/ijexportm.2024.146300

Amatulli, C., De Angelis, M., Peluso, A. M., Soscia, I., & Guido, G. (2019). The effect of negative message framing on green consumption: An investigation of the role of shame. *Journal of Business Ethics*, *157*(4), 1111–1132. https://doi.org/10.1007/s10551-017-3644-x

Ansar, N. (2013). Impact of green marketing on consumer purchase intention. *Mediterranean Journal of Social Sciences*, *4*(11), 650–650. https://doi.org/10.5901/mjss.2013.v4n11p650

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, *40*(4), 471–499. https://doi.org/10.1348/014466601164939

Arnoldussen, F., Koetse, M. J., de Bruyn, S. M., & Kuik, O. (2022). What are people willing to pay for social sustainability? A choice experiment among Dutch consumers. *Sustainability*, *14*(21), 14299. https://doi.org/10.3390/su142114299

Asif, M. H., Tan, Z., Irfan, M., & Işık, C. (2022). Do environmental knowledge and green trust matter for purchase intention of eco-friendly home appliances? An

application of extended theory of planned behavior. *Environmental Science and Pollution Research International*, *30*(13), 37762–37774. https://doi.org/10.1007/s11356-022-24899-1

Bamberg, S., Möser, G., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology*, *27*(1), 14–25. https://doi.org/10.1016/j.jenvp.2006.12.002

Biswas, A., & Roy, M. (2015). Leveraging factors for sustained green consumption behavior based on consumption value perceptions: Testing the structural model. *Journal of Cleaner Production*, *95*, 332–340. https://doi.org/10.1016/j.jclepro.2015.02.042

Braimah, S. M., Amoako, G. K., Abubakari, A., Ampong, G. O. A., & Ofori, K. S. (2022). Green perceived value and consumer attitudes in the light of the SDGs: A replication study from a developing economy. *Society and Business Review*, *18*(2), 345–362. https://doi.org/10.1108/sbr-03-2022-0088

Carrington, M., Neville, B. A., & Whitwell, G. J. (2010). Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers. *Journal of Business Ethics*, *97*(1), 139–158. https://doi.org/10.1007/s10551-010-0501-6

Chekima, B., Chekima, S., Wafa, S. A. W. S. K., Igau, O. A., & Sondoh, S. L. (2016). Sustainable consumption: The effects of knowledge, cultural values, environmental advertising, and demographics. *International Journal of Sustainable Development and World Ecology*, *23*(2), 210–220. https://doi.org/10.1080/13504509.2015.1114043

Chen, K., & Deng, T. (2016). Research on the green purchase intentions from the perspective of product knowledge. *Sustainability*, *8*(9), 943. https://doi.org/10.3390/su8090943

Chen, Y.-S. (2010). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics*, *93*(2), 307–319. https://doi.org/10.1007/s10551-009-0223-9

Connell, K. Y. H. (2010). Internal and external barriers to eco-conscious apparel acquisition. *International Journal of Consumer Studies*, *34*(3), 279–286. https://doi.org/10.1111/j.1470-6431.2010.00865.x

Examining Demographic Factors Impacting Green Marketing Strategies and Consumer Choices. (2023). *Journal of Informatics Education and Research*, *3*(2), 1515 to 1530. https://doi.org/10.52783/jier.v3i2.273

Gleim, M. R., Smith, J. S., Andrews, D., & Cronin, J. J. (2013). Against the green: A multi-method examination of the barriers to green consumption. *Journal of Retailing*, *89*(1), 44–61. https://doi.org/10.1016/j.jretai.2012.10.001

Gomes, S., Lopes, J. M., & Nogueira, S. (2023). Willingness to pay more for green products: A critical challenge for Gen Z. *Journal of Cleaner Production*, *390*, 136092. https://doi.org/10.1016/j.jclepro.2023.136092

Götz, O., Liehr-Gobbers, K., & Krafft, M. (2010). Evaluation of structural equation models using the partial least squares (PLS) approach. In V. Esposito Vinzi, W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of partial least squares. Springer handbooks of computational statistics* (pp. 691–711). Springer. https://doi.org/10.1007/978-3-540-32827-8_30

