

Bachelor Thesis
In the bachelor program
Information Management and Corporate Communications
at University of Applied Sciences Neu-Ulm

**The Impact of Sustainability Messaging: Perceived Credibility of Digital
Sustainability Communication in the German Cosmetics Market and
Differences Between Psychographic Target Groups**

1st examiner: Prof. Dr. Stefanie Schöberl

2nd examiner: Minna Kamula

Author: Luca Selina Gail (Enrolment number: 322979)

Topic received: 19 November 2025

Date of submission: 5 March 2026

Abstract

This bachelor's thesis investigates how the perceived credibility of digital sustainability communication influences consumers' purchase intention in the German cosmetics market and to what extent these effects differ across psychographic target groups. The motivation for this study arises from the growing strategic relevance of sustainability in the cosmetics industry alongside rising consumer scepticism towards greenwashing and sustainability claims that are difficult to verify. The research objective is to analyse perceived credibility as the central mechanism linking digital sustainability communication to purchase intention, to compare the effects of different communication formats, and to derive practical implications for targeted communication design.

Existing research has addressed digital sustainability communication, credibility indicators, greenwashing effects, and psychographic drivers of sustainable consumption. However, empirical evidence integrating these dimensions within one framework and examining psychographic differences remains limited, especially in the German cosmetics market.

This research draws on a quantitative online survey that measures perceived credibility, greenwashing, purchase intention, and sustainability-related psychographic orientation to enable group comparisons. Participants evaluated four digital sustainability communication stimuli from a fictitious cosmetics brand, covering evidential communication, emotionally framed storytelling, and influencer-based communication with differing thematic fit.

The analyses reveal a supportive role of perceived credibility for purchase intention, whereas perceived greenwashing undermines both constructs. Evidential formats and collaborations with sustainability-focused influencers are perceived as more credible than purely emotional storytelling and endorsements by beauty and lifestyle influencers. Psychographic differences are not reflected in overall credibility levels but in format sensitivity. Consumers with stronger sustainability orientation differentiate more clearly between evidential and emotional communication. The influence of perceived credibility on purchase intention remains similarly pronounced in both groups.

Overall, the results suggest that transparency, verifiability, and perceived expertise constitute key success factors for effective digital sustainability communication in the cosmetics market. Further research should specify credibility indicators, apply moderation-based approaches to capture psychographic effects more precisely, and extend analyses to real brands and behavioural outcomes.

Key Words: Digital Sustainability Communication, Perceived Credibility, Purchase Intention, Greenwashing, Psychographic Segmentation

Gender note

In this thesis, the generic masculine form is used for reasons of readability. It refers equally to male, female, and diverse gender identities. Double or alternative gender-specific language is therefore avoided. Unless explicitly stated otherwise, the masculine form is intended to include all genders.

Table of Contents

List of Figures.....	VI
List of Tables.....	VII
List of Abbreviations	VIII
1 Introduction	1
1.1 Problem Statement and Topic Relevance	1
1.2 Research Gap	2
1.3 Research Question and Objectives	2
1.4 Methodological Approach and Structure of the Thesis.....	3
2 Theoretical Foundations	4
2.1 Sustainability Communication in the Cosmetics Industry	4
2.1.1 Definition and Foundations of Sustainability Communication	4
2.1.2 Digital Channels and Formats.....	6
2.1.3 Industry-Specific Challenges in the Cosmetics Market.....	9
2.2 Credibility of Digital Sustainability Communication	11
2.2.1 Definition and Dimensions of Credibility	11
2.2.2 Factors Influencing Credibility.....	12
2.2.3 Greenwashing	15
2.3 Purchase Intention and Consumer Behaviour in the Cosmetics Market.....	16
2.3.1 Purchase Decision Process	16
2.3.2 Relationship Between Perceived Credibility and Purchase Intention	18
2.3.3 Theory of Planned Behaviour	19
2.3.4 Attitude-Behaviour Gap.....	20
2.4 Psychographic Segmentation in the Sustainability Context.....	20
2.4.1 Psychographic Influences on Sustainable Consumption	21
2.4.2 Definition and Key Characteristics of Psychographic Segmentation	22
2.4.3 Psychographic Dimensions of Sustainability-Related Orientation	23

2.5	Research Hypotheses.....	25
3	Empirical Study	29
3.1	Selection of the Research Method	29
3.2	Empirical Quality Criteria.....	30
3.3	Research Design.....	31
3.3.1	Framework	31
3.3.2	Structure of the Questionnaire	32
3.3.3	Pretest.....	35
3.4	Analysis and Presentation of Research Results	36
3.4.1	Demographic Characteristics of the Sample	37
3.4.2	Market-Related Characteristics and Prior Exposure.....	39
3.4.3	Digital Sustainability Communication Formats.....	40
3.4.4	Psychographic Sustainability Orientation of the Sample	44
4	Discussion of Research Findings	46
4.1	Testing of the Research Hypotheses	46
4.2	Interpretation of the Findings	53
4.3	Practical Implications and Recommendations for Brand Communication	56
4.4	Evaluation of Empirical Quality Criteria.....	57
5	Conclusion.....	59
5.1	Summary and Answer to the Research Question	59
5.2	Critical Reflection and Limitations	60
5.3	Outlook and Directions for Future Research.....	62
	References	IX
	Appendix	XIX

List of Figures

Figure 1: Key Drivers of Perceived Credibility in Digital Sustainability Communication	15
Figure 2: Purchase Decision Process	16
Figure 3: Psychographic Dimensions Influencing Sustainability-Related Orientation	25
Figure 4: Digital Sustainability Communication Stimuli	34
Figure 5: Gender Distribution of the Sample	38
Figure 6: Purchase Frequency of Cosmetic Products in the Sample	39
Figure 7: Prior Exposure to Online Sustainability Communication by Cosmetic Brands....	40
Figure 8: Distribution of Psychographic Sustainability Orientation Groups	45
Figure 9: Evidential Sustainability Communication Stimulus.....	XX
Figure 10: Emotional Sustainability Communication Stimulus	XXI
Figure 11: Sustainability Influencer Communication Stimulus.....	XXII
Figure 12: Beauty and Lifestyle Influencer Communication Stimulus	XXIII

List of Tables

Table 1: Sustainability Topics for Companies	5
Table 2: Derivation of the Research Hypotheses	26
Table 3: Survey Participation and Sample Composition.....	37
Table 4: Frequency Distribution of Age Groups.....	37
Table 5: Reliability Statistics for Perception Constructs	41
Table 6: Descriptive Statistics for Digital Sustainability Communication Formats	42
Table 7: Item-Level Reliability Statistics of the Sustainability Orientation Scale	44
Table 8: Descriptive Statistics for Psychographic Sustainability Orientation	45
Table 9: Descriptive Statistics for H1	47
Table 10: Descriptive Statistics for H2	48
Table 11: Covariance and Correlation for H3.....	48
Table 12: Covariance and Correlation for H4	49
Table 13: Covariance and Correlation for H5	50
Table 14: Descriptive Statistics for H6.....	50
Table 15: Descriptive Statistics for H7	51
Table 16: Covariance and Correlation for H8	52

List of Abbreviations

CSR	Corporate Social Responsibility
EU	European Union
PBC	Perceived Behavioural Control
TPB	Theory of Planned Behaviour

1 Introduction

1.1 Problem Statement and Topic Relevance

In response to global sustainability pressures such as environmental damage and climate change, organisations more systematically integrate ecological and social concerns into their strategies alongside economic objectives (Politis & Grigoroudis, 2022, p. 1; Tavanti, 2023, pp. 2–3, 5, 7). Due to the multifaceted nature and limited verifiability of sustainability attributes, sustainability communication becomes crucial for conveying related information to consumers (Genç, 2017, p. 514). At the same time, growing scepticism and information uncertainty regarding sustainability claims have increased the importance of communicating sustainability initiatives in a credible manner, making credibility a prerequisite for consumer trust (Bürker, 2025, p. 21, 165).

The cosmetics industry represents a particularly relevant context given its economic relevance and advanced digitalisation. Germany constitutes one of the largest cosmetics markets within the European Union (EU) (Turcu et al., 2025, p. 410). In 2025, the German cosmetics market generated a combined domestic and export turnover of €26.8 billion, reflecting year-on-year growth of 3.4% (Industrieverband Körperpflege- und Waschmittel e. V. (IKW), 2025, p. 2). Concurrently, digital technologies are reshaping market structures and consumer communication in this sector. A fundamental change in consumption patterns is driven by rising sales in online markets, positioning digital channels as increasingly important touchpoints within the purchase decision process (Turcu & Brancu, 2025, p. 2274). Therefore, digital sustainability communication can be relevant for consumer evaluations and related purchase intentions. These developments require brands to continuously adapt their communication strategies. Sustainability has become more prominent in brand communication, while consumers place greater emphasis on health-related and environmental aspects (Park & Hong, 2024, pp. 40, 67). A study conducted by the VKE Cosmetics Association indicates that 74% of respondents expect stronger sustainability engagement from the cosmetics industry (Telschow et al., 2020, p. 21). Accordingly, information disclosure on formulation, production processes and the origin of raw materials contributes to credibility (Park & Hong, 2024, p. 67).

However, sustainability communication faces substantial credibility challenges. Since sustainability-related information is often difficult to verify, credible communication becomes decisive in forming purchase intentions (Balderjahn, 2021, p. 166). Practices described as greenwashing can undermine perceived credibility (Bürker, 2025, p. 21; Tavanti, 2023, p. 134). Regulatory developments reflect these concerns. An EU screening revealed that

slightly more than half of the reviewed sustainability statements could be deceptive (European Commission: Directorate-General for Environment, IPSOS & Milieu, 2024, p. 12). Consequently, measures taking effect in Germany in September 2026 aim to restrict vague environmental claims and strengthen verifiability (Bundesministerium der Justiz und für Verbraucherschutz, n.d.). Against this background, understanding how consumers evaluate digital sustainability communication is highly relevant. Psychographic characteristics are considered pivotal for explaining differences in consumer responses (Park & Hong, 2024, p. 78). Given that credible indicators can mitigate perceived purchase uncertainty when sustainability claims cannot be independently confirmed (Balderjahn, 2021, p. 166), its effect across psychographic segments requires systematic examination.

1.2 Research Gap

The growing prominence of digital sustainability communication has increased the importance of credibility for understanding consumer evaluations. Although sustainability communication and credibility have attracted considerable scholarly attention, existing research has primarily examined:

- (1) the effects of specific digital sustainability communication channels and formats on consumer responses (Herrada-Lores et al., 2025; Jha & Verma, 2022; Blau et al., 2022),
- (2) credibility indicators in sustainability messages (Lou & Yuan, 2019; E. (Anna) Kim et al., 2022; Verleye et al., 2023; Vilkaite-Vaitone, 2024),
- (3) the negative consequences of greenwashing (Akturan, 2018; Nguyen et al., 2019; Isac et al., 2025),
- (4) and the role of psychographic factors in sustainable consumption (Falke et al., 2022; Baltacı et al., 2025; Sharma & Jha, 2017).

These research strands have largely been investigated in isolation. A lack of empirical evidence integrating digital sustainability communication formats, perceived credibility, and purchase intention persists. Moreover, insufficient attention has been paid to whether the magnitude and direction of these relationships differ across psychographic target segments. This gap is particularly evident in the German cosmetics market, where comprehensive, integrative analyses remain scarce.

1.3 Research Question and Objectives

Building on the identified research gap and the resulting need for further investigation, this bachelor's thesis addresses the following research question:

“How does the perceived credibility of digital sustainability communication influence consumers’ purchase intention in the German cosmetics market, and to what extent do these effects differ between psychographic target groups?”

This study investigates the impact of different digital sustainability communication formats on consumers’ purchase intention in the German cosmetics market. In particular, this thesis examines how the perceived credibility of these formats influences purchase intention and whether the observed relationships vary across psychographic target groups.

The analysis integrates communication formats, perceived credibility, and psychographic segmentation within a unified framework. It advances existing research, as these dimensions have often been examined separately or without market-specific comparison. The findings aim to deepen the theoretical and empirical understanding of the behavioural implications of sustainability communication. Additionally, they provide recommendations for companies on how to design more targeted and credible sustainability communication strategies.

1.4 Methodological Approach and Structure of the Thesis

To examine the guiding research question, this thesis applies a quantitative research design (H.-B. Brosius et al., 2022, p. 4). Data are collected using a fully standardised online questionnaire (Berger-Grabner, 2022, p. 174) assessing consumers’ evaluations of four different digital sustainability communication formats. The analysis focuses on perceived credibility, perceived greenwashing, and purchase intention. In addition, sustainability-related psychographic characteristics are measured to identify consumer segments and to examine potential differences in credibility perceptions and their effects on purchase intention across value orientations.

This thesis is structured into five chapters. Subsequent to this introduction, Chapter 2 outlines the theoretical foundations of this study. It reviews academic literature and existing research on sustainability communication, the cosmetics industry, credibility in corporate communication, consumer behaviour, and psychographic segmentation in sustainability contexts. Based on this framework, the research hypotheses are developed. Chapter 3 presents the empirical methodology, including the research design and descriptive results of this study. Chapter 4 reports and interprets the findings of hypothesis testing, derives practical implications for sustainability communication in the cosmetics market and assesses the fulfilment of empirical quality criteria. This thesis concludes with Chapter 5, which summarises the key findings and answers the research question. Within this chapter, the study’s limitations are critically discussed and avenues for future research are outlined.

2 Theoretical Foundations

The theoretical foundations of this thesis establish the analytical framework for examining how the perceived credibility of digital sustainability communication influences purchase intention in the German cosmetics market. This chapter introduces central concepts of sustainability communication, credibility, consumer decision-making, and sustainability-related psychographic orientations. These perspectives guide the derivation of research hypotheses and provide the conceptual basis for the subsequent empirical analysis.

2.1 Sustainability Communication in the Cosmetics Industry

This section defines sustainability communication and outlines key digital formats and channels used in the cosmetics industry to communicate sustainability-related information. It further highlights industry-specific challenges that shape sustainability messages in this market. This contextualisation clarifies the conditions under which perceived credibility becomes crucial for shaping consumer responses in the German cosmetics market.

2.1.1 Definition and Foundations of Sustainability Communication

Before defining sustainability communication, the underlying understanding of sustainable development is outlined. A widely acknowledged foundation is the definition of the Brundtland Commission (1987), which frames sustainable development as the “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987, p. 41). Since 1992, this principle has shaped international discourse and has been reflected in political and institutional frameworks (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, n.d.). Sustainability is commonly conceptualised as comprising three interconnected dimensions that are equally relevant and closely interlinked for long-term viability (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung, n.d.; Ranisch & Schmiedeknecht, 2023, p. 25). First, economic sustainability is characterised by maintaining sustained economic performance and resilience. Second, social sustainability captures conditions that enable individuals to participate in social life and to live in safety and fairness. Third, environmental sustainability focuses on safeguarding ecological systems by limiting adverse impacts on the environment and resources (Tavanti, 2023, p. 19). These dimensions indicate that sustainability permeates organisational practice and gives rise to industry-specific fields of action. Table 1 summarises typical corporate topics within each dimension (Ranisch & Schmiedeknecht, 2023, p. 32).

Table 1: Sustainability Topics for Companies

Economic	Environmental	Social
Stakeholder value	Resource consumption	Human rights
Product quality	Energy(-efficiency)	Discrimination / diversity / equality
Market presence	Emissions	Stakeholder engagement
Procurement practices	Waste / recycling	Forced labour / child labour
R&D / innovation	Supply chains / transportation	Collective bargaining
Compliance	Ecological footprint	Health and safety
Anti-corruption	Carbon footprint	Work–life balance
Consumer protection	Biodiversity	Training and education
Cause-related marketing	Cradle-to-cradle / circular economy	Partnerships / collective action

Source: Adapted from Ranisch & Schmiedeknecht, 2023, p. 32, translation by the author

Given the wide scope of sustainability in organisational practice (Ranisch & Schmiedeknecht, 2023, p. 32), communication is essential for making related intentions, actions and outcomes visible to stakeholders. Sustainability communication is part of corporate communication as it supports stakeholder dialogue that is pertinent to strategic decision-making (Schaefer, 2012, p. 258). It requires clear and coordinated messages that reach the right target groups (Meffert et al., 2024, p. 601). Taken together, sustainability-related initiatives are translated into messages that address various stakeholders and communicate organisational activities.

Literature provides no single commonly agreed definition of sustainability communication. Researchers describe it differently and emphasise distinct aspects. An established definition of sustainability communication is provided by Michelsen (2007), who describes it as a process of societal negotiation and understanding in which sustainability provides orientation for shaping long-term progress (Michelsen, 2007, p. 27). Building on this, later academic research emphasises that sustainability communication unfolds across diverse social settings and is shaped by prevailing societal expectations and value systems (Godemann & Michelsen, 2011, p. 6). As stated by Ziemann (2011), communication about sustainability involves actors repeatedly negotiating and framing ideas of well-being across the three dimensions of sustainability. Therefore, it constitutes an ongoing societal exchange on a global scale (Ziemann, 2011, p. 92). In corporate settings, it refers to how organisations communicate sustainability activities towards relevant audiences (Brugger, 2010, pp. 3–4). Fischer (2019) further distinguishes between explicit sustainability communication (e.g. dedicated reports) and broader, implicit communication that relates to sustainability topics such as climate change without explicitly referring to the concept itself. Implicit forms require additional indicators to assess their actual relevance to sustainability (Fischer, 2019, p. 56).

Sustainability communication is typically aligned with long-term objectives to minimise unanticipated consequences for consumer relations (Schaefer, 2012, p. 258). Inconsistent communication and practice may otherwise undermine stakeholder perceptions. Its goals are commonly grouped into three psychological dimensions: cognitive, affective, and conative (Bruhn, 2019, p. 162; Grunwald, 2022, pp. 269–270; Schaefer, 2012, pp. 258–259). Cognitive goals focus on making sustainability information visible and understandable, so that it can be recognised and remembered by stakeholders. Affective goals intend to influence emotional responses and attitudes towards the brand which shape how sustainability initiatives are interpreted and evaluated. Conative goals target behavioural responses, such as purchasing or recommending sustainable products (Bruhn, 2019, p. 162). Overall, sustainability communication therefore influences both consumer perceptions and behavioural intentions.

Sustainability communication is closely related to Corporate Social Responsibility (CSR) (Ranisch & Schmiedeknecht, 2023, p. 29). In the European Commission's interpretation, CSR requires companies to embed societal and environmental considerations, ethical standards, and consumer interests in their corporate practices (European Commission, 2011, p. 6). Although CSR has traditionally emphasised social commitment, recent research highlights growing alignment with sustainability communication, as organisations bring social and environmental responsibility together in an integrated approach (Ranisch & Schmiedeknecht, 2023, p. 29). Accordingly, this thesis treats CSR communication as a functional subset of sustainability communication and uses both terms interchangeably when referring to the communication of responsible corporate practices.

In this thesis, sustainability communication is defined as corporate communication that conveys ecological impact, social responsibility, and long-term economic viability to consumers. This includes the disclosure of sustainability-related goals, measures, and performance to support transparency and credibility. This working definition synthesises the conceptual approaches discussed above and provides the analytical foundation for the subsequent analysis.

2.1.2 Digital Channels and Formats

Digital communication has become a primary environment in which consumers in Germany can encounter information. Data from the ARD and ZDF media study indicate that, in 2025, 96% of the German population used the internet at least occasionally, while 63% reported regular social media use (ARD/ZDF-Forschungskommission, 2025, pp. 47, 56). This development is particularly significant for the cosmetics industry, which operates in a digitally

mediated market and is characterised by visual content and continuous consumer engagement (Park & Hong, 2024, pp. 20, 48–49). The following section outlines key digital channels and formats used for corporate sustainability communication and highlights their relevance within this industry-specific context.

Corporate Websites

Corporate websites serve as a central reference point for sustainability communication by providing structured access to related information (Heinrich, 2024, p. 92). Many companies maintain dedicated sustainability sections that describe environmental and social practices in depth (Ajayi & Mmutle, 2021, p. 10). For example, Weleda is a German natural cosmetics brand with a dedicated website section titled “Our Responsibility”. This section structures sustainability-related information into areas such as sustainability, biodiversity, raw materials and packaging. Weleda is referenced here as an objectively identifiable example due to its certification under an internationally recognised sustainability standard, which will be further outlined in Section 2.2.2 (Weleda, n.d.). In addition, sustainability reports and certifications are increasingly integrated into corporate websites to enable traceability and to ensure transparency (Ahmad & Müller, 2024, p. 342; Fifka, 2024, p. 107). However, younger audiences engage less with extensive website content and prefer more interactive or visually oriented formats (Bürker, 2025, p. 337). Building on these insights, corporate websites remain relevant for transparency, but their effectiveness is likely to depend on complementary formats aligned with contemporary media preferences.

Social Media

The efficacy of sustainability communication on social media is increased when messages are accompanied by dialogic exchange formats. Instead of merely presenting information, organisations can include questions and engage users in ongoing conversations through comments, links, or calls to action. Content perceived as dialogical tends to elicit stronger user engagement, which can enhance consumers’ connection to the brand and purchase intention (Herrada-Lores et al., 2025, pp. 317, 319, 326). Jha and Verma (2022) suggest that consumers respond positively to corporate sustainability messages on social media (Jha & Verma, 2022, p. 736). In the cosmetics sector, social media strongly influences consumer evaluation and purchase behaviour, as credible, genuine and personally relevant content is easily accessible (Park & Hong, 2024, p. 70). Moreover, consumers rely on social platforms to obtain insights into how products are manufactured and sourced (Wagner, 2024, p. 161). This development suggests that consumers may increasingly expect credible sustainability claims on social media, which could support purchase intention.

Digital Storytelling

Digital storytelling presents complex sustainability topics in an accessible narrative form, thereby enhancing understanding and encouraging stakeholder engagement (Blau et al., 2022, p. 114). In the cosmetics industry, emotionally framed narratives and brand imagery are widely used to connect with consumers (Park & Hong, 2024, pp. 19–20). Beyond affective effects, storytelling can also support cognitive goals of sustainability communication by contextualising sustainability-related topics and presenting them as structured narratives. For example, storytelling can incorporate actors, depict challenges, and specify outcomes. By aligning with basic cognitive processes storytelling can strengthen comprehension and improve recall of sustainability messages (Bruhn, 2019, p. 162; Grunwald, 2022, p. 289). However, its impact depends on stakeholder involvement. Low-involvement audiences may respond well to narrative messages, whereas highly involved consumers tend to prefer more evidence-based information in the context of sustainability communication (Dhanesh & Nekmat, 2019, pp. 29–30).

Evidential Formats

Because consumers can easily search for production processes or sourcing practices online (Wagner, 2024, p. 161), sustainability topics increasingly require evidence-based communication (Bürker, 2025, p. 337). Many consumers remain sceptical of sustainability claims and expect transparent, comparable information (Bekmeier-Feuerhahn et al., 2017, p. 104; Lee et al., 2019, p. 426). Empirical findings indicate that vague sustainability claims and missing concrete details, such as specific figures concerning materials or energy use, foster scepticism and reduce perceived trustworthiness (Margariti et al., 2024, p. 8). This suggests that more specific and verifiable information may strengthen credibility. Common examples include sustainability reports, precise data and infographics that summarise key environmental or social indicators. By providing specific explanations, evidential formats make sustainability topics more credible (Bürker, 2020, p. 138, 2025, pp. 337–338).

Influencer Communication

Influencer communication differs from corporate-owned channels. In the cosmetics industry, consumers increasingly rely on reviews by online personalities when forming purchase intention (Park & Hong, 2024, pp. 64, 71). Influencers can strengthen the perceived credibility of sustainability communication because they are often regarded as more independent communication sources than brands themselves (Bürker, 2025, p. 338). Empirical evidence suggests that credible influencers meaningfully affect sustainability-related behavioural intentions, whereas the perceived relevance of an influencer alone does not appear to exert an independent effect (Vilkaite-Vaitone, 2024, p. 10). Against this

background, it can be expected that credibility perceptions are shaped not only by message characteristics but also by the perceived credibility of the communication source.

Taken together, these digital formats differ in how sustainability information is presented and evaluated. Across formats, perceived credibility emerges as a central determinant of consumer responses. Accordingly, the digital sustainability communication formats outlined above constitute the communication formats investigated in this study for analysing perceived credibility.

