

Article

# Bridging consumer behavior and green marketing in Czech retail chains: Applying insights from Davari & Strutton research

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**Abstract:** Presented article takes a study done by researchers Davari & Strutton in the US in 2014 and replicated the same approach and methodology in evaluating how green marketing mix elements (product, price, promotion, place) influence brand associations, brand loyalty, perceived brand quality, and brand trust, in the context of retail chain stores in Czechia. The reason for this is the fact that the issue of reconciling pro-environmental beliefs of consumers with their real behavior is still topical. Businesses need to be careful with their green claims and focus on authentic green marketing in order to attract and retain the trust of environmentally conscious consumers in the long term. The research employs quantitative data analysis, drawing data from the survey, which was run online for five weeks and collected 4700 responses. The respondents are people who live in Czechia and have shopped in one of five stores at least during the last month. The reason for focusing on the Czechia is primarily the fact that green marketing is basically only on the rise here, while greenwashing still remains a significant problem. Six hypothesis were formulated, and linear regression analysis was used to test them. Key findings of the research revealed that green products and promotions positively influence brand associations and perceived brand quality, while green promotions significantly enhance brand loyalty and trust. Additionally, there was observed influence of consumers' environmental concerns and consideration of future consequences significantly moderating the relationship between green marketing and brand equity. The findings provide insight for businesses to integrate green marketing strategies to increase brand trust, loyalty, and perceived quality while environmentally conscious consumers.

**Keywords:** green marketing; consumer behaviour; Czech retail chains; environmental sustainability; consumer-based brand equity (CBBE)

## 1. Introduction

The world is changing rapidly, leading to a growing focus on environmental sustainability (EU, 2024). We are now standing at the crossroads of technological advancement and environmental awareness. The consumer interest in greener practices and products and the ecological debate are growing (Nekmahmud et al., 2022). Still, research on green marketing repeatedly shows the disconnect between consumers' pro-environmental beliefs and actual purchasing behaviour (Davari and Strutton, 2014; Mishra and Sharma, 2012). While green marketers implement gentle and non-manipulative sustainable practices to promote green goods, traditional advertising still wins sales with its consumer-centric approach. This results in green products being left behind the goods to which product-place-price-promotion techniques are applied (Biswas and Roy, 2015; Cho et al., 2013).

This research focuses on applying traditional consumer behaviour practices in marketing strategies for green products. The relevance of the study done by Davari

and Strutton, titled “Marketing mix strategies for closing the gap between green consumers’ pro-environmental beliefs and behaviors”, published in the *Journal of Strategic Marketing* in 2014, has been reviewed. Their findings have been applied to retail purchasing behavior in the Czechia. As consumers, store shopping is a routine aspect of everyday life; it provides a valuable opportunity to observe purchasing rationales. According to Peattie and Crane’s (2005) research, green marketing thought leaders have long recognized the need for a paradigm shift in promoting sustainable products. However, a deeper understanding of consumer psychology is essential to enable this transformation, as shown by Ajzen’s study on the Theory of Planned Behaviour (1991), along with the intelligent adaptation of proven traditional marketing strategies. Additionally, according to Jones (2019), the scepticism toward green advertising is growing, and concerns about greenwashing are evident from both government bodies (EU Parliament, 2023) and consumers (Gawrych, 2024; Zhang et al., 2018).

Traditional consumer behaviour research has brought the principles of green marketing (reliability, relevance, clarity, transparency, accessibility, collaboration, comparability, multi-channel and innovative approach, behavioural change, longer-term impact, and three dimensions of sustainability) and provided ethical directions for marketing communications (United Nations System Staff College). However, there are no data-driven recommendations for applying exact marketing strategies regarding brand equity dimensions, which are actively implied in Fast-Moving Consumer Goods distributed by retail chains and explored in this study.

Bridging consumer behavior and green marketing in Czech retail chains is essential for aligning with consumer preferences, gaining a competitive advantage, ensuring regulatory compliance, educating consumers, achieving economic benefits, promoting long-term sustainability, building trust and loyalty, and driving innovation. This alignment not only benefits the retailers but also contributes positively to environmental conservation and societal well-being.

In this research, the impact and applicability of Davari and Strutton’s research on green marketing strategies and Consumer-Based Brand Equity (CBBE) are evaluated within the context of goods retail chains, specifically Albert, Tesco, ROSSMANN, and BILLA, in the Czechia, assessing the influence of green marketing initiatives on consumer behaviour and brand perception.

Presented article investigates the potential mediators of the two key factors—consumers’ environmental concerns and their perception of the long-term consequences of their purchasing habits on the correlation of marketing strategies (product, pricing, promotion, place of sale/distribution tactics) and Consumer-Based Brand Equity (CBBE).

Six hypotheses were formulated, questioning and examining the influence of each strategy on four aspects of brand equity and relationship moderation by considering the future or current consequences of customers’ purchases.

The presented article aims to provide appropriate recommendations for retail supermarket chains to target customers adjusting brand equity share according to the assessment of the environmental consequences of their purchases. Companies looking for a proper combination of the 4Ps of marketing mix strategies to increase brand equity share and grow positive brand associations can apply these results to evaluate

the importance and influence of the above aspects. The study's results can help businesses address the customers' environmental concerns and promote green products via growing brand loyalty, trust, and perceived brand quality.

### 1.1. Green marketing definition

The concept of Green Marketing was widely introduced in 1975 by The American Marketing Association (AMA) in the "Ecological Marketing" workshop. The most relevant and applicable definition was formulated by Polonsky (2008), who identifies the terms 'green marketing', 'environmental marketing', 'ecological', and 'sustainable marketing' as synonyms. However, Dam and Apeldoorn (1996) formulated that Green Marketing "*focuses on market pull and legislative push toward improved, environmentally friendly corporate performance*", while ecological marketing is the reaction of the marketers to their rising environmental responsibilities concerns, and sustainable marketing—to the economic aspect of sustainable development. This definition does not consider the integration of sustainability into the 4Ps of marketing, which is central to this study of green marketing practices in Czech retail chains. Prashant Kumar, in his overview of the green marketing research for a period of 25 years, breaks down the term's evolution from Henion and Kinnear's "*the study of the positive and negative aspects of marketing activities on pollution, energy depletion, and non-energy resource depletion*" to Gordon's 2011 "*developing and marketing more sustainable products and services while introducing sustainability efforts at the core of the marketing and business process*" (Kumar, 2016). There might seem to be a particular paradox in the term "Green Marketing" itself since the idea of 'green' embraces calls for preservation and careful treatment of the environment while marketing itself stimulates and promotes consumption. However, the sustainability aspect of advertised products or services eliminates it.

In 2022, Professor Pinki Rai looked into the effect the COVID-19 pandemic had on people's beliefs about products that are good for the environment. Besides being limited by the data collected from Pune, the study found that more people grew more interested in buying eco-friendly products. Even when people care a lot about price, many are willing to pay slightly more for eco-friendly products if their quality remains good (Pinki Rai, 2022). The study also found that people started caring more about the packaging since more shops are online, so eco-friendly packaging or packaging reduction could influence sales positively (Pinki Rai, 2022).

The Czechia's green marketing research is limited to mainly university students' research (Krajina, 2019) and requires additional scholars' research to drive insights.

Additionally, the current research on retail supermarket chains' green marketing, e.g., Piumali (2023), Warnakulasuriya et al. (2024) or Xara-Brasil et al. (2024) effort mainly comprises business audits and specific insights into the theory of planned behaviour based on data analysis.