Grankvist, G., & Biel, A. (2007). Predictors of purchase of eco-labelled food products: A panel study. *Food Quality and Preference*, *18*(4), 701–708. https://doi.org/10.1016/j.foodqual.2006.11.002

Gu, C., Liu, S., & Chen, S. (2022). Does viewing green advertising promote sustainable environmental behavior? An experimental study of the licensing effect of green advertising. *Sustainability*, *14*(22), 15100. https://doi.org/10.3390/su142215100

Hossain, I., Nekmahmud, M., & Fekete-Farkas, M. (2022). How do environmental knowledge, eco-label knowledge, and green trust impact consumers' pro-environmental behaviour for energy-efficient household appliances? *Sustainability*, *14*(11), 6513. https://doi.org/10.3390/su14116513

Hudayah, S., Ramadhani, M. A., Sary, K. A., Raharjo, S., & Yudaruddin, R. (2023). Green perceived value and green product purchase intention of Gen Z consumers: Moderating role of environmental concern. *Environmental Economics*, *14*(2), 87–102. https://doi.org/10.21511/ee.14(2).2023.07

Igbomor, E. (2024). The effect of green packaging on consumers buying behavior. *Ekonomika a Spoločnosť*, *25*(1), 111–123. https://doi.org/10.24040/eas.2024.25.1.111-123

Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, *3*(1), 128–143. https://doi.org/10.1016/j.ism.2015.04.001

Kabir, M. S. H. (2023). A longitudinal study on organic food continuance behavior of Generation Y and Generation Z: Can health consciousness moderate the decision? *Young Consumers*, *24*(5), 513–539. https://doi.org/10.1108/yc-09-2022-1606

Kumar, R., Kumar, K., Singh, R., Sá, J. C., Carvalho, S., & Santos, G. (2023). Modeling Environmentally Conscious Purchase Behavior: Examining the Role of Ethical Obligation and Green Self-Identity. *Sustainability*, *15*(8), 6426. https://doi.org/10.3390/su15086426

Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, *18*(6), 503–520. https://doi.org/10.1108/eum0000000006155

Liang, G. (2024). Factors affecting green purchase behaviour and future marketing strategy. *American Journal of Industrial and Business Management*, *14*(2), 115–130. https://doi.org/10.4236/ajibm.2024.142010

Liang, H., Wu, Z., & Du, S. (2024). Study on the impact of environmental awareness, health consciousness, and individual basic conditions on the consumption intention of green furniture. *Sustainable Futures*, *6*, 100245. https://doi.org/10.1016/j.sftr.2024.100245

Limbu, Y. B., & Ahamed, A. (2023). What influences green cosmetics purchase intention and behavior? A systematic review and future research agenda. *Sustainability*, *15*(15), 11881. https://doi.org/10.3390/su151511881

Lobo, A., & Nguyen, N. (2017). Young consumers' green purchase behaviour in an emerging market. *Journal of Strategic Marketing*, *26*(7), 583–600. https://doi.org/10.1080/0965254x.2017.1318946

Luo, B., Li, L., & Sun, Y. (2022). Understanding the influence of consumers' perceived value on energy-saving products purchase intention. *Frontiers in Psychology*, *12*, 640376. https://doi.org/10.3389/fpsyg.2021.640376

Magnier, L., & Schoormans, J. P. L. (2015). Consumer reactions to sustainable packaging: The interplay of visual appearance, verbal claim and environmental concern. *Journal of Environmental Psychology*, *44*, 53–62. https://doi.org/10.1016/j.jenvp.2015.09.005

Malhotra, G., & Srivastava, H. (2023). Green purchase intention in omnichannel retailing: Role of environmental knowledge and price sensitivity. *Journal of Strategic Marketing*, 1–24. https://doi.org/10.1080/0965254x.2023.2241464

Mohasuweerachai, P., & Suttikun, C. (2022). The effect of green self-identity on perceived image, warm glow and willingness to purchase: A new generation's perspective towards eco-friendly restaurants. *Sustainability*, *14*(17), 10539. https://doi.org/10.3390/su141710539

