

Framing Sustainability: An Analysis of How Cosmetic Brands Integrate
Sustainability into Marketing Communication

by

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Author's Declaration

This thesis consists of material all of which I authored or co-authored: see Statement of Contributions included in the thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Statement of Contributions

Hajar Alviri was the sole author of Chapter 1 and Chapter 6 of this thesis, which were written under the supervision of Dr. Jennifer Lynes and were not intended for publication. This thesis consists in part of four research manuscripts (Chapters 2–5) prepared for publication. Exceptions to sole authorship of the material in Chapters 2–5 are detailed below:

Chapter 2 is published in the Journal of Global Sustainability. Hajar Alviri was the lead author joined by Dr. Jennifer Lynes and Dr. Komal Habib.

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Chapter 5 is based on a manuscript developed by Hajar Alviri as lead author, joined by Dr Jennifer Lynes.

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Abstract

The cosmetics industry is a rapidly growing global sector, valued at over \$650 billion, with continued expansion driven by lifestyle changes, novel marketing strategies, and digital marketing. However, this growth has raised serious environmental and social sustainability concerns. Amid these challenges, sustainability communication has become a critical arena through which brands position themselves as sustainable and responsible. Understanding how brands frame and integrate sustainability is essential for evaluating the holistic nature, credibility, inclusiveness, and transparency of their marketing practices.

This dissertation explores how sustainability—both environmental and social—is communicated by cosmetic brands through product-level marketing. Situated within the field of sustainability management, the research applies message framing theory as its core theoretical framework to examine how sustainability is defined, constructed, and communicated across different brand categories. Through four interrelated studies, the dissertation provides a multi-dimensional analysis of sustainability communication in the cosmetics industry, with a particular focus on the growing influence of fast beauty, the rise of sustainability-positioned brands, and the evolving expectations around sustainable practices, equity, inclusion, and transparency.

The first manuscript presents a systematic literature review of academic research on sustainability in the cosmetics industry between 1992 and 2022, revealing a strong disciplinary bias toward science and engineering, with limited contributions from the social sciences—particularly in areas such as marketing communication and stakeholder behaviour, as well as a notable lack of research focused on the Canadian context. The second manuscript examines how sustainability is framed in colour cosmetic marketing, specifically lipsticks, using message framing theory and the social construction framework to assess differences in sustainability-related claims, transparency, and greenwashing across leading, fast beauty, and sustainable brands. The third manuscript extends this investigation to skincare products, specifically moisturizers, again guided by message framing theory and the social construction framework. It highlights continued reliance on vague and unverified sustainability-related claims, limited transparency, and the selective construction of sustainable skincare. Both studies draw on mystery shopping and content analysis to explore how sustainability is constructed in brand communication. The fourth manuscript shifts

to the social dimension of sustainability by analyzing how brands integrate inclusion and diversity in lipstick and facial moisturizer marketing. This study also used mystery shopping and content analysis, drawing on message framing and social identity framing lenses, it finds narrow and inconsistent presence of inclusive beauty, with most brands aligning representation with marketable ideals.

Together, these studies demonstrate that sustainability communication in the cosmetics industry is often selective, emotionally driven, and shaped by brand positioning and market pressures. Claims such as "natural," "vegan," and "cruelty-free" are commonly emphasized, while complex or controversial topics—such as labour rights, environmental impacts beyond packaging, or accessible design—are frequently omitted. The prevalence of vague and unverified claims points to widespread greenwashing, which risks undermining consumer trust. By integrating content analysis and mystery shopping methods across two product categories and three brand category types, this research reveals how communication practices both reflect and shape the evolving meaning of sustainability in the marketplace.

This dissertation contributes to scholarship in sustainability marketing and management by offering critical insight into the framing strategies that brands use to communicate sustainability. It highlights the need for more transparent, comprehensive, and socially responsible narratives if the cosmetic industry is to align with the broader goals of sustainable development. Communication, as shown here, is not merely a promotional tool—it is a central mechanism through which sustainability is defined, enacted, and contested. In addition, this work develops a conceptual framework for assessing the integration of sustainability into marketing communication at the product level. This framework is adaptable and can be applied to different types of products or services across various brand categories, offering a structured approach for future research and practical evaluation.

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Dedication

I dedicate this dissertation to my husband and to my two boys, whose unwavering love, patience, and belief in me have been my greatest source of strength. Thank you for standing by me through every step of this journey. This achievement is as much yours as it is mine.

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Chapter 1

1.1 Overview

This dissertation is presented as a manuscript-based thesis and explores the overarching theme of sustainability communication in the cosmetics industry through four interconnected studies. It investigates how sustainability is framed and communicated in cosmetics marketing, with a focus on both environmental and social dimensions. The research identifies gaps in the existing literature on sustainable cosmetics, offering a critical assessment of how academic attention to this field has evolved. In addition, the dissertation (1) develops a methodological framework for assessing the integration of sustainability into product marketing communication, and (2) applies this framework to examine how sustainability is embedded in the marketing of two major cosmetic categories—colour cosmetics and skincare—by analyzing marketing claims, brand messaging, and the presence of greenwashing. It evaluates the extent to which sustainability-related claims are substantiated, and how they differ across brand categories. It also examines how equity-related themes—particularly inclusion and diversity—are integrated into cosmetics marketing, shedding light on how social sustainability is being communicated in brand narratives. Taken together, the four studies provide a multi-dimensional understanding of sustainability communication in the cosmetics sector.

This chapter provides an overview of the research included in the doctoral dissertation and explains its relevance to the field of sustainability management. The final section of this chapter outlines the structure of the dissertation.

1.2 Introduction

The cosmetic industry is undergoing a notable shift towards sustainability, driven by growing consumer demand for environmentally conscious and socially responsible products (Bom et al., 2019). As companies strive to adopt sustainable business models, it is imperative to understand the role of brand communication strategies in shaping the sustainability of the cosmetic industry.

The definition of ‘cosmetics’ encompasses more than just makeup and beauty products, although the specific details can vary across countries. In Canada, the Food and Drugs Act defines

a *cosmetic product* as “any substance used to clean, improve or change the complexion, skin, hair, nails or teeth and further divides this into beauty preparation (make-up, perfume, skincare, nail polish) and grooming aids (soap, shampoo, shaving cream, deodorant)” (Food and Drug Act, 2022, p 2). Similarly, section 321 of United States Food, Drug, and Cosmetic ACT defines *cosmetics* as “articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance” (FD&C ACT, 2022). In EU Cosmetics Regulation (Regulation (EC) No. 1223/2009), the *Official Journal of European Union* identifies *cosmetics* 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” (Official Journal of European Union, 2009, p 342/64).

The global cosmetic industry is experiencing rapid growth, driven by factors such as population expansion and shifting lifestyles. According to Statista (2024a), the industry is projected to grow at an average annual rate of 4.02% (compound annual growth rate (CAGR) 2023–2027), with its market value expected to rise from USD 571.07 billion in 2023 to USD 663.01 billion by 2027.

In the same way, the Canadian cosmetic industry is projected to reach a market value of 9.6 billion USD in 2029 with a growth rate of 2.94 (CAGR 2018-2027) (Statista, 2025). Despite challenges such as the Canadian Gross Domestic Product (GDP) decline in the 2020 COVID pandemic, the cosmetic industry has shown its resilience and ability to bounce back to its continued growth trajectory (Figure 1.1). This highlights the significance of this industry in the global and national economy, and its potential for continued growth in the future.

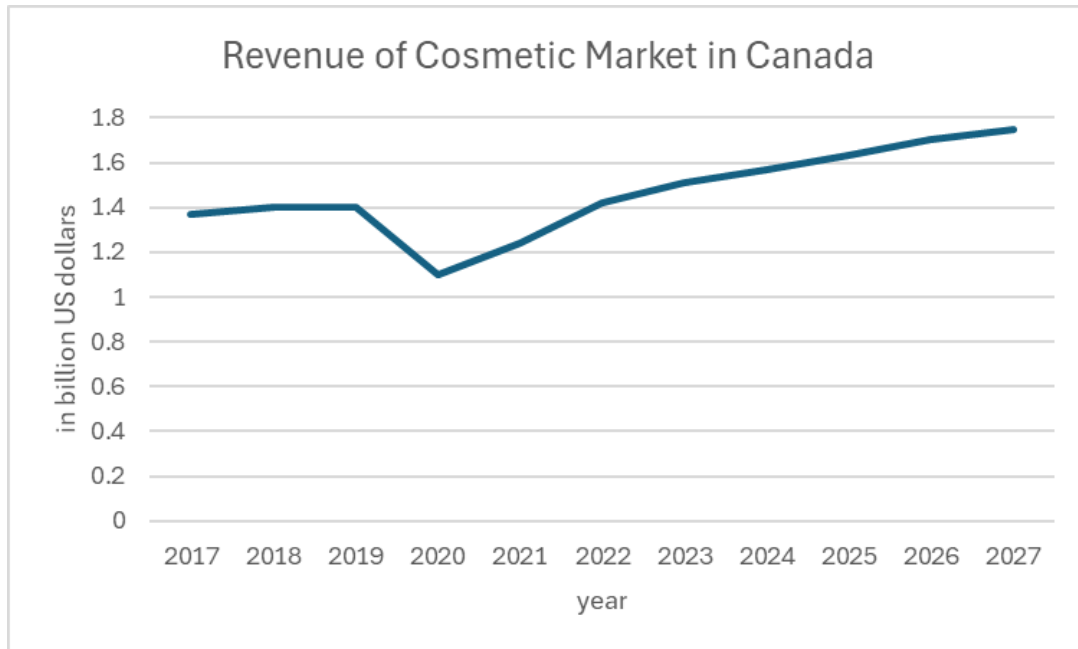


Figure 1.1: Revenue of cosmetic market in Canada 2015-2027 (Statista, 2025)

This consistent consumer demand reflects the cultural and emotional significance of beauty products in everyday life. During economic downturns in Canada, cosmetics sales often increase, highlighting how consumers turn to beauty products for mood enhancement and a sense of normalcy and self-esteem (Duhatschek, 2023). Economically, the Canadian cosmetics sector holds notable influence through its contribution to global trade: in 2023, the export value of cosmetics and beauty preparations from Canada reached approximately 1.9 billion U.S. dollars, underscoring the industry's role in supporting local employment and participating in global supply chains (Statista, 2023c). These factors reinforce the view that the cosmetics sector is not only culturally embedded and emotionally meaningful, but also economically significant—underlining its potential for continued social and economic impact both domestically and internationally.

Sustainability became a significant concept and priority after the 1987 "Our Common Future" report defined it as the capability to fulfill our needs without hindering future generations from doing the same. Since then, sustainability has become a central concern across industries, shaping debates about production, consumption, and corporate responsibility.

Within this context, the cosmetics industry provides a particularly salient lens for examining sustainability challenges, given its scale, rapid growth, and cultural significance. The

cosmetics industry represents a rapidly expanding global sector, driven by lifestyle changes, the growth of e-commerce, and powerful marketing strategies that position beauty as integral to identity and self-expression. This expansion brings with it significant sustainability challenges, spanning environmental issues such as resource extraction, packaging waste, and greenhouse gas emissions, as well as social concerns including labour exploitation, inequitable access, and the reinforcement of exclusionary beauty ideals.

What makes the sector especially dynamic today is the emergence of distinct brand types that illustrate shifting market logics. “Fast beauty” mirrors the speed and disposability of fast fashion. By contrast, sustainability-positioned brands present themselves as challengers to industry norms, emphasizing transparency, ethical sourcing, and environmental responsibility. This evolution raises critical questions about the industry’s overall sustainability profile and its future trajectory. Despite its scale and influence, the cosmetics sector remains under-researched compared to industries such as fashion or food, making it a high-impact yet underexplored context for sustainability research.