Other contemporary but broader concepts of green marketing include cause-related marketing (CRM) or prosocial behavior or fair trade promotions, which have different but important relationships to green marketing (López Rodríguez, 2020).

CRM is a marketing strategy that associates a brand or product with a specific social or environmental cause (Minton and Cabano, 2024). Brands typically promise

to donate a portion of their revenue or support certain projects when customers purchase their products (Schamp et al., 2024). CRM can support green marketing by focusing on environmental or ecological initiatives (Haynes et al., 2024). For example, if a brand promotes products with a portion of the proceeds going to environmental projects, it can improve its image and attract environmentally conscious customers (Luan and Phan, 2024).

Prosocial behaviour refers to actions that have a positive impact on society or the environment (Caserta et al., 2023). It can include various activities that promote sustainability, environmental protection or community support (Boo et al., 2024). Brands that promote prosocial behaviour can emphasize their efforts to improve environmental or social conditions as part of green marketing. Such behaviour can enhance the trust and loyalty of customers who care about ethical and environmental values (Yang and Chai, 2024).

Fair trade promotions refer to the marketing of products that are certified as fair trade. These products are produced under fair working conditions, at a reasonable price and with respect to ecological standards (Nikodemska-Wołowik et al., 2024). Fair trade promotions fit directly into green marketing because they include aspects of sustainability and responsible business (Phan et al., 2023). Products with fair trade certification often meet ecological and ethical standards, which is in line with the goals of green marketing. Customers who prefer fair trade products often also look for environmentally friendly products (Jiang et al., 2023).

All of these concepts can be part of a broader green marketing strategy that focuses on sustainable development, green practices and ethical business.

## **1.2. Green marketing strategy framework**

Despite the conceptual ground definition, many executive marketers and scholars have been exploring the best strategic mix of techniques to work for environmentally conscious consumers. Theoretical marketers highlight four general marketing strategies, which vary depending on the market state and competition landscape. These strategies vary from passive Lean Green to Defensive Green, non-transparent Shaded Green, and proactive Extreme Green (de Oliveira Lima, 2024; Ginsberg, 2004). The definition is based on the classic marketing concept of '4P's (Product, Price, Promotion, Place), which is adjusted for a Green Marketing perspective.

Companies adjusting their operations and strategies towards Lead Green aim to get a competitive advantage by decreasing goods prices via reducing expenses and improving effectiveness by integrating ecologically safe production. Fuller, in his Sustainable Marketing definition, highlights how it is central for cleaner production and corporate sustainability: *“the process of planning, implementing and controlling the development, pricing, promotion, and distribution of products in a manner that satisfies the following three criteria: (1) customer needs are met; (2) organizational goals are attained; and (3) the process is compatible with eco-systems”* (Fuller, 1999, p.4). At the same time, companies employing the Lean Green approach do not focus on green advertisement and internal corporate initiatives (Powell, 2024). They might want the green initiatives to be limited in the entire brand image to avoid exposure to green company labelling. That is why many companies might connect their green

efforts only with a particular brand (Ginsberg, 2004).

Defensive Green strategy is attributed to marketing tactics that defend against crisis or competitors' pressure. These companies acknowledge the importance of green marketing segments and that they account for a significant market portion and cannot be lifted entirely. Thus, they use green ideas to improve brand image and decrease losses. However, this only allows companies to differentiate from the competition by using the green advantage (Ginsberg, 2004). The efforts of these companies in the green segment are irregular and minimal, and sustainability ideas belong outside their core values (Rastogi, 2024)—which is explained by how challenging the green ideas are to integrate and communicate with the workforce and thus justify incremental resource allocation (Dekoninck, 2016).

Since aggressively promoting green products might backfire by setting expectations too high, companies tend to sponsor niche events and programs or support specific initiatives or causes (Gaffar and Koeswandi, 2024). These tactics allow companies to defend their green marketing claims via low investments without accusations from activists and regulatory bodies (Ginsberg, 2004).

The Shaded Green strategy focuses on long-term, systematic, and ecologically clean processes, requiring significant financial, time, and people resources and circumstances (Ghitti et al., 2023). Companies employing this strategy see green activities as an opportunity for innovations in product and technology areas, which they see as a way to gain a competitive advantage (Ginsberg, 2004).

Green products might act as a differentiator for those companies (Iannuzzi, 2024). However, they most likely receive an advantage and profit in other ways, ideally through providing direct and obvious client benefits from the products distributed via their main channels, where ecological factors are secondary to customers (Ginsberg, 2004). This strategy is the most effective for promoting goods and services that help consumers save money on their ongoing spending, like energy, power, electricity, and gas, or those that require significant long-term investment to switch to green production and thus might take opportunities for innovation in product and technology areas and consequently gain competitive advantage (Afnani and Gustavsson, 2022).

Ecological questions and responsibilities are fully integrated into all business processes and product life cycles in companies that employ the Extreme Green strategy (Wei et al., 2023). Their methods include a pricing strategy that considers the whole product lifecycle, the sustainability of the manufacturing process, and internal and external communication of the company's green values. This strategy is mainly attributed to the companies serving niche markets and their green needs via specific channels (Ginsberg, 2004).

Companies that aim to account for a portion of the “green market” must either adjust their current offering to match consumers' expectations for sustainability or develop new product ranges (Soomro et al., 2024). Sustainable development was defined by the World Commission on Environment and Development (1987) as a cycle that “*meets the needs of the present without compromising the ability of future generations to meet their own needs.*” Numerous sustainable design methods and tools (SDMTs) have been developed to stimulate the industry, but few have been implemented and tested in practice (Faludi, 2020). The reasons for poor implementation were identified by Dekoninck (2016), such as:

- specific use of theoretical terminology and concepts, which are confusing for executive teams;
- significant time investment required;
- difficulty with the implementation of theoretical recommendations;
- unclear outputs calculations;
- prerequisite for implementation is having comprehensive data, which might be unavailable.

The 'product' aspect of green marketing defines customer perception, product design, packaging design, and product ingredients (Kumar, 2016).

Giulia Granato et al. (2022) conducted an online survey with 5035 consumers across five European nations, the results of which demonstrated that the appreciation of sustainability could extend to other traditional benefits like ease of use, attractiveness, or the perception of the packaging's ability to protect content. The study results showed that customers thought that packaging made of paper or biodegradable/compostable materials, which conveyed a more considerable sustainability advantage, was more sustainable than packaging made of plastic. Recent recommendations from the UN promote information clarity, accessibility, and visibility: "*Let the information get to the consumer, not the other way around*" (United Nations System Staff College, 2024).

Green product production usually requires higher investments; thus, consumers must pay extra to purchase sustainable goods (Ahmad et al., 2024). However, consumers need to see the higher value and benefit they receive from the product to be willing to invest more and to be sure that the price/quality of the product is increased according to the addition they pay for it (Biswas, 2014).

Many academics have recently focused on sustainable supply chain (SSC) pricing strategies. Zhou et al. (2019) presented a dual credit system (power and green credit). They analysed pricing decisions in a two-level supply chain across three scenarios: regular products only, the combination of traditional and green products, and green products only. In their paper, Wang et al. (2019) explored inventory strategies and pricing decisions under the influence of various green growth mechanisms, specifically looking at how subsidies provided by governments or other entities influence the decision to engage in remanufacturing activities. They also examined the influence of products' greenness on optimal pricing decisions. At the same time Zheng et al. (2019) worked on investigating the correlation between vendors' fairness concerns and pricing decisions. Ma et al. (2018) determined the ideal degree of green production, retail and wholesale prices, member profits, and the overall profitability of the supply chain across several models. In the other 2019 study, Zhang et al. examined product production and remanufacturing modes. They discovered that production costs affect manufacturers' pricing and mode choices in response to consumer demand for remanufactured goods.