Naini, S. R., & Reddy, M. R. (2023). A bibliometric analysis on factors influencing green consumer behaviour – research issues and future directions. *Benchmarking: An International Journal*. https://doi.org/10.1108/bij-10-2022-0648

Nguyen, H. V., Nguyen, C. H., & Hoang, T. T. B. (2019). Green consumption: Closing the intention-behavior gap. *Sustainable Development*, *27*(1), 118–129. https://doi.org/10.1002/sd.1875

Nguyen, P.-H., Nguyen, D. Q., & Nguyen, L. A. (2023). Quantitative insights into green purchase intentions: The interplay of health consciousness, altruism, and sustainability. *Cogent Business & Management*, *10*(3), 2253616. https://doi.org/10.1080/23311975.2023.2253616

Nguyen-Viet, B., Tran, C. T., & Ngo, H. T. K. (2024). Corporate social responsibility and behavioral intentions in an emerging market: The mediating roles of green brand

image and green trust. *Cleaner and Responsible Consumption*, *12*, 100170. https://doi.org/10.1016/j.clrc.2024.100170

Nor, N. S. N. M., Senawi, A. R., Mokhtar, M. Z., & Harun, S. (2024). Factors affecting green purchase behavior among undergraduate students: A conceptual analysis. *Information Management and Business Review*, *16*(3), 35–42. https://doi.org/10.22610/imbr.v16i3(i)s.4091

Ottman, J. A., Stafford, E. R., & Hartman, C. L. (2006). Avoiding green marketing myopia: Ways to improve consumer appeal for environmentally preferable products. *Environment*, *48*(5), 22–36. https://doi.org/10.3200/envt.48.5.22-36

Paramzina, U., & Babazade, A. (2019). *Factors influencing green consumption: The moderating effect of market maturity* (Master's thesis, Linnaeus University). DiVA Portal. https://urn.kb.se/resolve?urn=urn:nbn:se:lnu:diva-84680

Paul, J., Modi, A. G., & Patel, J. D. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, *29*, 123–134. https://doi.org/10.1016/j.jretconser.2015.11.006

Pro Luomu ry. (2023). *Luomu Suomessa 2023* [Organic in Finland 2023 Report]. Pro Luomu. https://proluomu.fi/wp-content/uploads/2023/06/luomu-suomessa-2023.pdf

Rabayu, Y., Sukresna, I. M., & Sukresna, I. M. (2022). Green self-identity as a mediating variable of green knowledge and green purchase behavior. *Jurnal Organisasi Dan Management*, *18*(1), 74–87. https://doi.org/10.33830/jom.v18i1.2564.2022

Saunders, M., Lewis, P., & Thornhill, A. (2016). Research methods for business students (7th ed.). Harlow, England: Pearson Education.

Sharma, K., Aswal, C., & Paul, J. (2022). Factors affecting green purchase behavior: A systematic literature review. *Business Strategy and the Environment*, *32*(4), 2078–2092. https://doi.org/10.1002/bse.3237

Suphasomboon, T., & Vassanadumrongdee, S. (2022). Toward sustainable consumption of green cosmetics and personal care products: The role of perceived value and ethical concern. *Sustainable Production and Consumption*, *33*, 230–243. https://doi.org/10.1016/j.spc.2022.07.004

Tan, Z., Sadiq, B., Bashir, T., Mahmood, H., & Rasool, Y. (2022). Investigating the impact of green marketing components on purchase intention: The mediating role of brand image and brand trust. *Sustainability*, *14*(10), 5939. https://doi.org/10.3390/su14105939

Tanner, C., & Kast, S. W. (2003). Promoting sustainable consumption: Determinants of green purchases by Swiss consumers. *Psychology & Marketing*, *20*(10), 883–902. https://doi.org/10.1002/mar.10101

Vasan, M. (2018). Effect of environment concern and health consciousness of consumers on purchase intention of green products: A path analytic approach. *International Journal of Management Studies*, *5*(3), 90–98.