The increasing demand for cosmetic products, driven by population growth and lifestyle changes, has led to various social and environmental impacts within the cosmetic industry. Adverse impacts of cosmetics on human health (Bilal et al., 2020), human rights issues (Bliss, 2017), and lack of access to affordable green cosmetic products (Anastas & Zimmerman, 2018) have raised concerns over the social sustainability of the industry. For instance, mica mining in India involves more than 22,000 children working under hazardous conditions (BSR, 2022), while in Egypt, children as young as five have been documented on jasmine farms supplying major perfumery brands (Doyle, 2024). Beyond labour concerns, chemical-related health disparities are significant. Research indicates that 53% of Black and Latina women use personal care products containing formaldehyde-releasing preservatives daily, exacerbating risks of cancer and reproductive harm (Ajasa, 2025). At the same time, the industry’s marketing practices perpetuate psychological harms by promoting unrealistic beauty ideals that contribute to body dissatisfaction and reduced self-esteem (Enriquez et al., 2025).

Beyond these human and social consequences, the cosmetic industry's environmental profile has also been negatively impacted by deforestation, overexploitation of minerals, emissions

of greenhouse gases, and the release of pollutants into the environment leading to increasing concerns about its sustainability (Bom et al., 2019; Cinelli et al., 2019; Anagnosti et al., 2021). The environmental footprint of the cosmetics industry is substantial and multifaceted. The sector generates over 120 billion units of packaging annually, of which an estimated 95% is discarded after a single use, with only 14% entering recycling streams (O'Brian, 2022). Beyond packaging, production processes are resource-intensive: in 2020, the industry consumed approximately 10.4 million tonnes of water, contributing to both inefficiencies in resource use and contamination of aquatic systems (Biceika, 2022). Product formulations also exacerbate pollution, as exfoliating scrubs containing microbeads can release up to 95,000 microbeads per application into waterways, with significant implications for microplastic accumulation (Bhattacharya, 2016). Moreover, reliance on palm oil is widespread, with roughly 70% of cosmetics containing palm-derived ingredients (Warn, 2021). Palm oil cultivation has been linked to severe deforestation, with estimates suggesting that land equivalent to 300 football fields is cleared every hour, leading to habitat loss for endangered species (Davison, 2024).

These challenges are further intensified by marketing strategies that fuel consumption and accelerate production cycles. For instance, the growing significance of social media in connecting and engaging potential customers, plays a constant role in increasing cosmetics production and consumption, thus contributing to environmental and social impacts throughout the life cycle of cosmetic products.

While the issue of fast fashion has been a major concern in the fashion industry, the concept of “fast beauty” is rapidly emerging as a reality, further burdening the sustainability profile of the cosmetic industry (Jeelani, 2020). Similar to fast fashion which is described as “low-cost clothing collections based on current, high-cost luxury fashion trends” (Joy et al., 2012, p. 275), fast beauty can be described as low-cost cosmetics collection that is based on a massive amount of quick-turn-around products to meet customers’ demand. Introducing limited edition products has been a marketing strategy in fast fashion to encourage customers to purchase a product for a ‘fear of missing out’ (Bläse et al., 2023) which is started to be practiced in fast beauty. This may be one of the reasons behind vast increase in the consumption of cosmetics, mainly more than the average amount that a person needs. Just like fast fashion (Niinimäki et al., 2020; Bläse et al., 2023), the massive amount of production of fast beauty products has numerous impacts on the environment and

society, such as the emission of greenhouse gases, excessive use of non-renewable resources and energy, generation of waste, the release of solid and liquid pollutants to the environment, and workers' exploitation.

The emergence of green marketing¹ in the cosmetic market has emphasized the increased focus on sustainability adopted by cosmetic companies, evidenced by the introduction of products with lower environmental impacts (Amberg & Fogarassy, 2019; Kurnia & Mayangsari, 2020). However, similar to the challenges faced by green marketing initiatives in other industries (Peattie & Crane, 2005; Dangelico & Vocalelli, 2017), the cosmetic industry is faced with certain limitations and disparities. Green marketing alone is insufficient to solve societal and environmental problems (Dangelico & Vocalelli, 2017). Liobikienė & Bernatoniė discuss that green marketing is not about reducing consumption, but it is about increasing consumption of green products (Liobikienė & Bernatoniė, 2017). Encouraging customers to buy more sustainable products may lead to the purchase of a greater quantity of products, exploitation of more resources, and disposal of more waste, reaching and even exceeding the environmental impact of regular products, known as rebound effect (Binswanger, 2001; Dangelico & Vocalelli, 2017; Zink & Geyer, 2017). Furthermore, green marketing prevails in the context of customers' trust (Peattie & Crane, 2005; Vázquez-Burguete et al., 2017). Greenwashing, lack of transparency, or weak performance of products which are the consequences of poor performance of related upstream (regulators, policymakers) and midstream (manufacturers, retailers, and influencers) threaten that trust (Peattie & Crane, 2005; Delmas & Burbano, 2011; Jayaraman et al., 2012; Moser, 2015; Pop et al., 2020; Kim & Chung, 2011).

While environmental impacts have long been the focus of sustainability discourse, recent years have witnessed growing attention to social sustainability within the cosmetics industry (Kolling et al., 2022). Equity, inclusion, and diversity are now recognized as essential dimensions of sustainability, calling on brands to ensure fair representation, ethical labour practices, and meaningful consumer engagement (Eizenberg & Jabareen, 2017; Anastas & Zimmerman, 2018). These social dimensions align with global priorities such as the United Nations Sustainable Development Goals (SDGs), particularly Goals 5 and 10, which promote gender equality and

¹ Green marketing refers to all activities designed to generate and facilitate exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment (Polonsky, 2008).

reduced inequalities (Carlomagno & Veneziano, 2024). Increasingly, consumers expect brands to reflect these values in their communication, representation, and product offerings (Arsel et al., 2022; Branca et al., 2024).

In recent years, the cosmetics industry has witnessed the emergence of distinct brand categories that reflect shifting market expectations and evolving consumer values. Industry-leading brands, such as Estée Lauder and L'Oréal Paris, often retain traditional business models while gradually incorporating sustainability messaging (Estée Lauder Canada, 2025; L'Oréal Paris, 2023). Fast beauty brands such as Sheglam, by contrast, mirror the dynamics of fast fashion through rapid production cycles and trend-driven product launches (Niinimäki et al., 2020; Bläse et al., 2023; Jeelani, 2020). Meanwhile, sustainability-oriented brands position themselves around ethical and sustainable sourcing, environmental responsibility, minimal packaging, and ingredient transparency (Morosini, 2021). This diversity in brand positioning provides a valuable context for examining how sustainability is communicated across different brand categories.

Further complexity arises from the diversity within cosmetic product types. Skincare and colour cosmetics—two of the industry's largest segments—serve distinct consumer needs and rely on different marketing strategies. Colour cosmetics tend to emphasize aesthetics, identity, and self-expression (Etcoff et al., 2011), while skincare marketing often draws on themes of health, scientific credibility, and self-care (Hashem et al., 2020; Kenalemang-Palm & Eriksson, 2023). In both categories, sustainability claims are increasingly embedded within broader performance narratives, raising important concerns about their transparency and credibility (Ahmed et al., 2020).

Theoretical foundations

This dissertation employs a multi-theoretical approach to analyze how sustainability is integrated into the marketing communication of cosmetic products. While all manuscripts in Chapters 3, 4, and 5 draw on message framing theory as a core foundation, Chapters 3 and 4 also incorporate insights from social construction theory to explore how sustainability is defined and normalized through marketing discourse. Chapter 5 extends the message framing perspective by incorporating social identity framing theory, offering a more nuanced understanding of how brands integrated inclusion and diversity into their communication.

Taken together, these frameworks enable an in-depth investigation of how cosmetic brands construct their messaging and how that messaging contributes to broader understandings of sustainability. Message framing provides a lens through which to examine how specific cues—such as language, imagery, and repetition—are used by brands to shape meaning in their marketing communication (Florence et al., 2022). Social construction theory further illuminates how sustainability itself is constructed through brand narratives (Berger and Luckmann, 1966). Social identity framing focuses on how communication represents social identities through language, imagery, and symbolism (Seyranian, 2014; Gómez-Román et al., 2024). By employing these complementary theories across distinct research questions, this dissertation critically examines the strategies that different cosmetic brand categories use to position themselves as sustainable and inclusive in a competitive market.

Message framing theory originates from prospect theory (Kahneman & Tversky, 1979), which proposes that the way information is presented can significantly influence decision-making. In communication and marketing research, this concept has been expanded to examine how the structure of messages shapes audience interpretation. Entman (1993) defined framing as the process of selecting certain aspects of a perceived reality and making them more salient in a message, in order to promote a particular problem definition, causal interpretation, moral evaluation, or solution (Florence et al., 2022). Framing operates through emphasis, omission, and repetition to construct meaning and guide perception.

In marketing and sustainability communication, framing is used to shape how consumers understand product attributes, ethical values, and brand identity. Research has shown that message framing can function across multiple dimensions, including gain vs. loss framing, self vs. other-oriented appeals, and functional vs. emotional benefits (Leonidou & Leonidou, 2009; Florence et al., 2022). In sustainability contexts, it has been used to promote behaviours such as green purchasing, recycling, and energy conservation (White et al., 2011; Anghelcev & Sar, 2014). However, most of these applications emphasize consumer behaviour change, often overlooking how brands use framing to define and present sustainability as part of their market positioning.

In this study, message framing provides the analytical lens for examining how cosmetic brands strategically highlight sustainability-related claims and product features—such as being

‘vegan,’ ‘cruelty-free,’ ‘natural,’ or ‘clean’—to frame their environmental and ethical positioning. These practices are not neutral; they influence consumer understanding and contribute to the marketplace construction of what is perceived as “sustainable.” By analyzing patterns in both textual and visual cues across brand categories, the study investigates how framing is used to signal brand values and perform sustainability in ways that may vary in transparency, credibility, and inclusiveness.

While message framing sheds light on how communication is structured, social construction theory offers a broader lens for understanding how meanings—such as ‘sustainability,’ ‘natural,’ or ‘sustainable’—are socially produced and normalized through discourse. Originating in the work of Berger and Luckmann (1966), social construction theory argues that reality is not fixed or objective but formed through ongoing interactions, language, and shared understandings. Applied to marketing, this theory suggests that brands do not merely describe reality—they participate in shaping it, influencing what is seen as responsible, desirable, or credible.

In sustainability communication, this perspective is particularly valuable for analyzing how environmental and social values are framed not only as product attributes but also as socially meaningful categories. Terms like ‘clean beauty,’ ‘eco-friendly,’ or ‘green’ often lack standardized definitions (Del Greco et al., 2014; Larranaga & Valor, 2022), yet they gain symbolic power through frequent repetition in product descriptions, packaging, and visual branding. As these terms are normalized, they come to shape collective perceptions of what sustainability “looks like,” regardless of their scientific or regulatory grounding.

By incorporating social construction theory, this research goes beyond identifying which claims are present to critically assess how sustainability itself is constructed through brand narratives. This approach reveals the performative nature of brand communication—where sustainability is enacted through symbolic language, selective disclosure, and marketing strategies. It also enables a deeper analysis of how different brand categories (leading, fast beauty, sustainable) contribute to shaping public understanding of sustainability—and how these narratives may hide limited efforts or present only selective information to create a favorable image.

To investigate how brands communicate diversity and inclusion, particularly in product-level marketing of lipsticks and facial moisturizers, this dissertation draws on social identity framing framework that focuses on the representation of social identities. It has been applied in domains such as leadership communication and social change (Seyranian, 2014), as well as in environmental advocacy to promote sustainable behaviours and public support for green initiatives (Gómez-Román et al., 2024). Building on this foundation, the present study applies social identity framing to the context of cosmetic brand communication, specifically to examine how diversity and inclusion are represented in visual and textual elements across brand categories. While message framing explores how information is structured to influence interpretation, social identity framing emphasizes who is represented, how they are portrayed, and whose identities are made visible, omitted, or stereotyped through brand communication (Gómez-Román et al., 2024; Rotondi et al., 2024).