2.1.3 Industry-Specific Challenges in the Cosmetics Market

The cosmetics industry faces distinct sustainability challenges arising from its regulatory framework, production processes, and product formulations, which are outlined in this section. These conditions limit consumers' ability to independently assess statements about sustainability practices (Balderjahn, 2021, p. 166; Ballen et al., 2022, p. 17).

Cosmetics are legally defined as “any substance or mixture intended to be placed in contact with the external parts of the human body [...] or with the teeth and the mucous membranes of the oral cavity with a view exclusively or mainly to cleaning them, perfuming them, changing their appearance, protecting them, keeping them in good condition or correcting body odours” (European Union, 2025, p. 3). Due to their direct application to the body, companies must comply with strict requirements for safety, production standards, and regulatory reporting to ensure consumer health (Bundesamt für Verbraucherschutz und Lebensmittelsicherheit, n.d.). At the EU level, the Scientific Committee on Consumer Safety assesses cosmetic ingredients based on toxicological data, exposure estimates, and validated non-animal testing methods to assess potential health risks (European Commission: Directorate-General for Health and Food Safety, 2022, p. 5). Despite these safeguards, empirical research reveals that certain product compositions may still contain ingredients with potentially harmful impacts. These findings suggest a need for more stringent monitoring to meet broader social sustainability expectations (Khan & Alam, 2019, p. 5; Ranisch & Schmiedeknecht, 2023, p. 32).

Beyond health-related concerns, environmental sustainability has gained significant relevance in the cosmetics market. Consumers increasingly scrutinise the environmental implications of formulation components and packaging (Amberg & Fogarassy, 2019, p. 6). Empirical evidence suggests a growing preference for natural formulations and environmentally responsible packaging solutions (Amberg & Fogarassy, 2019, p. 10). In response, many organisations have adjusted formulations, developed alternative packaging

concepts, and increased disclosure regarding sustainable processes. These steps reflect a broader strategic change toward more sustainability-oriented practices within the industry (Park & Hong, 2024, p. 29).

Packaging and ingredient composition represent salient sustainability challenges in the cosmetics market. Packaging is highly visible and environmentally impactful, as multi-layered designs and non-biodegradable plastics contribute substantially to waste generation (Bom et al., 2019, p. 276). Consequently, companies are testing recyclable, biodegradable, and reusable alternatives (Morel et al., 2024, p. 12). Moreover, certain raw materials are increasingly questioned due to environmental concerns and limited availability (Bom et al., 2019, p. 275). Empirical studies indicate higher environmental impacts for several synthetic substances than for plant-based alternatives, while the latter may still entail non-negligible burdens (Bom et al., 2020, pp. 6–7).

These regulatory, compositional, and environmental complexities help explain why sustainability-related attributes in the cosmetics market are predominantly credence attributes. Many ecological and social product characteristics, such as responsible sourcing or environmentally friendly production processes, cannot be directly confirmed or verified by consumers. These are known as credence attributes. Consequently, consumers must rely on the information provided by companies when forming purchase intention (Balderjahn, 2021, p. 166; Ballen et al., 2022, p. 17). This information asymmetry increases the risk of scepticism (Bürker, 2025, p. 165) and places particular emphasis on the credibility of communicated sustainability claims (Balderjahn, 2021, p. 166). Consumers require specialised knowledge to evaluate credence attributes. Clear and comprehensible communication is crucial to render such qualities more assessable (Duong et al., 2024, p. 997). Certified and substantiated claims can help reduce uncertainty by signalling compliance with recognised sustainability standards (Balderjahn, 2021, p. 166). This need for precision is reinforced by regulatory guidelines. In line with the EU's common criteria for cosmetic claims, statements are required to be truthful, verifiable, and presented in a manner that is comprehensible to the ordinary consumer (European Commission, 2013, pp. 33–34).

Overall, the limited observability of sustainability attributes in the cosmetics market implies a structural reliance on communicated information, making perceived credibility a central criterion for evaluating sustainability-related claims and forming purchase intention.

2.2 Credibility of Digital Sustainability Communication

This section examines the perceived credibility of digital sustainability communication. It introduces the core dimensions of credibility, discusses key factors shaping the evaluation of sustainability claims and addresses greenwashing as a critical risk. Together, these approaches establish the theoretical foundation for analysing how credibility shapes consumers' responses to digital sustainability communication.

2.2.1 Definition and Dimensions of Credibility

Credibility constitutes an essential criterion for assessing digital sustainability communication, particularly in contexts marked by credence attributes and pronounced information asymmetries (Balderjahn, 2021, p. 166; Bürker, 2025, p. 165).

In communication research, credibility is typically conceptualised as the degree to which audiences regard a communicated message or its sender as believable. Although definitions vary slightly, most approaches converge on two core dimensions of trustworthiness and expertise (Metzger & Flanagin, 2008, p. 8). Trustworthiness reflects perceptions of honesty and sincerity, while expertise captures whether the communicator is regarded as knowledgeable and competent in a specific field (Wiedmann & Von Mettenheim, 2021, p. 709). These dimensions form the foundation of Hovland's source credibility theory. Accordingly, both dimensions substantially influence message evaluation and consumers' receptivity in corporate communication (Röttger, 2022, p. 354).

This concept has been extended to organisational settings. Corporate credibility refers to consumers' perceptions that a company possesses the expertise to substantiate its claims and the trustworthiness to communicate them truthfully (Kotler & Keller, 2016, p. 231; Newell & Goldsmith, 2001, p. 235).

Within sustainability communication, CSR credibility represents a more domain-specific form of credibility. It captures consumers' evaluations of trustworthiness and expertise specifically with regard to a company's environmental and social engagement (Lee et al., 2019, p. 415). Empirical evidence indicates that CSR communication is frequently met with scepticism. When sustainability efforts are demonstrated consistently and communicated transparently, consumers can infer both expertise and genuine commitment, thereby increasing credibility (Lee et al., 2019, p. 426).

Overall, credibility is understood as a complex construct that emerges from the evaluation of multiple perceptual indicators. These include, for example, the perceived trustworthiness and expertise of the communicated information (Röttger, 2022, p. 355).

Accordingly, this thesis conceptualises credibility as a perceptual construct based on trustworthiness and expertise. It captures how believable the communicated sustainability information appears and how competent the respective communicator is perceived to be. In the present study, credibility is assessed in relation to the presented digital sustainability communication formats (see Section 2.1.2), referring to the perceived trustworthiness and expertise attributed either to the brand or to the influencer communicating the message.

2.2.2 Factors Influencing Credibility

In digital environments, the credibility of sustainability claims is shaped by multiple, interrelated factors, which are discussed in this section.

Message Characteristics

Message characteristics are widely considered important in credibility assessments. Empirical research on green advertising indicates that sustainability-related claims are perceived as more credible when they are communicated in comprehensive and specific terms and substantiated with concrete evidence. In contrast, vague or generic statements undermine credibility and may fuel greenwashing concerns. Providing explanations, data, or further evidence enables recipients to better assess claims and reduce scepticism. Overall, perceived honesty is the strongest indicator of credibility, indicating whether sources or messages are seen as believable (Verleye et al., 2023, pp. 7–9).

Transparency further strengthens credibility, especially when companies openly address corporate benefits associated with sustainability initiatives. Such openness enhances consumer acceptance (E. (Anna) Kim et al., 2022, pp. 455–456). Conversely, messages that rely predominantly on emotional appeal without sufficient factual grounding, like storytelling formats, may appear superficial and weaken credibility (Blau et al., 2022, p. 115). Another risk arises when all communicated messages of an organisation place too much emphasis on environmental or social risks. Alarmist or exaggerated framing can reduce believability when perceived as unrealistic (Grunwald, 2022, p. 287). In conclusion, sustainability messages tend to be perceived as more credible when they are communicated with specificity, transparency, and a clear factual basis.

Communicator Characteristics

Credibility is also influenced by perceptions of the communicator. As discussed in Section 2.2.1, trustworthiness and expertise constitute the core dimensions of credibility (Metzger & Flanagin, 2008, p. 8). Attractiveness serves as an additional prerequisite for believable

communication. Together, these attributes determine whether communicators are perceived as credible (Ohanian, 1990, p. 41). Empirical research confirms that higher source credibility increases how credible a message appears to recipients (Jamal et al., 2021, p. 435).

At the organisational level, credibility increases when communicated sustainability claims align with observable corporate behaviour over time (Bruhn & Zimmermann, 2017, p. 16). Organisations can act as the sender, but identifiable individuals make sustainability communication more relatable and impactful. As credibility perceptions vary across audiences and settings, communicators should be selected based on their perceived suitability within the target group (Dickel & Kronewald, 2023, p. 252).

In influencer communication, perceived credibility is essential for sustainability-related responses. Accordingly, influencers can contribute to sustainable purchasing behaviour if they are perceived as credible (Vilkaite-Vaitone, 2024, p. 10). However, credibility is also determined by the perceived topical relevance of the influencer to sustainability. Influencers who genuinely engage with sustainability content support this perception (Nygaard, 2024, p. 54). For example, sustainability advocates or content creators may be particularly suitable communicators in this context (Bürker, 2025, p. 338). Dalla-Pria and Rodríguez-de-Dios (2022) further emphasise that credibility is not determined by whether a message is communicated by a company or an influencer (Dalla-Pria & Rodríguez-de-Dios, 2022, p. 549). Building on these findings, credibility can be assumed to depend largely on the perceived suitability of the communicator.

Communication Format Characteristics

The format used to communicate sustainability also affects how credible it appears. Academic literature distinguishes between storytelling, evidential formats, and the use of third-party voices to enhance believability (Bürker, 2025, pp. 336–338).

Storytelling can improve perceptions of credibility by providing concrete insights into projects or personal accounts from employees or partners. Bürker (2025) argues that this makes sustainability initiatives more relatable (Bürker, 2025, p. 336). By contrast, Blau et al. (2022) caution that emotional framing without factual substance may make messages appear promotional rather than informative, thereby undermining credibility (Blau et al., 2022, p. 115). Evidential formats, such as reports or infographics, strengthen credibility by providing factual depth and transparent information (Bürker, 2020, p. 138, 2025, p. 337). Third-party voices, including sustainability experts and content creators, can further increase credibility by adding perceived impartial sources. Across formats, credibility increases when

information is specific, evidence-based, and openly addresses potential trade-offs (Bürker, 2025, p. 338).

External Verification

Independent certifications and external verification help close information gaps by converting otherwise non-observable sustainability qualities into standardised indicators that can be compared and evaluated (Deconinck & Hobeika, 2023, p. 27). Evidence suggests that consumers consider certifications to be more effective in reinforcing credibility than endorsements by prominent individuals. This conclusion is drawn from a large-scale, non-academic consumer survey conducted by the Nuremberg Institute for Market Decisions with more than 8,000 participants across eight countries, including Germany (Biró & Neus, 2023, pp. 26–27, 39). Certifications such as the B Corp label, are important for establishing credibility because they demonstrate that a company's sustainability practices have undergone rigorous external assessment (Paelman et al., 2021, p. 12). Achieving B Corp status requires firms to substantiate their social and environmental practices through verified evidence and to comply with stringent disclosure requirements, which can enhance perceived corporate responsibility (B Lab, n.d.). For example, Weleda has held B Corp certification since 2021 and communicates it on online platforms such as websites. This illustrates how cosmetics brands use third-party assurance to communicate independently evaluated sustainability standards to consumers (Weleda, n.d.). However, even certified companies must ensure transparency and present structured documentation to maintain credibility. This enables consumers to assess whether stated commitments are reflected in organisational practices (Attanasio et al., 2025, p. 3766).

Taken together, the reviewed factors indicate that different digital sustainability communication formats may signal credibility in different ways. This supports the comparative examination of perceived credibility across formats in the present study. Figure 1 summarises the key credibility drivers identified in the research discussed in this section.

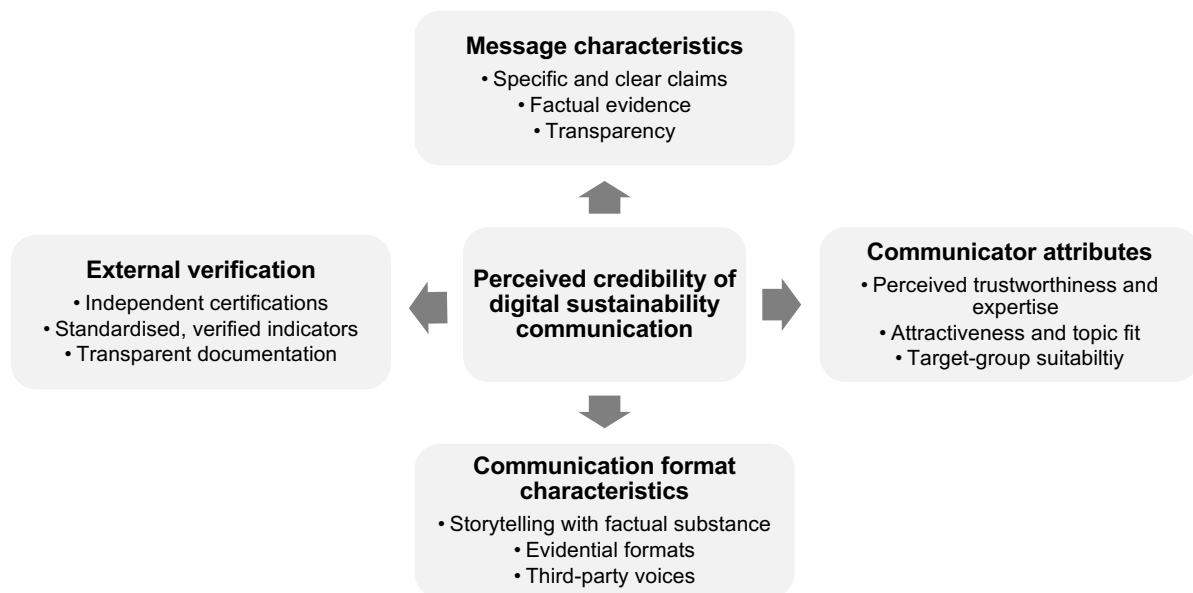


Figure 1: Key Drivers of Perceived Credibility in Digital Sustainability Communication

Source: Own illustration, based on (Attanasio et al., 2025, p. 3766; Blau et al., 2022, p. 115; Bürker, 2020, p. 138, 2025, pp. 336–338; Deconinck & Hobeika, 2023, p. 27; Dickel & Kronewald, 2023, p. 252; E. (Anna) Kim et al., 2022, pp. 455–456; Metzger & Flanagin, 2008, p. 8; Nygaard, 2024, p. 54; Ohanian, 1990, p. 41; Paelman et al., 2021, p. 12; Verleye et al., 2023, pp. 7–9)

2.2.3 Greenwashing

Greenwashing describes practices in which organisations present themselves as more environmentally responsible than justified by their actual activities (Ranisch & Schmiedeknecht, 2023, p. 31; Tavanti, 2023, p. 134). In communication research, it is understood as a strategic distortion that creates a favourable environmental reputation in the absence of substantive initiatives (Becker-Olsen & Potucek, 2013, p. 1318). Greenwashing often relies on misleading and difficult-to-verify sustainability claims that lack specific information or independent evidence. It may also rely on euphemistic framing by selectively highlighting positive aspects while obscuring other environmental impacts (Dickel & Kronewald, 2023, pp. 247–248).

Empirical evidence indicates that vague sustainability claims are widespread in digital settings. An EU-wide review of online environmental claims across several sectors, including cosmetics, indicated that a majority of the assessed claims did not disclose enough details for verification. In addition, 42% of the statements were evaluated as potentially misleading (European Commission, 2021, p. 1), which can contribute to reputational damage (Nygaard, 2024, p. 64). These findings underline that greenwashing intensifies scepticism and emphasises the importance of credible communication (Bürker, 2025, p. 21).

Empirical studies demonstrate that perceived greenwashing reduces both credibility and positive sustainability-related associations (Akturan, 2018, p. 818). With growing consumer

knowledge about sustainability, environmental claims that appear misleading tend to be scrutinised more sceptically. This reduces the intention to purchase from the communicated brands (Nguyen et al., 2019, p. 11). Rising greenwashing awareness makes it more difficult to appear genuine. Credibility improves when companies openly document sustainability efforts and cooperate with reputable partners who can confirm the legitimacy of these actions (Terchilă, 2025, pp. 124–125).

Against this background, it can be expected that transparent and verifiable digital sustainability communication is crucial for maintaining credibility. To sum up, the discussion of greenwashing highlights the fragility of credibility in sustainability communication, emphasising its pivotal role in influencing consumer perceptions and behavioural responses.

2.3 Purchase Intention and Consumer Behaviour in the Cosmetics Market

This section outlines the purchase decision process and discusses the relevance of sustainability communication at different stages. It then reviews theoretical and empirical evidence on how perceived credibility relates to purchase intention and introduces established consumer behaviour models in sustainable consumption. Together, these perspectives provide a conceptual basis for analysing how credible digital sustainability communication may shape purchase intention in the cosmetics market.

2.3.1 Purchase Decision Process

To analyse responses to sustainability communication in the cosmetics market, it is important to consider how consumers form purchase decisions. Therefore, this study draws on Kotler's five-stage model as its conceptual foundation. This model describes how decisions evolve through interconnected phases before, during and after the transaction itself. The structure of this process is illustrated in Figure 2.

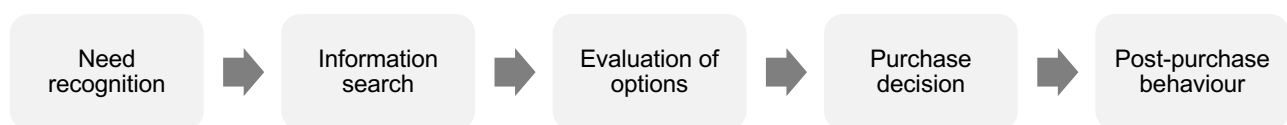


Figure 2: Purchase Decision Process

Source: Adapted from Kotler et al., 2022, p. 287, translation by the author

Kotler's model indicates that the entire process must be considered when developing effective communication strategies. It provides a useful framework for identifying where sustainability communication can influence perceptions and choices (Kotler et al., 2022, p. 287).

Need recognition

The first phase involves the recognition of a need. This may be shaped by internal or external factors. In the context of cosmetics, internal factors may reflect a perceived need to reach a desired state, whereas external factors can include digital advertising, social interaction, and media exposure (Kotler et al., 2022, pp. 287–288). Needs are closely related to appearance concerns and self-confidence, particularly among younger consumers (Park & Hong, 2024, p. 52). Sustainability considerations increasingly shape cosmetic consumption, as concerns about health and environmental consequences, as well as product composition, influence how consumers evaluate and select cosmetic products (Park & Hong, 2024, p. 67).

Information search

Following need recognition, consumers seek information to reduce uncertainty. The intensity of this search depends on the perceived importance and complexity of the purchase. Information sources typically include personal recommendations and brand communication. Digital environments intensify this phase by providing access to various social media reviews and recommendations (Kotler et al., 2022, pp. 288–289). Sustainability-related information on social channels supports the development of buying intention for sustainable cosmetic products (Nekmahmud et al., 2022, p. 12). In addition, social platforms contribute to the formation of environmental attitudes (Pop et al., 2020, p. 9). At this stage, digital sustainability communication primarily fulfils a cognitive orientation function by shaping consumers' knowledge base for subsequent evaluations (Bruhn, 2019, p. 162).

Evaluation of options

In the evaluation stage, consumers compare brands based on relevant attributes. In cosmetics, these may include ingredients, price, product quality and brand image. Evaluation criteria differ across individuals. Consumers combine analytical reasoning with intuitive judgments and assign varying importance to specific qualities when forming their preferences (Kotler et al., 2022, pp. 289–291). Social and environmental aspects have gained growing importance as criteria influencing consumers' product choices (Park & Hong, 2024, p. 67). However, these considerations may complement rather than replace traditional criteria. Attributes such as efficacy and price remain central to purchase decisions (Lin et al., 2018, pp. 9–10). As many sustainability attributes are credence-based, consumers rely on communicated information and certifications to assess their credibility (Balderjahn, 2021, p. 166). Accordingly, it can be argued that the perceived credibility of sustainability claims likely determines whether such attributes are actually taken into account during evaluation.

Purchase decision

Subsequent to evaluating alternatives, consumers translate preferences into purchase intention and choose a brand. This decision remains susceptible to social influence and situational constraints such as budget limits (Kotler et al., 2022, p. 292). In the cosmetics market, social validation via social media content or recommendations from influencers can weaken or reinforce intended choices (Park & Hong, 2024, p. 68). Credible sustainability communication can reduce uncertainty about environmental claims and support purchase decisions (Balderjahn, 2021, p. 166). Empirical research indicates that integrating sustainability into corporate communication has a positive effect on purchase decisions (Del Pilar Miranda-Guerra et al., 2023, p. 6).

Post-purchase behaviour

The decision process continues after purchase. Satisfaction depends on whether the product experience aligns with consumer expectations, which can foster repeat purchases and recommendations. If communicated product attributes do not correspond to the actual performance, dissatisfaction occurs. Applied to sustainability communication, perceived gaps between sustainability claims and the actual product may therefore amplify dissatisfaction (Kotler et al., 2022, pp. 293–294).

Overall, Kotler's five-stage model suggests that sustainability communication can influence cosmetic purchase intention at multiple stages. However, consumers do not necessarily engage in every stage, particularly in habitual situations (Kotler et al., 2022, p. 287). Building on the preceding evidence, credibility appears particularly important during information search and evaluation, as it influences whether sustainability cues are translated into buying intentions.

2.3.2 Relationship Between Perceived Credibility and Purchase Intention

In markets characterised by credence attributes, purchase intention depends on perceptions of communicated sustainability indicators that reduce ambiguity. Therefore, credible communication constitutes a key mechanism enabling consumers to develop purchase intention (Balderjahn, 2021, p. 166). Empirical findings on green advertising suggests that several credibility-related attributes (see also Section 2.2.2) substantially contribute to consumers' purchase intention. When sustainability advertising is perceived as reliable and informative, purchase intention increases. In addition, the attractiveness of the advertisement is also positively associated with consumers' intention to purchase (W. Kim

& Cha, 2021, p. 5). A similar emphasis on credibility can be observed in digital influencer communication. Lou and Yuan (2019) argue that the credibility of an influencer comprises multiple dimensions. Nevertheless, their results indicate that only perceived trustworthiness increases purchase intention, whereas the remaining credibility dimensions are not significant predictors. This implies that trustworthiness may constitute the most influential component within the broader credibility construct in digital contexts (Lou & Yuan, 2019, pp. 6, 8). By contrast, when consumers perceive greenwashing, credibility decreases, which in turn reduces purchase intention (Akturan, 2018, p. 818). Similarly, Isac et al. (2025) show that greenwashing relates to lower purchase intention. This relationship is partly explained by weakened trust in the brand's sustainability-related efforts (Isac et al., 2025, p. 8).

Taken together, these findings suggest that credibility drivers (see Section 2.2.2) play a decisive role in determining whether sustainability communication strengthens or weakens purchase intention. For the present study, perceived credibility is therefore understood as a key perceptual construct through which digital sustainability communication is expected to directly affect purchase intention among German cosmetics consumers.

2.3.3 Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) provides a suitable framework for explaining how psychological factors determine intentional behaviour, including sustainable choices (Ajzen, 1991, p. 188; Bürker, 2025, p. 218). Within TPB, behaviour is predicted by the combined influence of attitude, subjective norm, and perceived behavioural control (PBC) (Ajzen, 1991, p. 188). Attitudes represent an individual's overall assessment of performing a specific behaviour. In sustainability contexts, this reflects whether sustainable consumption is considered meaningful and worth supporting (Haddock & Maio, 2023, pp. 221–222). Empirical studies consistently indicate that favourable attitudes concerning sustainable cosmetics are associated with stronger buying intentions (Askadilla & Krisjanti, 2017, pp. 11; Pop et al., 2020, p. 9).