Vehmas, K., Bocken, N., & Tuovila, H. (2024). Understanding consumer attitudes towards sustainable business models—A qualitative study with Finnish consumers. *Circular Economy and Sustainability*, *4*(2), 1487–1512. https://doi.org/10.1007/s43615-023-00338-2

Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude – behavioral intention" gap. *Journal of Agricultural & Environmental Ethics*, *19*(2), 169–194. https://doi.org/10.1007/s10806-005-5485-3

Wandosell, G., Parra-Meroño, M. C., Alcayde, A., & Montoya, F. G. (2021). Green packaging from consumer and business perspectives. *Sustainability*, *13*(3), 1356. https://doi.org/10.3390/su13031356

Wang, J., & Li, A. (2022). The impact of green advertising information quality perception on consumers' response: An empirical analysis. *Sustainability*, *14*(20), 13248. https://doi.org/10.3390/su142013248

White, K., Habib, R., & Hardisty, D. J. (2019). How to SHIFT consumer behaviors to be more sustainable: A literature review and guiding framework. *Journal of Marketing*, *83*(3), 22–49. https://doi.org/10.1177/0022242919825649

Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, *135*, 732–739. https://doi.org/10.1016/j.jclepro.2016.06.120

Zhang, H. (2023). Consumers' willingness to pay premium for carbon-labelled agricultural products—An empirical analysis based on CVM. *Proceedings of the 2nd International Conference on Mathematical Statistics and Economic Analysis, MSEA 2023*. https://doi.org/10.4108/eai.26-5-2023.2334232

Zhuang, W., Luo, X., & Riaz, M. U. (2021). On the factors influencing green purchase intention: A meta-analysis approach. *Frontiers in Psychology*, *12*, 644020. https://doi.org/10.3389/fpsyg.2021.644020

# Appendices

## Appendix 1. Cover Letter

### Factors Influencing Green Purchase Intentions in Fast-Moving Consumer Goods (FMCG)

-GERMAN VERSION BELOW-
-DEUTSCHE VERSION WEITER UNTEN-

ENGLISH:

Dear Recipient,

I am currently pursuing my Master's in International Business at the University of Vaasa, and conducting my thesis on determinants of consumers' green purchase intentions in the Fast-Moving Consumer Goods (FMCG) sector.

In recent years, sustainability and environment-friendly products have gained higher importance in terms of consumers as well as companies. However, what actually drives consumers to purchase green products or restricts them from doing so, is an unanswered question. Therefore, your input to this survey would be greatly valued. Your views and experiences will help to get a clearer picture of what compels consumers in Germany and Finland towards more sustainable decision-making.
We would appreciate it if you could help by completing this questionnaire, ideally before October 22nd.

The answers are anonymous, and they are looked at as a whole, so no one can see individual answers. You may also share this Link with others!

Filling the questionnaire takes around 5-7 minutes, it is in English and German.

Should you have any questions or if you are interested in a summary report of the findings, please do not hesitate to contact:

Dilara Sanli
tel. +49 163 3559999
dilara.sanli@gmail.com

Tahir Ali, Associate Professor
University of Vaasa, FINLAND
tel. +358 45 848 0333
tali@uva.fi

GERMAN:

Sehr geehrte Damen und Herren,
ich absolviere derzeit meinen Master in International Business an der Universität Vaasa und schreibe meine Abschlussarbeit über die Determinanten der Kaufabsichten von Verbrauchern für umweltfreundliche Produkte im Bereich der schnelllebigen Konsumgüter (FMCG).

In den letzten Jahren haben Nachhaltigkeit und umweltfreundliche Produkte sowohl für Verbraucher als auch für Unternehmen an Bedeutung gewonnen. Was Verbraucher jedoch tatsächlich dazu bewegt, umweltfreundliche Produkte zu kaufen, oder sie davon abhält, ist eine unbeantwortete Frage. Daher würde ich mich sehr über Ihre Teilnahme an dieser Umfrage freuen. Ihre Ansichten und Erfahrungen werden dazu beitragen, ein klareres Bild davon zu erhalten, was Verbraucher in Deutschland und Finnland zu nachhaltigeren Kaufentscheidungen bewegt.
Wir würden uns sehr freuen, wenn Sie uns helfen könnten, indem Sie diesen Fragebogen ausfüllen, idealerweise vor dem 22. Oktober.