Social identity framing, an extension of social identity theory—which posits that individuals’ self-concept is shaped by their group memberships (Tajfel, 1996)—refers to the use of visual and textual cues, such as diverse models, inclusive language, and cultural references, that reflect and affirm consumers’ identities across dimensions like race, gender, and culture (Gómez-Román et al., 2024). In marketing, such framing signals whether consumers are recognized, welcomed, and valued by the brand (Chaney et al., 2019). These frames are not merely aesthetic decisions; they serve to affirm certain social identities while potentially excluding others. For instance, racialized imagery, realistic portrayal, references to cultural heritage, or inclusive design can signal a brand’s alignment with inclusion—or reveal its absence.

This study also distinguishes identity framing from value-based framing, which relies on general statements such as “we support inclusion” without substantiating them through actual indication or representation (Schmeltz, 2014). While value-based messages may communicate intent, identity framing involves visible and concrete forms of inclusion that resonate more directly with consumers’ lived experiences.

By applying identity framing as a theoretical lens, this research examines how cosmetic brands in different categories (leading, fast beauty, sustainable) use imagery, product descriptions, and symbolic cues to engage with themes of diversity. In doing so, it contributes to growing

research on social sustainability in marketing and expands the application of framing theory to include not only environmental but also equity-based dimensions of brand communication. Table 1.1 provides the summary of theoretical foundations used in this dissertation.

Table 1.1: Summary of theoretical foundation used in this dissertation.

Theory/Framework	Definition / Focus	Application in this dissertation	Chapters
Message Framing Theory	Originates from prospect theory; focuses on how the structure of messages shapes audience perception and decision-making (Kahneman & Tversky, 1979; Entman, 1993).	Used to analyze how brands highlight sustainability-related claims (e.g., “vegan,” “natural,” “clean”) through language and imagery to shape consumer perception.	3,4, and 5
Social Construction	Proposes that meanings are created through discourse, interaction, and repetition rather than existing objectively (Berger & Luckmann, 1966).	Examined how brands construct and normalize sustainability through claims, terminology, and symbolic language.	3 and 4
Social Identity Framing	Draws on social identity theory; examines how communication represents and activates social group identities to mobilize support, foster inclusion, or signal group membership (Seyranian, 2014; Gómez-Román et al., 2024).	Applied to assess how brands represent diversity (e.g., race, gender, culture) and contribute to narratives of inclusion or exclusion.	5

The research focuses on three main areas of sustainability communication: (1) mapping the evolution and current state of sustainability research in the cosmetics field, (2) evaluating how sustainability claims are communicated in the marketing of both colour cosmetics and skincare products, and (3) examining the integration of inclusion and diversity in cosmetics marketing as a

form of social sustainability. Special attention is given to how different brand categories—leading brands, fast beauty brands, and sustainable brands—frame their messaging and what gaps or inconsistencies emerge across these categories. Brands were categorized based on their core market positioning: leading brands just as L’Oreal Paris were identified through industry market share reports, fast beauty brands know as brands mirroring fast fashion in speed and volume such as ColourPop and sustainable brands known as brands who have their core identity built on sustainability values such as The Body Shop, were classified through reputational sources such as industry journals and media coverage. By doing so, this work provides a comprehensive understanding of how sustainability is communicated, which claims are included or emphasized, how messaging differs across product types and brand positions, and how these practices contribute to or detract from consumer trust and long-term sustainability goals.

This research contributes to the growing field of sustainability marketing by offering empirical insights into communication practices within the cosmetics industry. It also offers practical implications for marketers, regulators, and consumers seeking more ethical, transparent, and inclusive approaches to cosmetics. Ultimately, this dissertation aims to inform the development of more credible and responsible sustainability narratives, positioning communication not only as a branding tool but as a pathway toward transformative change in the industry.

This research is firmly grounded in the field of sustainability management, as it critically examines how sustainability principles are translated into marketing communication within the cosmetics industry—a sector increasingly scrutinized for its environmental and social impacts. By analyzing the strategies brands use to frame sustainability-related claims, this dissertation contributes to understanding how organizations operationalize sustainability not only through product development and supply chains, but also through consumer-facing narratives. The study highlights how sustainability management extends beyond internal practices to include the ethical responsibility of transparent and accountable communication. In doing so, it bridges the gap between sustainability performance and stakeholder engagement, offering insights that are relevant to sustainability managers, regulators, and scholars seeking to align organizational practices with the broader goals of sustainable development.

1.3 Research Gap

As the cosmetic industry continues to expand, with a proliferation of brands targeting various consumer segments, there is a growing awareness of the environmental and social impact of cosmetics. This awareness has given rise to the development of cosmetic brands with more consideration of social and environmental issues (Bom et al., 2019), while other brands, such as fast beauty brands, have gained a distinct market niche (Jeelani, 2020; Lawlor, 2019). These brands may employ unique messaging strategies and vary in terms of transparency regarding various attributes such as sustainability.

Although several studies have examined sustainability in cosmetics communication, notable research gap exists. Seelig et al. (2021), for instance, analyzed how “greenness” is framed on cosmetic and skincare websites, while Grappe et al. (2022) explored the influence of message framing on consumer attitudes and purchase intentions related to personal care products. Other scholars have investigated the use of scientific language (Kenalemang-Palm & Eriksson, 2023), the impact of environmental and ethical claims (Oe & Yamaoka, 2022; Teixeira et al., 2023), CSR communication (Pönkänen & Wedendal, 2018), and the creative dimensions of sustainability messaging (Alevizou, 2021). However, existing research tends to focus on specific brand types or narrowly defined aspects of sustainability, leaving a gap in comparative analyses of communication strategies across brand categories—particularly sustainable brands, fast beauty brands, and leading industry players. These categories reflect contrasting priorities, including sustainability, affordability, and trendiness, yet few studies have systematically evaluated how these priorities are communicated or the extent to which greenwashing practices are employed.

Parallel to the environmental and ethical dimensions, scholars have begun to examine the role of diversity and inclusion in cosmetics marketing—an essential element of social sustainability and equity in brand communication. Carlomagno and Veneziano (2024) demonstrate how brands like Dove and Fenty Beauty are reshaping beauty standards by embedding inclusive representation into product development and messaging strategies. Similarly, Salsabila and Apriliyanty (2022) found that diverse portrayals of gender, race, ethnicity, religion, and sexual orientation enhance brand trust, emotional connection, and consumer-brand relationships. Nadhirahastri (2022) further highlights that in culturally and ethnically diverse markets, consumers

increasingly expect brands to reflect and represent diverse identities. Despite these advances, the literature lacks comparative studies that examine how different categories of brands—such as sustainable, fast beauty, and leading brands—integrate inclusion and diversity into their communications. This gap limits our understanding of how social sustainability is differentially framed and practiced across the industry.

Overall, there is a clear need for research that systematically compares communication strategies across brand categories and cosmetic product types, and that evaluates how environmental and social sustainability are framed across various messaging channels. Such a comparative approach would provide a more comprehensive understanding of brand values, transparency, and marketing effectiveness. It would also yield critical insights into how different communication strategies can shape consumer perceptions, behaviours, and trust—ultimately informing both academic discussions and industry practices around sustainable brand management.

1.4 Main research objective and questions

Main research goal: To investigate how different categories of cosmetic brands communicate environmental and social sustainability through product-level marketing.

To achieve this objective, this study answered three main questions:

Question 1: How do different categories of colour cosmetic brands integrate sustainability into their marketing communication strategies?

Question 2: How do different categories of skincare brands integrate sustainability into their marketing communication strategies?

Question 3: How do different categories of cosmetic brands integrate diversity and inclusion into their marketing communication strategies?

1.5 Research design and methodology overview

This thesis follows a manuscript-based format composed of four studies that collectively investigate how sustainability is integrated into communication of cosmetic brands. The research design is structured to evolve from a comprehensive conceptual foundation to applied empirical analysis. The first manuscript provides a systematic review of three decades of academic research on sustainability in the cosmetics industry, while the remaining three manuscripts present original empirical studies that explore how sustainability and inclusion is integrated into brand communication across different product categories and brand types.

The research began with a systematic literature review to establish the state of knowledge in the field and to identify gaps in how sustainability in cosmetics has been studied (Alviri et al., 2025). The review includes both bibliometric and qualitative thematic analysis, allowing for a methodologically rigorous overview of global research trends, fields of study, and underexplored areas. Notably, the review revealed a lack of attention to different aspects of sustainability communication, the limited presence of comparative research across different types of cosmetic brands, and the absence of empirical analysis at the product or messaging level, especially in Canada. These findings directly informed the empirical phase of the thesis and shaped its methodological focus.

The three empirical manuscripts share a common methodological approach grounded in both quantitative and qualitative research, combining content analysis with a mystery shopping technique to examine real-time brand communication in the online retail environment. This dual-method strategy allows for structured comparison and interpretive depth. Content analysis was used to systematically code and categorize sustainability-related communication elements, including claims, language, visual content, and the presence or absence of labels or certifications and supporting information. Mystery shopping, applied in a digital context, allowed for the simulation of a consumer's perspective in evaluating how brands present and prioritize sustainability and inclusion across their product webpages. This approach enabled the assessment of both what is communicated and how verifiable and prominent that communication is to consumers.

Each empirical study compares how sustainability is communicated across three categories of brands: leading brands, fast beauty brands, and sustainability-positioned brands. Brands were categorized based on their core market positioning: leading brands were identified through industry market share reports, fast beauty brands and sustainable brands were classified through reputational sources such as industry journals and media coverage. A detailed discussion of inclusion and exclusion criteria is provided in the methods sections of each study, ensuring clarity and replicability of the categorization process. While the second manuscript focuses on colour cosmetics (specifically lipstick products), the third extends the analysis to skincare (specifically moisturizers), and the fourth shifts the lens to social sustainability by exploring inclusion and diversity in brand communication for both product categories. Across these studies, the same methodological tools were used to ensure consistency, while each study was tailored to address specific dimensions of sustainability-related communication.

Data collection involved systematic sampling of product webpages of brands from each brand category, with attention to ensuring representation across products and consistent data points. Coding frameworks were developed and refined iteratively based on literature, pilot testing, and alignment with the research objectives. All statistical analyses were conducted using IBM SPSS 29 (SPSS Inc., Chicago, IL). Analysis involved both descriptive comparison and thematic interpretation, enabling the identification of patterns, differences, and areas of concern such as transparency gaps and greenwashing. A detailed overview of the research methods is provided in Appendices A and B.

Overall, this multi-method research design allows the thesis to move from conceptual synthesis to applied comparative inquiry. It supports the development of practical insights into how sustainability is framed in cosmetic marketing and how brand narratives shape consumer-facing definitions of sustainable beauty. The structure of the research—beginning with a systematic review and followed by three empirical investigations—ensures both depth and coherence across the manuscripts and strengthens the contribution to sustainability marketing scholarship.

1.6 Research significance and contribution

This dissertation makes significant contributions to sustainability management and marketing by providing a comparative, product-level analysis of how environmental and social sustainability are communicated across cosmetic brand categories. By examining both colour cosmetics and skincare, it advances understanding of how sustainability claims and inclusive messaging are framed differently by leading, fast beauty, and sustainability-positioned brands—categories that reflect varying market priorities such as affordability, trend responsiveness, or sustainability orientation. In doing so, it addresses a longstanding gap in the academic literature, which has often studied sustainability communication in isolation or without systematic comparison across brand types.