Subjective norms describe how strongly an individual perceives social expectations surrounding a behaviour. This influence emerges when sustainable practices are socially endorsed and individuals are inclined to align their behaviour with these perceived norms (Haddock & Maio, 2023, p. 222). These norms affect purchase intention for sustainable cosmetics (Askadilla & Krisjanti, 2017, pp. 10–11), and social media content reinforces subjective norms by increasing the perceived social relevance of sustainable products (Pop et al., 2020, pp. 9–10).

PBC describes the perceived ability to carry out a certain behaviour. In sustainable consumption, this belief influences the formation of sustainable intentions and, when sufficient capabilities are present, can also directly affect related behaviour (Haddock & Maio, 2023, pp. 222–223). Empirical evidence from the cosmetics market shows that PBC is closely linked to purchase intention (Askadilla & Krisjanti, 2017, pp. 10–11). From a communication perspective, TPB implies that sustainable behaviour depends on favourable attitudes, perceived social expectations, and ability to take action (Bürker, 2025, p. 218). For this thesis, TPB is relevant because it links purchase intention to underlying beliefs, thereby clarifying how credibility cues in digital sustainability communication may influence intention formation.

2.3.4 Attitude-Behaviour Gap

The attitude-behaviour gap refers to “the predictability of attitude to behavior” (Zhuo et al., 2022, p. 13). In sustainability research, this is commonly termed the “green attitude-behaviour gap”, indicating that positive sustainability attitudes are not consistently reflected in corresponding purchase decisions. This divergence is influenced by situational and social factors, including the ease of finding suitable options and social expectations. These factors can attenuate the impact of attitudes on behaviour (Joshi & Rahman, 2015, p. 129). Practical barriers reinforce this gap. Sustainable options frequently require additional knowledge, involve higher financial or time-related costs, and reduce convenience, thereby discouraging consistent pro-environmental actions (Kropp, 2019, pp. 17–19). Consequently, sustainability considerations tend to be less salient in everyday decision-making, even among consumers who recognise their wider social and ecological implications (Kropp, 2019, p. 18). Communication-related factors can contribute to intensifying the discrepancy between attitudes and behaviour. Empirical evidence shows that perceptions of greenwashing reduce the extent to which positive environmental attitudes translate into sustainable purchase intention (Margariti et al., 2024, p. 7). Vague or unclear sustainability information regarding ingredients and production processes in the cosmetics market reduces the intention to choose sustainable products (Margariti et al., 2024, p. 8). Overall, these insights suggest that perceived credibility may be crucial for transforming sustainability attitudes into purchase intention.

2.4 Psychographic Segmentation in the Sustainability Context

Consumers differ substantially in their perceptions of and responses to sustainability. These differences are linked to underlying value orientations. This chapter addresses psychographic characteristics as a conceptual foundation for capturing such heterogeneity

and for structuring consumer groups in a sustainability context. These orientations provide the basis for segmenting consumers in this study and for analysing whether the association between perceived credibility and purchase intention varies across psychographic target groups.

2.4.1 Psychographic Influences on Sustainable Consumption

Consumers exhibit distinct sustainability-related psychological orientations. Accordingly, they cannot be regarded as a uniform target group (Sahelices-Pinto et al., 2023, p. 237). This heterogeneity is supported by empirical findings indicating that specific underlying value orientations and motivational drivers are systematically associated with sustainable consumption patterns. Individuals prioritise sustainability differently depending on their personal orientations. Consumers tend to engage more strongly in environmentally responsible consumption when social concern plays a central role in their personal values. By contrast, a strong focus on personal independence can weaken this effect, as sustainability-oriented practices may be perceived as effortful or incompatible with established habits. A preference for maintaining familiar patterns over adapting to social expectations can further limit openness to changes in consumption behaviour (Sharma & Jha, 2017, pp. 83–84). These psychographic differences are consequential. The influence of personal value orientations on behaviour is particularly pronounced when accompanied by a favourable environmental attitude (Sharma & Jha, 2017, p. 85). Empirical evidence further confirms that psychographic factors significantly shape sustainable purchase intention (Falke et al., 2022, p. 916). Moreover, prior sustainable consumption experiences strengthen future intentions, indicating that psychographic decision patterns develop cumulatively over time (Falke et al., 2022, p. 918). Sustainability-related behaviour is also influenced by the interplay of individual moral standards, affective responses and social expectations. Kropp (2019) argues that environmentally harmful actions often occur unintentionally, as individuals prioritise competing goals in daily decision-making and do not consistently consider ecological consequences (Kropp, 2019, pp. 17–18).

Research confirms that psychographic characteristics explain sustainable patterns more effectively than observable attributes such as socio-demographics (Mathur, 2025, p. 180). Psychographic segmentation therefore provides a more suitable basis for understanding sustainability-related consumer choices, as it captures deeper motivational structures that demographic classifications alone cannot explain. Aligning sustainability communication with these structures is associated with stronger consumer engagement and more persistent behavioural responses (Bhat et al., 2025, p. 8795). Building on these insights, differences

in sustainability-related orientations appear essential for understanding why consumers respond differently to sustainability communication.

2.4.2 Definition and Key Characteristics of Psychographic Segmentation

Market segmentation aims to structure heterogeneous markets by grouping consumers who respond in comparable ways to marketing activities while ensuring that these groups remain clearly distinguishable in their behaviour patterns (Meffert et al., 2024, pp. 220–221).

Demographic segmentation categorises consumers according to observable attributes such as age and gender. This provides a basic overview of the market composition. Such characteristics remain essential for assessing market potential and evaluating the effectiveness of targeting different customer segments (Kotler et al., 2022, p. 350). However, even if consumers belong to the same demographic group, their underlying motivations and preferences can differ significantly. This limitation highlights the need for segmentation criteria that capture deeper behavioural drivers. Psychographic segmentation addresses this by grouping individuals according to psychological characteristics (Kotler & Keller, 2016, p. 280).

In marketing theory, psychographic approaches are commonly structured around the dimensions of social class, lifestyle and personality. Class-based segmentation assumes that different social groups develop distinct consumption patterns and expectations, which can be used by firms to design value propositions that align with the norms and preferences of each group. Lifestyle segmentation focuses on characteristic ways of living that shape consumption choices and are often combined with demographic or behavioural indicators to improve segmentation accuracy. Personality-based segmentation draws on psychological traits and links them to brand positioning strategies. This approach is particularly relevant in markets where identification processes often play a role, such as cosmetics (Kotler et al., 2022, pp. 352–353).

In psychographic segmentation, attitudes are especially informative because they indicate likely behavioural tendencies. However, broad attitudes remain too abstract to explain concrete purchase decisions. For example, a consumer may value sustainability in general but still avoid buying a sustainable cosmetic product if the price is too high. Therefore, general attitudes need to be complemented by more specific psychographic factors, such as lifestyle orientation (Meffert et al., 2024, p. 226).

In sustainability contexts, psychographic segmentation enables firms to identify consumer segments for whom environmental behaviour is personally relevant. In addition, psychographic insights make it possible to distinguish between consumers who fail to be

sustainable due to a lack of motivation and those whose behaviour is constrained by limited knowledge or insufficient information. This differentiation allows companies to focus their efforts on developing effective sustainability communication approaches (Nygaard, 2024, pp. 145–146). Accordingly, psychographic segmentation provides the conceptual basis for examining whether credibility effects differ across consumer groups in this study.

2.4.3 Psychographic Dimensions of Sustainability-Related Orientation

Several psychographic dimensions are important for differentiating consumer segments in sustainability contexts. The key factors include environmental concern, sustainability-related values and broader environmental worldviews. These worldviews capture how individuals generally view environmental responsibility within the broader public. Environmental concern refers to the combination of awareness and affective reactions to related issues, which together influence environmentally responsible behaviour (Mathur, 2025, p. 179).

Personal values represent a key dimension of psychographic influences. Individuals who emphasise compassion, acceptance and a sense of connectedness to others tend to prefer sustainable options. These values enhance the personal relevance of acting sustainably and therefore support its integration into behaviour. Universalism is particularly important because it reflects concern for the welfare of others and for the nature. However, not all value orientations foster pro-environmental behaviour. Individuals who prioritise self-direction tend to value independence and personal choice. As a result, they are less responsive to social expectations, thereby reducing the willingness to adopt more sustainable patterns. Values are closely linked to environmental attitudes, which influence how strongly these are reflected in actual behaviour. Research indicates that personal priorities including self-enrichment encourage sustainable action primarily when individuals also hold favourable attitudes (Sharma & Jha, 2017, pp. 83–85). In the cosmetics sector, consumers who perceive environmental responsibility as part of their self-concept and believe in their ability to act accordingly show more consistent sustainable consumption patterns (Singhal & Malik, 2021, p. 516).

Another important dimension concerns individuals' environmental approaches. An ecocentric orientation assigns intrinsic value to the environment and emphasises responsibility for its protection. Consumers with this perspective are more likely to prefer environmentally sustainable products. In contrast, an anthropocentric orientation centres on human benefits and tends to weaken concern for long-term environmental consequences. Their consumption decisions are therefore primarily guided by self-interest (Baltacı et al., 2025, pp. 4–5).

Lifestyle patterns and habits further shape sustainability-related decisions. Consumers often rely on prior product experiences when developing attitudes. Negative experiences with products marketed as sustainable can reduce openness towards green alternatives. Consumers who prioritise performance or price assign less importance to environmental attributes in their product choices (Lin et al., 2018, p. 10). Conversely, a health-oriented lifestyle is associated with higher openness toward natural cosmetics and a stronger readiness to accept higher prices for related ingredients and packaging (Amberg & Fogarassy, 2019, p. 10).

Future orientation has emerged as another relevant psychographic dimension. Empirical evidence indicates a positive link between future-oriented thinking and environmentally conscious behaviour. The findings suggest that stronger consideration of long-term consequences tends to coincide with more sustainable consumption (Naderi & Van Steenburg, 2018, p. 287).

In recent years, green scepticism has gained particular importance as a differentiating factor. Research consistently indicates that greenwashing heightens consumer scepticism, which subsequently reduces purchase intention. This is especially pronounced among consumers with greater environmental knowledge and information (Nguyen et al., 2019, pp. 7, 10). Environmental beliefs also shape sceptical responses. Individuals who care deeply about ecological impacts tend to react more critically to greenwashing and may develop negative reactions towards brands (Khandai et al., 2025, pp. 14, 17). Purchase intention decreases as greenwashing increases, and consumers' environmental knowledge affects the magnitude of this effect (Isac et al., 2025, p. 8). Empirical findings indicate that precise communication results in more positive evaluations, particularly among consumers with strong environmental attitudes, whereas vague claims increase scepticism and lower consumers' price acceptance. Among consumers with weaker environmental attitudes, critical responses tend to differ less across claim specificity. Therefore, individuals with strong sustainability orientations may evaluate specific sustainability communication more favourably (Pham & Barretta, 2024, pp. 25–27). They are less inclined to assume that sustainability messages are purely promotional and more likely to attribute competence to them (Magee, 2022, p. 548). Against this background, it can be assumed that the perceptions of sustainability communication differ across psychographic orientations.

In this study, sustainability-related psychographic orientation is used to describe recurring patterns across several interrelated characteristics discussed in this section. These characteristics include sustainability-related personal values, environmental concern, attitudes, approaches, as well as related lifestyle and future-oriented tendencies. This

concept serves as an analytical framework for capturing systematic differences in how consumers perceive digital sustainability communication. In this thesis, the extent to which these characteristics are pronounced is likely to influence how personally relevant sustainability issues are to an individual. Accordingly, respondents are assumed to differ in terms of a relatively weaker or stronger sustainability orientation, which is expected to influence how credibility cues are processed and translated into purchase intention. Figure 3 summarises six psychographic dimensions outlined above that shape sustainability-related orientation.

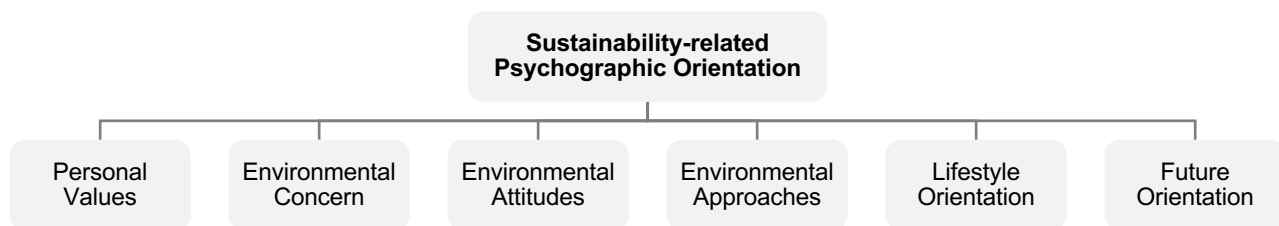


Figure 3: Psychographic Dimensions Influencing Sustainability-Related Orientation

Source: Own illustration, based on (Amberg & Fogarassy, 2019, p. 10; Baltacı et al., 2025, pp. 4–5; Lin et al., 2018, p. 10; Mathur, 2025, p. 179; Naderi & Van Steenburg, 2018, p. 287; Sharma & Jha, 2017, pp. 83–85; Singhal & Malik, 2021, p. 516)

2.5 Research Hypotheses

Hypotheses are testable assumptions about expected relationships between variables (Berger-Grabner, 2022, p. 131). Building on the state of research outlined in Chapter 2, this study derives relationship and difference hypotheses (H1-H8) to address the investigated research topic (Berger-Grabner, 2022, p. 132). The hypotheses are tested in the empirical analysis presented in Section 4.1. Table 2 summarises the research hypotheses and relates each one to the key theoretical arguments discussed in the preceding sections.

In empirical research, hypothesis testing contrasts a null hypothesis (H0) with an alternative hypothesis (H1). While H0 assumes no systematic relationship or difference between the investigated variables, H1 assumes that an effect is present. If H0 is rejected, the results are considered statistically significant, providing evidence in favour of H1. If H0 is not rejected, the results do not provide adequate statistical evidence to infer that an effect exists. Hypothesis testing evaluates whether the available data provide sufficient evidence to reject H0. Thus, it aims to reject H0 and thereby supports the alternative hypothesis (Berger-Grabner, 2022, pp. 131–132).

Table 2: Derivation of the Research Hypotheses

Hypotheses on the perceived credibility of sustainability communication formats	
H1	Evidential sustainability communication formats are perceived as more credible than emotionally framed sustainability storytelling formats.
Reference	Sustainability claims largely relate to credence attributes and information asymmetry and are difficult to verify directly. Evidential formats provide specific, transparent, and verifiable information, thereby reducing uncertainty and supporting credibility judgements. By contrast, emotionally framed storytelling without sufficient factual grounding may be perceived as less substantive in sustainability contexts and can therefore weaken credibility perceptions. Accordingly, it is assumed that evidential sustainability communication is perceived as more credible than emotionally framed sustainability storytelling formats. Relevant sections: 2.1.2, 2.1.3, 2.2.2
H2	Digital sustainability communication featuring a sustainability-focused influencer is perceived as more credible than communication featuring a beauty and lifestyle influencer.
Reference	Credibility is primarily based on trustworthiness and expertise. In influencer communication, perceived suitability and topic fit also influence credibility. Therefore, sustainability communication featuring a sustainability-focused influencer is expected to be perceived as more credible than the same communication featuring a beauty and lifestyle influencer. Relevant sections: 2.1.2, 2.2.1, 2.2.2
Hypothesis on the impact of greenwashing on perceived credibility and purchase intention	
H3	The higher the perceived greenwashing in digital sustainability communication, the lower the perceived credibility of the communication.
Reference	Greenwashing involves vague or deceptive sustainability claims that increase scepticism and undermine credibility. Because credibility depends on perceived expertise as well as specific, transparent and evidence-based communication, it is assumed that higher perceived greenwashing reduces the perceived credibility of sustainability communication. Relevant sections: 2.2.2, 2.2.3

H4	The higher the perceived greenwashing in digital sustainability communication, the lower consumers' purchase intention for products of the communicated brand.
Reference	Perceived greenwashing increases scepticism and reduces purchase intention. Accordingly, higher perceived greenwashing in digital sustainability communication is expected to lower consumers' purchase intention for products of the communicated brand. Relevant sections: 2.2.3, 2.3.2
Hypothesis on the impact of credibility on purchase intention	
H5	The higher the perceived credibility of digital sustainability communication, the higher consumers' purchase intention for products of the communicated brand.
Reference	When sustainability information is perceived as credible, consumers tend to integrate this information into evaluation processes and use it to reduce uncertainty surrounding sustainability claims. This is positively associated with purchase intention. Therefore, H5 assumes that higher perceived credibility leads to increased purchase intention. Relevant sections: 2.1.3, 2.2.2, 2.3.1, 2.3.2, 2.3.4
Hypothesis on the differences between psychographic orientations	
H6	Perceived credibility of digital sustainability communication differs between psychographic consumer segments with a stronger sustainability-related orientation and those with a weaker sustainability-related orientation.
Reference	Consumers are described as heterogeneous in sustainability contexts. Differences in environmental concern, approaches, values, attitudes, lifestyle patterns and future-oriented thinking influence how personally relevant sustainability aspects are perceived and how sustainability-related communication is evaluated. Therefore, perceived credibility of digital sustainability communication is expected to differ between more and less sustainability-oriented psychographic segments. Relevant sections: 2.4.1, 2.4.2, 2.4.3
H7	Consumers with a stronger sustainability-related psychographic orientation perceive evidential sustainability communication as more credible than emotionally framed sustainability communication, compared with consumers with a weaker orientation.
Reference	Credibility is strengthened by specificity, transparency, and evidence-based information, whereas emotionally framed sustainability messages without sufficient factual substance may appear superficial. Consumers with stronger sustainability orientations tend to process sustainability information more critically. Precise communication leads to more positive

	credibility evaluations. Therefore, H7 assumes that consumers with a stronger sustainability-related orientation perceive evidential formats as more credible than predominantly emotional sustainability storytelling formats, compared with weaker orientation groups. Relevant sections: 2.1.2, 2.2.2, 2.4.3
H8	The positive effect of perceived credibility of digital sustainability communication on purchase intention is stronger for consumers with a stronger sustainability-related psychographic orientation than for consumers with a weaker orientation.
Reference	Perceived credibility can support purchase intention by reducing uncertainty and scepticism regarding sustainability claims. At the same time, consumers differ in the personal relevance they attribute to sustainability, which shapes how sustainability information is processed and translated into intention formation. Building on these considerations, it is expected that credibility cues in digital sustainability communication are more consequential for purchase intention among consumers with a stronger sustainability-related orientation than among those with a weaker orientation. Relevant sections: 2.3.2, 2.3.3, 2.3.4, 2.4.1, 2.4.3

Source: Own illustration

3 Empirical Study

This chapter presents the empirical study. It outlines the selected research method, discusses key empirical quality criteria, and describes the research design, including the questionnaire structure and pretest. Finally, the results are presented and analysed.

3.1 Selection of the Research Method

To address the research objective of this thesis, an approach is required that links theoretical assumptions to observable evidence. In communication research, this entails the systematic and transparent collection of data to safeguard the comprehensibility and reproducibility of the findings. This method is referred to as empirical research (H.-B. Brosius et al., 2022, pp. 1–3). The present study follows an empirical research logic. Accordingly, it not only captures how credible consumers perceive digital sustainability communication by cosmetics brands but also assesses whether these perceptions are associated with purchase intention and whether the strength of these relationships varies across psychographic target groups.

Empirical research commonly distinguishes between qualitative and quantitative methodological approaches, depending on the research objective (H.-B. Brosius et al., 2022, pp. 4–5). Qualitative methods aim to gain deep insights into individual perceptions and interpretations. Accordingly, they typically employ open and flexible forms of data collection, such as interviews or group discussions. Because the objective is depth rather than numerical comparison, qualitative studies typically rely on small, purposive samples. This is especially useful when prior knowledge is limited, as it supports exploring complex relationships and theory development (Berger-Grabner, 2022, pp. 127–128; H.-B. Brosius et al., 2022, pp. 4–5).

In contrast, quantitative research focuses on measuring selected aspects of a research topic using numerical data. To enable comparison, multifaceted issues are operationalised into clearly defined variables and examined across large samples (H.-B. Brosius et al., 2022, p. 4). Researchers use a standardised data collection protocol and provide identical conditions for all participants. This increases comparability as well as objectivity and allows for hypothesis testing. Quantitative research examines the relationships between variables, for example through surveys, panels, and experiments (Berger-Grabner, 2022, p. 127).

Given the research focus of this thesis, a quantitative approach was selected to statistically test the relationship between perceived credibility of digital sustainability communication and purchase intention. Collecting standardised numerical data from a larger sample enables systematic comparisons across communication formats and psychographic groups and

supports a hypothesis-driven analysis of the proposed relationships and differences (see Section 2.5).

A standardised survey constitutes an appropriate quantitative data collection method. Surveys often follow a clearly defined structure, including consistent question wording and closed-ended answer formats to enhance comparability across respondents (Berger-Grabner, 2022, p. 174). Therefore, surveys suit market-related research that relies on information obtained directly from participants (Bruhn, 2024, p. 91). In this context, researchers focus on specific attributes relevant to the research aim and treat participants primarily as carriers of these attributes rather than as fully individual cases (H.-B. Brosius et al., 2022, p. 86).

In the present study, this standardised survey is implemented as an online questionnaire, representing a written survey (H.-B. Brosius et al., 2022, p. 114). Respondents receive the questionnaire digitally, for instance by opening a link provided via email (Berger-Grabner, 2022, p. 177), and complete it independently without direct interaction with an interviewer. This minimises interviewer effects and allows researchers to conduct ongoing analyses during data collection (Bruhn, 2024, p. 94). Digital survey tools (e.g. Limesurvey) support the automated recording of responses and their direct export into data-processing environments like Microsoft Excel, thereby facilitating subsequent statistical analysis. Given appropriate digital infrastructure, a broad distribution of the survey enables a substantial number of responses within a limited time frame (Berger-Grabner, 2022, p. 177). However, online surveys entail limitations. Participation is typically based on self-selection and can therefore distort the composition of the sample. Accordingly, it is difficult to ensure representativeness (Bruhn, 2024, p. 94). In addition, researchers have limited control over completion conditions and respondent identity, potentially influencing data quality (H.-B. Brosius et al., 2022, p. 115).

3.2 Empirical Quality Criteria

The quality of empirical findings depends strongly on how data are collected and measured. In quantitative research, this is commonly assessed using three interrelated criteria: objectivity, reliability, and validity (Berekoven et al., 2009, pp. 80, 83).

Objectivity describes that a measurement method delivers results which are independent of the researcher conducting the study. Under identical procedural conditions, results should be replicable across different researchers (Berekoven et al., 2009, p. 80; Berger-Grabner, 2022, p. 173). This is ensured by limiting subjective influences during the administration, evaluation, and interpretation of the measurement process. Administration objectivity is

achieved when the survey is carried out with minimal personal interaction, thereby reducing the risk that respondents are affected by the researcher's presence or behaviour. Evaluation objectivity is ensured when responses are analysed according to clearly defined and standardised rules, limiting subjective judgments during processing the data. Interpretation objectivity exists when separate investigators derive the same conclusions. This can be assessed using an objectivity coefficient by comparing outcomes from independent administrations of the identical measurement approach (Berekoven et al., 2009, p. 80).

Reliability captures how strongly results remain consistent when researchers repeat the measurement under the identical conditions (Berger-Grabner, 2022, p. 173). Differences may arise because external circumstances change, the instrument yields imprecise measurements or respondents' attitudes fluctuate. In addition, repeated exposure to the same items may produce learning or familiarity effects that influence subsequent responses (Berekoven et al., 2009, p. 81).

Validity examines whether a measurement actually captures the intended construct and is not systematically affected by unrelated factors (Berekoven et al., 2009, p. 82; Berger-Grabner, 2022, p. 173). A common distinction is made between two different types of validity. Internal validity indicates whether observed effects result from the variables of interest rather than from confounding influences. External validity captures the generalisability of research results. It indicates whether results obtained from the sample can be applied to the target population or to the intended application context (Berekoven et al., 2009, p. 82).