Die Antworten sind anonym und werden als Ganzes betrachtet, sodass niemand einzelne Antworten sehen kann. Sie können diesen Link auch an andere weitergeben!

Das Ausfüllen des Fragebogens dauert etwa 5-7 Minuten, welcher auf Englisch und Deutsch vorzufinden ist.

Wenn Sie Fragen haben oder an einer Zusammenfassung der Ergebnisse interessiert sind, wenden Sie sich bitte an:

Dilara Sanli
Tel. +49 163 3559999
dilara.sanli@gmail.com

Tahir Ali, außerordentlicher Professor
Universität Vaasa, FINNLAND
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tali@uva.fi

## Appendix 2. Webropol Questionnaire: Factors Influencing Green Purchase Intentions in Fast-Moving Consumer Goods

Section A - Background Information

1)
ENG - Your age:
GER - Ihr Alter: *

- ◯ <18
- ◯ 18-30
- ◯ 31-43
- ◯ 44-56
- ◯ >56

2)
ENG - Your gender:
GER - Ihr Geschlecht: *

- ◯ Female / Weiblich
- ◯ Male / Männlich
- ◯ Other / Andere [ ]

3)
ENG - Your nationality:
GER - Ihre Staatsangehörigkeit: *

Please fill in your nationality / bitte tragen Sie Ihre Staatsangehörigkeit ein: * [ ]

4)
ENG - Your country of living:
GER - Ihr Wohnsitz: *

- ◯ Germany / Deutschland
- ◯ Finland / Finnland
- ◯ Other

5)
ENG - Your employment status:
GER - Ihr Beschäftigungsstatus: *

- ◯ Student / Student_in
- ◯ Apprentice / Auszubildende_r
- ◯ Self-employed / Selbstständig
- ◯ Employee / Angestellt
- ◯ Un-employed / Arbeitslos
- ◯ Retired / im Ruhestand
- ◯ Other / Andere

6)
ENG - Your monthly income (before taxes):
GER - Ihr monatliches Einkommen (brutto): *

- ◯ <1000€
- ◯ 1000-2299€
- ◯ 2300-3599€
- ◯ 3600-4899€
- ◯ >4900€

7)
ENG - Your highest education:
GER - Ihr höchster Abschluss: *

- ◯ Middle School Diploma / Mittlerer Schulabschluss
- ◯ High School / Abitur
- ◯ Bachelor's degree / Bachelor Abschluss
- ◯ Master's degree / Master Abschluss
- ◯ Doctorate degree / Doctor Abschluss
- ◯ Other (please indicate)

8)
ENG - Your city of living:
GER - Ihr aktueller Wohnort: *

City / Stadt *

## Section B - Green Purchase Intentions

ENGLISH

What are FMCG products?

In this survey, Fast-Moving Consumer Goods (FMCG) are everyday products that are purchased frequently and have a short life cycle. Examples include:

· Food and beverages
· Personal care items (e.g., cosmetics, toiletries)
· Household products (e.g., cleaning supplies, detergents)

Whenever you see the term FMCG in this questionnaire, please think of these types of products.

GERMAN

Was sind FMCG-Produkte?

In dieser Umfrage sind Fast-Moving Consumer Goods (FMCG) Produkte des täglichen Bedarfs, die häufig gekauft werden und einen kurzen Lebenszyklus haben. Beispiele hierfür sind:

· Lebensmittel und Getränke
· Körperpflegeprodukte (z. B. Kosmetika, Toilettenartikel)
· Haushaltsprodukte (z. B. Reinigungsmittel, Waschmittel)

Wenn Sie in diesem Fragebogen den Begriff FMCG sehen, denken Sie bitte an diese Art von Produkten.