Empirically, the research is the first to conduct a comparative study of sustainability communication in cosmetics across multiple brand categories and product types. It also represents the first study in the Canadian context, offering insights into how sustainability is integrated into brand messaging in a multicultural marketplace where equity and environmental responsibility are prominent social values.

Theoretically, the dissertation extends and integrates established frameworks to analyze sustainability communication. It expands the application of message framing theory to product-level marketing in cosmetics, an area underexplored compared to political, health, or environmental communication (e.g., Mannetti et al., 2013; Gallagher & Updegraff, 2012; Kolandai-Matchett & Armoudian, 2020). By showing how brand categories frame sustainability differently, it highlights framing not only as a persuasive device but also as a mechanism of social construction, shaping consumer and societal understandings of what is considered “sustainable.” Furthermore, the study introduces social identity framing to the context of marketing communication, expanding its use beyond leadership and advocacy (e.g., Seyranian, 2014; Gómez-Román et al., 2024). It refines the concept by distinguishing it from abstract value-based messaging and emphasizing its role in representing social identities through concrete visual and textual cues such as inclusive language, racial representation, and accessible design. By combining message framing, social construction, and social identity framing, the research develops a multi-theoretical framework that captures both environmental and social dimensions of sustainability.

This integrated perspective offers a more comprehensive foundation for analyzing how sustainability is constructed and communicated across brand categories.

Methodologically, the dissertation makes a novel contribution by developing a structured tool to evaluate the integration of sustainability into product-level communication. This framework captures environmental and social dimensions, assesses transparency and credibility, and incorporates indicators of greenwashing. Applied across colour cosmetics and skincare, it enables systematic comparison while balancing qualitative depth and quantitative rigor. The approach provides a replicable model for future research and, importantly, a transferable conceptual framework that can be adapted to examine sustainability communication across other product categories and industries.

Practically and for the field of marketing, the dissertation generates insights for brands, policymakers, and consumers. For brands, it highlights the need for more authentic and balanced communication that integrates sustainability with product performance, provides clearer end-of-life guidance, and moves beyond tokenistic representation. For policymakers, it underscores the urgency of stronger regulation of sustainability claims in online platforms to combat greenwashing and ensure transparency. For consumers and media, it strengthens literacy by exposing vague or misleading claims. For the discipline of marketing, the research broadens the scope of sustainability marketing beyond environmental performance by demonstrating that diversity and inclusion are integral to social sustainability. It also shifts attention from corporate-level sustainability reports to product-level communication, showing how brand narratives shape perceptions of sustainability and equity at the point of sale.

Ultimately, this dissertation reinforces the idea that sustainability management extends beyond internal operations and supply chains to encompass external communication practices. In a marketplace where consumers are increasingly values-driven, how brands communicate sustainability is as important as what they do. By combining empirical evidence, theoretical innovation, methodological tools, and practical insights, this research contributes to advancing both sustainability management and marketing scholarship while offering actionable guidance for practice and policy.

Beyond the specific context of cosmetics, this conceptual framework provides a transferable tool for examining sustainability communication in other product categories and industries. Its flexibility allows researchers and practitioners to adapt the framework to explore how environmental and social sustainability is framed and integrated into marketing across diverse sectors.

1.7 Ontological and epistemological perspective and theoretical lens

Ontology refers to the researcher's view of reality—what exists and what can be known about it (Goertz & Mahoney, 2012). This research takes a position between realism and constructivism. It begins with the understanding that sustainability has a defined and widely accepted conceptual foundation—most notably as meeting present needs without compromising the ability of future generations to meet theirs (Brundtland Report, 1987). This realist orientation acknowledges that sustainability refers to measurable goals such as environmental protection, sustainable sourcing, and inclusivity. At the same time, the study recognizes that in marketing and brand communication, the meaning of sustainability is often framed and interpreted differently. Brands may emphasize certain aspects—such as vegan or cruelty-free claims—while downplaying others, shaping how sustainability is understood by consumers. This reflects a constructivist perspective, where meaning is created through communication and social context.

Epistemology concerns how knowledge is generated and understood. Aligned with this ontological stance, the research adopts an interpretivist epistemological perspective (Alharahsheh & Pius, 2020). Rather than seeking objective measurement of sustainability performance, this study focuses on how such ideas are communicated, framed, and interpreted through brand messaging. Knowledge is thus generated by analyzing how meaning is constructed in product-level marketing, and how claims are presented or omitted. The research recognizes that marketing texts, images, and claims are not neutral, but are purposeful constructions that influence public understanding of environmental and social sustainability.

The theoretical lens guiding this research is message framing theory (Kahneman & Tversky, 1979; Entman, 1993), which offers a framework for analyzing how brands emphasize certain attributes, values, or identities to shape perception and consumer decision-making. Framing

is understood here as both a strategic and socially constructive process—brands do not merely reflect sustainability but actively define and perform these concepts in ways that align with their market positioning and audience expectations. This theoretical approach is applied across the thesis to examine how different types of brand- industry leaders, fast beauty, and sustainability-oriented brands—construct sustainability narratives through social and environmental claims, inclusion messaging, and product-level communication. By integrating message framing theory with social construction of reality (Berger & Luckmann, 1966) and social identity framework, this research provides a critical lens for understanding how sustainability is not just communicated but made meaningful within the cosmetics industry.

1.8 Conceptual framework

This dissertation introduces a conceptual map designed to guide the systematic analysis of how sustainability is integrated into product-level marketing communication across brand categories. While developed in the context of the cosmetics industry, the framework is transferable and can be applied to other product categories and sectors to assess the integration of sustainability in marketing communication.

Grounded in message framing theory, the framework examines how brands strategically structure sustainability-related claims to shape consumer attention, evoke emotion, and influence interpretation. Social construction theory supports the analysis by exploring how meanings of “sustainability” is constructed through brand communication, often emphasizing certain aspects while neglecting others.

To assess the social dimension of sustainability, the framework incorporates social identity framing, which enables the evaluation of how brand messaging includes (or omits) diversity of (or omits) race, gender, culture, realistic portrayal, and accessible design through textual and visual cues in messaging. This component is especially useful in identifying how inclusion and diversity are integrated within the broader scope of social sustainability in marketing communication.

The map structures the analysis of environmental sustainability around four key themes: (1) product attributes, (2) packaging and end-of-life information, (3) transparency, and (4)

environmental and ethical claims. Some claims may bridge both environmental and social domains (e.g., fair trade or safe), and the framework acknowledges this overlap.

Verification of environmental and ethical claims—where applicable—is supported through the presence of internal or third-party labels and certifications. The framework also incorporates an assessment of greenwashing, understood as the practice of misleading consumers about the environmental benefits of a product or brand through unsubstantiated, exaggerated, or vague claims (Delmas & Burbano, 2011). In addition, the framework can be extended to bluewashing, which mirrors greenwashing but with claims relating to social responsibility. Bluewashing occurs when companies amplify commitments to social responsibility—such as pledges of “slavery-free supply chains” or alignment with global initiatives like the United Nations Global Compact, while failing to substantively address the social issues within their operations or supply chains (Pryde & Nolan, 2025). This extension allows the framework to evaluate both environmental and social dimensions of misleading communication where relevant to the research focus.

While this study integrates social construction and social identity framing alongside message framing theory, future applications of the map may adapt the theoretical scope based on their own research questions and contexts. Overall, the conceptual map (Figure 1.2) provides a flexible yet rigorous structure for evaluating how sustainability is framed and performed across brand messaging strategies.

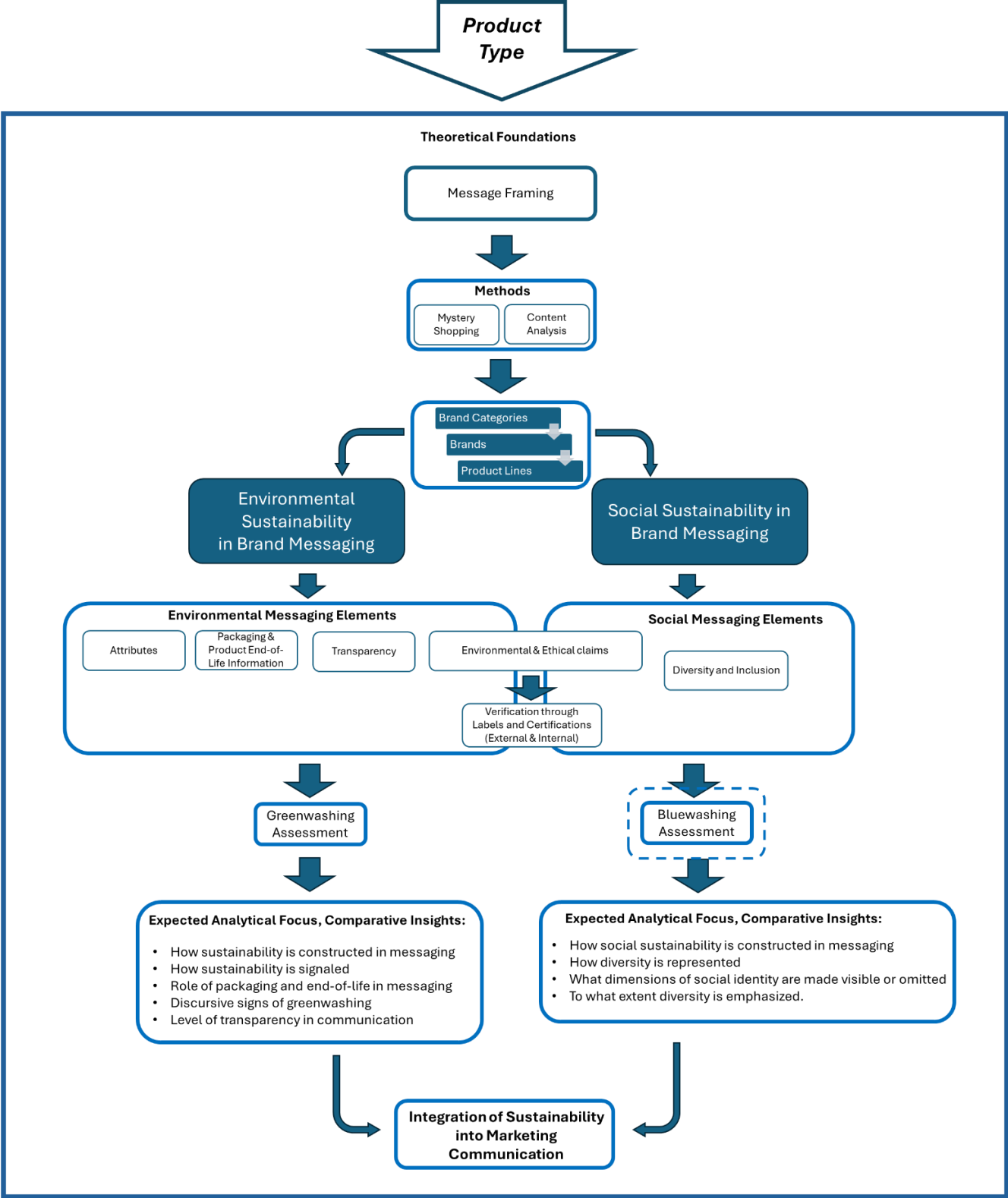


Figure 1.2: Conceptual map of the study (developed by author)

1.9 Thesis overview

This dissertation is organized into six chapters, combining both conceptual and empirical investigations to explore how sustainability is communicated in the cosmetics industry through brand marketing communication. The research adopts a manuscript-based format, consisting of four standalone but interrelated studies.

Chapter 1 introduces the research topic by providing the background and context of the study, a review of key literature, and an overview of the main research gaps. It explains the study's relevance to the field of sustainability management and outlines its significance, contribution, and guiding theoretical framework—message framing theory. This chapter also discusses the research philosophy of the work and concludes with an outline of the dissertation structure.