3.3 Research Design

3.3.1 Framework

The research question defines the scope of the survey by specifying the target population to which the findings are intended to generalise. The population (N) comprises all individuals that the research intends to describe or make inferences about. Because surveying an entire population is typically infeasible, empirical studies examine only a subset of the population (H.-B. Brosius et al., 2022, pp. 61–62), namely a sample (n) (H.-B. Brosius et al., 2022, p. 63). The sample should closely reflect the target population with respect to attributes that are pertinent to the research objective. The more representative the sample, the more generalisable the findings to the target population (Berger-Grabner, 2022, p. 212). Whether a sample can be considered representative depends largely on the sampling procedure (H.-B. Brosius et al., 2022, p. 63). Sampling can be random, purposive, or convenience-based (H.-B. Brosius et al., 2022, p. 69).

The present study primarily targets younger generations. However, older participants were also included for reasons of research economy. Accordingly, the population of this thesis comprises cosmetic consumers living in Germany. For this investigation, a sample size of approximately 150 study participants ($n = 150$) was targeted. This number was chosen to enable statistically meaningful hypothesis testing and to support comparisons across psychographic consumer groups.

Random or purposive selection of participants was not possible, as the target population could not be accessed under controlled conditions. Therefore, this study relied on a convenience selection, meaning participation depended on whether individuals encountered the survey link and voluntarily filled out the questionnaire. Although this recruitment approach enabled the collection of a sufficient number of responses for the planned analyses, it limits representativeness and, therefore, constrains the generalisability of the findings (H.-B. Brosius et al., 2022, pp. 69–70).

The questionnaire was developed using the online survey tool LimeSurvey. Distribution was conducted via several channels to ensure broad reach within the target population. The survey link was shared via social media (WhatsApp, LinkedIn, Instagram), where recipients were also asked to forward it within their personal network. In addition, the link was shared via the University of Applied Sciences Neu-Ulm (HNU) email distribution list, reaching students of all degree programmes and semesters. Participation was voluntary and anonymous, and respondents completed the questionnaire independently, without any contact with an interviewer.

3.3.2 Structure of the Questionnaire

When designing a questionnaire, researchers should ensure that the content is appropriate and that the instrument follows a clear structure and format to support accurate completion (Berger-Grabner, 2022, p. 206). Therefore, this study uses closed-ended items to implement a fully standardised online questionnaire and to support consistent measurement and comparability across respondents (Döring, 2023, p. 399). The instrument was designed by aligning layout, content and wording with the research question and hypotheses, and by considering functional aspects such as thematic categories, a logical item order, and filter routing (Berger-Grabner, 2022, pp. 202–207; Döring, 2023, p. 404). The selection of questions and response options was guided by the theoretical foundations and the derived research hypotheses presented in Chapter 2. At the beginning of the empirical study, the items were refined, the wording finalised and the questionnaire structured into a logical sequence. The final version of the questionnaire is presented in Appendix 2.

Overall, the questionnaire comprises 13 questions and is divided into four main sections: screening questions, evaluation of digital sustainability communication formats, psychographic characteristics, and sociodemographic information.

At the starting point, respondents received a brief overview outlining the purpose of this study and the relevance of participation, including assurances of anonymity and practical details such as the expected completion time (Berger-Grabner, 2022, p. 207).

The survey then begins with some icebreaker questions, which are simple to answer and help respondents enter the survey situation (H.-B. Brosius et al., 2022, p. 105). These questions also serve a screening function by restricting the analytical sample to respondents who meet the predefined inclusion criteria (H.-B. Brosius et al., 2022, p. 106). First, participants are asked about their country of residence, with only respondents living predominantly in Germany proceeding. Second, the participants indicate how frequently they purchase cosmetic products for themselves. Multiple response options are given, ranging from at least *once a week* to *never*, including *two to three times a month*, *once a month*, and *less than once a month*. Respondents who never purchase cosmetics are excluded, as it is assumed that they would not be able to contribute any valuable insights to the study. Third, participants state whether they at least occasionally search online for information about cosmetic products or brands before making a purchase. This screening question ensures that the sample has experience with digital information environments. Only respondents meeting all criteria continue to the subsequent questions.

A fourth question assesses whether respondents had encountered online sustainability-related communication by cosmetic brands within the last twelve months. This item is not used as a screening question, but it is included to capture contextual information that supports the interpretation of the results.

Next, the central part of the questionnaire assesses how different forms of digital sustainability communication are perceived. Respondents view four stimulus-based Instagram posts from a fictitious cosmetics brand to minimise potential brand-related bias and to ensure that evaluations focus on the communication format itself.

Two stimuli represent company-owned formats: evidential sustainability communication and emotionally framed sustainability communication. The other two stimuli depict brand-influencer collaboration formats and differ in the influencer's positioning. One influencer was presented as primarily creating sustainability-related content, while the other was characterised as focusing mainly on beauty and lifestyle topics. All four stimuli follow the same Instagram mockup design to avoid visual inconsistencies as a confounding factor and

to support direct comparisons across formats. The visuals were created specifically for this study by generating images with ChatGPT and assembling the final mockups in Canva (see Figure 4). The stimuli do not depict real individuals and do not contain any copyrighted brand elements. A larger representation of the stimuli is included in Appendix 1.

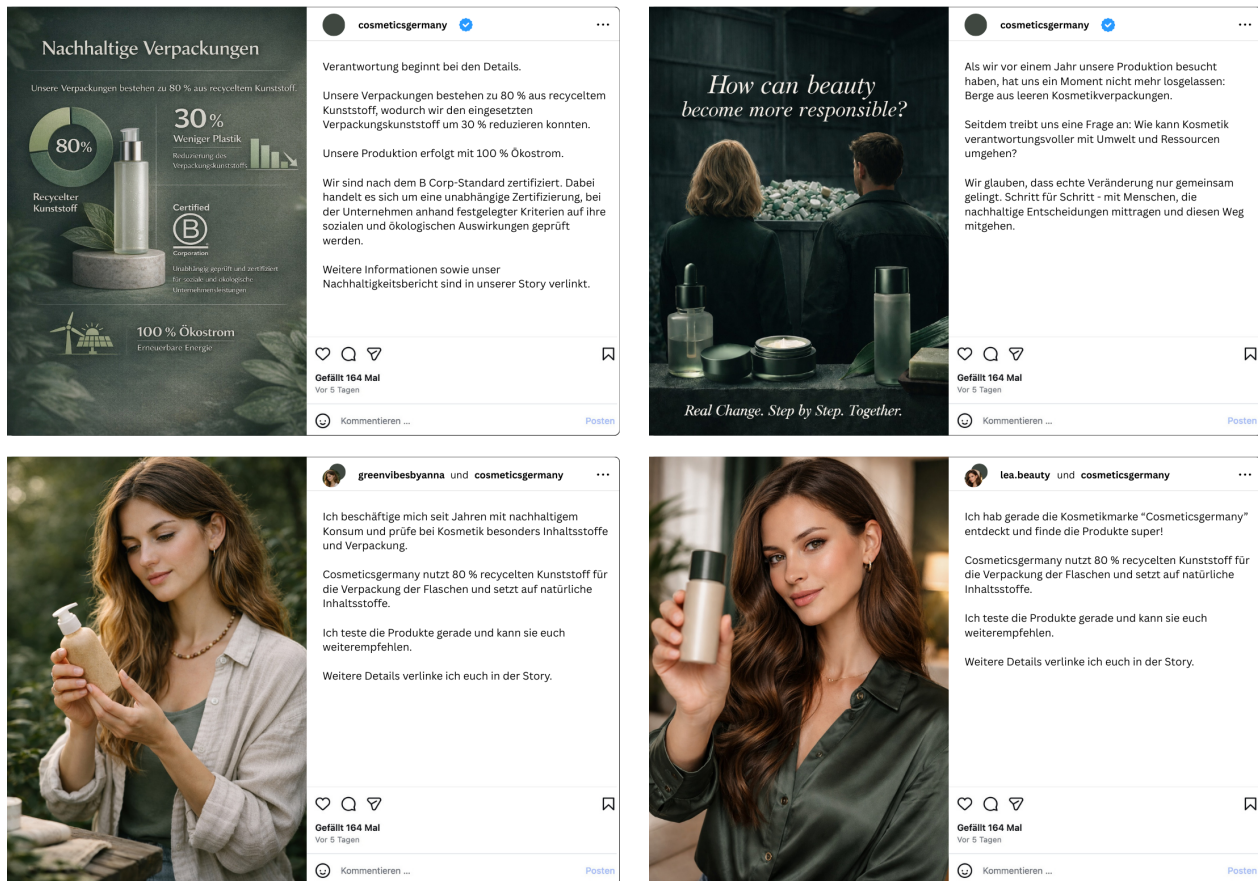


Figure 4: Digital Sustainability Communication Stimuli

Source: Own illustration, created for this study using AI-generated images (ChatGPT) and assembled in Canva. After viewing each stimulus, respondents rate standardised statements on a four-point rating scale (Döring, 2023, p. 247). Perceived credibility is captured through the dimensions of trustworthiness and expertise, while perceived greenwashing indicators are assessed via perceptions of exaggerated, euphemistic, vague or difficult-to-verify claims. In addition, purchase intention is measured, and the personal appeal of the sustainability information is considered to gain further insight into the type of message that resonates best with the target sample.

To identify psychographic differences between respondents, the questionnaire includes a block of statements on sustainability-related attitudes and values. Participants rate their agreement on a four-point rating scale (Döring, 2023, p. 247). The measured items capture environmental and social responsibility, personal concern regarding environmental and climate issues, the relevance of sustainability in purchase decisions, and an ecocentric mindset, complemented by health consciousness and long-term thinking.

The questionnaire concludes with sociodemographic questions, which are typically placed at the end to keep respondents' full attention for the core measures (Berger-Grabner, 2022, p. 203). These include age, gender, highest educational qualification, and current main occupation with predefined response options. Although sociodemographic characteristics are not the primary focus of this analysis, they provide essential information on the sample structure and support the contextual interpretation of the results (Döring, 2023, p. 402).

The icebreaker and screening questions at the beginning use single-choice categorical responses. Country of residence (Q1), online information behaviour (Q3), and exposure to sustainability communication (Q4) are measured on a nominal scale. Purchase frequency (Q2), in contrast, is collected using ordered categories ranging from *at least once a week* to *never* and is therefore treated as an ordinal variable (Berger-Grabner, 2022, pp. 133–134). The evaluation of four sustainability communication stimuli as well as psychographic items are measured using four-point bipolar rating scales with verbal anchors. These scales range from *strongly disagree* to *strongly agree* (*strongly disagree*, *rather disagree*, *rather agree*, *strongly agree*) (Döring, 2023, p. 247). An even number of response categories is deliberately chosen to avoid a neutral midpoint and to encourage a clear evaluative tendency (Berger-Grabner, 2022, p. 209). Despite being formally ordinal, the scale points are typically treated as approximately interval-scaled, as the symmetric and evenly spaced response format supports the assumption of equidistant intervals (Döring, 2023, p. 246). The sociodemographic variables are collected using single-choice categorical items. Age group and educational qualification are measured on an ordinal scale. Gender and current main occupation are treated as nominal variables (Berger-Grabner, 2022, pp. 133–134).

3.3.3 Pretest

Before launching the developed online survey, a pretest is conducted to identify potential weaknesses and assess comprehensibility. A few participants who resemble the target population complete the survey under conditions comparable to the main study (Berger-Grabner, 2022, pp. 124, 202). After completing the questionnaire, participants provide feedback on the overall structure of the survey, item clarity, and the adequacy of the response options (Berger-Grabner, 2022, p. 202). The pretest also helps detect practical issues, such as overly demanding questions, problems in the filter logic, and the actual time needed to complete the survey (Berger-Grabner, 2022, p. 124; Schnell et al., 2018, p. 317).

The pretest was conducted with seven participants ($n = 7$) aged 22 to 60 years. The feedback obtained provided the basis for targeted refinements before the main data collection. When completing the survey on mobile devices, the stimulus visualisations were not fully visible at first glance. Therefore, the images were optimised for smartphone display, as the survey is expected to be completed primarily on mobile devices. Another revision concerned the response option “The brand (Q5 and Q6) or person (Q7 and Q8) appears competent in terms of sustainability”, which participants perceived as insufficiently precise. To enhance conceptual clarity, the item was reworded as “The brand (Q5 and Q6) or person (Q7 and Q8) appears professionally competent in the field of sustainability”. In addition, several participants were unfamiliar with the certification shown in the first stimulus. Consequently, a clearer explanation was added. The caption of the emotional format was also revised, as it was not interpreted as intended in relation to sustainability. To strengthen this link, the sustainability aspect was emphasized more explicitly. Finally, participants indicated that the influencer collaboration was not clearly identifiable in the initial presentation. The stimulus was adjusted to clearly show the content is a joint publication by the company and the influencer. Overall, the questionnaire received very positive feedback. Participants particularly highlighted the clarity and coherence of the questionnaire structure and question sequencing. The estimated completion time (seven to ten minutes) was considered appropriate, and the visual design was perceived as appealing.

3.4 Analysis and Presentation of Research Results

For the analysis of the research results, survey data were exported from LimeSurvey and subsequently processed in Microsoft Excel and IBM SPSS Statistics for statistical evaluation. For improved clarity and to facilitate subsequent analyses and calculations, all variables and their respective response categories were numerically coded in LimeSurvey prior to data processing (Schnell et al., 2018, p. 388). The rating scales used to assess the digital sustainability communication formats as well as sustainability orientation (see Section 3.3.2) are treated as interval-level measures (Döring, 2023, p. 246). Accordingly, the verbal scale anchors were translated into numeric codes (1 = strongly disagree, 2 = rather disagree, 3 = rather agree, 4 = strongly agree). A complete overview of the coding scheme is provided in the accompanying document (*Survey_Variable_Coding_LucaGail.pdf*). Additionally, suitable visual representations and frequency tables were created for the evaluation. Frequency tables report the proportion of observations in each category of a variable within the sample (Schnell et al., 2018, pp. 403–404). The resulting cleaned dataset (final sample) is documented in the Excel file *02_Cleaned_Survey_Data_LucaGail.xlsx*.

The online survey was conducted from 16 January 2026 to 2 February 2026. In total, 192 individuals started the survey, and 162 of them completed the questionnaire. This represents a completion rate of 84.4%, while 30 responses were incomplete, resulting in a dropout rate of 15.6%. To ensure that the dataset reflected the predefined target population, different screening criteria were applied. Overall, 46 respondents were excluded based on the screening questions (see Section 3.3.2), representing 24.0% of all survey starts. Most exclusions occurred at the third screening stage (Q3: 40 respondents; 20.8%), whereas Q1 and Q2 each accounted for 3 exclusions (1.6% each). The final dataset used for the statistical analyses included 116 respondents ($n = 116$), as only complete questionnaires meeting the inclusion criteria were considered (see Table 3).

Table 3: Survey Participation and Sample Composition

Survey starts	192	Participation rate	100%
Completed surveys	162	Completion rate	84.4%
Incomplete surveys	30	Dropout rate	15.6%
Screened-out cases	46	Screen-out rate	24.0%
Q1	3	Screen-out rate Q1	1.6%
Q2	3	Screen-out rate Q2	1.6%
Q3	40	Screen-out rate Q3	20.8%
Final analytical sample (n)	116	Final sample rate	60.4%

Source: Own illustration

3.4.1 Demographic Characteristics of the Sample

Age

The age distribution of the final analytical sample is concentrated in younger age groups. Almost half of respondents (49.1%) are aged 18-24 years, followed by 37.9% in the 25-34 years age group. Accordingly, the 18-24 years category constitutes the modal age group. Older age groups are substantially less represented: 35-44 years account for 4.3%, 45-54 years for 3.4%, and 55 years or older for 5.2%. In total, participants aged 35 years and above comprise 12.9% of the sample (see Table 4).

Table 4: Frequency Distribution of Age Groups

Age groups	Absolute frequencies (f_k)	Relative frequencies (h_k)
18 - 24 years	57	49.1%
25 - 34 years	44	37.9%
35 - 44 years	5	4.3%
45 - 54 years	4	3.4%
55 years or older	6	5.2%
Total	116	100%

Source: Own illustration

Gender

In total, 99 respondents identify as female, whereas 17 respondents identify as male. This corresponds to a dominant female proportion of 85.3% and a low male proportion of 14.7%. No respondents reported identifying as diverse (see Figure 5).

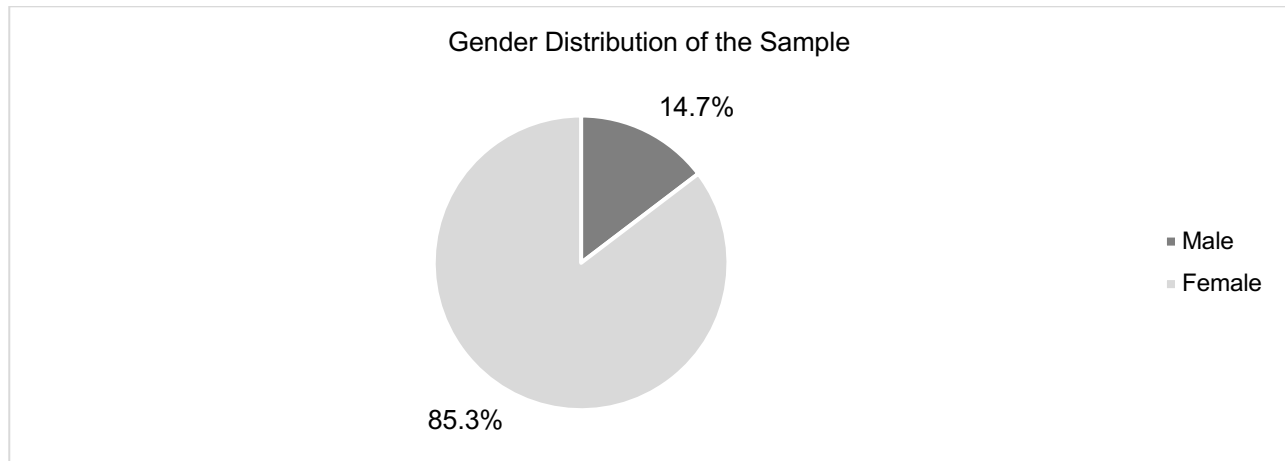


Figure 5: Gender Distribution of the Sample

Source: Own illustration

Educational background

The largest proportion of respondents has obtained a “(Fach-)Abitur” (41.4%). A substantial share of the sample has completed tertiary education, with 25.9% having a bachelor’s degree and 9.5% having a master’s degree. In addition, 21.6% of respondents have completed vocational training, while 1.7% ($n = 2$) hold a “Hauptschulabschluss”. Taken together, the educational profile of the sample reflects a comparatively high level of formal qualification. Notably, no respondent reported holding a “Realschulabschluss” as highest educational background.

Main occupation

The occupational profile of the sample is dominated by respondents currently in education. Nearly two-thirds of respondents (62.9%) are enrolled as students, whereas approximately one-third (32.8%) are in employment, either salaried or self-employed. The remaining categories are only marginally represented, including respondents who are not employed (1.7%), retired (1.7%), and school pupils (0.9%). In addition, the sample does not comprise respondents in an apprenticeship or vocational education programme.

3.4.2 Market-Related Characteristics and Prior Exposure

Country of residence

Given the study's focus on the German cosmetics market, residence in Germany constituted an inclusion criterion. Accordingly, the final analytical sample ($n = 116$) consists exclusively of respondents residing in Germany.

Purchase frequency of cosmetic products

Purchase frequency within the final analytical sample ($n = 116$) reflects regular consumption of cosmetic products. 38.8% of respondents purchase cosmetics approximately *once per month* ($n = 45$), representing the most frequently reported category. 37.9% purchase cosmetics *two to three times per month* ($n = 44$), accounting for an almost equally large share. A smaller proportion of respondents (12.1%) purchase cosmetics *at least once a week* ($n = 14$), while 11.2% purchase cosmetics *less than once per month* ($n = 13$). Overall, 88.8% of respondents ($n = 103$) purchase cosmetic products *at least once per month*. Respondents who never purchase cosmetics for themselves were excluded from the analytical sample. Figure 6 visualises this distribution.

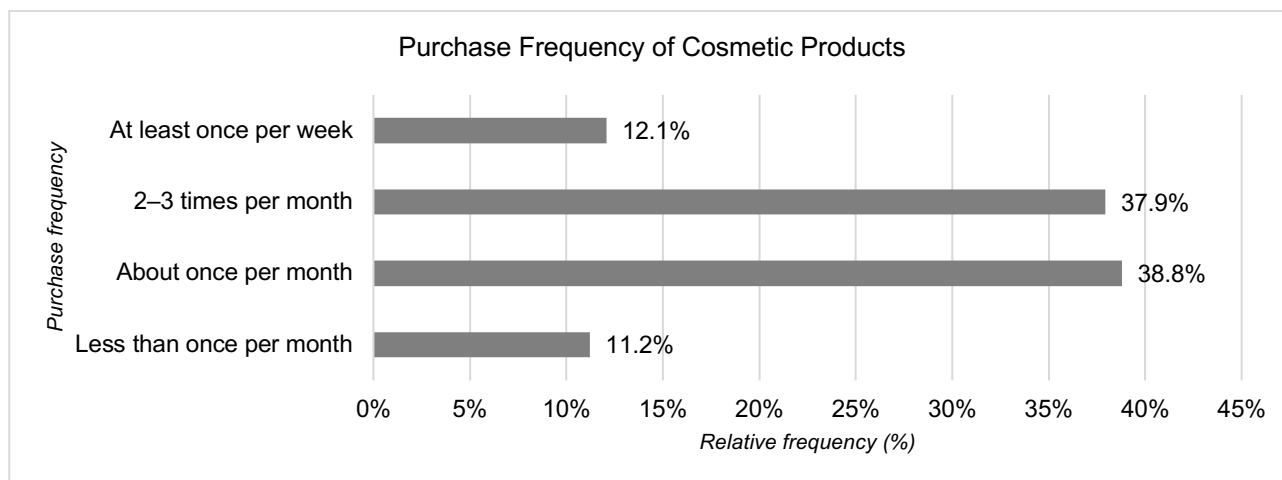


Figure 6: Purchase Frequency of Cosmetic Products in the Sample

Source: Own illustration

Online pre-purchase information behaviour

Online information behaviour was applied as a screening criterion. Consequently, all respondents in the final analytical sample ($n = 116$) inform themselves online about cosmetic products or brands at least occasionally prior to purchase. Therefore, no variance is observed for this variable within the final analytical sample.

Prior exposure to online sustainability-related communication by cosmetic brands

A total of 83.6% of respondents reported having been exposed to online sustainability-related statements or content from cosmetic brands within the last twelve months ($n = 97$), constituting the predominant response category. By contrast, 16.4% reported no exposure during this period ($n = 19$). Figure 7 illustrates this distribution.

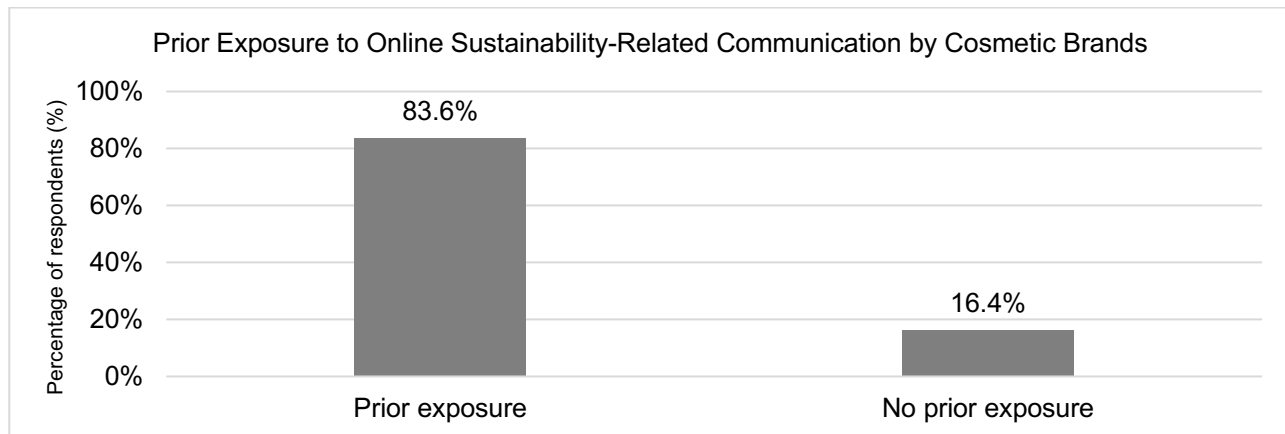


Figure 7: Prior Exposure to Online Sustainability Communication by Cosmetic Brands

Source: Own illustration

3.4.3 Digital Sustainability Communication Formats

This study assesses digital sustainability communication using latent constructs measured indirectly through indicators (Döring, 2023, p. 226), namely perceived credibility, perceived greenwashing, and purchase intention. These constructs were operationalised using unidimensional psychometric scales consisting of at least two indicator items (Döring, 2023, p. 270). Accordingly, respondents rated several statements for each stimulus on a four-point rating scale, which was numerically coded for analysis.