The 'price' aspect of green marketing consists of a higher pricing strategy, willingness-to-pay, and value-for-money factors (Dauda et al., 2024; Kumar, 2016).

The choice of a place to provide green goods or services dramatically impacts the potential target audience it reaches and its perception (Ganda, 2023). Companies should always consider that customers are unlikely to invest their time and effort to

reach locations far from them to purchase green products and might prefer nearby alternatives (D'Angelo, 2023). Despite some papers reporting that green product ranges must be placed near each other (Mishra, 2012; Sheikh, 2014), recent research shows it is better to expose consumers to green products across all market sectors and potential shopping locations (Fraccascia et al., 2023; Yıldırım, 2024).

Factors like retail atmosphere, sustainability-based programs, environmental goals, and operations are to be considered in the Green Place aspect (Kumar, 2016).

Green promotion, just like classic promotion, includes instruments like an advertisement, marketing creatives, banners, informative decks, communication strategy, branding, websites, videos, and presentations, which consider the target audience's interests but still incorporate planet and sustainability as stakeholders (Guan et al., 2024). In their study, Davari & Strutton refer to three requirements for green promotions that should be met and were established by Banerjee et al. (1995): They either directly or indirectly highlight the connection between goods and the biophysical environment, promote eco-friendly living, whether or not a product or service is highlighted; and present, improve, or maintain environmentally conscious company images.

Nowadays, green marketers' scope goes beyond emphasizing the production cycle, healthy aspects, or recycling potential. They also challenge green promoters to employ the Theory of Planned Behaviour (TPB) to push consumers to choose green products (United Nations System Staff College, 2023). The theory of planned behaviour (TPB) is an essential pillar of consumer behaviour research, which was initially developed to predict purchasing behaviour (Ajzen, 1985), (Tunji-Olayeni et al., 2024). Later on, TBP gained validation and traction and leveraged ground for multiple traditional marketing tactics and has been applied in several pro-environmental consumer behaviour patterns studies (Chao and Lam, 2011; Wang et al., 2020), showcasing its applicability in the context of green marketing. Companies themselves might need to focus on promoting their sustainability certifications, achievements and initiatives, and events inside the corporate culture.

Green promotion requires considering factors such as eco-labelling information, credibility, communication tools, consumer engagement, and determinants of green purchase intentions (Kumar, 2016).

### **1.3. Brand equity**

The extra benefit and profit companies get from selling their products with brand consumers recognize compared to equivalents is a significant marketing asset called brand equity (Hyun et al., 2024). It helps companies create unique relationships with stakeholders, predict and shape long-term customer behaviour, and adjust pricing strategies (Hunt and Morgan, 1995). Brand equity was defined by Aaker in 1991 as a set of assets and liabilities linked to a brand, its name, and its symbol that enhance or diminish the value provided by products or services to either firms and their consumers' and most scholars have been using these definitions for more than three decades (Aaker, 1991, p. 15). However, in 2022, research has been conducted reviewing publications on BE (brand equity), one of which was to define the 'trajectory of the evolution of the scientific articles on BE published to date' (Rojas-

Lamorena, 2022). The study showed that the interest in brand equity has been rising ever since and reached 2730 publications in managerial, business, brand management, marketing, and advertising journals (RQ1). The definition has been stated relevant and remains a topic to be examined under different lenses, like “Social Media” and “Sport” (RQ5) (Rojas-Lamorena, 2022).

Scholars, e.g., Sousa and Ferreira (2024) or Baca and Reshidi (2023) suggest three perspectives to assess brand equity: FBBE, EBBE, and CBBE. Firm or Financial-Based Brand Equity (FBBE) focuses on the importance of a brand to the company, and its financial success is the main topic of FBBE. By calculating the added value in terms of future cash flows, price, revenue, market share, or other comparable financial or market outcome indicators at the business level, it seeks to produce a monetary estimate of BE. There are two ways to measure FBBE: the financial market method and the product market approach (Oliveira, 2023).

EBBE, Employee-Based Brand Equity, refers to the unique impact that brand awareness has on workers’ reactions to their workplace (Baalbaki, 2016).

CBBE, Consumer-Based Brand Equity, focuses on customer attitudes, sentiments, and impressions of the brand. While the marketing literature has a variety of viewpoints and jargon, (Veloutsou, 2020) asserts that CBBE is the most commonly utilized BE indicator.

From the consumer’s perspective, BE contributes to their attraction or dislike of a specific brand’s goods (Aaker, 1991; Mikul and Mittal, 2023).

There is also a holistic approach suggested by Oliveira and Heldt in 2023 following a systematic literature review, merging CBBE and FBBE, which has yet to be explored or tested in further research. There are several ways to improve this comprehensive evaluation, including knowing how measures related to consumer mentality affect a brand’s financial success, suggesting appropriate ways to connect CBBE as a preliminary method to FBBE, and relying only on secondary data sources to enable a longitudinal brand equity measurement (Oliveira, 2023). Going back to Aaker’s most thorough and widely-cited definition, brand awareness, brand associations, and brand loyalty are among its dimensions, along with perceived quality (of the branded product) and other brand assets like patents, trademarks, and channel relationships (Aaker, 1991). However, in a more recent paper, Oliviera et al. identified 62 dimensions that arose in the research since Aaker and were employed in practice by marketers (Oliveira, 2023). For the investigation, there are four fundamental dimensions selected by Davari and Strutton:

- brand associations,
- brand loyalty,
- perceived brand quality (PBQ),
- brand trust, which are believed to be the most relevant in green marketing decision-making.

Brand associations are all the things people have in their minds that they associate with a brand (Aaker, 1991). Those symbols and images of a brand people have in their memories may include ideas brands promoted, thoughts from advertisements, and episodes of encounters with its goods and services, which form the general feeling built in minds from the brand (Parris and Guzman, 2023). The knowledge of brand



consumers can positively influence purchasing behaviour during the decision-making process and thus is related positively to brand equity (Alagarsamy, 2024).

Susceptibility to global consumer culture, perceived brand globalness, brand investment, credibility, and awareness influence brand credibility (Chen, 2013).

Brand loyalty can be described as an indicator of how attached customers feel to a particular brand (Khan and DePaoli, 2024) or as a measure of consumer loyalty to a brand that can predict when a customer switches to other brands offered by competitors, such as price adjustments and other changes (Aaker, 1991). More recent studies show that the impact of brands' socio-political consciousness, responsibility to the planet, and people on brand loyalty is rapidly growing (Parris, 2023).

Perceived brand quality (PBQ) is what customers recognize when interacting with a product or service (Harcourt, 2024). PBQ is believed to impact perceived risk and can strategically impact brand equity (Aaker, 1991). As Aaker (1991) stated, PBQ is the foundation for brand expansion and distinctiveness and can justify higher prices (Netemeyer et al., 2004).

Brand trust is the customers' respect, appreciation, and belief in a company's ability to deliver on its promises.