Chapter 2 presents a systematic review of academic literature on sustainability in the cosmetics industry. Drawing on both bibliometric analysis and qualitative thematic review, the chapter offers a methodologically rigorous overview of research trends, disciplinary distribution, and underexplored topics in the field. Analyzing 365 peer-reviewed articles published during three decades of 1992-2022 since Agenda 21, this study highlights the limited attention given to the topic within the social sciences and identifies key gaps in the literature based on geographic scope and disciplinary engagement.

Chapter 3 investigates how sustainability is integrated into brand communication in the colour cosmetics segment, specifically focusing on lipstick products. Guided by message framing theory, the study employs quantitative method and qualitative content analysis and mystery shopping to compare how three types of brands—leading, fast beauty, and sustainability-positioned—integrate sustainability into their messaging. The chapter explores how transparency, product end-of life information, environmental and ethical claims, use of labels or certifications, and greenwashing vary across brand categories and how brand narratives can shape consumer-facing definitions of sustainability.

Chapter 4 extends this analysis to skincare marketing, focusing on facial moisturizer products. Using the same theoretical and methodological approach as in Chapter 3, this study evaluates the framing of sustainability in the skincare segment, where functionality often dominates messaging. The chapter compares how different brand categories balance product performance

with sustainability claims, assesses the presence of greenwashing, and examines how communication strategies can influence consumer perceptions of sustainable skincare.

Chapter 5 shifts the focus to social sustainability by exploring how diversity and inclusion are integrated into brand communication for both colour cosmetics and skincare. This study, also grounded in message framing theory, analyzes textual and visual representations across brand categories, examining the integration of diversity and inclusion into products messaging. By highlighting the selective nature of inclusive messaging, the chapter contributes to literature on equity in sustainability marketing and offers implications for brands seeking to align social commitments with equity.

Chapter 6 synthesizes the key findings across all studies, discusses the main contributions of the research, outlines its limitations, and proposes directions for future research. The chapter concludes by reflecting on the broader implications of the study for sustainability marketing and brand strategy in the cosmetics sector.

Chapter 2²: Beyond green chemistry: a comprehensive review of how sustainability has been integrated into cosmetic research

Abstract

Technical: Cosmetics have become an essential part of daily life, but their impact on the environment and society cannot be ignored. With the cosmetics industry experiencing almost continuous growth, it is imperative to ensure its sustainability. While several studies have examined various aspects of cosmetics and sustainability, there is no comprehensive overview of the literature in this field. To address this gap, this review aims to categorize the extant literature thematically and identify areas that require further research. A systematic review of 365 selected journal articles published from 1992 to 2022 revealed several insights. Firstly, the number of publications in this area has increased significantly over the years. Secondly, Italy has the highest number of publications, and Sustainability is the most popular publication outlet. Thirdly, research output from chemistry, chemical engineering, and pharmacy disciplines is abundant, while social science disciplines have comparatively few studies. Fourthly, experimental procedures are the most commonly used research methods. Finally, “process and technology” is the most studied area, while “stakeholder behavior” is the least studied area. These findings highlight research gaps and suggest future research directions to promote sustainability in the cosmetics industry.

Non-technical: Cosmetics, including makeup, perfumes, and facial care products, have a significant impact on the environment and society, particularly as they are used by many consumers daily. The industry’s continued growth further contributes to this impact. This paper reviews 365 articles on existing research on sustainable cosmetics. Findings of this review showed that Italy, Brazil, and Spain are the countries with highest number of research articles. It was also noted that many studies were from Chemical and Pharmaceutical disciplines, whereas there is minimal research through a Social Science lens. These insights provide avenues for future sustainability research in the cosmetics industry.

² This chapter adheres to the American English writing style required for publication in *Global Sustainability*.

2.1 Introduction

There are likely three things that most of us make use of on a daily basis: clothes, a mobile phone, and cosmetics. The latter of the three – cosmetics - is often synonymous with makeup and beauty products; however, its actual definition is much broader and includes products used to clean, improve or change one’s complexion, skin, hair, and teeth (Food and Drug Act, 2022). Various iterations of cosmetics can be found throughout human history, though in no point in time has the consumption of cosmetics been greater than in the 21st century. The cosmetic industry has seen almost continual growth and is estimated exceed \$380 billion USD in 2027 (Statista, 2023b). With this growth comes increasing concerns related to the social and environmental impacts of cosmetics, highlighting the importance of sustainable practices and leading to the development of research in the field of cosmetics and sustainability. It is within this field of cosmetics and sustainability that this paper is rooted, with the aim of providing a systematic review of the extant literature over the past 30 years – from 1992 to 2022. Agenda 21 emphasized the role of science in sustainable development, and its development in 1992 can be identified as a crucial focal point for academic research regarding the sustainability of industries (UN, 1992, para. 35). Furthermore, its emphasis on localized implementation provides valuable insights and lessons learned for advancing sustainability within specific industry contexts (UN, 1992, para. 35). Therefore, it serves as a foundational reference for academic inquiry into how sustainability research has advanced in a specific sector.

With a sample size of 365 publications, this systematic review recognizes the evolution and development of research in the field of cosmetics and sustainability over the past 30 years, by:

- i) exploring trends related to the geographical location of research, research topics most studied, and journals of publication,
- ii) classifying types of methodologies used in cosmetics and sustainability research, and
- iii) exploring thematic bibliometric profiles (e.g., documenting keywords and their co-appearance in publications, most prolific authors in this field, etc.),

The primary goal of this systematic review is to comprehensively gather and interpret the existing body of knowledge concerning the sustainability of the cosmetic industry. It aims to

establish a research agenda and offer managerial implications for both the academic community and industry practitioners operating within this domain. As noted by Bom et al. (2019), the sustainability of cosmetics represents a complex and multifaceted matter that necessitates an integrated evaluation encompassing the environmental, social, and economic dimensions. Consequently, this study adopts a holistic approach to examine the sustainability of the cosmetic industry, considering various dimensions. Notably, this review distinguishes itself from previous literature reviews that have focused on specific aspects relating to sustainable cosmetics. Rather than focusing on a specific aspect of sustainability, this review takes a holistic approach to documenting the research that has been conducted within the field of cosmetics and sustainability while providing an in-depth review of the least studied research category: stakeholder behavior.

2.2 Background

2.2.1 Cosmetic industry

The definition of the term ‘cosmetics’ has slight nuances from one country to another but largely includes products that are used on one or more parts of the body. For instance, the European Commission of European Union (Regulation (EC) No. 1223/2009) identifies cosmetics 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” (Official Journal of European Union, 2009, p 342/64). While the United States Food and Drug Administration (FDA) takes a similar approach in its definition of cosmetics, it does not count anti-bacterial soap as a cosmetic product and categorizes antibacterial products as drugs. More specifically, section 321 of the United States Food, Drug, and Cosmetic ACT defines cosmetics as “articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance” (FD&C ACT, 2022). Meanwhile, in Canada, the Food and Drugs Act defines a cosmetic product as “any substance used to clean, improve or change the complexion, skin, hair, nails or teeth and further divides this into beauty preparation (make-up, perfume, skincare, nail polish) and grooming aids (soap, shampoo, shaving cream, deodorant)” (Food and Drug Act, 2022. p 2).

Due to the growth in population and lifestyle changes, the cosmetic industry is categorized as one of the fastest-growing industries on a global scale. Over the past decade, the global beauty market has grown by 3.78% a year on average (Statista, 2023). It is expected that the industry exceeds a market value of 380 billion USD in 2026 from 267.7 billion USD in 2021 (Statista Consumer Market, 2022). This industry has demonstrated economic resilience by returning to its continued growth after the 2008 global financial crisis and the 2020 COVID pandemic.

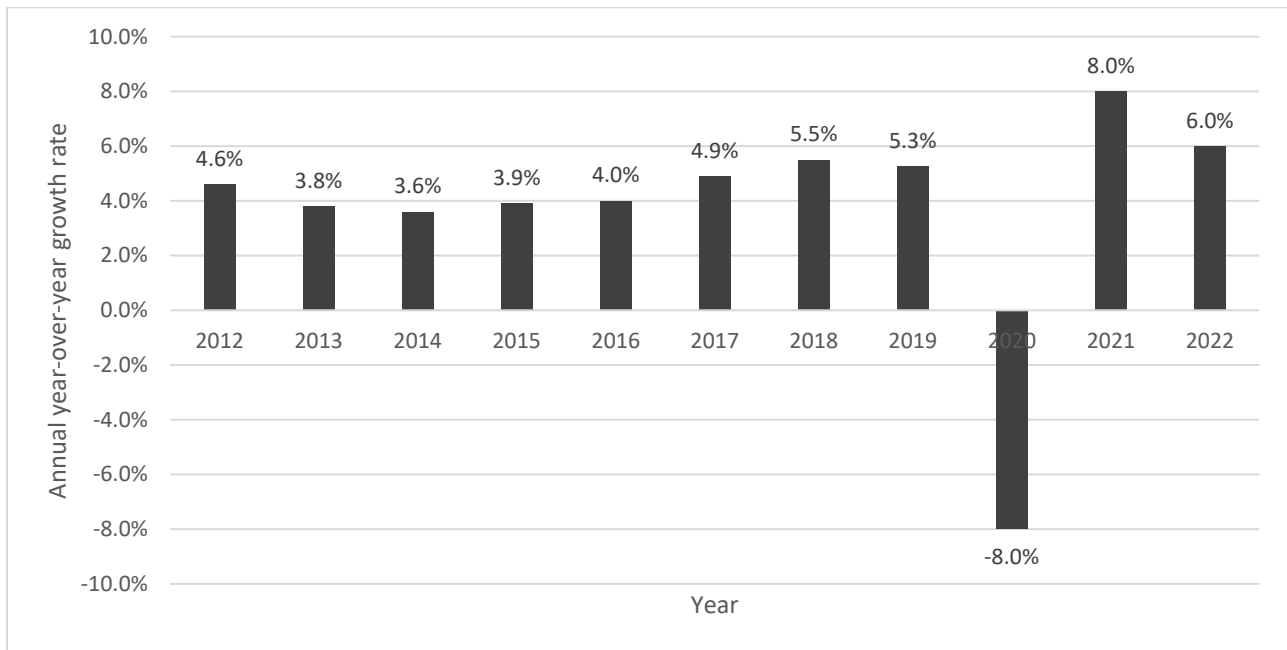


Figure 2.1: Annual year-over-year growth of the global cosmetics market from 2012-2022 (Statista, 2023)

2.2.2 Cosmetic industry and sustainability

Sustainability, both as a concept and a priority gained attention after the “Our Common Future” report in 1987 that defined it as the ability to meet our needs without compromising future generations meeting their needs (Brundtland et al., 1987). More recently, the United Nations’ Sustainable Development Goals described sustainability as: “peace and prosperity for people and the planet, now and into the future” (UN, 2015, p. 1). This definition takes into account the three pillars of sustainability – that is, trying to balance social, environmental, and economic issues (UN, 2015).

The cosmetic industry significantly impacts both the environment and society, with consequences expected to worsen as the industry grows. The cosmetic industry's environmental profile has been negatively impacted by deforestation, overexploitation of minerals, emissions of greenhouse gases from production to post-consumption, and the release of liquid and solid pollutants into the environment leading to increasing concerns about its sustainability (Bom et al., 2019; Cinelli et al., 2019). For instance, the amount of cosmetic packaging produced and disposed of is approximately 120 billion units per year, mostly unrecyclable (Moore, 2019). Socially, the industry's practices often involve unethical labor conditions, including exploitative labor in developing countries and adverse impact of cosmetics on human health. For instance, in 2016, the Dutch NGO SOMO and Terre des Hommes Netherlands published a report revealing that up to 20,000 child laborers were engaged in mica mining in Northeast India. It is estimated that these illegal mines account for 25% of the world's mica production (Kate et al., 2016). The development of marketing strategies, such as the growing significance of social media in connecting and engaging potential customers, plays a persistent role in increasing cosmetics production and consumption, thus intensifying the impacts throughout the life cycle of cosmetic products.