Reliability Analysis (Cronbach's Alpha)

To ensure measurement precision and appropriateness for subsequent statistical analyses, the internal consistency of the scales was investigated in SPSS. Cronbach's alpha was used as a measure of reliability for this purpose (Döring, 2023, pp. 438–439). When interpreting alpha, it must be noted that the coefficient is influenced by both the number of items and the magnitude of inter-item correlations (Döring, 2023, p. 462). According to Brosius (2018), values of $\alpha \geq .80$ are regarded as indicating sufficient reliability, whereas $\alpha \geq .70$ may also be considered acceptable (F. Brosius, 2018, p. 951). As identical items were applied across the four sustainability communication formats, alpha was calculated for each construct across all stimuli (see Table 5). Appendix 3.1, 3.2 and 3.3 contain the calculated alpha values

for all constructs, as well as the associated inter-item correlations and the improved value if items were excluded.

Table 5: Reliability Statistics for Perception Constructs

Construct	Items	Cronbach's α
Perceived Credibility	12	.767
Perceived Greenwashing	8	.641
Purchase Intention	8	.753

Source: Own illustration

Perceived Credibility

The credibility scale consisted of 12 items (three items per stimulus) and yielded a value of $\alpha = .767$, indicating acceptable internal consistency (F. Brosius, 2018, p. 951). Corrected item-total correlations were predominantly within the acceptable range ($r > .30$) (Döring, 2023, p. 473), expected three items. Since the exclusion of individual items did not result in a substantial increase of the reliability coefficient and all items operationalise theoretically relevant facets of credibility, the scale was retained for subsequent analyses (Döring, 2023, p. 274).

Perceived Greenwashing

The perceived greenwashing scale comprised eight items (two items per stimulus). The reliability analysis resulted in a value of $\alpha = .641$, which is slightly below the commonly used threshold for acceptable internal consistency (F. Brosius, 2018, p. 951). The corrected item-total correlations were mixed: several items showed acceptable values ($r \geq .30$), while others were lower (Döring, 2023, p. 473). This pattern is plausible, as the scale consists of only two items per stimulus (Döring, 2023, p. 462) and covers different aspects of greenwashing (e.g., exaggeration vs. vagueness), which can reduce item homogeneity. As item exclusion did not meaningfully improve internal consistency and all items were theoretically justified, the scale was retained (Döring, 2023, p. 274). Results for this construct are therefore interpreted with caution.

Purchase Intention

The construct of purchase intention was measured using eight items (two items per stimulus). The scale demonstrated acceptable internal consistency ($\alpha = .753$) (F. Brosius, 2018, p. 951). Corrected item-total correlations were consistently positive and exceeded $r > .37$ (Döring, 2023, p. 473), and item exclusion did not improve internal consistency (Döring, 2023, p. 274). The scale was therefore considered suitable for the computation of composite scores and hypothesis testing.

Descriptive Results

For each respondent ($n = 116$), construct scores were computed as the mean of the corresponding item responses (Döring, 2023, p. 270). Subsequently, arithmetic means (M) and standard deviations (SD) were calculated across all respondents based on these individual construct-level indices (Backhaus et al., 2025, p. 8). Given the four-point rating scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*), the scale midpoint is 2.5. Values above the scale midpoint indicate a tendency towards agreement, whereas values below the midpoint indicate a tendency towards disagreement. For perceived greenwashing, higher values reflect stronger perceptions of exaggerated or vague sustainability communication. Descriptive results for all constructs across the four digital sustainability communication formats are presented in Table 6.

Table 6: Descriptive Statistics for Digital Sustainability Communication Formats

	Credibility		Greenwashing		Purchase Intention		Personal Appeal	
Format	M	SD	M	SD	M	SD	M	SD
Evidential	2.89	0.65	2.55	0.74	2.64	0.84	2.77	0.85
Emotional	2.49	0.76	2.71	0.83	2.31	0.75	2.46	0.94
Sustainability Influencer	2.62	0.84	2.47	0.72	2.56	0.81	2.54	0.89
Beauty and Lifestyle Influencer	1.78	0.69	3.06	0.69	1.90	0.66	1.74	0.75

Source: Own illustration

Perceived Credibility

Perceived credibility varied noticeably across the four sustainability communication formats. Evidential sustainability communication received the highest credibility ratings ($M = 2.89$, $SD = 0.65$), corresponding to the response category *rather agree*. The comparatively low standard deviation suggests limited variation in responses within the sample (Backhaus et al., 2025, p. 23). Sustainability influencer communication ranked second with a mean credibility score of $M = 2.62$ ($SD = 0.84$), also reflecting overall agreement, though less pronounced. Emotional sustainability communication showed a lower mean ($M = 2.49$, $SD = 0.76$), placing the average evaluation close to the scale midpoint and thus indicating a more ambivalent evaluation. By contrast, beauty and lifestyle influencer communication was perceived as least credible ($M = 1.78$, $SD = 0.69$), reflecting a clear tendency toward disagreement with credibility-related statements.

Perceived Greenwashing

Regarding the perception of greenwashing, a distinct pattern emerges. The highest greenwashing perception is observed for beauty and lifestyle influencer communication, with

a value of $M = 3.06$ ($SD = 0.69$). This finding indicates a clear tendency to agree with greenwashing statements. The comparatively low standard deviation suggests limited variability in responses across the sample (Backhaus et al., 2025, p. 23). Emotional sustainability communication also showed elevated perceived greenwashing ($M = 2.71$, $SD = 0.83$), reflecting a similar tendency towards agreement, albeit with greater variability. In comparison, evidential sustainability communication yielded a slightly lower mean value of $M = 2.55$ ($SD = 0.74$). It is positioned just above the scale midpoint and thus suggests a moderate inclination towards agreement. By contrast, sustainability influencer communication exhibited the lowest perceived greenwashing ($M = 2.47$, $SD = 0.72$). Accordingly, the mean value reflects a more neutral assessment close to the midpoint rather than clear agreement or disagreement, indicating a cautious evaluation of greenwashing.

Purchase Intention

Evidential sustainability communication yielded the highest mean purchase intention ($M = 2.64$, $SD = 0.84$), suggesting that respondents tended to express agreement with statements assessing purchase intention. A similar pattern was observed for sustainability influencer communication ($M = 2.56$, $SD = 0.81$) likewise reflecting a tendency toward agreement. In contrast, emotional sustainability communication yielded a lower mean value of $M = 2.31$ ($SD = 0.75$), corresponding to a tendency toward disagreement and indicating a comparatively lower purchase intention. The lowest purchase intention was reported for beauty and lifestyle influencer communication ($M = 1.90$, $SD = 0.66$), indicating a tendency towards disagreement. The comparatively low standard deviation suggests that this assessment is largely homogeneous within the sample (Backhaus et al., 2025, p. 23).

Personal Appeal

Ratings of personal appeal differed across the four communication formats. Evidential sustainability communication received the highest mean score ($M = 2.77$, $SD = 0.85$), indicating that respondents generally agreed that this format was personally appealing. Sustainability influencer communication yielded a mean score of $M = 2.54$ ($SD = 0.89$). Given its proximity to the scale midpoint, this result suggests a more ambivalent evaluation rather than pronounced agreement. Emotional sustainability communication showed a comparable mean ($M = 2.46$, $SD = 0.94$), also close to the midpoint and therefore indicating no clear tendency towards agreement or disagreement. The relatively high standard deviation points to considerable heterogeneity in individual perceptions (Backhaus et al., 2025, p. 23). Beauty and lifestyle influencer communication was rated least appealing with an average score of $M = 1.74$ ($SD = 0.75$). This result indicates that respondents tended to disagree that this communication format was personally appealing.

3.4.4 Psychographic Sustainability Orientation of the Sample

Psychographic sustainability orientation is a latent construct and was therefore operationalised using a unidimensional psychometric scale, from which an aggregated score was computed (Döring, 2023, pp. 226, 270). To capture sustainability orientation, six items were measured using a rating scale, which was subsequently converted into numerical values for statistical analysis. The overall score was derived as the mean across all six items (Döring, 2023, p. 270) with higher scores representing a stronger orientation.

Reliability Analysis (Cronbach's Alpha)

Cronbach's alpha was computed in SPSS to examine the reliability of the scale (Döring, 2023, pp. 438–439). The six-item scale demonstrated good reliability ($\alpha = .813$) (F. Brosius, 2018, p. 951), supporting the aggregation of the items into a composite score. Corrected item-total correlations further support the reliability of the scale (see Table 7). Corrected item-total correlations ranged from $r = .357$ to $r = .763$, suggesting overall acceptable to high item discriminability (Döring, 2023, p. 473). Moreover, Cronbach's alpha if item deleted varied between $\alpha = .735$ and $\alpha = .823$ (see Table 7). Although excluding the item with the lowest corrected item-total correlation would slightly increase alpha ($\alpha = .823$), the improvement is marginal compared to the reliability of the full scale ($\alpha = .813$). Therefore, all items were retained, as internal consistency was already sufficient and item removal would have reduced content validity (Döring, 2023, p. 274). Appendix 3.4 presents the calculated alpha values for this construct, including the related inter-item correlations and the improved value if items were excluded.

Table 7: Item-Level Reliability Statistics of the Sustainability Orientation Scale

Items	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
It is important to me to take responsibility for the environment and society through my actions.	.588	.782
Environmental and climate issues concern me personally.	.687	.758
Sustainability plays an important role in my purchasing decisions.	.763	.735
Nature should be protected even if I do not gain any direct benefit from it.	.357	.823
A health-conscious lifestyle is important to me.	.474	.803
I also consider long-term consequences when making decisions.	.602	.782

Source: Own illustration

Descriptive results

For each respondent, a psychographic sustainability orientation value was calculated by computing the arithmetic mean of the six item responses (Döring, 2023, p. 270). Subsequently, descriptive statistics were computed across all respondents based on these aggregated scale scores (see Table 8). Psychographic sustainability orientation within the final analytical sample ($n = 116$) was generally pronounced. The aggregated scale score yielded a mean of $M = 3.17$ ($SD = 0.50$), indicating an overall tendency toward agreement with sustainability-oriented statements. Observed scores ranged from a minimum of 1.83 to a maximum of 4.00, indicating that although sustainability orientation was predominantly strong, a minority of respondents reported comparatively weaker orientations. The median is 3.17, corresponding to the mean.

Table 8: Descriptive Statistics for Psychographic Sustainability Orientation

n	M	SD	Min	Max	Median
116	3.17	0.50	1.83	4.00	3.17

Source: Own illustration

For group-based comparisons, respondents were divided into weaker vs. stronger sustainability orientation using a median split to enable interpretable contrasts between psychographic target groups (Döring, 2023, p. 261). Respondents scoring below the median (3.17) were assigned to the weaker sustainability-related orientation group, representing 41.4% ($n = 48$) of the sample. Respondents scoring at or above the median are assigned to the stronger sustainability-related orientation group, comprising 58.6% ($n = 68$). Figure 8 visualises this distribution. This segmentation serves as the analytical basis for comparing outcome measures between psychographic target groups in the subsequent hypothesis tests. As a relative classification, it captures systematic differences in sustainability orientation within the sample rather than absolute categorisations.

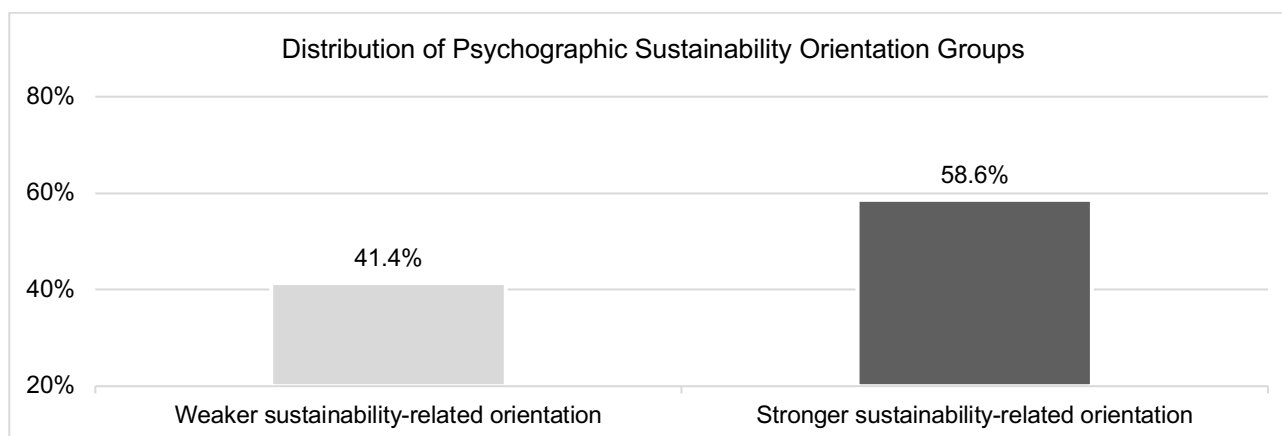


Figure 8: Distribution of Psychographic Sustainability Orientation Groups

Source: Own illustration

4 Discussion of Research Findings

In this chapter, the proposed research hypotheses (H1-H8) are tested based on the results reported in the previous chapter. Subsequently, the findings are interpreted and practical implications for sustainability communication of cosmetic brands in the German market are derived. The chapter concludes with an evaluation of the empirical quality criteria.

4.1 Testing of the Research Hypotheses

To test the proposed hypotheses, statistical procedures were used to analyse observed differences and relationships within the sample. Each alternative hypothesis was contrasted with a corresponding null hypothesis (H_0). The significance level was uniformly set at $\alpha = 0.05$, and p denotes the probability of error. If $p < 0.05$, the statistical result is significant and provides evidence against H_0 . Thus, the observed relationship is assumed to also exist in the population. If $p \geq 0.05$, H_0 fails to be rejected, indicating insufficient statistical evidence in support of the alternative hypothesis (Backhaus et al., 2025, pp. 33, 36; Döring, 2023, p. 603). In this study, a t-test is used to calculate p (Backhaus et al., 2025, pp. 39–41). To assess relationships between variables, covariance cov and correlation coefficient r are calculated. Negative covariances indicate negative relationships and positive covariances positive ones. As the covariance is not directly interpretable, r is used to measure how strongly variables are related. Following Backhaus et al. (2025), $r \geq 0.7$ indicates a strong and $r \leq 0.3$ a weak relationship (Backhaus et al., 2025, pp. 25–29). For the statistical analyses, responses on the four-point rating scale (Q5-Q9) were numerically coded and treated as approximately interval-scaled (see Section 3.3.2). All subsequent analyses were based on the final sample ($n = 116$). Due to the scope of the dataset, the detailed calculation basis for the following hypothesis tests is documented in the accompanying Excel file (*04_Hypothesis_Testing_LucaGail.xlsx*).

H1: Evidential sustainability communication formats are perceived as more credible than emotionally framed sustainability storytelling formats.

The null hypothesis H_{01} is contrasted with H1 and states that evidential sustainability communication is not perceived as more credible than emotionally framed sustainability storytelling. To examine this assumption, perceived credibility scores were compared for the evidential and emotional formats (*Credibility_Evidential* vs. *Credibility_Emotional*). *Perceived credibility* served as the dependent variable, whereas *communication format* constituted the independent variable.

Descriptive results (see Table 9) show that evidential sustainability communication is generally considered to be more credible ($M = 2.89$, $SD = 0.65$) than emotional sustainability storytelling ($M = 2.49$, $SD = 0.76$). The mean difference amounts to $MD = 0.40$, indicating that respondents rated the evidential format 0.40 scale points higher in perceived credibility than the emotional format.

Table 9: Descriptive Statistics for H1

Format	n	M	SD
<i>Credibility_Evidential</i>	116	2.89	0.65
<i>Credibility_Emotional</i>	116	2.49	0.76
Mean Difference		0.40	-

Source: Own illustration

As each respondent assessed both communication formats, a within-subjects design is present (Döring, 2023, p. 211). To assess the statistical significance of the identified mean difference, a one-tailed t-test was applied (Backhaus et al., 2025, p. 39; Schnell et al., 2018, p. 412). The t-test yields $p = 0.00005$, which is well below the predefined significance level of $\alpha = 0.05$. However, the findings warrant a restrained interpretation, given that the sample is not representative (see Section 3.3.1). This limitation also applies to all subsequent interpretations. Nevertheless, the difference is statistically significant. Consequently, H_{01} can be rejected. As the mean values also differ in the expected direction (evidential > emotional), H_1 is supported.

H2: Digital sustainability communication featuring a sustainability-focused influencer is perceived as more credible than communication featuring a beauty and lifestyle influencer.

To assess H2, perceived credibility ratings were compared between the two influencer-based sustainability communication formats (*Credibility_SustainabilityInfluencer* vs. *Credibility_LifestyleInfluencer*). The corresponding null hypothesis H_{02} states that sustainability-focused influencer communication is not perceived as more credible than communication featuring a beauty and lifestyle influencer. Perceived credibility constituted the dependent variable, whereas influencer type represented the independent variable.

Descriptive results (see Table 10) indicate a substantial difference between the two conditions. Communication featuring a sustainability-focused influencer received higher credibility ratings ($M = 2.62$, $SD = 0.84$) than communication featuring a beauty and lifestyle influencer ($M = 1.78$, $SD = 0.69$). The mean difference ($MD = 0.84$) suggests that the sustainability-focused influencer format was rated 0.84 scale points higher on average.

Table 10: Descriptive Statistics for H2

Format	n	M	SD
<i>Credibility_SustainabilityInfluencer</i>	116	2.62	0.84
<i>Credibility_LifestyleInfluencer</i>	116	1.78	0.69
Mean Difference		0.84	-

Source: Own illustration

Consistent with H1, a within-subjects design is present as each respondent evaluated both influencer sustainability communication formats (Döring, 2023, p. 211). A one-tailed t-test was performed to statistically evaluate the significance of the mean difference in perceived credibility between the two influencer-based formats (Backhaus et al., 2025, p. 39; Schnell et al., 2018, p. 412). The t-test yields $p = 0.00000000000000005$, which is well below $\alpha = 0.05$. Thus, the difference is statistically significant. Consequently, H_{02} can be rejected. As the mean difference also aligns with the hypothesised direction (sustainability influencer > beauty and lifestyle influencer), H2 is supported.

H3: The higher the perceived greenwashing in digital sustainability communication, the lower the perceived credibility of the communication.

The null hypothesis H_{03} contrasts H3 and states that no relationship exists between perceived greenwashing and perceived credibility in digital sustainability communication. To examine this relationship, the independent variable *perceived greenwashing* (*Greenwashing_Overall*) and the dependent variable *perceived credibility* (*Credibility_Overall*) were analysed. For this purpose, aggregated construct scores were calculated at the individual respondent level by computing arithmetic means across all four digital communication formats. To assess this relationship, covariance *cov* and correlation coefficient *r* were calculated (see Table 11).

Table 11: Covariance and Correlation for H3

Variables	n	Covariance cov	Correlation coefficient r
<i>Greenwashing_Overall, Credibility_Overall</i>	116	-0.11	-0.55

Source: Own illustration

The covariance is negative ($cov = -0.11$), suggesting a negative relationship. The correlation coefficient amounts to $r = -0.55$, indicating a moderate negative relationship between perceived greenwashing and perceived credibility. Thus, the correlation is interpretable in the expected direction. Higher perceived greenwashing (independent variable) is related to lower perceived credibility (dependent variable) (Backhaus et al., 2025, pp. 25–29). Accordingly, H_{03} can be rejected and H3 is supported. The regression equation $y = 3.8876 - 0.5345x$ further indicates that if perceived greenwashing increases by one scale point, perceived credibility decreases by the regression coefficient $b = -0.5345$. Moreover, the

coefficient of determination $r^2 = 0.30$ implies that perceived greenwashing accounts for about 30% of the observed variation in perceived credibility, consistent with a moderate linear relationship (Backhaus et al., 2025, pp. 66–68, 89–91).

H4: The higher the perceived greenwashing in digital sustainability communication, the lower consumers' purchase intention for products of the communicated brand.

The alternative hypothesis H4 was examined by analysing the relationship between the independent variable *perceived greenwashing* (*Greenwashing_Overall*) and the dependent variable *purchase intention* (*PurchaseIntention_Overall*). The corresponding null hypothesis H0₄ assumes that no relationship exists between perceived greenwashing and purchase intention in digital sustainability communication. The analysis relies on overall construct indices across all formats. To assess the relationship between both variables, covariance *cov* and correlation coefficient *r* were calculated (see Table 12).

Table 12: Covariance and Correlation for H4

Variables	n	Covariance <i>cov</i>	Correlation coefficient <i>r</i>
<i>Greenwashing_Overall, PurchaseIntention_Overall</i>	116	-0.10	-0.48

Source: Own illustration

The covariance (*cov* = -0.10) indicates a negative relationship. The correlation coefficient (*r* = -0.48) further confirms a moderate negative relationship. As perceived greenwashing increases, consumers' purchase intention decreases (Backhaus et al., 2025, pp. 25–29). Given that the observed direction aligns with H4, H0₄ can be rejected and H4 is supported. To further specify the relationship the regression equation was calculated ($y = 3.7754 - 0.5274x$). This indicates that an increase of one scale point in perceived greenwashing is related with a decrease of $b = 0.5274$ scale points in purchase intention. Additionally, the coefficient of determination ($r^2 = 0.23$) suggests that perceived greenwashing explains approximately 23% of the variance in purchase intention, which reflects a moderate linear relationship (Backhaus et al., 2025, pp. 66–68, 89–91).

H5: The higher the perceived credibility of digital sustainability communication, the higher consumers' purchase intention for products of the communicated brand.

H5 contrasts the null hypothesis H0₅. H0₅ states that no relationship exists between the perceived credibility of digital sustainability communication and purchase intention for the communicated brand. To examine this relationship, the independent variable *perceived credibility* (*Credibility_Overall*) and the dependent variable *purchase intention* (*PurchaseIntention_Overall*) were analysed. Overall construct indices were computed at the respondent level by averaging scores across all four digital communication formats. The

results of calculating the covariance cov and the correlation coefficient r indicate a clear tendency in the hypothesised direction (see Table 13).

Table 13: Covariance and Correlation for H5

Variables	n	Covariance cov	Correlation coefficient r
<i>Credibility_Overall, PurchaseIntention_Overall</i>	116	0.16	0.75

Source: own illustration

The covariance is positive ($cov = 0.16$), suggesting a positive relationship. With $r = 0.75$, the variables show a strong positive correlation. Accordingly, higher perceived credibility is related to higher purchase intention (Backhaus et al., 2025, pp. 25–29). Consequently, $H0_5$ can be rejected and H5 is supported. By determining the regression equation $y = 0.2814 + 0.8469x$, it can be stated that an increase of one scale point in perceived credibility leads to an increase of 0.8469 scale points in purchase intention. Moreover, the coefficient of determination $r^2 = 0.56$ suggests that perceived credibility explains approximately 56% of the variance in purchase intention, evidencing a strong linear relationship (Backhaus et al., 2025, pp. 66–68, 89–91).

H6: Perceived credibility of digital sustainability communication differs between psychographic consumer segments with a stronger sustainability-related orientation and those with a weaker sustainability-related orientation.

The null hypothesis $H0_6$ contrasts H6 and states that perceived credibility of digital sustainability communication does not differ between consumers with a stronger sustainability-related orientation and those with a weaker orientation. To examine this assumption, *perceived credibility (Credibility_Overall)* was compared across the two psychographic segments derived in Section 3.4.4 (weaker vs. stronger sustainability-related orientation). *Perceived credibility* constituted the dependent variable, while *sustainability-related orientation* served as the independent grouping variable.