#### **1.4. Green marketing in Czechia**

Green marketing in the Czech Republic is gaining importance, mainly due to the growing interest of consumers in the sustainability and ecological behaviour of companies. Businesses are trying to incorporate environmental principles into their business strategies to attract new customers and gain a competitive advantage (Líšková et al., 2016). An important aspect of this trend is the credibility of communication, as it is not always easy to verify the truth of ecological claims, which sometimes leads to greenwashing (Vančurová and Chocholáč, 2022).

Green marketing is often associated with concepts such as corporate social responsibility (CSR), eco-labelling and sustainable products (Pechová and Štrach, 2020). Studies and research on this topic are taking place, for example, at Masaryk University and the University of Economics in Prague (Aduku, 2023; Altunbulak, 2023; Rösnerová, 2022; Škochová, 2023), which analyse the current situation and challenges in this area. The main challenges include raising awareness of environmental issues and creating transparent communications that clearly show customers the benefits of products for the environment.

Green marketing in the Czech Republic is developing as an important strategy for companies responding to the growing interest in sustainability and ecology among consumers (Moravčíková et al., 2017). The main principles of green marketing focus on reducing the negative impact on the environment through innovation in products, packaging and distribution. A key challenge is to convince consumers that companies are authentic in their approach to sustainability, which increases trust and brand loyalty (Sagapova et al., 2022).

The key strategies of green marketing in the Czech Republic based on Skokanová (2024) and Moravčíková et al. (2017) are:

- Transparency and authenticity: Companies in the Czech Republic that apply green marketing must consistently communicate their ecological commitments.

A transparent approach includes, for example, certificates such as Ecolabel or Fairtrade, which guarantee ecological and ethical production standards.

- Eco-friendly products: Development and offer of products that minimize the environmental footprint. Companies focus on sustainable materials, lower energy consumption and recycling options. Examples are brands such as Mattoni, which implements recyclable packaging and supports the circular economy.
- Communication policy: Marketing communication includes raising awareness of environmental issues. Campaigns aimed at educating consumers about the environmental benefits of products and the importance of sustainable purchasing decisions are common
- Energy saving and sustainable innovation: Companies are trying to optimize their production processes to reduce CO<sub>2</sub> emissions and energy consumption. Examples are investments in renewable energy sources and reduction of waste during production.

Green marketing is therefore perceived in the Czech Republic as a key strategy for building trustworthy and successful brands in the eyes of modern consumers who are increasingly interested in the impact of their purchases on the environment (Průša and Sadílek, 2019).

Hypermarkets, as giants of the consumer industry, play a key role in our daily lives and thus also in sustainability issues. Their impact on the environment is considerable, both in terms of the product range offered, waste production, energy consumption, and product transport (Machek, 2012).

In recent years, the green marketing of Czech hypermarkets has focused on various ecological initiatives and sustainable practices. These efforts correspond to the growing consumer demand for environmentally friendly products and sales methods. Large chains such as Tesco, Lidl, Kaufland or Globus implement several key strategies as part of their green marketing (Zámková et al. 2023).

Hypermarkets focus on the offer of ecological products, such as organic food, products with the Fairtrade label or from local production. For example, Tesco promotes organic products and has programs to support local suppliers. Lidl and Kaufland are also expanding their range of organic food and sustainable goods with organic farming certification. Globus and Tesco are implementing programs to reduce plastic consumption. Lidl has committed to reducing the volume of plastic packaging by 20% by 2025 and uses recyclable packaging for its own products. Tesco has introduced packaging-free sales of selected products and supports the use of reusable bags. Kaufland and Lidl are investing in modern energy-saving technologies, including LED lighting and temperature control systems in stores. This leads to lower energy consumption and a smaller carbon footprint. Globus uses solar panels and other renewable energy sources in some of its stores. As part of promoting the circular economy, many hypermarkets, including Tesco and Kaufland, support recycling, for example taking back used electrical appliances or batteries. Lidl collaborates on projects that support recycling and waste minimization (Križan et al., 2021; Zámková et al., 2023).

Large hypermarkets are trying to reduce food waste through cooperation with food banks. Tesco is one of the pioneers in this regard, and since 2016 it has been

donating unsold food to those in need through the Food Bank. Kaufland has a similar program and works with charities to donate food (Skypalová et al., 2022).

## **2. Materials and methods**

The effects of the earlier mentioned strategies—defensive, lean, shaded, and extreme—are investigated and tested in the context of the study’s subject: Czech retail chains’ brand perceptions. Retail chains’ potential to produce a positive brand perception is investigated through the effects of each green marketing technique.

The study examines the relationship between the CBBE characteristics and the marketing mix components (i.e., product, price, promotion, and place) essential to implementing green initiatives.

The findings should provide helpful information about the distinct function that each marketing mix component plays as businesses implement green marketing tactics meant to improve CBBE.

### **2.1. Hypothesized relationships**

#### **2.1.1. Marketing 4Ps and brand associations**

Businesses that employ green marketing include the four Ps of marketing—product, pricing, promotion, and place—to highlight their commitment to the environment. That builds consumer perceptions based on their interaction with a brand. When customers’ awareness of the brand grows, they create brand associations, which constructs CBBE. Those attitudes can be product-related, like taste, features, and quality of an item, or nonproduct-related, like price or packaging; functional, like product utility; experiential, for example, sensory, or symbolic, like impressions. If we take the example of Albert, which is included in the survey, the product-related attribute would be the promotion of organic food products (‘Nature’s Promise’ brand stands and online ads) (Albert, n.d.), the non-product-related attribute would be the use of eco-friendly packaging, and experiential benefit would be highlighting of sustainable sourcing in its advertisements. Based on this reasoning, the following hypothesis is suggested:

Hypothesis H1: Brand associations are favourably correlated with green products, green prices, green promotions, and green places.

#### **2.1.2. Marketing 4Ps and brand loyalty**

When customers repeatedly purchase from the brand and build emotional attachments, it shows behavioural and attitudinal dimensions of their loyalty to the brand (Chaudhuri and Holbrook, 2001). Businesses aim to build attitudinal loyalty to secure their sales and customer pool, particularly those that employ green marketing tactics. To do this, firms work towards satisfaction of the demands of green consumers, defend price increases, highlight the advantages of being green, and distribute through ecologically friendly means. Companies’ efforts in meeting green customers’ demands include designing and manufacturing green products (Albert offers the ‘Nature’s Promise’ line of organic and eco-friendly products) (Albert, n.d.) and justifying price premiums by providing significant benefits (Rossmann educating customers on benefits of refilling stations for house cleaning goods and designing it in premium style)

(Rossman, 2019), selling goods via certain channels and establishments where environmental responsibility is valued (Billa mentioning their shopping baskets are made from 'up to 95% recycled plastic' on every one of them in-store) (Billa, n.d.). All of this results in loyalty in behaviour and thus brings the following hypothesis:

Hypothesis H2: Brand loyalty is favourably correlated with green products, green prices, green promotions, and green places.

### **2.1.3. Marketing 4Ps and PBQ**

Perceived Brand Quality (PBQ) influences consumer willingness to pay premium prices and purchase intentions. Consumers' judgments of a brand's excellence compared to alternatives define PBQ. Green marketing strategists work on enhancing PBQ by designing high-quality green products, making sure customers see value and perceive high quality to justify premium prices, and distributing through channels and public activities that emphasize social responsibility. The following hypothesis is suggested:

Hypothesis H3: Perceived brand quality is positively correlated with green products, green prices, green promotions, and green places.