While the issue of fast fashion has been a major concern in the fashion industry, the concept of “fast beauty” is emerging as a reality, further burdening the sustainability profile of the cosmetic industry. Similar to fast fashion, which is described as “low-cost clothing collections based on current, high-cost luxury fashion trends” (Joy et al., 2012, p. 275), fast beauty can be described as a collection of low-cost cosmetics that is based on a vast amount of quick-turn-around products to entice ongoing consumption. Introducing limited edition products has been a marketing strategy in fast fashion to encourage customers to purchase a product for a ‘fear of missing out’ (Bläse et al., 2024) with similar initiatives now being practiced in the fast beauty industry. This may be one of the reasons behind the sizable increase in the consumption of makeup, often exceeding the amount one individual could consume in a given period. Similar to fast fashion (Niinimäki et al., 2020; Bläse et al., 2024), the ever-increasing amount of production of beauty products, comes with a variety of environmental and social impacts, including greenhouse gas emissions, excessive use of non-renewable resources and energy, generation of waste, release of solid and liquid pollutants to the environment, and workers’ exploitation.

The sustainability of the cosmetic industry has increasingly gained attention from scholars globally and led to an increasing number of publications in this field. Several of these studies have focused on reviewing publications in different areas related to the sustainability of cosmetics. Most of these articles focused on reviewing research on the development of specific ingredients and technologies applicable to the cosmetic industry (e.g. Santos et al. (2019); Pangestuti, et al. (2021); Liu et al. (2019)). For example, Pangestuti, et al. (2021) looked at the anti-photoaging and potential skin health benefits of seaweeds, while Santos et al. (2019) reviewed nanotechnological breakthroughs in the development of topical phytochemicals-based formulations. Other reviews have focused on circular economy and related topics, such as Lourenço-Lopes et al.'s (2020) review of the application of macroalgae metabolites and Panwar et al.'s (2021) review of the utilization of citrus by-products in cosmetics to promote circularity. Green Chemistry is a field that focuses on designing chemical products and processes to eliminate the use or generation of hazardous materials (EPA, 2022). Several publications, such as Jiang, et al. (2021), emphasized applying green chemistry to develop cosmetic ingredients. Some studies, such as Tkaczyk, et al. (2020) and Montesdeoca-Esponda et al. (2018), focused on the environmental impacts of cosmetics. However, there are limited studies that have taken a holistic view of the cosmetic industry and its sustainability with regards to both social and environmental (Table 2.1).

Table 2.1: Review articles with a holistic perspective on the sustainability of the cosmetic industry

Author	Review Paper Title	Main Goals and Outcomes	Journal	Number of publications reviewed
<i>Bilal, Mehmood, and Iqbal. (2019)</i>	The beast of beauty: environmental and health concerns of toxic components in cosmetics	Presented a review of the toxic ingredients used in formulating cosmetics with a focus on the biological risks of these substances on human health and the aquatic system.	<i>Cosmetics</i>	Not indicated
<i>Bom et al. (2019)</i>	A step forward on sustainability in the cosmetics industry: A review	The review discussed the different life cycle phases of cosmetic products and focused on reviewing publications for common ingredients used in	<i>Journal of Cleaner Production</i>	173 articles

		skincare products and their sustainable replacement. It identified the sustainability of cosmetics as a complex and multifaceted issue that requires an integrated assessment of the environmental, social, and economic dimensions of each product.		
<i>Hitce et al. (2018)</i>	UN sustainable development goals: How can sustainable/green chemistry contribute? Green chemistry as a source of sustainable innovations in the cosmetic industry	The review presented the integration of green chemistry principles and related strategies in the process of new performing cosmetics ingredients through sustainable chemistry.	<i>Green and Sustainable Chemistry</i>	Not indicated
<i>Liobikiene and Bernatoniene (2017)</i>	Why determinants of green purchase cannot be treated equally? The case of green cosmetics: Literature review	The review identified different factors as determinants of green purchase behavior in publications. It suggested consideration of product category in future research and identified it as beneficial for policymakers and marketers.	<i>Journal of Cleaner Production</i>	80 articles
<i>Fonseca-Santos et al. (2021)</i>	Sustainability, natural and organic cosmetics: consumer, products, efficacy, toxicological and regulatory considerations	The article reviews natural and organic cosmetics, focusing on consumer preferences, toxicological considerations, and regulatory aspects.	<i>Brazilian Journal of Pharmaceutical Science</i>	Not indicated

It is important to take a holistic view of sustainability into account when exploring the extant research on cosmetics; however, to date, there are a very limited number of studies that have addressed this. For example, Bom et al. (2019) offered a pharmaceutical perspective by reviewing the different life cycle phases of cosmetic products and focusing on reviewing publications for common ingredients used in skincare products and their sustainable replacement. In addition,

Liobikienė and Bernatoniienė (2017) focused on the concept of behavior and review the factors influencing consumer green cosmetic purchasing behavior. From a green chemistry perspective, Hitce et al. (2018) reviewed how green chemistry can contribute to achieving sustainable development goals. On the other hand, Bilal, Mehmood, and Iqbal (2019) focused on the environmental and social impact of toxic components in cosmetic products, and Fonseca-Santos et al. (2021) looked at sustainability, natural and organic cosmetics while considering consumer behavior and reviewed different regulatory aspects. Although these reviews provide a more holistic view compared to other reviews, they still provide information from available literature on specific topics or from a specific perspective within the larger umbrella of cosmetics and sustainability. Consequently, a thorough understanding of the state of the research and a comprehensive overview of the literature in the field of cosmetics and sustainability is lacking. Filling this knowledge gap can also contribute to the implementation gap in the industry and may impact acquiring adequate policies and strategies to promote sustainability of the industry. The aim of this paper is to conduct a comprehensive analysis in order to determine: 1) primary areas of research in the cosmetics and sustainability field and the research methodologies that have been applied, 2) identify the countries in which the research is being conducted along with the types of journals it is being published in and, 3) identify areas in which research has been lacking on this topic. It aims to create a common framework of knowledge in this field and identify research gaps.

2.3 Methodology

2.3.1 Data collection

We selected the approach of conducting a systematic review because it encompasses both quantitative and qualitative analyses, providing a comprehensive and methodically rigorous examination of the field of cosmetics and sustainability. While the review includes bibliometric elements, such as exploring trends related to geographical locations, research topics, and journals, classifying methodologies, and analyzing thematic bibliometric profiles, it also looks deeper by providing an in-depth analysis of publications on stakeholder behavior. This qualitative analysis goes beyond merely counting citations and publications, addressing the practical implications and real-world applications of the research (Linnenluecke, Marrone, and Singh, 2020).

This systematic literature review is based on a keyword search using Scopus and Web of Science, the reason for this being that they both are among the largest databases of peer-reviewed literature (Chadegani et al., 2013; Mongeon and Paul-Hus, 2016). In addition, using these two databases ensures accuracy, as no single database includes all publications. This literature review took a funnel approach to conduct a systematic literature review on cosmetics-related academic publications. It started with a broader view and attempted to count all academic publications related to cosmetics available on each database. For this purpose, keywords of the central concept and synonyms for cosmetics were selected. Through a process of brainstorming and reviewing literature in the field, “cosmetic”, “cosmetics”, “beauty industry”, and “beauty product” were selected to collect publications. To prevent getting search responses not related to the theme, only publications with these terms in their title, author keywords, or index keywords were selected.

By using these main keywords, 42,151 and 19,362 publications were found in the Scopus and Web of Science databases, respectively. The first publication identified is dated 1857 that focused on “arsenic as a cosmetic” (Crawford, 1857). Later, a temporal range of the last 30 (1992-2022) years was selected to identify current research trends on this topic that were published after Agenda 21 action plan, where an emphasis on sustainable production and consumption was made.

In the next step, the research was narrowed down to the field of sustainability to collect publications in the area of cosmetics and sustainability. The keywords of “sustainability”, “sustainable”, “green”, and “SDG s” were used to narrow down and collect publications. To be able to collect publications from different countries, especially from ones that are pioneers in cosmetics development, no other language limitations were set. As a result, 451 and 273 research articles that were published in Scopus and Web of Science, respectively, were collected. Upon reviewing and reading the title and abstracts, duplicates and articles with the absenteeism of sustainability perspective were removed. This resulted in 365 publications for further investigation. The process of article selection is illustrated in Figure 2.2 and discussed in detail in supplementary section.

The 365 studies were selected for analysis to understand the most and least frequently researched areas. Later, a more in-depth review was conducted to explore the stakeholder behavior research in the sustainability and cosmetic field.

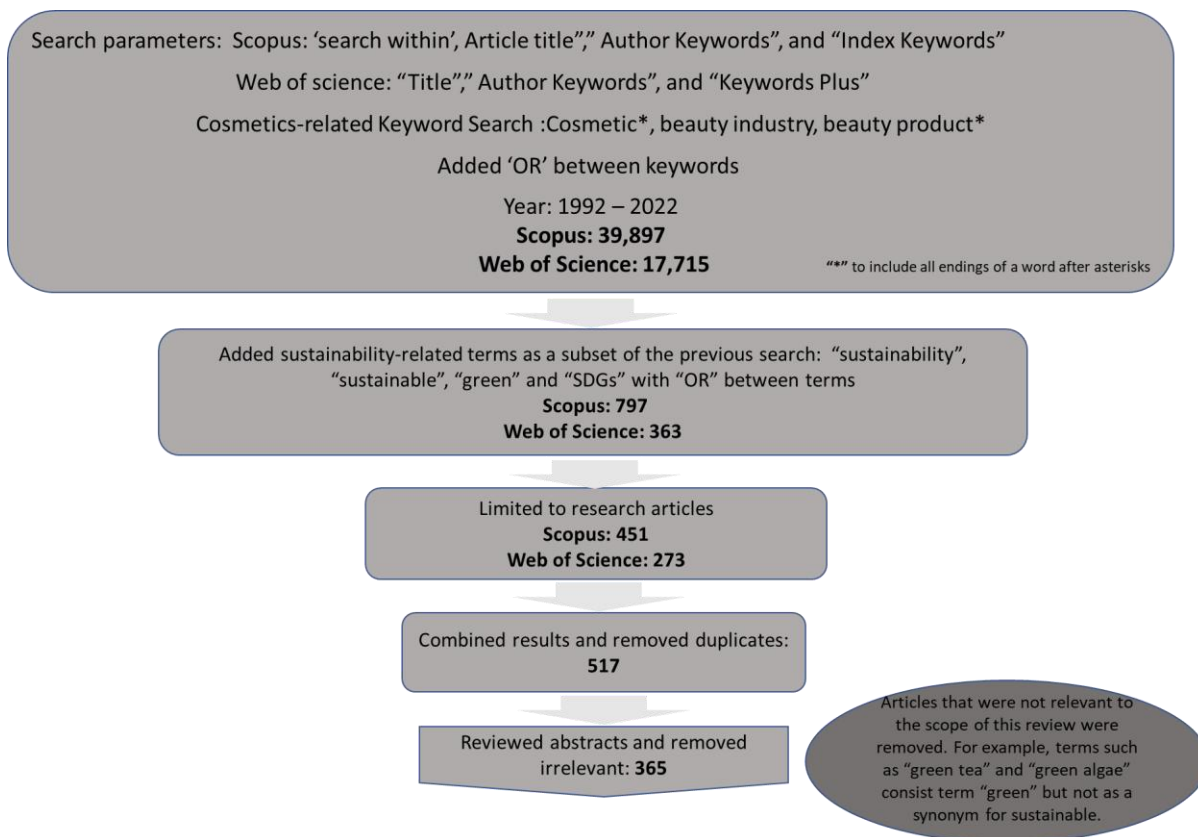


Figure 2.2: Overview of how articles were funnelled in the data collection process

Data synthesis and analysis

Following the process of data collection, the next step was to analyze the articles by year, country, and journal type and study the different research methods used in the collected research articles. To facilitate the journal-wise analysis, the SCImago Journal Rank Indicator (SJR) was employed. This particular indicator is an index based on the SCOPUS database, which stands as the largest abstract and citation database of peer-reviewed literature (Yuen, 2018). On the other hand, according to Falagas et al. (2008), SJR covers more journal titles published from a broader variety of countries compared to other journal rank indicators of the Impact Factor (based on Web of Science data). Therefore, given the diverse origins and disciplines of publications in the field of cosmetics, the SJR indicator was employed to evaluate journals that have two or more publications in this review. Later, the articles were categorized based on the applied techniques and research tools employed, including experimental, analytical, survey/focus group research, conceptual, and descriptive groups. This classification was based on the methodology section of each article.