Descriptive results (Table 14) indicate slightly higher perceived credibility among respondents with weaker sustainability-related orientation ($M = 2.53$, $SD = 0.43$) compared to respondents with stronger orientation ($M = 2.38$, $SD = 0.42$). The resulting mean difference amounts to $MD = 0.15$.

Table 14: Descriptive Statistics for H6

Orientation segment	n	Credibility_Overall (M)	Credibility_Overall (SD)
<i>Weaker sustainability orientation</i>	48	2.53	0.43
<i>Stronger sustainability orientation</i>	68	2.38	0.42
Mean Difference		0.15	-

Source: Own illustration

Because H6 is formulated non-directional (“differs”) and does not specify the expected direction of the assumption, a two-tailed t-test was applied (Backhaus et al., 2025, pp. 34, 228). The analysis yields $p = 0.059$. As this value exceeds the predefined significance level of $\alpha = 0.05$, the observed difference is not considered statistically significant. Accordingly, H_{06} cannot be rejected. While a small descriptive difference is observed, there is insufficient statistical evidence within the examined sample to conclude that sustainability-related orientation is associated with differences in perceived credibility. Therefore, H6 is not supported.

H7: Consumers with a stronger sustainability-related psychographic orientation perceive evidential sustainability communication as more credible than emotionally framed sustainability communication, compared with consumers with a weaker orientation.

H7 examines whether the credibility advantage of evidential over emotionally framed sustainability communication is more pronounced among consumers with a stronger sustainability-related orientation than among those with a weaker orientation. The corresponding null hypothesis H_{07} assumes that this credibility advantage is not greater in the stronger-orientation group than in the weaker-orientation group. To test this assumption, an individual difference score was computed for each respondent ($Diff = Credibility_Evidential - Credibility_Emotional$) to operationalise the credibility advantage of evidential over emotional communication. These credibility difference scores were compared between the two independent psychographic segments (weaker ($n = 48$) vs. stronger ($n = 86$) sustainability-related orientation). The difference score constituted the dependent variable, whereas sustainability-related orientation served as the independent grouping variable.

Descriptive results (Table 15) show that the credibility advantage of evidential over emotional sustainability communication is considerably larger among respondents with a stronger sustainability-related orientation ($M = 0.65$, $SD = 1.11$) than among respondents with a weaker orientation ($M = 0.05$, $SD = 0.90$). The observed mean difference between segments amounts to $MD = 0.60$ scale points.

Table 15: Descriptive Statistics for H7

Orientation segment	<i>n</i>	<i>M</i>	<i>SD</i>
Weaker sustainability orientation	48	0.05	0.90
Stronger sustainability orientation	68	0.65	1.11
Mean Difference		0.60	-

Source: Own illustration

A one-tailed t-test assessed the statistical significance of the mean difference (Backhaus et al., 2025, p. 39; Schnell et al., 2018, p. 412). The test yields $p = 0.00087$, which is well below the predefined significance level of $\alpha = 0.05$. The difference can therefore be considered statistically significant. Accordingly, H_{07} can be rejected. Given that the mean values also differ in the assumed direction (stronger > weaker), H_7 is supported.

H8: The positive effect of perceived credibility of digital sustainability communication on purchase intention is stronger for consumers with a stronger sustainability-related psychographic orientation than for consumers with a weaker orientation.

In contrast to H8, the null hypothesis H_{08} states that the positive effect of perceived credibility on purchase intention is not more pronounced among consumers with stronger sustainability-related orientation than among those with a weaker orientation. To examine this assumption, the relationship between *perceived credibility* (*Credibility_Overall*) and *purchase intention* (*PurchaseIntention_Overall*) was analysed separately for the two segments (weaker vs. stronger sustainability-related orientation). In both cases, *perceived credibility* served as the independent variable, whereas *purchase intention* constituted the dependent variable. Within the final dataset, analyses were performed separately for the weaker- ($n = 48$) and stronger-orientation segments and ($n = 68$). To quantify the association within each segment, covariance *cov* and correlation coefficient *r* were calculated (see Table 16).

Table 16: Covariance and Correlation for H8

Orientation segment	<i>n</i>	Covariance <i>cov</i> ¹	Correlation coefficient <i>r</i> ¹
Weaker sustainability orientation	48	0.17	0.78
Stronger sustainability orientation	68	0.14	0.72

¹ *Credibility_Overall*, *PurchaseIntention_Overall*

Source: Own illustration

The covariances indicate a positive relationship in both groups (*cov_weak* = 0.17; *cov_strong* = 0.14). This pattern is confirmed by the correlation coefficients, which suggest a strong positive relationship in both groups (*r_weak* = 0.78; *r_strong* = 0.72) (Backhaus et al., 2025, pp. 25–29). However, H8 assumes that the positive effect of perceived credibility on purchase intention is more pronounced among consumers with a stronger sustainability-related orientation. The comparison of the correlation coefficients does not provide evidence for this assumption, as the relationship is slightly stronger in the weaker-orientation group ($0.78 > 0.72$). Thus, the results do not indicate that stronger sustainability-related orientation amplifies the credibility-purchase intention relationship. Accordingly, H_{08} cannot be rejected, and H8 is not supported.

4.2 Interpretation of the Findings

When interpreting the empirical findings, the composition of the sample must first be considered. The final analytical sample ($n = 116$) is predominantly composed of younger respondents. Almost 87% are aged between 18 and 34, and 85.3% identify as female. Older age groups and male consumers are therefore underrepresented. This may reflect a stronger involvement of younger women with cosmetic products. Furthermore, students represent the largest occupational group (62.9%), reflecting the recruitment channels used. As participation was voluntary and self-selective, these distributions could not be fully controlled. Consequently, the findings mainly reflect the perceptions of younger, female consumers and are not fully generalisable to the entire German cosmetics market.

Sustainability-related orientation within the sample is generally pronounced ($M = 3.17$), indicating that sustainability is personally relevant to most respondents. They value assuming responsibility for the environment and society, engage with environmental and climate issues, and consider sustainability an important factor in purchase decisions. In addition, respondents support protecting nature even without direct personal benefit and place high importance on a health-conscious and future-oriented lifestyle. Given the median-split segmentation, weaker and stronger sustainability-related orientation groups represent relative differences within the sample rather than absolute consumer categories.

Moreover, 83.6% reported prior exposure to digital sustainability communication by cosmetic brands within the past twelve months. Sustainability communication can therefore be considered a familiar topic for most participants.

Communication Format Effects

Across all four communication formats, a coherent evaluation pattern emerges across perceived credibility, greenwashing, purchase intention, and personal appeal. Evidential sustainability communication consistently received the most favourable evaluations. It achieved the highest credibility ($MD = 0.40$ compared to emotional communication) and purchase intention and was also perceived as most appealing, while greenwashing perceptions were comparatively lower. These findings support the theoretical assumption that sustainability claims, as credence attributes, require transparent and verifiable information to reduce uncertainty (Balderjahn, 2021, p. 166). By addressing this information asymmetry (Bürker, 2025, p. 165), evidential formats appear to strengthen both perceptive evaluations and behavioural intentions through specific and measurable information.

Emotionally framed communication was assessed more ambivalently. Compared with evidential communication, it showed lower perceived credibility ($H1$), higher perceived greenwashing, weaker purchase intention and appeal. This suggests that emotional

storytelling alone may be insufficient in sustainability contexts unless it is substantiated by credible evidence. In contexts characterised by heightened scepticism (Bürker, 2025, p. 21), emotionally framed claims may be perceived as offering less factual content and resembling promotional messaging (Blau et al., 2022, p. 115).

A comparable pattern emerges for influencer communication (H2). Communication featuring a sustainability-focused influencer yields significantly higher perceived credibility ($MD = 0.84$ compared to beauty and lifestyle influencer) and higher purchase intention, while eliciting lower greenwashing perceptions. Beauty and lifestyle influencer communication performed weakest across all constructs. These findings underline the relevance of perceived suitability and thematic fit (Dickel & Kronewald, 2023, p. 252; Nygaard, 2024, p. 54). Consistent with credibility theory, trustworthiness and expertise are central dimensions shaping the perceived credibility of sustainability claims (Metzger & Flanagin, 2008, p. 8). Notably, personal appeal largely mirrors the credibility pattern. Formats rated as more credible are also perceived as more appealing, suggesting that appeal is partly driven by perceived transparency and expertise within the sample.

Credibility as a Central Mechanism

The most pronounced association emerges between perceived credibility and purchase intention. The correlation is strongly positive ($r = 0.75$), with credibility explaining 56% of the variance in purchase intention. Accordingly, credibility emerges as the central explanatory construct linking digital sustainability communication to behavioural intention. Trustworthy sustainability messages from credible sources tend to be integrated into consumers' evaluations and contribute to higher purchase intention.

Greenwashing and Behavioural Effects

Perceived greenwashing shows an inverse relationship with both perceived credibility (H3, $r = -0.55$) and purchase intention (H4, $r = -0.48$). In other words, when sustainability communication is perceived as exaggerated or vague, consumer responses become less favourable. Regression analyses further indicate that greenwashing perceptions account for a substantial share of variance, explaining 30% of credibility and 23% of purchase intention. This highlights their analytical relevance for understanding consumer evaluations. Whereas credibility emerges as a central mechanism underlying purchase intention, greenwashing reflects an opposing perception that erodes credibility and may attenuate the positive effects of sustainability communication. Overall, these findings align with existing research that greenwashing undermines credibility and entails behavioural consequences (Akturan, 2018, p. 818; Nguyen et al., 2019, p. 11). Notably, even evidential communication exhibited slightly elevated greenwashing perceptions. This may indicate a generally cautious baseline attitude

toward sustainability communication within the sample. Given the high prior exposure to sustainability messaging, respondents may have developed increased sensitivity toward potentially exaggerated or insufficiently substantiated claims. The inclusion of greenwashing as an explanatory construct thus proved analytically meaningful, as it highlights the fragility of credibility in sustainability communication contexts.

Psychographic Differences

Contrary to initial expectations, overall perceived credibility does not differ significantly between consumers with stronger and weaker sustainability-related orientations (H6). Although respondents with weaker orientations reported slightly higher credibility perceptions on a descriptive level, this difference was not statistically significant. This suggests that credibility operates as a general evaluation criterion across consumer segments rather than being inherently higher among more sustainability-oriented individuals. Therefore, cosmetic brands should tailor their communication strategies to both target groups. However, sustainability orientation influences how communication formats are perceived. H7 shows that the credibility advantage of evidential over emotionally framed sustainability communication is more pronounced among consumers with a stronger sustainability-related orientation than among those with a weaker orientation (MD = 0.60). Thus, stronger sustainability-oriented consumers may be not necessarily more trusting or more sceptical overall. Instead, they tend to respond more strongly to substantiated communication and evaluate emotionally framed messages more critically. This pattern aligns with the assumption that stronger environmental concern leads more rigorous evaluation (Nguyen et al., 2019, p. 10; Pham & Barretta, 2024, pp. 25–27). Furthermore, sustainability orientation does not strengthen the credibility-purchase intention relationship (H8). The association remained strong in both segments and does not differ in the hypothesised direction. Thus, credibility appears behaviourally relevant across consumer groups rather than being confined to more strongly sustainability-oriented individuals.

Taken together, the findings show that the impact of digital sustainability communication in the German cosmetics market is primarily driven by perceived credibility. Formats that increase transparency and signal expertise strengthen perceived credibility, purchase intention, and appeal, whereas greenwashing erodes credibility and reduces purchase intention. While sustainability orientation shapes format sensitivity, credibility remains the decisive mechanism translating sustainability communication into purchase intention.

4.3 Practical Implications and Recommendations for Brand Communication

Building on the findings of this study, this section derives practical recommendations for digital sustainability communication by cosmetic brands operating in the German market. These recommendations outline how sustainability can be embedded effectively in brand communication and support the development and implementation of strategies that enhance perceived credibility, minimise greenwashing perceptions, and strengthen purchase intention.

- 1) Prioritise Verifiability and Transparency:** Sustainability communication should be grounded in concrete, verifiable, and structured information. Consumers rely on substantiated claims to reduce uncertainty about sustainability attributes. Brands should therefore communicate measurable sustainability indicators (e.g., quantified emission reductions or material composition data), provide transparent explanations of sourcing, production, packaging practices, and integrate recognised certifications or independently verifiable standards into digital communication. Structured formats such as concise sustainability fact sheets, infographics, or ingredient traceability tools can enhance information clarity while maintaining coherence with brand aesthetics. Informational transparency should form the structural foundation of sustainability communication.
- 2) Avoid Greenwashing Signals:** Sustainability communication should avoid vagueness or exaggeration to minimise greenwashing perceptions and maintain credibility and purchase intention. Greenwashing increases scepticism, which undermines credibility and limits the positive impact of sustainability messaging. Brands are therefore advised to avoid misleading or undefined claims such as “eco-friendly” or “natural” without contextual clarification, refrain from exaggerated or absolute environmental statements, and transparently communicate limitations, trade-offs, or ongoing improvement efforts. In a market characterised by increasing regulatory scrutiny and consumer awareness, clear communication strategies may enhance authenticity. Positioning sustainability as a continuous process rather than a completed achievement may strengthen perceived credibility and long-term trust.
- 3) Select Communicators Based on Expertise and Congruence:** Influencer collaborations should prioritise thematic competence and expertise over lifestyle appeal. Cosmetic brands should therefore collaborate with creators who demonstrate consistent sustainability engagement, establish longer-term partnerships that signal genuine commitment, and ensure strong alignment between the influencer profile and the communicated sustainability initiatives. Collaborations with beauty and lifestyle

influencers lacking sustainability credentials may elevate greenwashing perceptions, thereby weakening message credibility.

- 4) Combine Emotional Storytelling with Substantiated Content:** While evidential communication enhances credibility, emotional resonance remains relevant in the cosmetics sector due to its symbolic and identity-related character. However, emotionally framed communication without factual grounding is less persuasive, particularly among stronger sustainability-oriented consumers who differentiate strongly between substantiated and non-substantiated claims. Brands should therefore connect emotional storytelling to concrete evidence by linking narratives to measurable sustainability data, combining behind-the-scenes insights with documented performance indicators, and embedding product stories (e.g., sourcing or packaging innovation) within transparent environmental metrics. These hybrid formats help maintain emotional engagement without compromising credibility.
- 5) Apply a Layered Communication Strategy:** Cosmetic brands should adopt a layered approach to digital sustainability communication that addresses varying information needs and levels of consumer involvement while maintaining transparency. Evidence-based information is particularly valued by more sustainability-oriented consumers, while credibility remains relevant across segments. Concise sustainability messages can serve as accessible entry points. More detailed information such as extended explanations, downloadable reports, or interactive digital tools should be readily available for consumers seeking verification. When implemented consistently across digital touchpoints, this structure supports coherent messaging and may reduce scepticism arising from perceived ambiguity.

4.4 Evaluation of Empirical Quality Criteria

This section critically examines the extent to which the empirical quality criteria are fulfilled within the present research design.

Objectivity

Administration objectivity is achieved because the questionnaire was conducted as a fully standardised online survey without personal interaction between researcher and respondents. All participants received identical stimuli (four standardised communication formats) and instructions. This minimises potential interviewer effects and prevents the researcher from influencing responses. Evaluation objectivity is ensured through a clearly defined coding scheme and standardised statistical procedures. Construct indices were calculated consistently across respondents, limiting subjective judgment during data

processing. Interpretation objectivity was pursued through transparent reporting of descriptive and inferential statistics. However, no objectivity coefficient was calculated as no parallel measurements by different researchers were conducted.

Reliability

Full standardisation and automated administration of the online questionnaire ensure consistent measurement conditions and would allow comparable results under repeated application. Therefore, reliability can be considered largely fulfilled. The psychometric scales used to measure perceived credibility ($\alpha = .767$), purchase intention ($\alpha = .753$), and psychographic sustainability orientation ($\alpha = .813$) demonstrate acceptable to good internal consistency. These values indicate that the items within each construct are sufficiently reliable. The perceived greenwashing scale yields a lower alpha ($\alpha = .641$), which is slightly below commonly used reference values. Nevertheless, given that the scale consists of relatively few items and captures conceptually distinct aspects of greenwashing (e.g., exaggeration and vagueness), the internal consistency is considered acceptable for the purpose of this study. But findings involving this construct should be interpreted with caution. Differences in measurement results may arise because respondents' attitudes are not fully stable and can change over time, particularly for constructs such as sustainability-related orientation. Moreover, since participants evaluated multiple sustainability communication formats using similar questionnaire items, slight familiarity or habituation effects cannot be entirely excluded and may therefore lead to slight deviations in the measured results.

Validity

Internal validity is supported, as the research question guided the derivation of hypotheses as well as the development of the questionnaire items and stimuli. Moreover, using a fictitious cosmetics brand and a standardised mock-up design helps to minimise potential confounding effects, such as prior brand attitudes or visual influences. According to the findings, differences in perceived credibility, perceived greenwashing, and purchase intention can largely be attributed to the communication formats used. However, it cannot be assumed with absolute certainty that all respondents interpreted the stimuli exactly as intended, which can lead to measurement errors and weaken the observed effects. External validity is limited due to the convenience-based selection procedure and the sample size ($n = 116$). As participation was voluntary and recruitment occurred primarily through online distribution, the sample cannot be considered representative of the population of cosmetics consumers in Germany. Therefore, the findings are only generalisable with caution, and it cannot be concluded with certainty whether the observed relationships also exist in the broader population.

5 Conclusion

5.1 Summary and Answer to the Research Question

This thesis examined how the perceived credibility of different digital sustainability communication formats affects consumers' purchase intention in the German cosmetics market and assessed whether these effects differ across psychographic target groups. Against the backdrop of increasing regulatory scrutiny, heightened consumer scepticism, and the structural information asymmetry associated with sustainability-related credence attributes, the study investigated the following research question:

“How does the perceived credibility of digital sustainability communication influence consumers' purchase intention in the German cosmetics market, and to what extent do these effects differ between psychographic target groups?”

To investigate this research question, a quantitative online survey was conducted with a final analytical sample of 116 respondents ($n = 116$). Four stimulus-based formats of digital sustainability communication were integrated into a single analytical framework comprising perceived credibility, perceived greenwashing, purchase intention, and sustainability-related psychographic orientation.

The empirical findings provide a clear answer to the first part of the research question. Perceived credibility emerges as the decisive explanatory mechanism linking digital sustainability communication to consumers' purchase intention. A substantial positive correlation ($r = 0.75$) indicates that higher credibility evaluations systematically coincide with higher purchase intention towards the communicated brand, with credibility explaining a considerable proportion of variance in behavioural intention ($r^2 = 0.56$). Digital sustainability communication therefore influences purchase intention primarily when it is perceived as trustworthy and substantively supported.

Conversely, perceived greenwashing constitutes a significant inhibiting factor. Higher greenwashing perceptions are associated with lower credibility ($r = -0.55$) and lower purchase intention ($r = -0.48$), demonstrating that exaggerated, vague or difficult-to-verify claims undermine not only message believability but also behavioural intention.

Systematic differences were observed across communication formats. Formats that included verifiable content and credible expertise cues received higher credibility evaluations and were likewise associated with higher purchase intention. Accordingly, evidential communication and sustainability influencer collaboration emerge as comparatively persuasive approaches. In contrast, purely emotional storytelling and beauty

and lifestyle influencer communication were evaluated less favourably on both outcomes and therefore appear less suitable for strengthening credibility in sustainability communication. The alignment of credibility and purchase intention across formats underlines the behavioural relevance of perceived credibility in shaping consumer responses.

Regarding the second part of the research question, differences between psychographic target groups were overall limited. General credibility perceptions did not differ significantly between consumers with stronger and weaker sustainability-related orientations. This suggests that credibility functions as a broadly relevant evaluative criterion rather than being confined to stronger sustainability-oriented consumers. However, sustainability orientation affected the relative evaluation of the communication formats rather than overall credibility levels. Specifically, consumers with a stronger sustainability-related orientation differentiated more clearly between evidential and emotionally framed communication and evaluated substantiated formats more positively. The impact of perceived credibility on purchase intention remained strong in both segments, indicating that once credibility is established, its behavioural relevance applies across psychographic groups.

Taken together, the research question can be answered as follows:

Perceived credibility has a significant influence on consumers' purchase intention in digital sustainability communication within the German cosmetics market. Communication formats that are evidence-based and demonstrate sustainability expertise can increase the perceived trustworthiness of sustainability claims and the perceived expertise of the brand. This strengthens credibility and contributes to higher purchase intention. In contrast, perceived greenwashing weakens both credibility and behavioural intention. Psychographic differences are mainly reflected in the extent to which consumers differentiate between specific communication formats. However, perceived credibility remains a stable and substantial predictor of purchase intention across both segments, indicating that its behavioural relevance is largely independent of weaker or stronger sustainability-related orientation.

5.2 Critical Reflection and Limitations

This thesis provides valuable insights into the conditions under which digital sustainability communication in the German cosmetics market is perceived as credible and how perceived credibility translates into purchase intention. At the same time, several limitations warrant

critical consideration to appropriately contextualise the interpretive value, scope, and contribution of the findings.

A key limitation pertains to the composition of the final analytical sample. Although a target sample size of approximately 150 respondents was initially intended, the final sample comprised 116 participants due to distribution reach, incomplete responses and the exclusion of responses not meeting the predefined inclusion criteria. Additionally, the resulting sample is predominantly female and largely composed of students, with younger age groups being clearly overrepresented. This skewed distribution constrains the diversity of perspectives captured. Consequently, the findings cannot be readily generalised to the broader population of cosmetics consumers in Germany, especially to sociodemographically different segments.

A further methodological limitation relates to the operationalisation of psychographic segmentation. Although a median split was applied to differentiate between weaker and stronger orientation groups, both segments represent relative differences within an overall sustainability-aware sample. While this approach facilitates interpretable group comparisons, it reduces variance by transforming a continuous construct into categorical groups and may obscure more nuanced attitudinal differences. In addition, the self-reported sustainability orientation measure may be susceptible to social desirability effects, leading respondents to answer in line with perceived normative expectations. Moreover, sustainability-related attitudes may fluctuate depending on situational or societal influences, limiting their representation of stable dispositions.

Methodological constraints also arise from the survey design. The use of a fictitious brand and standardised Instagram mock-ups was intended to minimise confounding effects attributable to prior brand attitudes. However, it cannot be fully ensured that all respondents interpreted the formats as intended.

All central constructs were assessed within a single questionnaire using similar rating scales. This may have amplified common response tendencies and thereby strengthened the observed associations, most notably between perceived credibility and purchase intention.

Additionally, data were collected in a single measurement phase, limiting temporal inference and the study measures behavioural intention rather than observed purchasing actions. Accordingly, the findings indicate associations rather than definitive causal relationships.

Finally, the study focuses exclusively on the German cosmetics market. Cultural, regulatory and market-specific characteristics may influence credibility perceptions and sustainability expectations. The transferability of the findings to other industries or countries is therefore

restricted. Despite limited generalisability, the findings align with key assumptions in the literature and provide market specific insights that can inform further research.

5.3 Outlook and Directions for Future Research

The findings of this study provide a structured foundation for further research on digital sustainability communication in the cosmetics market. Several aspects identified within this thesis highlight promising avenues for further investigation.

Future empirical studies could move beyond broad format comparisons and examine which concrete message elements most effectively strengthen credibility. Relevant elements may include quantified sustainability indicators, sustainability reporting, transparent explanations of trade-offs, and independent verification cues such as certifications. This helps to clarify which information cues most reliably reduce greenwashing perceptions and enhance credibility.

Further investigations may also refine the analysis of psychographic differences by treating sustainability-related orientation as a continuous construct within moderation models rather than using categorical group splits. This would enable a more precise assessment of whether credibility effects systematically increase with stronger sustainability orientation.

Furthermore, subsequent research could broaden the contextual scope by examining whether the identified patterns extend to other digital touchpoints (e.g., online shops or short-form video platforms).

Comparative studies across industries or countries may further clarify whether the observed credibility patterns are specific to the German cosmetics market or generalise to other markets characterised by credence attributes. In addition, incorporating real brands would allow for an assessment of how prior brand trust and established reputations interact with sustainability communication.

Finally, future research could incorporate additional constructs that may shape the effectiveness of sustainability communication, such as green scepticism or prior brand trust.