### **2.1.4. Marketing 4Ps and brand trust**

Consumers tend to value brands perceived as competent, honest, and socially responsible, making brand trust important for building loyalty between green marketing firms and consumers. Firms should be persistent in their pro-environmental practices, like supporting consistently sustainable packaging, fulfilling their promises, and designing stores using sustainable energy so consumers can grow confident expectations and not expect risks from the brand. That expectation defines the trust consumers have in getting what is desired and not what is worrying, and thus pushes brands to care about finding keys to influence it. This brings us to the following hypothesis:

Hypothesis H4: Brand trust is favourably correlated with green products, green prices, green promotions, and green places.

### **2.1.5. Environmental concerns (EC)**

Companies are exploring consumers' perceptions in multiple ways-by organizing focus groups, conducting sociological research, purchasing surveys, or using demographic data from statistical agencies. That is because companies realize how influential customers' beliefs are on their purchasing behaviour. In the context of green marketing, pro-environmental consumers are already considering their views and lifestyle attitudes, have a high awareness of their actions, and thus give preference in purchases to green options. Considering what the

Theory of Planned Behavior predicts (Ajzen, 1991), those customers are more willing to pay higher prices for green products, resonate with green advertisements, and initially choose places where green products are provided.

Hypothesis H5: The relationship between a company's consumer-based brand equity and its green marketing approach is moderated by consumers' environmental concerns.

### **2.1.6. Consideration of consequences (future and current) (CCF, CCC)**

Another level of consumer awareness is not just pro-environmental beliefs but

also consumers' consideration of their actions' current or future impact. This progressive attitude involves examining how today's decisions ultimately impact the economy, society, and environment. Similarly to Davari and Strutton's study, this study considers the possibility that consumers' consideration of their choices' consequences moderates the relationship between green marketing 4Ps and CBBE and brings the following hypothesis:

Hypothesis H6: The association between a company's green marketing strategy and its consumer-based brand equity components is moderated when consequences are considered.

## 2.2. Research process

Both the snowball sampling method and quantitative research were used. The target audience for the poll was individuals without age or gender constraints who have been shopping at least once a month over the past year at Tesco, Billa, Rossman, or Albert retail chains in Czechia.

The brands mentioned above are familiar to most consumers in the country and dominate the retail market (Wikipedia, 2024).

This study aims to gather information on purchasing patterns, brand perception, and demographics.

Four CBBE dimensions that were specific to retail establishments and based on scales already in use (Baalbaki, 2012; Chaudhuri and Holbrook, 2001; Netemeyer et al., 2004; Yoo et al., 2000) were the dependent variables that were employed. Davari & Strutton used hypothesized moderating constructs from previous research (Dunlap and Van Liere, 1978; Strathman et al., 1994) with environmental concerns and consequences awareness (Davari and Strutton, 2014).

The researchers' 12-item scale, which measures independent variables on a five-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree), is used for hypothesis testing.

The survey was run in May 2024, and 4700 responses were collected. In the final analysis, 4700 people were included in the sample. The entire data set was examined for errors, omissions, and suspicious data entries. Following the testing process, 4700 forms remained. Sample-related demographics can be found in **Table 1**. As in the original research, there were notably more female respondents (64.6%).

**Table 1.** Sample demographics.

<b>Gender</b>	<b>Percentage</b>
Male	27.1
Female	64.4
Other	2.1
Missing	6.3
<b>Age</b>	<b>Percentage</b>
18–20	0,0
21–25	52.1
26–30	22,9

**Table 1.** (Continued).

<b>Age</b>	<b>Percentage</b>
31–35	16.7
36–40	6.3
41–45	4.2
46–50	2.1
51–55	0.0
56–60	0.0
60+	0.0
<b>Household Income (USD) per month</b>	<b>Percentage</b>
Less than \$20,000	43.8
\$20,001–\$40,000	31.3
\$40,001–\$60,000	14.6
\$60,001–\$80,000	0.0
\$80,001–\$100,000	0.0
\$100,001–\$140,000	2.1
\$140,001–\$180,000	8.3
\$180,001–\$220,000	0.0
\$220,001–\$260,000	0.0
More than \$260,000	0.0

(Source: own).

The survey was made available online using the URL link to the digital form. The Typeform platform was used to develop the form, which promotes several user-experience-enhancing strategies, including one question per slide and an intuitive user interface. The main methods for finding research subjects include word-of-mouth, internet resources, personal connections, and continuing partnerships. The poll was posted on several websites, such as social media and online forums. This is also the reason why the largest share of respondents are young women aged 21–25. Participants were encouraged to forward the link to their networks to promote referrals.

Since the methodology suggested by the authors mentioned above and then tested by Davari and Strutton is used in this study, the results of the study executed using these methods are consulted. Davari and Strutton stated six hypotheses on the correlation of green products, green prices, green promotion, and green places to brand perception and found that four hypotheses were validated, two were partly validated, and one did not identify a significant correlation (Davari and Strutton, 2014). While Davari and Strutton worked with the food restaurant sector (DANONE, Coca-Cola, Starbucks, Pepsi, Kellogg’s) and the US market, this study aims to investigate the same hypothesis and use the data in the same manner as the original researchers did, with the correction for the time-2024 and Czech retail brands. The original research assessed 286 forms (Davari and Strutton, 2014). In their study, Davari and Strutton (2014) produced a theoretical model exploring the correlation and impact of green

marketing strategies on CBBE (Davari and Strutton, 2014). According to the model, several characteristics of brand equity are favourably impacted by successful green marketing tactics, increased environmental concerns, and careful evaluation of the effects of decisions made while making purchases. Davari and Strutton’s study results assessment shows that brands that are aware of these correlations have the potential to customize their marketing strategy better and increase their perceived value among environmentally concerned consumers.

The data has been downloaded from Typeform and edited in Excel. Since most of the questions were ‘matrix’ type, each input of the question has been given a value according to the variable it was measuring (GProduct, GPrice, GPromotion, GPlace, Brand Associations, Brand Loyalty, Perceived Brand Quality, Brand Trust, EC, CCC, CFC). Four CBBE dimensions were the dependent variables. The investigation included four pillars of conventional green marketing strategies as independent variables (product, place, price, and promotion). Linear regression analysis (see **Tables 2–6**) was used to measure the strength of the correlations between the dependent and different independent variables.

**Table 2.** Correlation matrix among variables.

	<b>GProduct</b>	<b>GPrice</b>	<b>GPromotion</b>	<b>GPlace</b>	<b>EC</b>	<b>CCC</b>	<b>CFC</b>
GProduct	1.000	0.133	0.078	0.509**	0.153	0.209	0.180
GPrice	0.133	1.000	0.099	0.206	0.050	0.195	-0.049
GPromotion	0.078	0.099	1.000	0.267	0.278	0.182	0.161
GPlace	0.509**	0.206	0.267	1.000	0.320*	0.042	0.443**
EC	0.153	0.050	0.278	0.320	1.000	-0.045	0.570**
CCC	0.209	0.195	0.182	0.042	-0.045	1.000	-0.190
CFC	0.180	-0.049	0.161	0.443**	0.570**	-0.190	1.000

Note. \* Correlation is significant at the 0.05 level; \*\* Correlation is highly significant at the 0.01 level (two-tailed).

**Table 3.** Mean, standard deviation.

<b>Variable</b>	<b>Mean</b>	<b>Standard Deviation</b>
GProduct	3.07	0.55
GPrice	3.65	0.75
GPlace	3.06	0.58
GPromotion	2.85	0.64
BA	2.77	0.74
BL	3.06	0.5
BT	3.04	1.06
CCC	3.6	0.63
CFC	3.17	0.82
PBQ Average	3.22	0.63

(Source: own).