Following this categorization, an in-depth analysis was conducted to examine the research theme and applied methodology.

2.3.2 Systematic Literature Network Analysis

Systematic literature network analysis focused on identifying how scholars in previous publications have addressed different subject areas. This analysis was performed using VOSviewer software which is a tool that provides literature network mapping and develops professional graphical representations of bibliographic mapping based on quantitative measurements (Van Eck and Waltman, 2010). This software can analyze the network of a large number of publications, create maps, and provide the visualization of this analysis. VOSviewer software uses authors' and index keywords to identify the frequency of keyword occurrences and generate the co-occurrence network visualization. This paper conducts a co-occurrence network analysis to visualize the network among the most frequently used keywords in the 365 publications in the cosmetics and sustainability field.

Many terms are synonyms or might appear in various spelling formats. For example, the word "behaviour" (behavior) appears in two different spelling formats, and a word like "human" may have introduced as singular (human) or plural (humans) as a keyword. To have an efficient visualization, these keywords need to be cleaned up. A thesaurus file was used for data cleaning to merge synonyms and correct spellings.

2.3.3 Categorization based on research focus and in-depth review

To understand the research focus of the selected 365 research articles, a careful review of the titles and abstracts of these publications was made. As a result, the 365 articles were categorized into seven different groups based on their research focus: (1) process and technology; (2) ingredient and formulation; (3) social and environmental impact; (4) green chemistry; (5) business and management; (6) stakeholder behavior; and (7) others. Categorization has been made based on the main aim or field of each study. The research focus of some studies related to “process and technology”, “ingredient and formulation,” and “green chemistry” could overlap. In such cases, to avoid double-counting, based on the purpose statement of each study, one category of research was selected. As a final step, the research articles in the least-studied category,

“stakeholder behavior”, were selected for further in-depth review to look at what has been done, but also where the gaps lie. As the demand for sustainable products grows (Bom et al., 2019), it is increasingly vital for businesses to understand the factors that influence consumers' choices in this market segment. Understanding stakeholder behavior can drive innovation and transparency, fostering trust and collaboration among all stakeholders while advancing environmental and social responsibility within the industry.

2.4 Results and discussion

The following subsections illustrate the analysis result on the annual production of articles, country-wise distribution, distribution of the articles in various journal outlets, and utilization of research methodology in the research articles.

2.4.1 Distribution of articles based on Years (1992-2022)

During the past three decades since the declaration of Agenda 21, the number of research studies and academic articles related to cosmetics and sustainability has increased. The initial scholarly article addressing the intersection of cosmetics and sustainability did not emerge until the year 2001. Since that time, bibliographic analysis of research articles shows a drastically increased attention to the field from the academic community (Figure 2.3). More than 70% (259 articles) of the 365 articles reviewed were published in the last five years (2018–2022), with 2022 having the highest number of published articles (98). It is important to indicate that most studies have been in the fields of chemistry, medicine, pharmacology, and chemical engineering, recorded on Scopus and Web of Science.

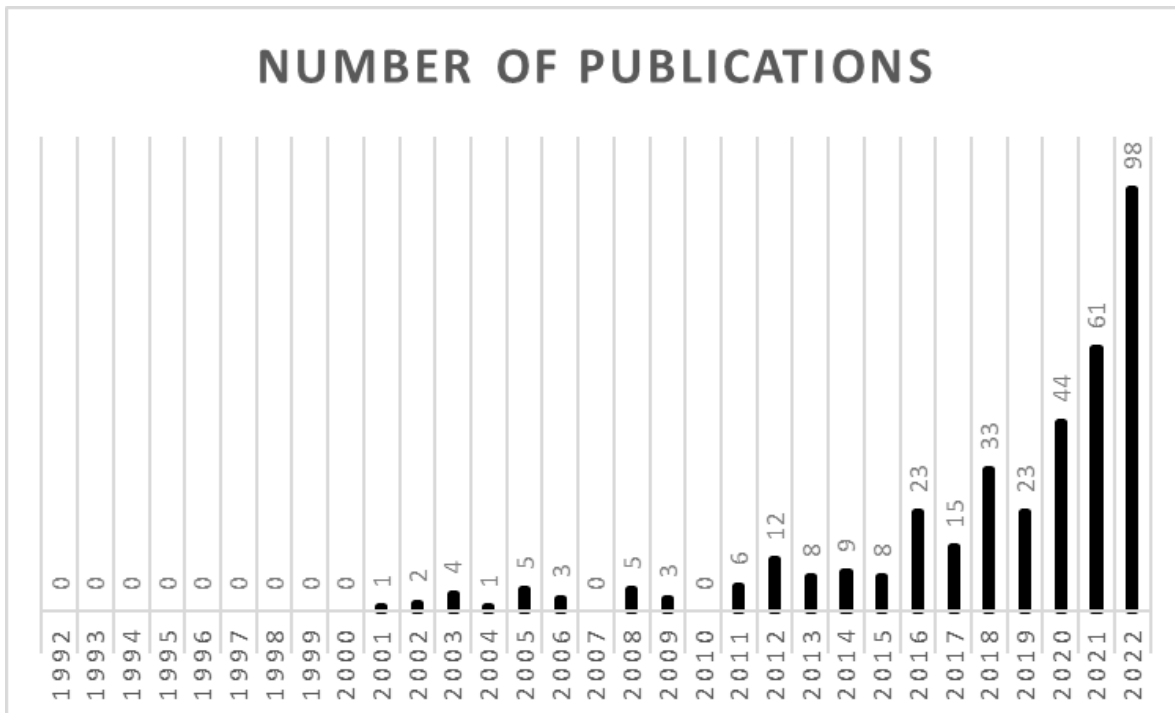


Figure 2.3: Number of publications per year in the area of cosmetics and sustainability since UN Agenda 21

2.4.2 Distribution of articles based on Country

In the collection of the articles that were analyzed, the first author's affiliation country was considered the article's origin. The list of articles comprises publications from a total of 53 different countries. Italy, the world leader in producing perfumes and cosmetics (Pavone and Migliaccio, 2022), had the highest number of publications (40 articles) in the field. Following this, Brazil, with 35 articles, is a country under the group of emerging economy countries with a high number of publications. This country is among the largest cosmetic markets worldwide and ranks as the largest in Latin America (Statista, 2022). Additionally, Brazil has the advantage of having access to resources from the Amazon rainforest, which makes the country one of the main origins of natural ingredients for cosmetics products (Fonseca-Santos et al., 2015). Spain has 30 published research articles in this field – more than the United States (25), India (25) and China (20). Portugal (19), France (16) and South Korea (16) are other notable countries with research in this field.

Although enhancing the sustainability of cosmetics is essential in reducing the negative impact of the cosmetic industry, research in this field is minimal in some countries. For instance,

developed countries like Canada, Japan, and Australia only have three, two, and two articles in this field, respectively. The geographical distribution of the studies for countries with two or more publications is illustrated in Figure 2.4.

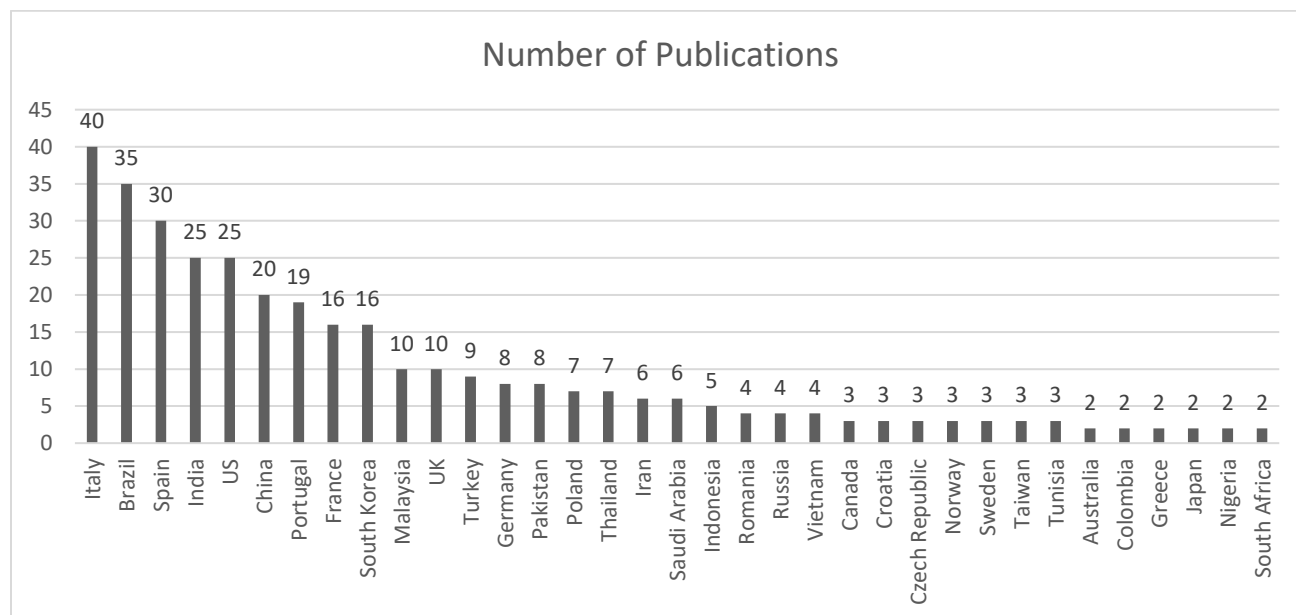


Figure 2.4: Number of publications per country in the area of cosmetics and sustainability since UN Agenda 21

2.4.3 Distribution of articles based on Journal

The selected articles were published in 219 different journal outlets. Out of these, 49 journals have two or more publications, and 170 journals have one article in this field. These journals are from a variety of countries and disciplines. The diversity of journal outlets publishing articles in the cosmetics and sustainability field highlights the importance of taking a multidisciplinary approach from a variety of countries to enhance the sustainability of cosmetics. Most of the papers were published in journals such as Sustainability, Molecules, Cosmetics, and International Journal of Cosmetic Science. Table 2.2 presents the journals that have published more than two articles in the field, accompanied by their corresponding SCImago Journal Rank (SJR) indicators.