Overall, future investigations should build on the central finding of this thesis that credibility is fundamental to effective sustainability communication. By extending methods, contexts, and behavioural measures, subsequent research can further specify how sustainability communication can be designed to remain effective across different consumer segments and digital environments.

References

- Ahmad, L., & Müller, S. (2024). CSR-Kommunikation im Lebensmitteleinzelhandel (LEH). In P. Heinrich (Ed.), *CSR und Kommunikation: Unternehmerische Verantwortung überzeugend vermitteln* (3rd edn, pp. 335–346). Springer Gabler. https://doi.org/10.1007/978-3-662-69026-0_21
- Ajayi, O. A., & Mmutle, T. (2021). Corporate reputation through strategic communication of corporate social responsibility. *Corporate Communications: An International Journal*, 26(5), 1–15. <https://doi.org/10.1108/CCIJ-02-2020-0047>
- 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](https://doi.org/10.1016/0749-5978(91)90020-T)
- Akturan, U. (2018). How does greenwashing affect green branding equity and purchase intention? An empirical research. *Marketing Intelligence & Planning*, 36(7), 809–824. <https://doi.org/10.1108/MIP-12-2017-0339>
- Amberg, N., & Fogarassy, C. (2019). Green Consumer Behavior in the Cosmetics Market. *Resources*, 8(3), 137. <https://doi.org/10.3390/resources8030137>
- ARD/ZDF-Forschungskommission. (2025). ARD/ZDF-Medienstudie 2025: Grundlagenstudie im Auftrag der ARD/ZDF-Forschungskommission. Retrieved 29 November 2025, from <https://www.ard-zdf-medienstudie.de/getFile.php?from=globalInformation&id=29>
- Askadilla, W. L., & Krisjanti, M. N. (2017). UNDERSTANDING INDONESIAN GREEN CONSUMER BEHAVIOR ON COSMETIC PRODUCTS: THEORY OF PLANNED BEHAVIOR MODEL. *Polish Journal of Management Studies*, 15(2), 7–15. <https://doi.org/10.17512/pjms.2017.15.2.01>
- Attanasio, G., Battistella, C., & Chizzolini, E. (2025). B-Corp Certification: Systematic Literature Review and Research Agenda. *Corporate Social Responsibility and Environmental Management*, 32(3), 3729–3769. <https://doi.org/10.1002/csr.3118>
- B Lab. (n.d.). About B Corp Certification. Retrieved 21 February 2026, from <https://www.bcorporation.net/en-us/certification/>
- Backhaus, K., Erichson, B., Gensler, S., Weiber, R., & Weiber, T. (2025). *Multivariate Analysemethoden: Eine anwendungsorientierte Einführung*. Springer Gabler. <https://doi.org/10.1007/978-3-658-47929-9>
- Balderjahn, I. (2021). *Nachhaltiges Management und Konsumentenverhalten* (2nd edn). UVK Verlag. <https://doi.org/10.36198/9783838554914>
- Ballen, F., Evans, E., & Parra-Acosta, Y. (2022). Consumer Preferences for Green Skin Avocados in the US Market: The Role of Experienced Quality Attributes, Credence Attributes, and Demographic Factors. *Journal of Agricultural & Food Industrial Organization*, 20(1), 15–23. <https://doi.org/10.1515/jafio-2020-0006>

- Baltacı, D. Ç., Durmaz, Y., & Baltacı, F. (2025). The mediating role of attitudes in the effect of human and environment-centered value orientation on green cosmetic product purchasing behavior: comparison of different countries. *Environment, Development and Sustainability*. <https://doi.org/10.1007/s10668-025-06173-9>
- Becker-Olsen, K., & Potucek, S. (2013). Greenwashing. In S. O. Idowu, N. Capaldi, L. Zu, & A. D. Gupta (Eds), *Encyclopedia of Corporate Social Responsibility* (pp. 1318–1323). Springer. <https://doi.org/10.1007/978-3-642-28036-8>
- Bekmeier-Feuerhahn, S., Bögel, P. M., & Koch, C. (2017). Investigating Internal CSR Communication: Building a Theoretical Framework. In S. Diehl, M. Karmasin, B. Mueller, R. Terlutter, & F. Weder (Eds), *Handbook of Integrated CSR Communication* (pp. 89–107). Springer. https://doi.org/10.1007/978-3-319-44700-1_6
- Berekoven, L., Eckert, W., & Ellenrieder, P. (2009). *Marktforschung: Methodische Grundlagen und praktische Anwendung* (12th edn). Gabler. <https://doi.org/10.1007/978-3-8349-8267-4>
- Berger-Grabner, D. (2022). *Wissenschaftliches Arbeiten in den Wirtschafts- und Sozialwissenschaften: Hilfreiche Tipps und praktische Beispiele*. Springer Gabler. <https://doi.org/10.1007/978-3-658-39586-5>
- Bhat, S., Jarad, R., Bhavsar, D., Yadav, M., Suryavanshi, P., & Moholkar, N. (2025). The Role of Psychographic Segmentation in Advertising. *International Journal of Research Publication and Reviews*, 6(4), 8792–8796. <https://doi.org/10.55248/gengpi.6.0425.1566>
- Biró, T., & Neus, A. (2023). Greenwashing vs. Greenacting: Wünsche, Erwartungen und Perspektiven von Konsumenten und Marketingmanagern in acht Ländern. Nürnberg Institut für Marktentscheidungen e. V. Retrieved 29 November 2025, from https://www.nim.org/fileadmin/PUBLIC/3_NIM_Publikationen/NIM-Studien/NIMPulse/230717_NIMPulse_2023-4_Greenwashing_fin.pdf
- Blau, S., Giagozidou, A., Klausmeyer, J., Saxinger, F., Wettengel, L., & Winkel, C. D. (2022). Talking green business: A qualitative study on the use of digital storytelling in sustainability communication to influence corporate success. In A. Godulla, L. Beck, E. Christiansen, P. A. Johe, T. Krüper, V. Niemsch, & F. Saxinger (Eds), *Disrupt Adapt: New ways to deal with current challenges in media and communication* (pp. 101–128). https://www.ssoar.info/ssoar/bitstream/handle/document/81819/ssoar-2022-blau_et_al-Talking_green_business_A_qualitative.pdf?sequence=1&isAllowed=y&lnkname=ssoar-2022-blau_et_al-Talking_green_business_A_qualitative.pdf
- Bom, S., Jorge, J., Ribeiro, H. M., & Marto, J. (2019). A step forward on sustainability in the cosmetics industry: A review. *Journal of Cleaner Production*, 225, 270–290. <https://doi.org/10.1016/j.jclepro.2019.03.255>

- Bom, S., Ribeiro, H. M., & Marto, J. (2020). Sustainability Calculator: A Tool to Assess Sustainability in Cosmetic Products. *Sustainability*, 12(4), 1437. <https://doi.org/10.3390/su12041437>
- Brosius, F. (2018). *SPSS: umfassendes Handbuch zu Statistik und Datenanalyse* (8th edn). mitp.
- Brosius, H.-B., Haas, A., & Unkel, J. (2022). *Methoden der empirischen Kommunikationsforschung: eine Einführung* (8th edn). Springer VS. <https://doi.org/10.1007/978-3-658-34195-4>
- Brugger, F. (2010). *Nachhaltigkeit in der Unternehmenskommunikation: Bedeutung, Charakteristika und Herausforderungen*. Gabler. <https://doi.org/10.1007/978-3-8349-8861-4>
- Bruhn, M. (2019). *Kommunikationspolitik: systematischer Einsatz der Kommunikation für Unternehmen* (9th edn). Franz Vahlen. <https://doi.org/10.15358/9783800657643>
- Bruhn, M. (2024). *Marketing: Grundlagen für Studium und Praxis*. Springer Gabler. <https://doi.org/10.1007/978-3-658-43789-3>
- Bruhn, M., & Zimmermann, A. (2017). Integrated CSR Communications. In S. Diehl, M. Karmasin, B. Mueller, R. Terlutter, & F. Weder (Eds), *Handbook of Integrated CSR Communication* (pp. 3–21). Springer. https://doi.org/10.1007/978-3-319-44700-1_1
- Brundtland, G. H. (1987, March 20). Report of the World Commission on Environment and Development: Our Common Future. Retrieved 18 November 2025, from <http://www.un-documents.net/our-common-future.pdf>
- Bundesamt für Verbraucherschutz und Lebensmittelsicherheit. (n.d.). Kosmetik. Retrieved 25 November 2025, from https://www.bvl.bund.de/DE/Arbeitsbereiche/03_Verbraucherprodukte/01_Aufgaben/06_Kosmetik/bgs_Kosmetik_node.html
- Bundesministerium der Justiz und für Verbraucherschutz. (n.d.). Greenwashing. Retrieved 27 January 2026, from https://www.bmju.de/DE/themen/verbraucherschutz/verbraucherbildung_teilnahme/greenwashing/greenwashing_node.html
- Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung. (n.d.). Nachhaltigkeit (nachhaltige Entwicklung). Retrieved 18 November 2025, from <https://www.bmz.de/de/service/lexikon/nachhaltigkeit-nachhaltige-entwicklung-14700>
- Bürker, M. (2020). Content-Marketing – mit Themen gewinnen. In M. Stumpf (Ed.), *Die 10 wichtigsten Zukunftsthemen im Marketing: Buzzwords die bleiben* (2nd edn, pp. 131–162). Haufe.
- Bürker, M. (2025). *Management der Nachhaltigkeitskommunikation: Grundlagen und Perspektiven für die Praxis*. Springer Gabler. <https://doi.org/10.1007/978-3-658-48471-2>

- Dalla-Pria, L., & Rodríguez-de-Dios, I. (2022). CSR communication on social media: the impact of source and framing on message credibility, corporate reputation and WOM. *Corporate Communications: An International Journal*, 27(3), 543–557. <https://doi.org/10.1108/CCIJ-09-2021-0097>
- Deconinck, K., & Hobeika, M. (2023). Understanding the impact of consumer-oriented assurance schemes: A review of voluntary standards and labels for the environmental sustainability of agri-food products. *OECD Food, Agriculture and Fisheries Papers*, No. 200. <https://doi.org/10.1787/af917674-en>
- Del Pilar Miranda-Guerra, M., Francesca Avila Arellano, N., Merly Garay Condorachay, J., & Verastegui Ramos, C. E. (2023). Green Marketing in The Decision to Purchase Cosmetic Products. *IBIMA Business Review*, 2023(2023), 1–12. <https://doi.org/10.5171/2023.557418>
- Dhanesh, G. S., & Nekmat, E. (2019). Facts Over Stories for Involved Publics: Framing Effects in CSR Messaging and the Roles of Issue Involvement, Message Elaboration, Affect, and Skepticism. *Management Communication Quarterly*, 33(1), 7–38. <https://doi.org/10.1177/0893318918793941>
- Dickel, P., & Kronewald, E. (2023). Nachhaltigkeitskommunikation. In A. W. Bühler & G. Nufer (Eds), *Nachhaltigkeitsmanagement in Sport und Kultur: Grundlagen – Anwendungen – Praxisbeispiele* (pp. 243–265). Erich Schmidt Verlag GmbH & Co. KG. <https://doi.org/10.37307/b.978-3-503-23664-0.11>
- Döring, N. (2023). *Forschungsmethoden und Evaluation in den Sozial- und Humanwissenschaften* (6th edn). Springer. <https://doi.org/10.1007/978-3-662-64762-2>
- Duong, C., Sung, B., Lee, S., & Easton, J. (2024). The effect of shopping channel (online vs. offline) on message framing of naturalness. *Journal of Consumer Behaviour*, 23(2), 987–1001. <https://doi.org/10.1002/cb.2259>
- European Commission. (2011, October 25). COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS: A renewed EU strategy 2011-14 for Corporate Social Responsibility [COM(2011) 681 final]. Retrieved 19 November 2025, from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0681>
- European Commission. (2013). COMMISSION REGULATION (EU) No 655/2013 of 10 July 2013 laying down common criteria for the justification of claims used in relation to cosmetic products (Text with EEA relevance). *Official Journal of the European Union*. Retrieved 26 November 2025, from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R0655>
- European Commission. (2021, January 28). Screening of websites for ‘greenwashing’: half of green claims lack evidence [Press release]. Retrieved 30 November 2025, from https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_21_269/IP_21_269_EN.pdf

- European Commission: Directorate-General for Environment, IPSOS & Milieu. (2024). Environmental claims in the EU: inventory and reliability assessment: final report. Publications Office of the European Union. Retrieved 24 January 2026, from <https://data.europa.eu/doi/10.2779/83089>
- European Commission: Directorate-General for Health and Food Safety. (2022). The SCCS notes of guidance for the testing of cosmetic ingredients and their safety evaluation: 11th revision. Publications Office of the European Union. Retrieved 25 November 2025, from <https://data.europa.eu/doi/10.2875/273162>
- European Union. (2025, September 1). REGULATION (EC) No 1223/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 November 2009 on cosmetic products (recast) (Text with EEA relevance). Retrieved 25 November 2025, from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02009R1223-20250901>
- Falke, A., Schröder, N., & Hofmann, C. (2022). The influence of values in sustainable consumption among millennials. *Journal of Business Economics*, 92, 899–928. <https://doi.org/10.1007/s11573-021-01072-7>
- Fifka, M. S. (2024). CSR-Kommunikation und Nachhaltigkeitsreporting. In P. Heinrich (Ed.), *CSR und Kommunikation: Unternehmerische Verantwortung überzeugend vermitteln*. Springer Gabler. https://doi.org/10.1007/978-3-662-69026-0_6
- Fischer, D. (2019). Nachhaltigkeitskommunikation. In U. Kluwick & E. Zemanek (Eds), *Nachhaltigkeit interdisziplinär: Konzepte, Diskurse, Praktiken*. Ein Kompendium (pp. 51–69). Böhlau.
- Genç, R. (2017). The Importance of Communication in Sustainability & Sustainable Strategies. *Procedia Manufacturing*, 8, 511–516. <https://doi.org/10.1016/j.promfg.2017.02.065>
- Godemann, J., & Michelsen, G. (2011). Sustainability Communication – An Introduction. In J. Godemann & G. Michelsen (Eds), *Sustainability Communication: Interdisciplinary Perspectives and Theoretical Foundation*. Springer. https://doi.org/10.1007/978-94-007-1697-1_1
- Grunwald, G. (2022). Nachhaltigkeitsmarketing: Grundlagen - Gestaltungsoptionen - Umsetzung. Schäffer-Poeschel.
- Haddock, G., & Maio, G. R. (2023). Einstellungen. In J. Ullrich, W. Stroebe, & M. Hewstone (Eds), *Sozialpsychologie* (pp. 193–226). Springer. https://doi.org/10.1007/978-3-662-65297-8_6
- Heinrich, P. (2024). CSR-Kommunikation – Die Instrumente. In P. Heinrich (Ed.), *CSR und Kommunikation* (pp. 79–101). Springer Gabler. https://doi.org/10.1007/978-3-662-69026-0_5
- Herrada-Lores, S., Palazón, M., Iniesta-Bonillo, M. Á., & Estrella-Ramón, A. (2025). The communication of sustainability on social media: the role of dialogical communication. *Journal of Research in Interactive Marketing*, 19(2), 307–332. <https://doi.org/10.1108/JRIM-10-2023-0372>

- Industrieverband Körperpflege- und Waschmittel e. V. (IKW). (2025, December 3). Erneutes Wachstumsplus für die Schönheits- und Haushaltspflegebranche [Press release]. Retrieved 22 January 2026, from https://www.ikw.org/fileadmin/IKW_Dateien/IKW_Bilder/Presse/Wirtschaftspressekonzferenz_2025/03_IKW-Presseninformation_Umsatz_2025_Wirtschaftspressekonzferenz_03.12.2024.pdf
- Isac, N., Javed, A., Radulescu, M., Cismasu, I. D. L., Yousaf, Z., & Serbu, R. S. (2025). Is greenwashing impacting on green brand trust and purchase intentions? Mediating role of environmental knowledge. *Environment, Development and Sustainability*, 27, 21329–21346. <https://doi.org/10.1007/s10668-023-04352-0>
- Jamal, F. N., Othman, N. A., Saleh, R. C., Nurhanay, A. H., & Rohmah, W. (2021). Evaluating Information Credibility Toward Green Marketing in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(2), 427–438. <https://doi.org/10.13106/JAFEB.2021.VOL8.NO2.0427>
- Jha, A. K., & Verma, N. K. (2022). Social Media Sustainability Communication: An Analysis of Firm Behaviour and Stakeholder Responses. *Information Systems Frontiers*, 25, 723–742. <https://doi.org/10.1007/s10796-022-10257-6>
- Joshi, Y., & Rahman, Z. (2015). Factors Affecting Green Purchase Behaviour and Future Research Directions. *International Strategic Management Review*, 3(1–2), 128–143. <https://doi.org/10.1016/j.ism.2015.04.001>
- Khan, A., & Alam, M. (2019). COSMETICS AND THEIR ASSOCIATED ADVERSE EFFECTS: A REVIEW. *Journal of Applied Pharmaceutical Sciences and Research*, 2(1), 1–6. <https://doi.org/10.31069/japsr.v2i1.1>
- Khandai, S., Zupic, I., Kohli, H. S., Kataria, S., Yadav, R., & Mathew, J. (2025). Greenwashing and its consequences: the role of skepticism, brand embarrassment, and brand hate in shaping purchase intentions. *Quality & Quantity*, 59, 3723–3749. <https://doi.org/10.1007/s11135-025-02132-8>
- Kim, E. (Anna), Shoenberger, H., Kwon, E. (Penny), & Ratneshwar, S. (2022). A narrative approach for overcoming the message credibility problem in green advertising. *Journal of Business Research*, 147(1), 449–461. <https://doi.org/10.1016/j.jbusres.2022.04.024>
- Kim, W., & Cha, S. (2021). How Attributes of Green Advertising Affect Purchase Intention: The Moderating Role of Consumer Innovativeness. *Sustainability*, 13(16), 8723. <https://doi.org/10.3390/su13168723>
- Kotler, P., Armstrong, G., Harris, L. C., & He, H. (2022). *Grundlagen des Marketing* (8th edn). Pearson.
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th edn). Pearson.
- Kropp, A. (2019). Warum wir nicht nachhaltig Handeln. In A. Kropp (Ed.), *Grundlagen der Nachhaltigen Entwicklung* (pp. 17–22). Springer Gabler. https://doi.org/10.1007/978-3-658-23072-2_6

- Lee, S. Y., Zhang, W., & Abitbol, A. (2019). What Makes CSR Communication Lead to CSR Participation? Testing the Mediating Effects of CSR Associations, CSR Credibility, and Organization–Public Relationships. *Journal of Business Ethics*, 157, 413–429. <https://doi.org/10.1007/s10551-017-3609-0>
- Lin, Y., Yang, S., Hanifah, H., & Iqbal, Q. (2018). An Exploratory Study of Consumer Attitudes toward Green Cosmetics in the UK Market. *Administrative Sciences*, 8(4), 71. <https://doi.org/10.3390/admsci8040071>
- Lou, C., & Yuan, S. (2019). Influencer Marketing: How Message Value and Credibility Affect Consumer Trust of Branded Content on Social Media. *Journal of Interactive Advertising*, 19(1), 58–73. <https://doi.org/10.1080/15252019.2018.1533501>
- Magee, R. G. (2022). Understanding worldview beliefs to allay skepticism toward CSR advertising. *Journal of Brand Management*, 29, 538–555. <https://doi.org/10.1057/s41262-022-00277-7>
- Margariti, K., Hatzithomas, L., & Boutsouki, C. (2024). Elucidating the Gap between Green Attitudes, Intentions, and Behavior through the Prism of Greenwashing Concerns. *Sustainability*, 16(12), 5108. <https://doi.org/10.3390/su16125108>
- Mathur, M. (2025). Sustainable Consumer Behaviour in Emerging Markets. In R. Singh & T. A. Wani (Eds), *Marketing to the Base of the Pyramid* (pp. 171–187). Springer. https://doi.org/10.1007/978-981-96-7105-2_9
- Meffert, H., Burmann, C., Kirchgeorg, M., & Eisenbeiß, M. (2024). *Marketing: Grundlagen marktorientierter Unternehmensführung Konzepte – Instrumente – Praxisbeispiele* (14th edn). Springer Gabler. <https://doi.org/10.1007/978-3-658-41755-0>
- Metzger, M. J., & Flanagin, A. J. (2008). Digital Media and Youth: Unparalleled Opportunity and Unprecedented Responsibility. In M. J. Metzger & A. J. Flanagin (Eds), *Digital media, youth, and credibility* (pp. 5–28). MIT press. <https://library.oapen.org/bitstream/handle/20.500.12657/26088/1/1003998.pdf>
- Michelsen, G. (2007). Nachhaltigkeitskommunikation: Verständnis- Entwicklung - Perspektiven. In J. Godemann & G. Michelsen (Eds), *Handbuch Nachhaltigkeitskommunikation: Grundlagen und Praxis* (2nd edn). oekom.
- Morel, S., Mura, G., Gallarate, M., & Sapino, S. (2024). Cosmetic Packaging: European Regulatory Aspects and Sustainability. *Cosmetics*, 11(4), 110. <https://doi.org/10.3390/cosmetics11040110>
- Naderi, I., & Van Steenburg, E. (2018). Me first, then the environment: young Millennials as green consumers. *Young Consumers: Insight and Ideas for Responsible Marketers*, 19(3), 280–295. <https://doi.org/10.1108/YC-08-2017-00722>
- Nekmahmud, Md., Naz, F., Ramkissoon, H., & Fekete-Farkas, M. (2022). Transforming consumers' intention to purchase green products: Role of social media. *Technological Forecasting and Social Change*, 185, 122067. <https://doi.org/10.1016/j.techfore.2022.122067>

- Newell, S. J., & Goldsmith, R. E. (2001). The development of a scale to measure perceived corporate credibility. *Journal of Business Research*, 52(3), 235–247. [https://doi.org/10.1016/S0148-2963\(99\)00104-6](https://doi.org/10.1016/S0148-2963(99)00104-6)
- Nguyen, T. T. H., Yang, Z., Nguyen, N., Johnson, L. W., & Cao, T. K. (2019). Greenwash and Green Purchase Intention: The Mediating Role of Green Skepticism. *Sustainability*, 11(9), 2653. <https://doi.org/10.3390/su11092653>
- Nygaard, A. (2024). *Green Marketing and Entrepreneurship*. Springer. <https://doi.org/10.1007/978-3-031-50333-7>
- Ohanian, R. (1990). Construction and Validation of a Scale to Measure Celebrity Endorsers' Perceived Expertise, Trustworthiness, and Attractiveness. *Journal of Advertising*, 19(3), 39–52. <https://doi.org/10.1080/00913367.1990.10673191>
- Paelman, V., Van Cauwenberge, P., & Vander Bauwhede, H. (2021). The Impact of B Corp Certification on Growth. *Sustainability*, 13(13), 7191. <https://doi.org/10.3390/su13137191>
- Park, Y. W., & Hong, P. (2024). *Cosmetics Marketing Strategy in the Era of the Digital Ecosystem: Revolutionizing Beauty in the New Market Frontier*. Springer. <https://doi.org/10.1007/978-981-97-3674-4>
- Pham, N. T., & Barretta, P. G. (2024). Green Marketing or Greenwashing: How Consumers Evaluate Environmental Ads. *The Journal of Applied Business and Economics*, 26(1), 19–33. <https://www.proquest.com/scholarly-journals/green-marketing-greenwashing-how-consumers/docview/2932217621/se-2>
- Politis, Y., & Grigoroudis, E. (2022). Incorporating the Sustainability Concept in the Major Business Excellence Models. *Sustainability*, 14(13), 8175. <https://doi.org/10.3390/su14138175>
- Pop, R.-A., Săplăcan, Z., & Alt, M.-A. (2020). Social Media Goes Green—The Impact of Social Media on Green Cosmetics Purchase Motivation and Intention. *Information*, 11(9), 447. <https://doi.org/10.3390/info11090447>
- Ranisch, L., & Schmiedeknecht, M. H. (2023). Grundlagen und Instrumente des Nachhaltigkeitsmanagements. In A. W. Bühler & G. Nufer (Eds), *Nachhaltigkeitsmanagement in Sport und Kultur: Grundlagen – Anwendungen – Praxisbeispiele* (pp. 23–47). Erich Schmidt Verlag GmbH & Co. KG. <https://doi.org/10.37307/b.978-3-503-23664-0.02>
- Röttger, U. (2022). Vertrauen und Glaubwürdigkeit in der Unternehmenskommunikation. In A. Zerfaß, M. Piwinger, & U. Röttger (Eds), *Handbuch Unternehmenskommunikation* (3rd edn, pp. 351–370). Springer Gabler. https://doi.org/10.1007/978-3-658-22933-7_15
- Sahelices-Pinto, C., Lanero Carrizo, A., & Vazquez Burguete, J. L. (2023). Sustainable Cosmetics and Perceived Brand Image on Social Networks: Comparison Between Millennial and Centennial Women. In E. C. Bianchi, J. L. Vazquez Burguete, M. M. Galan-Ladero, & A. Lanero Carrizo (Eds), *Responsible Consumption and Sustainability* (pp. 229–247). Springer. https://doi.org/10.1007/978-3-031-30742-3_14