The mean values (**Table 3**) indicate that respondents generally perceive the green marketing and brand equity constructs slightly positively, with scores mostly around

3 (neutral) to 3.65 (slightly positive). The standard deviation values indicate the variability in responses, with most variables having moderate variability.

**Table 4.** Results of the regression analysis for H1–H4.

IV/DV	GProduct ( $\beta, p$ )	GPrice ( $\beta, p$ )	GPromotion ( $\beta, p$ )	GPLace ( $\beta, p$ )	Model ( $R^2, p$ )
BA	$\beta = 0.453$ $p = 0.068$	$\beta = -0.176$ $p = 0.163$	$\beta = 0.349$ $p = 0.051$	$\beta = 0.144$ $p = 0.493$	$R^2 = 0.386$ $p = 0.000$
BL	$\beta = -0.041$ $p = 0.833$	$\beta = -0.0843$ $p = 0.400$	$\beta = 0.2595$ $p = 0.068$	$\beta = 0.1334$ $p = 0.426$	$R^2 = 0.147$ $p = 0.000$
BQ	$\beta = 0.8746$ $p < 0.001$	$\beta = -0.0491$ $p = 0.666$	$\beta = -0.1542$ $p = 0.335$	$\beta = -0.2994$ $p = 0.121$	$R^2 = 0.297$ $p = 0.000$
BT	$\beta = 0.0417$ $p = 0.918$	$\beta = -0.1316$ $p = 0.528$	$\beta = 0.7537$ $p = 0.013$	$\beta = -0.1598$ $p = 0.647$	$R^2 = 0.178$ $p = 0.000$

(Source: own).

**Table 5.** Results of the regression analysis for H5.

IV/DV	GProduct ( $\beta, p$ )	GPrice ( $\beta, p$ )	GPromotion ( $\beta, p$ )	GPLace ( $\beta, p$ )	CCC ( $\beta, p$ )	CFC ( $\beta, p$ )	Model ( $R, p$ )
BA	$\beta = 0.4199$ , $p = 0.108$	$\beta = -0.176$ $p = 0.331$	$\beta = 0.2534$ $p = 0.172$	$\beta = 0.1249$ $p = 0.566$	$\beta = -0.0360$ , $p = 0.820$	$\beta = 0.2038$ , $p = 0.110$	$R = 0.333$ , $p = 0.009$
BL	$\beta = -0.1027$ $p = 0.620$	$\beta = -0.1276$ $p = 0.226$	$\beta = 0.3070$ $p = 0.042$	$\beta = 0.1967$ $p = 0.264$	$\beta = 0.1538$ , $p = 0.230$	$\beta = -0.0923$ , $p = 0.363$	$R = 0.333$ , $p = 0.009$
BT	$\beta = -0.2998$ $p = 0.366$	$\beta = 0.0182$ $p = 0.913$	$\beta = 0.3684$ $p = 0.123$	$\beta = -0.0936$ $p = 0.737$	$\beta = 0.2174$ , $p = 0.287$	$\beta = 0.8505$ , $p = 0.000$	$R = 0.333$ , $p = 0.009$
BQ	$\beta = 0.7760$ $p = 0.002$	$\beta = -0.0942$ $p = 0.430$	$\beta = -0.1183$ $p = 0.482$	$\beta = -0.2159$ $p = 0.281$	$\beta = 0.2065$ , $p = 0.158$	$\beta = -0.0634$ , $p = 0.582$	$R = 0.333$ , $p = 0.009$

(Source: own).

**Table 6.** Results of the regression analysis for H6.

IV/DV	GProduct ( $\beta, p$ )	GPrice ( $\beta, p$ )	GPromotion ( $\beta, p$ )	GPLace ( $\beta, p$ )	CCC ( $\beta, p$ )	CFC ( $\beta, p$ )	Model ( $R, p$ )
BA	$\beta = -0.0110$ , $p = 0.948$	$\beta = 0.1045$ , $p = 0.391$	$\beta = -0.0984$ , $p = 0.467$	$\beta = 0.0525$ , $p = 0.708$	$\beta = 0.2650$ , $p = 0.084$	$\beta = 0.3716$ , $p = 0.027$	$R^2 = 0.302$ , $p = 0.006$
BL	$\beta = -0.1423$ , $p = 0.342$	$\beta = 0.1660$ , $p = 0.183$	$\beta = 0.1060$ , $p = 0.381$	$\beta = -0.1800$ , $p = 0.200$	$\beta = 0.0803$ , $p = 0.550$	$\beta = 0.0294$ , $p = 0.835$	$R^2 = 0.157$ , $p = 0.095$
BT	$\beta = 0.0522$ , $p = 0.795$	$\beta = 0.1043$ , $p = 0.520$	$\beta = 0.2792$ , $p = 0.131$	$\beta = -0.0638$ , $p = 0.757$	$\beta = 0.1540$ , $p = 0.418$	$\beta = 0.2745$ , $p = 0.187$	$R^2 = 0.210$ , $p = 0.043$
BQ	$\beta = 0.5742$ , $p = 0.003$	$\beta = 0.1985$ , $p = 0.120$	$\beta = -0.0381$ , $p = 0.757$	$\beta = -0.2332$ , $p = 0.064$	$\beta = 0.0180$ , $p = 0.900$	$\beta = 0.2596$ , $p = 0.085$	$R^2 = 0.367$ , $p = 0.001$

(Source: own).

The Cronbach’s Alpha for the green marketing constructs is 0.70, which indicates acceptable internal consistency, and for the brand equity constructs it is 0.45, which is lower than the recommended in this type of research (0.70), indicating poor internal consistency for this group of items.

### 2.3. Research limitations

The research carried out by us is related to the following limits:

- The research is limited to a specific geographical area, which is the Czechia. This



may limit the generalizability of the results to other regions or countries where consumer preferences, regulatory frameworks and levels of awareness of environmental issues may differ.

- Different cultural and socio-economic factors can influence consumer behaviour and their perception of green marketing. These factors may be specific to particular demographic groups or regions. Our results may be influenced by cultural or socio-economic contexts, which may make it difficult to apply them to wider or different populations.
- The research examines only a limited number of variables, which limits the ability to capture the complex interactions between the various factors influencing green marketing. Thus, the results may lack the depth and nuance that are important to fully understand the influence of various variables.
- Respondents may tailor their answers to conform to what they believe to be socially acceptable or desirable, which may affect the accuracy of the data. Therefore, the data collected may be biased and may not accurately reflect the true opinions and behaviour of consumers.

### 3. Results

Based on the regression analysis results from **Table 4**, we can highlight key insights for each H1 to H4, regarding the relationship between green marketing strategies (product, price, promotion, place) and the components of Consumer-Based Brand Equity (CBBE).

Hypothesis H1: Brand associations are favourably correlated with green products, green prices, green promotions, and green places.

There is a positive relationship between green products and green promotions and brand associations, but it is not statistically significant (GPromotion ( $\beta = 0.349$ ,  $p = 0.051$ ), GProduct ( $\beta = 0.453$ ,  $p = 0.068$ )). Based on that, green products have some contribution to brand associations but may need more intense promotion or accent to have a significant impact, while effective marketing campaigns can improve brand associations slightly. GPrice ( $\beta = -0.176$ ,  $p = 0.163$ ): considering the negative coefficient, there is no favourable relationship between green pricing and brand associations. This means that higher prices of green products might be holding back strong positive brand associations. GPlace ( $\beta = 0.144$ ,  $p = 0.493$ ) correlation was not statistically significant, meaning that the availability of green products across different places does improve brand association.