9)
ENG - Have you purchased FMCG (e.g., food, cosmetics, cleaning products, etc.) in the last three months?
GER - Haben Sie in den letzten drei Monaten FMCG (z. B. Lebensmittel, Kosmetika, Reinigungsmittel usw.) gekauft? *

◯ No / Nein
◯ Yes / Ja

10)
ENG - Please indicate the degree to which you agree with the following statements:
GER - Bitte geben Sie an, inwieweit Sie den folgenden Aussagen zustimmen: *

| | 1 Strongly disaggree / Stimme überhaupt nicht zu | 2 Partly disagree / Stimme teilweise nicht zu | 3 Neutral / Neutral | 4 Partly agree / Stimme teilweise zu | 5 Strongly agree / Stimme voll und ganz zu |
|---|---|---|---|---|---|
| a)<br>ENG: I intent to buy environmentally friendly products in the next month.<br><br>GER: Ich habe vor, im nächsten Monat umweltfreundliche Produkte zu kaufen. * | ○ | ○ | ○ | ○ | ○ |
| b)<br>ENG: I will make an effort to choose green alternatives when available.<br><br>GER: Ich werde mich bemühen, grüne Alternativen zu wählen, wenn diese verfügbar sind. * | ○ | ○ | ○ | ○ | ○ |
| c)<br>ENG: I am likely to purchase green products whenever possible.<br><br>GER: Ich werde wahrscheinlich grüne Produkte kaufen, wann immer dies möglich ist. * | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| d)<br>ENG: I plan to actively seek out environmentally friendly products in the future.<br><br>GER: Ich habe vor, in Zukunft aktiv nach umweltfreundlichen Produkten zu suchen. * | ○ | ○ | ○ | ○ | ○ |
| e)<br>ENG: I look for a brand that communicates clear environmental benefits.<br><br>GER: Ich suche nach einer Marke, die klare Umweltvorteile kommuniziert. * | ○ | ○ | ○ | ○ | ○ |
| f)<br>ENG: The brand's green advertisement improve my trust in its products.<br><br>GER: Die umweltfreundliche Werbung der Marke stärkt mein Vertrauen in ihre Produkte. * | ○ | ○ | ○ | ○ | ○ |
| g)<br>ENG: The brand's green advertisement make me more willing to buy its products.<br><br>GER: Die umweltfreundliche Werbung der Marke erhöht meine Kaufbereitschaft für ihre Produkte. * | ○ | ○ | ○ | ○ | ○ |

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| h)<br>ENG: The brand's green advertisement convince me that it cares about the environment.<br><br>GER: Die umweltfreundliche Werbung der Marke überzeugt mich davon, dass sie sich um die Umwelt kümmert. * | ○ | ○ | ○ | ○ | ○ |
| i)<br>ENG: I ensure that the product's packaging looks environmentally friendly.<br><br>GER: Ich achte darauf, dass die Verpackung des Produkts umweltfreundlich aussieht. * | ○ | ○ | ○ | ○ | ○ |
| j)<br>ENG: It is important that the packaging information convinces me of its sustainability.<br><br>GER: Es ist wichtig, dass mich die Informationen auf der Verpackung von ihrer Nachhaltigkeit überzeugen. * | ○ | ○ | ○ | ○ | ○ |

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| k)<br>ENG: It is important that the product uses ethically or sustainably sourced inputs.<br><br>GER: Es ist wichtig, dass das Produkt ethisch oder nachhaltig gewonnene Rohstoffe verwendet. * | ○ | ○ | ○ | ○ | ○ |
| l)<br>ENG: I think that green products are more expensive than conventional ones.<br><br>GER: Ich denke, dass umweltfreundliche Produkte teurer sind als herkömmliche Produkte. * | ○ | ○ | ○ | ○ | ○ |
| m)<br>ENG: I think that green products are over-priced.<br><br>GER: Ich denke, dass umweltfreundliche Produkte überteuert sind. * | ○ | ○ | ○ | ○ | ○ |
| n)<br>ENG: I know my purchase choices impact the environment.<br><br>GER: Ich weiß, dass meine Kaufentscheidungen Auswirkungen auf die Umwelt haben. * | ○ | ○ | ○ | ○ | ○ |