- Schaefer, S. (2012). Nachhaltigkeitskommunikation aus der Perspektive des Controllings. In H. Corsten & S. Roth (Eds), *Nachhaltigkeit: Unternehmerisches Handeln in globaler Verantwortung* (pp. 255–273). Gabler. https://doi.org/10.1007/978-3-8349-3746-9_13
- Schnell, R., Hill, P. B., & Esser, E. (2018). *Methoden der empirischen Sozialforschung* (11th edn). De Gruyter.
- Sharma, R., & Jha, M. (2017). Values influencing sustainable consumption behaviour: Exploring the contextual relationship. *Journal of Business Research*, 76, 77–88. <https://doi.org/10.1016/j.jbusres.2017.03.010>
- Singhal, A., & Malik, G. (2021). The attitude and purchasing of female consumers towards green marketing related to cosmetic industry. *Journal of Science and Technology Policy Management*, 12(3), 514–531. <https://doi.org/10.1108/JSTPM-11-2017-0063>
- Tavanti, M. (2023). *Developing Sustainability in Organizations: A Values-Based Approach*. Springer. <https://doi.org/10.1007/978-3-031-36907-0>
- Telschow, S., Degen, R., & Fernow, H. (2020). Ergebnisse: VKE-Nachhaltigkeitsstudie. Gesellschaft Für Innovative Marktforschung. Retrieved 22 January 2026, from https://www.g-i-m.com/_Resources/Persistent/050b843cc8fb76d6ca2e6c2b7e2b241a372155d3/GIM_VKE-Nachhaltigkeitstudie_2020.pdf
- Terchilă, S. (2025). Integrating CSR in External Communication Strategies: Economic and Social Impact. In C. R. Tănăsescu, C. Oprean-Stan, S. O. Idowu, & B. Díaz Díaz (Eds), *Advancements in Sustainable Development: Proceedings of the 10th International Conference on CSR, Sustainability, Ethics and Governance*, Sibiu, Romania, June 2024 (pp. 119–135). Springer. https://doi.org/10.1007/978-3-031-86337-0_8
- Turcu, O., & Brancu, C. (2025). Cosmetics Industry Performance in the European Union: A Comparative Analysis. *Proceedings of the International Conference on Business Excellence*, 19(1), 2267–2276. <https://doi.org/10.2478/picbe-2025-0175>
- Turcu, O., Brancu, C., & Busu, C. (2025). The Beauty Boom: Analyzing the Socio-Economic Contribution of the Beauty Industry to the European Union. In M. Busu (Ed.), *Smart Solutions for a Sustainable Future* (pp. 403–412). Springer. https://doi.org/10.1007/978-3-031-78179-7_24
- Verleye, G., De Ruyck, A., Vermeulen, W., & Schoenaers, I. (2023). Credibility of green advertising: six elements that drive credibility in green advertising. *Frontiers in Communication*, 8, 1056020. <https://doi.org/10.3389/fcomm.2023.1056020>
- Vilkaite-Vaitone, N. (2024). From Likes to Sustainability: How Social Media Influencers Are Changing the Way We Consume. *Sustainability*, 16(4), 1393. <https://doi.org/10.3390/su16041393>

- Wagner, R. (2024). CSR-Kommunikation und Social Media. In P. Heinrich (Ed.), *CSR und Kommunikation: Unternehmerische Verantwortung überzeugend vermitteln* (pp. 153–170). Springer Gabler. https://doi.org/10.1007/978-3-662-69026-0_9
- Weleda. (n.d.). WAS UNS NACHHALTIGKEIT BEDEUTET: Verantwortung und Respekt gegenüber der Umwelt. Retrieved 23 December 2025, from <https://www.weleda.de/weleda/unsere-verantwortung/nachhaltigkeit>
- Wiedmann, K.-P., & Von Mettenheim, W. (2021). Attractiveness, trustworthiness and expertise – social influencers’ winning formula? *Journal of Product & Brand Management*, 30(5), 707–725. <https://doi.org/10.1108/JPBM-06-2019-2442>
- Zhuo, Z., Ren, Z., & Zhu, Z. (2022). Attitude-Behavior Gap in Green Consumption Behavior: A Review. *Journal of Economics, Management and Trade*, 28(12), 12–28. <https://doi.org/10.9734/jemt/2022/v28i121065>
- Ziemann, A. (2011). Communication Theory and Sustainability Discourse. In J. Godemann & G. Michelsen (Eds), *Sustainability Communication: Interdisciplinary Perspectives and Theoretical Foundation* (pp. 89–96). Springer. https://doi.org/10.1007/978-94-007-1697-1_8

Appendix

Appendix 1: Digital Sustainability Communication Stimuli	XX
Appendix 1.1: Evidential Format.....	XX
Appendix 1.2: Emotional Format	XXI
Appendix 1.3: Sustainability Influencer Format	XXII
Appendix 1.4: Beauty and Lifestyle Influencer Format	XXIII
Appendix 2: Survey.....	XXIV
Appendix 3: Cronbachs Alpha	XXIX
Appendix 3.1: Perceived Credibility	XXIX
Appendix 3.2: Greenwashing	XXX
Appendix 3.3: Purchase Intention.....	XXXI
Appendix 3.4: Sustainability Orientation	XXXII
Appendix 4: Tools Used.....	XXXIII

Appendix 1: Digital Sustainability Communication Stimuli

Appendix 1.1: Evidential Format



Figure 9: Evidential Sustainability Communication Stimulus

Source: Own illustration, created for this study using AI-generated images (ChatGPT) and assembled in Canva

Appendix 1.2: Emotional Format



Figure 10: Emotional Sustainability Communication Stimulus

Source: Own illustration, created for this study using AI-generated images (ChatGPT) and assembled in Canva

Appendix 1.3: Sustainability Influencer Format



Figure 11: Sustainability Influencer Communication Stimulus

Source: Own illustration, created for this study using AI-generated images (ChatGPT) and assembled in Canva

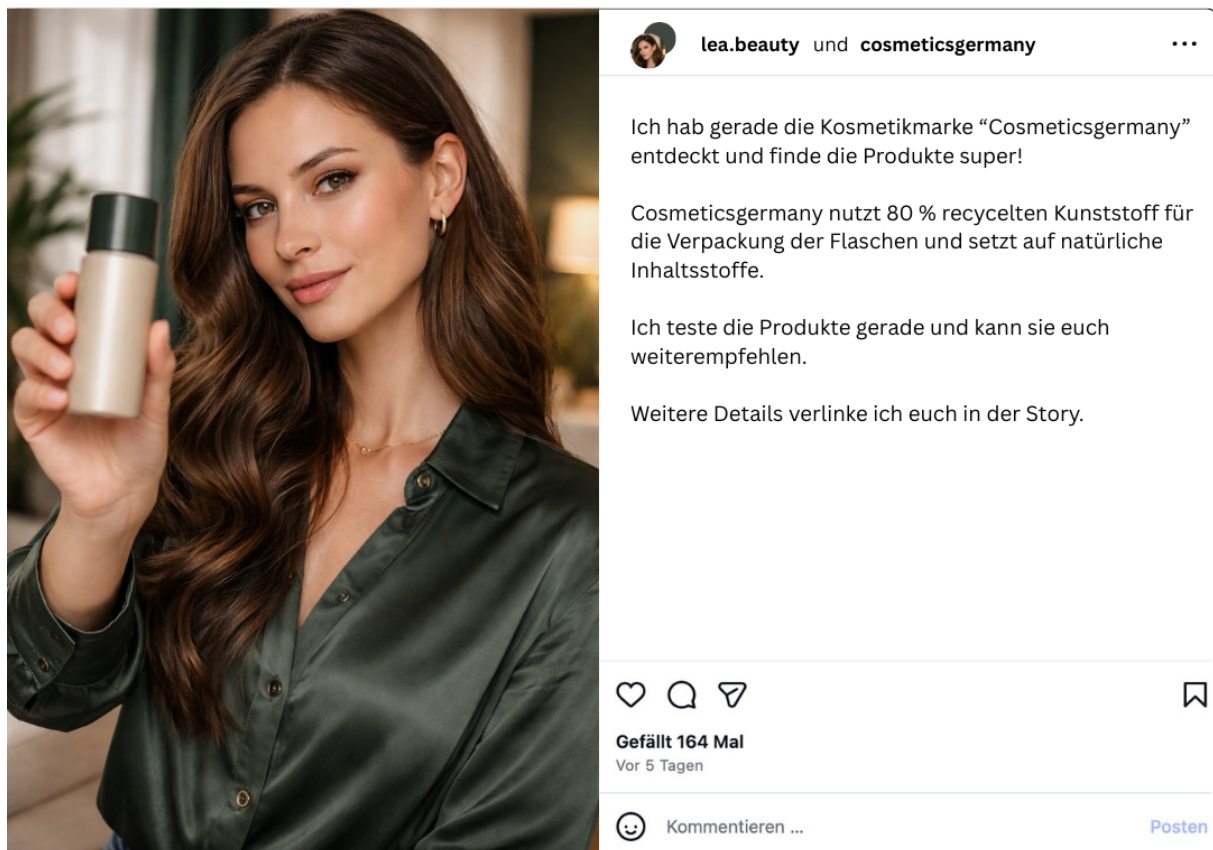
Appendix 1.4: Beauty and Lifestyle Influencer Format

Figure 12: Beauty and Lifestyle Influencer Communication Stimulus

Source: Own illustration, created for this study using AI-generated images (ChatGPT) and assembled in Canva

Appendix 2: Survey



Zwischengespeicherte Umfrage laden

%

Nachhaltigkeitskommunikation in der Kosmetikbranche

Online-Befragung im Rahmen einer Bachelorarbeit

Liebe Teilnehmerin, lieber Teilnehmer,

mein Name ist Luca Selina Gail und ich studiere Informationsmanagement und Unternehmenskommunikation an der Hochschule Neu-Ulm.

Im Rahmen meiner Bachelorarbeit untersuche ich, wie glaubwürdig verschiedene Formen digitaler Nachhaltigkeitskommunikation von Kosmetikmarken wahrgenommen werden und wie diese Wahrnehmung die Kaufabsicht beeinflusst. Ein besonderer Fokus liegt dabei auf persönlichen Einstellungen und Werthaltungen.

Warum ist Ihre Teilnahme wichtig?

Nachhaltigkeit spielt im Kosmetikmarkt eine zunehmend wichtige Rolle. Gleichzeitig sind entsprechende Aussagen für Konsumentinnen und Konsumenten häufig nur schwer überprüfbar. Ihre Einschätzungen tragen dazu bei, besser zu verstehen, wie digitale Nachhaltigkeitskommunikation gestaltet sein sollte, um als glaubwürdig wahrgenommen zu werden.

Ihre Meinung ist für die Studie wichtig, unabhängig davon, wie stark Sie sich persönlich mit Nachhaltigkeit beschäftigen.

Anonymität und Datenschutz

Alle Angaben werden anonym erhoben, vertraulich behandelt und ausschließlich zu wissenschaftlichen Zwecken im Rahmen der Bachelorarbeit verwendet. Es werden keine personenbezogenen Daten gespeichert, die einen Rückschluss auf Ihre Person zulassen.

Hinweise zur Bearbeitung

Die Umfrage dauert ca. 7 bis 10 Minuten. Für den Erfolg der Studie ist es wichtig, den Fragebogen vollständig auszufüllen und keine der Fragen auszulassen.

Vielen Dank für Ihre Unterstützung und Ihre Zeit!

Luca Selina Gail

In dieser Umfrage sind 13 Fragen enthalten.

Dies ist eine anonyme Umfrage.

In den Umfrageantworten werden keine persönlichen Informationen über Sie gespeichert, es sei denn, in einer Frage wird explizit danach gefragt.

Wenn Sie für diese Umfrage einen Zugangscode benutzt haben, so können Sie sicher sein, dass der Zugangsschlüssel nicht zusammen mit den Daten abgespeichert wurde. Er wird in einer getrennten Tabelle aufbewahrt und nur aktualisiert, um zu speichern, ob Sie diese Umfrage abgeschlossen haben oder nicht. Es gibt keinen Weg, die Zugangscode mit den Umfrageergebnissen zusammenzuführen.

Weiter

Hochschule Neu-Ulm

Wileystraße 1, 89231 Neu-Ulm, Germany, Telefon: +49(0)731-9762-0, E-Mail: info@hnu.de

0%

* 1 In welchem Land wohnen Sie aktuell überwiegend?

Bitte wählen Sie eine der folgenden Antworten:

- ☐ Deutschland
- ☐ Anderes Land

Zurück

Weiter

8%

* 2 Wie häufig kaufen Sie Kosmetikprodukte für sich selbst?

(z. B. Hautpflege, Haarpflege, Make-up, Körperpflege)

Bitte wählen Sie eine der folgenden Antworten:

- ☐ Mindestens 1× pro Woche
- ☐ 2–3× pro Monat
- ☐ Etwa 1× pro Monat
- ☐ Seltener als 1× pro Monat
- ☐ Nie

Zurück

Weiter

15%

* 3 Informieren Sie sich zumindest ab und zu **online** über Kosmetikprodukte oder -marken, bevor Sie diese kaufen?

Bitte wählen Sie eine der folgenden Antworten:

- ☐ Ja
☐ Nein

Zurück

Weiter

23%

* 4 Sind Ihnen in den letzten 12 Monaten **online** Aussagen oder Inhalte von Kosmetikmarken zum Thema Nachhaltigkeit begegnet?

(z. B. zu Umwelt, Verpackung, Inhaltsstoffen, Lieferketten, Produktionsprozessen)

Bitte wählen Sie eine der folgenden Antworten:

- ☐ Ja
☐ Nein

Zurück

Weiter

31%

* 5 Bitte sehen Sie sich den folgenden Beitrag einer fiktiven Kosmetikmarke aufmerksam an und bewerten Sie danach Ihre persönliche Wahrnehmung.

Beispiel 1:



	Stimme gar nicht zu	Stimme eher nicht zu	Stimme eher zu	Stimme voll zu
Die Aussagen wirken glaubwürdig.	☐	☐	☐	☐
Die Aussagen wirken vertrauenswürdig.	☐	☐	☐	☐
Die Marke wirkt fachlich kompetent im Bereich Nachhaltigkeit.	☐	☐	☐	☐
Die Aussagen wirken übertrieben oder beschönigend.	☐	☐	☐	☐
Die Aussagen wirken vage und schwer überprüfbar.	☐	☐	☐	☐
Ich würde Produkte dieser Marke in Betracht ziehen.	☐	☐	☐	☐
Ich halte es für wahrscheinlich, dass ich Produkte dieser Marke kaufen würde.	☐	☐	☐	☐
Die Nachhaltigkeitsinformation spricht mich persönlich an.	☐	☐	☐	☐

Zurück

Weiter

Weiter

Weiter

54%

* 8

Bitte sehen Sie sich den folgenden Influencer-Beitrag zu einer fiktiven Kosmetikmarke an und bewerten Sie danach Ihre persönliche Wahrnehmung.

Beispiel 4:

* Die gezeigte Influencerin erstellt überwiegend Inhalte zu Beauty und sonstigen Lifestyle Produkten.



	Stimme gar nicht zu	Stimme eher nicht zu	Stimme eher zu	Stimme voll zu
Die Person wirkt glaubwürdig.	☐	☐	☐	☐
Die Person vermittelt die Nachhaltigkeitsaussagen vertrauenswürdig.	☐	☐	☐	☐
Die Person wirkt fachlich kompetent im Bereich Nachhaltigkeit.	☐	☐	☐	☐
Die Aussagen der Person wirken übertrieben oder beschönigend.	☐	☐	☐	☐
Die Aussagen der Person wirken vage und schwer überprüfbar.	☐	☐	☐	☐
Ich würde Produkte dieser Marke in Betracht ziehen.	☐	☐	☐	☐
Ich halte es für wahrscheinlich, dass ich Produkte dieser Marke kaufen würde.	☐	☐	☐	☐
Die Art, wie die Nachhaltigkeitsinformation vermittelt wird, spricht mich persönlich an.	☐	☐	☐	☐

Zurück

Weiter

62%

* 9

Im Folgenden finden Sie einige allgemeine Aussagen zu Einstellungen und Werthaltungen. Bitte geben Sie an, inwieweit die Aussagen auf Sie persönlich zutreffen.

	Stimme gar nicht zu	Stimme eher nicht zu	Stimme eher zu	Stimme voll zu
Mir ist es wichtig, bei meinem Handeln Verantwortung für Umwelt und Gesellschaft zu übernehmen.	☐	☐	☐	☐
Umwelt- und Klimaprobleme beschäftigen mich persönlich.	☐	☐	☐	☐
Nachhaltigkeit spielt für mich eine wichtige Rolle bei meinen Kaufentscheidungen.	☐	☐	☐	☐
Die Natur sollte geschützt werden, auch wenn ich selbst keinen direkten Nutzen davon habe.	☐	☐	☐	☐
Ein gesundheitsbewusster Lebensstil ist mir wichtig.	☐	☐	☐	☐
Ich denke bei meinen Entscheidungen auch an langfristige Auswirkungen.	☐	☐	☐	☐

Zurück

Weiter

69%

* 10 Wie alt sind Sie?

Bitte wählen Sie eine der folgenden Antworten:

- ☐ 18 - 24 Jahre
- ☐ 25 - 34 Jahre
- ☐ 35 - 44 Jahre
- ☐ 45 - 54 Jahre
- ☐ 55 Jahre oder älter

Zurück

Weiter

77%

* 11 Welchem Geschlecht fühlen Sie sich zugehörig?

Bitte wählen Sie eine der folgenden Antworten:

- ☐ Männlich
- ☐ Weiblich
- ☐ Divers

Zurück

Weiter

85%

* 12 Was ist Ihr höchster abgeschlossener Bildungsabschluss?

Bitte wählen Sie eine der folgenden Antworten:

- ☐ Kein Schulabschluss
- ☐ Hauptschulabschluss
- ☐ Realschulabschluss
- ☐ (Fach-)Abitur
- ☐ Abgeschlossene Berufsausbildung
- ☐ Bachelor
- ☐ Master
- ☐ Diplom

Zurück

Weiter

92%

* 13 Was ist Ihre derzeitige Haupttätigkeit?

Bitte wählen Sie eine der folgenden Antworten:

- ☐ Schüler:in
- ☐ Student:in
- ☐ In Ausbildung
- ☐ Berufstätig (angestellt oder selbstständig)
- ☐ Nicht erwerbstätig (z. B. arbeitssuchend, in Elternzeit)
- ☐ Rentner:in

Zurück

Absenden

Appendix 3: Cronbachs Alpha

Appendix 3.1: Perceived Credibility

Reliability Statistics

Cronbach's Alpha	N of Items
.767	12

Item Statistics

	Mean	Std. Deviation	N
Q5[1]	2.91	.717	116
Q5[2]	2.84	.718	116
Q5[3]	2.91	.717	116
Q6[1]	2.67	.873	116
Q6[2]	2.55	.838	116
Q6[3]	2.25	.864	116
Q7[1]	2.70	.877	116
Q7[2]	2.65	.887	116
Q7[3]	2.52	.937	116
Q8[1]	1.93	.788	116
Q8[2]	1.81	.745	116
Q8[3]	1.59	.722	116

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q5[1]	26.43	23.934	.298	.761
Q5[2]	26.50	23.296	.394	.752
Q5[3]	26.43	23.813	.316	.760
Q6[1]	26.67	23.474	.273	.766
Q6[2]	26.79	22.931	.363	.755
Q6[3]	27.09	24.330	.172	.777
Q7[1]	26.65	21.865	.476	.742
Q7[2]	26.70	21.639	.499	.739
Q7[3]	26.83	21.553	.472	.742
Q8[1]	27.41	21.427	.616	.727
Q8[2]	27.53	22.199	.539	.737
Q8[3]	27.75	22.833	.462	.745

Appendix 3.2: Greenwashing

Reliability Statistics

Cronbach's Alpha	N of Items
.641	8

Item Statistics

	Mean	Std. Deviation	N
Q5[4]	2.35	.816	116
Q5[5]	2.74	.896	116
Q6[4]	2.47	.918	116
Q6[5]	2.95	.903	116
Q7[4]	2.21	.775	116
Q7[5]	2.74	.814	116
Q8[4]	2.91	.753	116
Q8[5]	3.21	.752	116

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q5[4]	19.23	10.876	.192	.646
Q5[5]	18.84	10.671	.188	.651
Q6[4]	19.11	10.866	.143	.664
Q6[5]	18.64	10.042	.300	.620
Q7[4]	19.38	10.011	.400	.593
Q7[5]	18.84	9.054	.583	.541
Q8[4]	18.67	9.683	.497	.570
Q8[5]	18.38	9.768	.477	.575

Appendix 3.3: Purchase Intention

Reliability Statistics

Cronbach's Alpha	N of Items
.753	8

Item Statistics

	Mean	Std. Deviation	N
Q5[6]	2.70	.867	116
Q5[7]	2.58	.896	116
Q6[6]	2.39	.800	116
Q6[7]	2.23	.773	116
Q7[6]	2.62	.820	116
Q7[7]	2.51	.850	116
Q8[6]	1.97	.716	116
Q8[7]	1.82	.680	116

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q5[6]	16.12	11.672	.459	.726
Q5[7]	16.24	11.698	.431	.732
Q6[6]	16.43	12.369	.379	.740
Q6[7]	16.59	12.366	.400	.736
Q7[6]	16.20	11.639	.506	.717
Q7[7]	16.31	11.433	.520	.714
Q8[6]	16.84	12.376	.447	.729
Q8[7]	17.00	12.452	.464	.727

Appendix 3.4: Sustainability Orientation

Reliability Statistics

Cronbach's Alpha	N of Items
.813	6

Item Statistics

	Mean	Std. Deviation	N
Q9[1]	3.15	.608	116
Q9[2]	3.06	.676	116
Q9[3]	2.72	.787	116
Q9[4]	3.59	.559	116
Q9[5]	3.47	.596	116
Q9[6]	3.03	.869	116

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q9[1]	15.87	6.670	.588	.782
Q9[2]	15.96	6.129	.687	.758
Q9[3]	16.29	5.461	.763	.735
Q9[4]	15.42	7.481	.357	.823
Q9[5]	15.55	7.032	.474	.803
Q9[6]	15.99	5.643	.602	.782

Appendix 4: Tools Used

All sources cited in this bachelor's thesis were independently identified and researched by the author. In addition, several tools were used to support the writing process and the production of questionnaire materials. The final manuscript, the substantive focus of the work, and all academic decisions, evaluations, interpretations, and recommendations were developed independently and responsibly by the author.

The tools used are listed below:

- 1. ChatGPT 5.2 (OpenAI):** Used to support the linguistic refinement of formulations, to improve sentence structure and clarity, and to check grammar. Additionally, ChatGPT was used to generate visual material for the stimuli included in the questionnaire. All prompts were developed independently by the author based on the theoretical framework of the study.
- 2. DeepL:** Used to translate selected text passages from sources where necessary and to support the linguistic quality of English formulations.
- 3. Canva:** Used to create the Instagram mock-ups for the stimuli included in the questionnaire. Layout and design elements were developed independently by the author.
- 4. Turnitin:** The plagiarism detection software by the university was used to ensure the originality of the thesis.