Overall model ( $R^2 = 0.386$ ,  $p = 0.000$ ) presents 38.6% of the variance in brand associations, which is statistically significant, meaning that green marketing mix elements all together do influence brand associations.

Hypothesis H2: Brand loyalty is favourably correlated with green products, green prices, green promotions, and green places.

There is no significant relationship between green products and brand loyalty (GProduct ( $\beta = -0.0410$ ,  $p = 0.833$ )), the relationship between green pricing and brand loyalty is negative and not significant (GPrice ( $\beta = -0.0843$ ,  $p = 0.400$ )), indicating that higher prices and greener product presentation for green products may not build stronger loyalty. There is a positive but insignificant relationship between green

promotions and brand loyalty, as well as green place and brand loyalty-GPlace ( $\beta = 0.1334$ ,  $p = 0.426$ ), GPromotion ( $\beta = 0.2595$ ,  $p = 0.068$ ). This may indicate that effective marketing (promotion) can help build loyalty, while the availability of green products will likely not influence it.

The overall model ( $R^2 = 0.147$ ,  $p = 0.000$ ) presents 14.7% of the variance in brand loyalty, which is statistically significant, but the individual contributions of the marketing mix (4Ps) are not very strong.

Hypothesis H3: Perceived brand quality is positively correlated with green products, green prices, green promotions, and green places.

There is a highly significant positive correlation between green products and perceived brand quality (GProduct ( $\beta = 0.8746$ ,  $p < 0.001$ )), which suggests that high-quality green products significantly enhance consumers' perceptions of brand quality. Meanwhile, the relationship between green pricing and perceived brand quality is insignificant (GPrice ( $\beta = -0.0491$ ,  $p = 0.666$ ), indicating that price alone might not influence the perception of quality. Promotion and place, on the other hand, have a negative but insignificant correlation and thus might not effectively enhance PBQ (GPromotion ( $\beta = -0.1542$ ,  $p = 0.335$ ), GPlace ( $\beta = -0.2994$ ,  $p = 0.121$ )).

Overall ( $R^2 = 0.297$ ,  $p = 0.000$ ) model explains 29.7% of the variance in perceived brand quality, indicating a collective impact of the green marketing mix factors, particularly the product quality, on PBQ.

Hypothesis H4: Brand trust is favourably correlated with green products, green prices, green promotions, and green places.

There is no significant relationship between green products, price, place, and brand trust, suggesting that the presence of green products, pricing strategies, or places alone does not significantly influence brand trust (GProduct ( $\beta = 0.0417$ ,  $p = 0.918$ ), GPrice ( $\beta = -0.1316$ ,  $p = 0.528$ ), GPlace ( $\beta = -0.1598$ ,  $p = 0.647$ )). However, there is a statistically significant positive relationship between green promotions and brand trust (GPromotion ( $\beta = 0.7537$ ,  $p = 0.013$ )), suggesting that promoting green initiatives effectively can enhance consumer trust.

The overall model ( $R^2 = 0.178$ ,  $p = 0.000$ ) presents a 17.8% variance in brand trust, indicating a mild collective impact of green marketing factors, mainly promotions.

Hypothesis H5: The relationship between a company's consumer-based brand equity and its green marketing approach is moderated by consumers' environmental concerns.

Since this hypothesis considers multiple correlations, let's review only statistically significant ones. There are positive and statistically significant correlations between Brand Loyalty (BL) and GPromotion ( $\beta = 0.3070$ ,  $p = 0.042$ ), a highly significant positive correlation between Perceived Brand Quality (PBQ) and GProduct ( $\beta = 0.7760$ ,  $p = 0.002$ ). Finally, CFC ( $\beta = 0.8505$ ,  $p = 0.000$ ) and BT is highly significant, indicating that consumers' future environmental concerns strongly moderate the relationship between green marketing mix elements and brand trust.

Overall model ( $R^2 = 0.333$ ,  $p = 0.009$ ) presents a statistically significant 33.3% variance towards brand trust, with a strong influence from consumers' environmental concerns.

To summarize, consumers' environmental concerns significantly moderate the

relationship between green marketing strategies and brand trust. Green promotions positively influence brand loyalty, and perceived brand quality significantly improves with the help of green products. Green marketing mix elements collectively influence brand associations, brand loyalty, perceived brand quality, and brand trust. The impact of consumers' environmental concerns has also been detected.

Hypothesis H6: The association between a company's green marketing strategy and its consumer-based brand equity components is moderated when consequences are considered.

Similarly, let's take a look at significant correlations for this analysis.

Environmental concerns (EC) significantly enhance brand associations (BA) when customers consider future consequences of CFC ( $\beta = 0.3716, p = 0.027$ ). The model between BA and other variables ( $R^2 = 0.302, p = 0.006$ ) explains 30.2% of the variance in brand associations, which is statistically significant. Thus, it shows the influence of green marketing strategies on brand associations when consequences are considered.

There is also a highly significant positive impact between GProduct and BQ ( $\beta = 0.5742, p = 0.003$ ), indicating green products significantly enhance perceived brand quality. The overall model for PBQ ( $R^2 = 0.367, p = 0.001$ ) explains statistically significant 36.7% of the variance in perceived brand quality. This means that green marketing strategies have an impact on perceived brand quality when consequences are considered. Similarly for the overall model for BT ( $R^2 = 0.210, p = 0.043$ )-the model explains a significant 21.0% of the variance in brand trust.

In **Table 7** below, we present a summary evaluation of the hypotheses formulated by us.

**Table 7.** Hypothesis evaluation.

Hypothesis	Evaluation
Hypothesis H1: Brand associations are favourably correlated with green products, green prices, green promotions, and green places.	Rejected
Hypothesis H2: Brand loyalty is favourably correlated with green products, green prices, green promotions, and green places.	Rejected
Hypothesis H3: Perceived brand quality is positively correlated with green products, green prices, green promotions, and green places.	Confirmed
Hypothesis H4: Brand trust is favourably correlated with green products, green prices, green promotions, and green places.	Rejected
Hypothesis H5: The relationship between a company's consumer-based brand equity and its green marketing approach is moderated by consumers' environmental concerns.	Confirmed
Hypothesis H6: The association between a company's green marketing strategy and its consumer-based brand equity components is moderated when consequences are considered.	Confirmed

### Recommendations for further research

As consumers' environmental concerns grow and businesses seek the best strategies to promote green production, further research is essential. Whether companies' strategies come out for profit-led reasons or genuine environmental concerns, the increase in sustainable consumption nevertheless influences the ecosystem in a good way. Despite this study provides findings from Czech retail, the case is quite specific, and the geographical expansion of the research might provide more understanding. This study had 4700 responses analysed, but additional from

various age groups, regions, genders, and income levels would increase the study's reliability. Additional variables could be considered, including a more thorough consumer psychology research or review of the impact of corporate transparency, like known supply chain and regulatory practices. Regarding variables included in this study, each can be explored more thoroughly. For example, Green Promotion can be reviewed using digital marketing consumer perception versus in-store or outdoor advertisement.

Each company should conduct financial profit-loss and risk assessments, A/B testing, sales analytics, and other research in addition to the study findings to design unique strategies suitable for their customer pool.