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| o)<br>ENG: I know about environmental issues caused by products.<br><br>GER: Ich weiß über Umweltprobleme Bescheid, die durch Produkte verursacht werden. * | ○ | ○ | ○ | ○ | ○ |
| p)<br>ENG: I pay attention to how products affect health.<br><br>GER: Ich achte darauf, wie sich Produkte auf die Gesundheit auswirken. * | ○ | ○ | ○ | ○ | ○ |
| q)<br>ENG: I avoid products that I believe could harm my health.<br><br>GER: Ich vermeide Produkte, von denen ich glaube, dass sie meiner Gesundheit schaden könnten. * | ○ | ○ | ○ | ○ | ○ |
| r)<br>ENG: Choosing this green products benefits me (e.g., performance/health).<br><br>GER: Die Wahl dieser umweltfreundlichen Produkte kommt mir zugute (z. B. Leistung/Gesundheit). * | ○ | ○ | ○ | ○ | ○ |

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| s)<br>ENG: The overall quality of green products is high.<br><br>GER: Die Gesamtqualität umweltfreundlicher Produkte ist hoch. * | ○ | ○ | ○ | ○ | ○ |
| t)<br>ENG: I intend to buy products from a company which has a positive environmental image.<br><br>GER: Ich beabsichtige, Produkte von einem Unternehmen zu kaufen, das ein positives Umweltimage hat. * | ○ | ○ | ○ | ○ | ○ |
| u)<br>ENG: I intend to buy products from a company that acts responsibly towards the environment.<br><br>GER: Ich beabsichtige, Produkte von einem Unternehmen zu kaufen, das verantwortungsbewusst mit der Umwelt umgeht. * | ○ | ○ | ○ | ○ | ○ |
| v)<br>ENG: I feel proud to see myself as a consumer who buys green products.<br><br>GER: Ich bin stolz darauf, mich als Verbraucher zu sehen, der umweltfreundliche Produkte kauft. * | ○ | ○ | ○ | ○ | ○ |

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| w)<br>ENG: Being "green" is an important part of who I am.<br><br>GER: „Umweltfreundlich“ zu sein, ist ein wichtiger Teil meiner Persönlichkeit. * | ○ | ○ | ○ | ○ | ○ |
| x)<br>ENG: For me, buying green products is a wise decision.<br><br>GER: Für mich ist der Kauf umweltfreundlicher Produkte eine kluge Entscheidung. * | ○ | ○ | ○ | ○ | ○ |
| y)<br>ENG: I like the idea of buying green products.<br><br>GER: Ich finde die Idee, umweltfreundliche Produkte zu kaufen, gut. * | ○ | ○ | ○ | ○ | ○ |
| z)<br>ENG: My family/friends expect me to choose green products.<br><br>GER: Meine Familie/Freunde erwarten von mir, dass ich mich für umweltfreundliche Produkte entscheide. * | ○ | ○ | ○ | ○ | ○ |
| aa)<br>ENG: People around me think buying green products is the right thing to do.<br><br>GER: Die Menschen in meinem Umfeld halten den Kauf umweltfreundlicher Produkte für richtig. * | ○ | ○ | ○ | ○ | ○ |
| ab)<br>ENG: I have previously bought green products.<br><br>GER: Ich habe bereits zuvor umweltfreundliche Produkte gekauft. * | ○ | ○ | ○ | ○ | ○ |
| ac)<br>ENG: My past experiences with green products were positive.<br><br>GER: Meine bisherigen Erfahrungen mit umweltfreundlichen Produkten waren positiv. * | ○ | ○ | ○ | ○ | ○ |

Section C - Voluntary Information

11)
ENG - Would you be interested in a summary report of the findings?
GER - Wären Sie an einem zusammenfassenden Bericht über die Ergebnisse interessiert?

- ◯ a) Yes / Ja
- ◯ b) No / Nein

ENG - If yes, please provide the contact information:
GER - Wenn ja, geben Sie bitte die Kontaktdaten an:

14)
ENG - Contact Information:
GER - Kontaktdaten:

a) Name: _____

b) E-Mail: _____

☐ I want to submit my answers / Ich möchte meine Antworten abgeben*