#### **4. Discussion**

This study deep-dives into the complex relationship between classic marketing mix elements (4Ps of marketing) and brand loyalty dimensions within a specific case of the green marketing approach moderated by consumers' environmental concerns.

The study's main conclusions are that green products and promotions positively impact brand associations; as confirmed by Dinh et al. (2023), Sohail (2017) or Mohd Suki (2017), however, more intensive marketing efforts can have a bigger impact (Papa et al., 2022). The significant enhancement of perceived brand quality of high-grade green products demonstrates the best association among the criteria examined, which state Liu et al. (2020) and Ghylin et al. (2008). Green promotions greatly increase brand trust, highlighting the significance of credible green marketing communications. As evidenced by studies by Chen (2010), Lewandowska et al. (2017) or Putra et al. (2024).

Furthermore, the relationship between green marketing strategies and brand trust is strongly moderated by customers' environmental concerns, and brand associations and perceived quality are significantly influenced by consideration of the current and future consequences. Our findings correlate with the results and findings by Tan et al. (2022) or Wu and Liu (2022). While it was expected that consumers would appreciate superior product quality, it was a surprise that consumers were not willing to pay significantly higher prices for green products despite their sustainability value. Which contradicts the findings by Wei et al. (2018), but confirms findings by Hamzaoui Essoussi and Linton (2010). This highlights the need for smart pricing strategies, which is confirmed by Zhang and Zheng (2022) as well.

The moderating effects of consumers' environmental concerns and consideration of future consequences play a crucial role in shaping how green marketing strategies are received and acted upon. Environmental concerns refer to the degree to which consumers are worried about the impact of their consumption on the environment. This includes awareness of issues like pollution, climate change, and resource depletion. Consumers with higher environmental concerns are more likely to respond positively to green marketing initiatives. They are more attentive to messages about sustainability and eco-friendly practices, and are more inclined to support brands that align with their values.

These consumers are often willing to pay a premium for products that are environmentally friendly. This means that green marketing can be particularly

effective in targeting this segment with messages about the benefits of sustainable practices and products.

Environmental concerns can significantly influence purchase decisions. Consumers who are highly concerned about environmental issues are more likely to choose products based on their environmental impact and may be more skeptical of greenwashing (i.e., misleading claims about environmental benefits).

Strong environmental concerns can lead to increased brand loyalty. Consumers who prioritize sustainability are more likely to remain loyal to brands that consistently demonstrate genuine commitment to environmental issues.

Consideration of Future Consequences refers to the degree to which individuals consider the long-term impacts of their actions on the future. It reflects a person's propensity to prioritize long-term benefits over immediate gratification.

Consumers with high CFC are more likely to engage in green purchasing behaviours, as they are more aware of and concerned about the long-term environmental consequences of their choices. They are inclined to make decisions that benefit future generations, even if these decisions involve higher costs or inconvenience in the short term.

Marketing messages that emphasize long-term environmental benefits and future impacts are likely to resonate more with consumers who have high CFC. These consumers are more attuned to messages about sustainability that highlight future advantages and the broader impact of their choices.

Consumers with high CFC are generally more critical of product claims and require substantial evidence of a product's long-term environmental benefits. They may be more likely to scrutinize green marketing claims and demand transparency and proof of sustainability.

High CFC consumers are often more consistent in their environmental behaviours across different contexts. They are likely to incorporate sustainability into various aspects of their lives, not just in their purchasing decisions but also in their lifestyle choices.

Consumers who have both high environmental concerns and high CFC are likely to be the most responsive to green marketing strategies. They are motivated by both immediate environmental concerns and the long-term consequences of their actions, making them more likely to engage with and support sustainable brands and products.

Understanding the moderating effects of these factors allows for more tailored and effective marketing strategies. For instance, marketing campaigns can be designed to emphasize both the immediate environmental benefits and the long-term positive impacts of products to appeal to both high-concern and high-CFC consumers.

Consumers with high environmental concerns and high CFC are more sensitive to greenwashing. They are likely to scrutinize marketing claims more closely and may react negatively to brands that fail to deliver on their sustainability promises.

In conclusion, the moderating effects of consumers' environmental concerns and consideration of future consequences significantly influence the effectiveness of green marketing strategies. Retailers and marketers need to understand these factors to effectively target and communicate with different consumer segments, ensuring that their green marketing efforts resonate with those who are most motivated by environmental issues and long-term consequences.

Based on the above findings, companies aiming to increase their brand equity through green marketing strategies should invest their effort in the following:

- Invest in green product quality. Since the high quality of green products enhances perceived brand quality, companies should prioritize the manufacturing and distribution of high-quality green products.
- Leverage green promotions. Effective green advertising is found to be crucial for enhancing brand associations and trust.
- Rethink green pricing strategies. Higher green prices leave consumers with negative brand associations, so companies should pay attention and invest effort in sustaining affordable prices for green products without compromising the quality.
- Avoid inconsistency in green marketing messaging. While promotions benefit brand trust, inconsistent or non-credible green promotions can bring negative effects. Companies should avoid any form of greenwashing while promoting their green initiatives, as this can damage brand trust and equity and thus push away customers.

Our suggestions strictly correlate with the findings by Nguyen-Viet (2023), Qayyum (2023), Sanidewi and Paramita (2018) or Ha (2020).

Additionally, the research shows that consumers' environmental beliefs should be considered while planning green marketing strategies to improve brand equity.

Retail supermarket chains can leverage these insights to increase brand loyalty and trust when correctly applying a combination of green products, price, promotion, and place and considering customers' concerns about future and current environmental consequences. Those techniques will consequently help companies grow retention and sales and thus help their business meet sustainability goals.

Bridging consumer behaviour and green marketing in Czech retail chains has several managerial implications that can provide actionable insights for practitioners. Understanding these implications can help retailers effectively align their strategies with consumer preferences and drive successful green marketing initiatives.

Retailers should conduct market research to identify segments of consumers who are most concerned about environmental issues and who consider future consequences in their purchasing decisions. These segments are likely to be more responsive to green marketing efforts.

They should develop tailored marketing strategies that address the specific needs and preferences of these segments. For example, use messaging that emphasizes both immediate environmental benefits and long-term impacts to resonate with consumers who value both aspects.

They should ensure that green marketing messages are authentic and transparent. Consumers with high environmental concerns are particularly sensitive to greenwashing. They must clearly communicate the genuine environmental benefits of products and practices.

For consumers with high consideration of future consequences (CFC), it is good idea to focus on the long-term benefits of sustainable products, to provide evidence of how these products contribute to a more sustainable future.

They should invest in the development of products that are genuinely sustainable.

This includes using eco-friendly materials, reducing waste, and improving energy efficiency. Innovation in these areas can meet the demands of environmentally conscious consumers.

They must actively seek and incorporate feedback from consumers regarding their environmental preferences and concerns. This feedback can guide product development and ensure that new offerings align with consumer values.

They should train employees on the importance of green marketing and how to effectively communicate the environmental benefits of products to customers. Employees should be well-informed and able to answer consumer queries about sustainability.

They should regularly monitor consumer response to green marketing campaigns and adjust strategies based on performance data.

They should develop strategies to mitigate risks related to sustainability claims, such as potential backlash from failed green initiatives or negative consumer reactions to perceived greenwashing.

By implementing these strategies, Czech retail chains can effectively bridge consumer behaviour and green marketing, resulting in improved market positioning, enhanced customer loyalty, and a positive impact on both the environment and the bottom line.

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