Table 2.2: Journals with more publications in the cosmetics and sustainability field

Journal	Number of Publications	SJR
Sustainability	17	0.664
Molecules	15	0.704
Cosmetics	14	0.509
International Journal of Cosmetic Science	13	0.467
Antioxidants	8	1.084
Industrial Crops and Products	6	0.897
Journal of Chromatography A	6	0.766
ACS Sustainable Chemistry and Engineering	5	1.744
Analytica Chimica Acta	5	1.042
Journal of Cleaner Production	5	1.981
Sustainable Chemistry and Pharmacy	5	0.773
Chemosphere	4	1.727
Espacios	4	0.215
Journal of Applied Cosmetology	4	0.104
Talanta	4	0.986
International Journal of Biological Macromolecules	4	1.187
Journal of Pharmaceutical and Biomedical Analysis	4	0.608
Green Chemistry	3	1.959
Heliyon	3	0.609
Journal of Colloid and Interface Science	3	1.604
Journal of Environmental Management	3	1.678
Journal of Ethnopharmacology	3	0.833
Journal of the Iranian Chemical Society	3	0.353
Marine Drugs	3	0.813
Sustainable Production and Consumption	3	2.029
Applied Clay Science	2	0.985

Journal	Number of Publications	SJR
Applied Microbiology and Biotechnology	2	0.968
Archives of Environmental Contamination and Toxicology	2	0.886
Biomedicines	2	0.897
Colloids and Surfaces B-Biointerfases	2	0.868
Corporate Social Responsibility and Environmental Management	2	2.134
Deutsche Apotheker Zeitung	2	0.106
Emerald Emerging Markets Case Studies	2	0.19
Environmental Pollution	2	2.11
Environmental Quality Management	2	0.291
Environmental Toxicology and Chemistry	2	1.025
Food Chemistry	2	1.624
Frontiers in Psychology	2	0.891
International Journal of Consumer Studies	2	1.753
International Journal of Environmental Research and Public Health	2	0.828
Journal of Cosmetic Dermatology	2	0.61
Journal of Dispersion Science and Technology	2	0.357
Journal of Marketing Communications	2	1.012
Journal of Molecular Liquids	2	0.914
Pharmaceutical historian	2	0.102
Resources, Conservation and Recycling	2	2.682
Revista de Gestao Social e Ambiental	2	0.114
Science of the Total Environment	2	1.946
Separations	2	0.371

2.4.4 Distribution of research articles by methodology

In terms of research methodology, the most frequent methodology was experimental (59%), followed by analytical (22%), survey/focus group research (13%), conceptual (5%), and descriptive (1%) (Figure 2.5). The categorization made in this study is based on the techniques applied or tools that were used for research. When the research study involved an experiment and manipulated variables to test a hypothesis and determine a cause-and-effect relation, that study was considered experimental research. This review identified 215 experimental research articles in the cosmetics and sustainability field. In addition, the studies that focused on analyzing the data available from conducted studies and tried to conclude forming a cause-and-effect relationship are categorized as analytical studies. There are 81 studies among 365 articles in this category. Another category is defined as the survey/focus group research category, which consists of 47 articles. The articles that have studied the shared pattern of behaviors or actions of a group of people in a natural setting were categorized as survey/focus group research methodology (Creswell & Creswell, 2017). The main difference between analytical and survey/focus group research lies in the fact that survey/focus group research is an approach that provides insights into human behavior. In contrast, the analytical method is generally positioned as an approach that analyzes a broad database from conducted studies in the research field (Charles & Gherman, 2019). The conceptual studies are focused on elaborating and introducing new frameworks or approaches in the field. This systematic literature review identified 19 articles with conceptual methodology. Additionally, few studies (three articles) were focused on describing the industry's status or particular substances. The methodology of these publications was categorized as descriptive methodology.

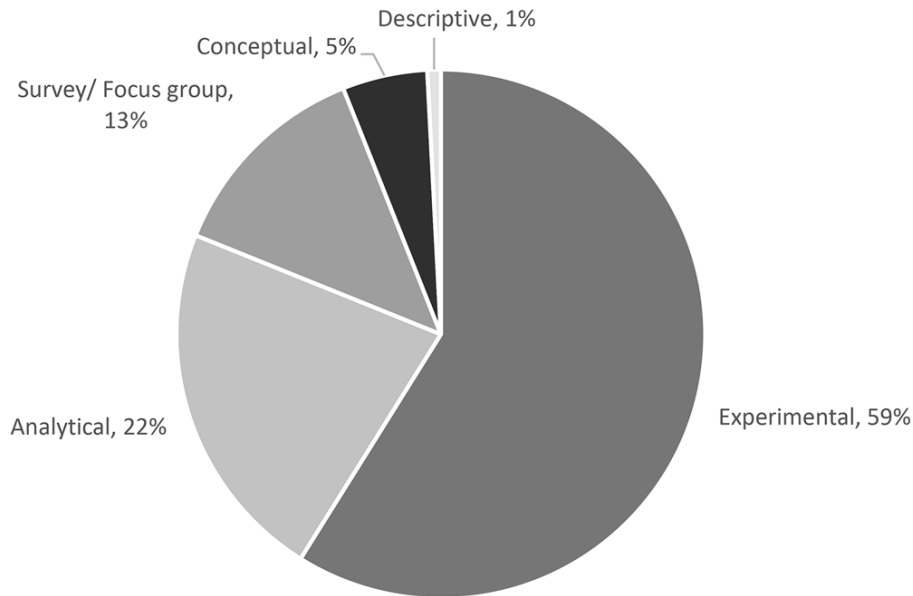


Figure 2.5: Distribution of methodologies used among publications

2.4.5 Keywords co-occurrence network analysis

In this study, 365 articles related to sustainability and cosmetics retrieved from Scopus and Web of Science were imported into the VOSviewer tool. VOSviewer software is a bibliometric mapping tool that develops the publications network visualization and illustrates large bibliometric maps. This software also clusters and categorizes keywords that appear more often together. The software has been set to consider authors and index keywords that have occurred at least 10 times. Based on this criterion, 51 keywords were selected by the software for the analysis. As explained in Section 2.3.2, a thesaurus file was used for data cleaning to merge synonyms and correct spellings. In addition, the keywords “cosmetic”, “controlled study”, “article”, and “priority journal” have been removed to have a clear border between clusters.

The VOSviewer generates a keyword map based on the keywords’ occurrence illustrated in Figure 2.6. The size of nodes is evidence of the frequency of occurrence of a particular keyword. In addition, the distance between nodes demonstrates the relatedness and the number of times the keywords came together. Based on the data of this review and the introduced criterion, VOSviewer generates four clusters, each consisting of keywords that have appeared with each other in the literature.

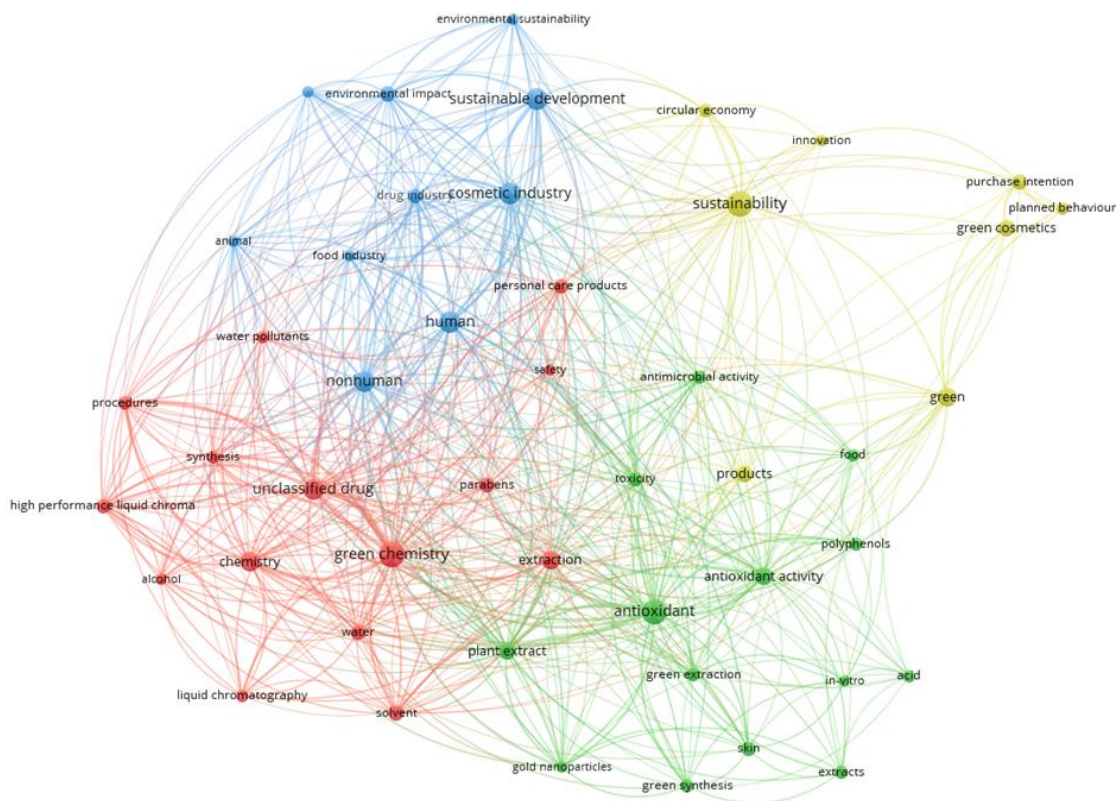


Figure 2.6: Keyword co-occurrence network map for sustainability-related cosmetics literature from 1992 to 2022.

The largest cluster in red contains 15 items containing chemistry, green chemistry, extraction, and high-performance liquid. Some of the articles with keywords in this cluster are Villa et al. (2005), Parmar and Singh (2018), and Khesina et al. (2021). Most publications with keywords in this cluster focus on the green chemistry approach and chemistry to promote environmental protection. This cluster is connected to the blue cluster through the "water pollutants" keyword.

The second cluster shown in green contains 14 items, such as toxicity, antioxidant, antioxidant activity, and green extraction. The keyword toxicity has distance from other keywords in this cluster which is the evidence of a few simultaneous appearances with other keywords. However, this keyword is the main connection between this cluster and other clusters. Some of the studies covering the keywords in this cluster are Peyrot et al. (2020), Huynh et al. (2021), and Tong et al. (2021).

The third cluster in blue has ten main keywords such as sustainable development, environmental sustainability, cosmetic industry, drug industry, and environmental impact. The publications with these keywords are related to cosmetic products and the cosmetic industry's environmental impact. Some of the publications covering these keywords are Sánchez-Bayo and Goka (2006), Jos et al. (2009), and Seoane et al. (2017).

The fourth and smallest cluster, illustrated in yellow, consists of eight keywords. Keywords of "behavior," "purchase intention," "circular economy," "green cosmetics", and "sustainability". The distance between "sustainability" and "behavior" shows that although these terms are located in the same cluster, the number of simultaneous appearances in papers is not high. However, the keywords of "behavior" and "green cosmetics" have appeared more frequently in literature. Some of the studies covering the keywords in this cluster are Askadilla and Krisjanti (2017), Singhal and Malik (2018), and Gupta et al. (2021).

Overall, according to the results derived from VOSviewer, this analysis has identified four main clusters constructed based on keyword appearance. However, some keywords such as "life cycle assessment," "waste management," "cosmetic waste," "environmental awareness," "disposal behavior," "green marketing," "post-consumption," and "carbon footprint," or their synonyms are not visible or have a minimal node on this map. This is evidence of the low frequency of these keywords appearing in the literature.

2.4.6 Research profiling

2.4.6.1 Categorization based on research focus

In addition to keyword co-occurrence analysis, it is important to identify the main focus areas in cosmetics and sustainability research. The keyword co-occurrence network provided a holistic view of keywords' utilization literature. However, an in-depth review of the literature is beneficial to understanding the main areas of research and identifying gaps. A careful review of the selected 365 studies identified seven major research areas in the field of cosmetics and sustainability (Figure 2.7). The categorization was made based on the primary research objective of the studies. The categories of "process and technology" and "ingredient and formulation" were the two with the highest number of studies. This result is in line with the previously discussed finding that most studies have been conducted in chemistry, chemical engineering, and pharmacology. The category of "Green chemistry" is another group that consists of studies

focusing on the green chemistry approach and its application. According to Anastas and Warner (1998), Green chemistry is the “design of chemical products and processes to reduce or eliminate the use and generation of hazardous substances.” Additionally, studies that focus on the impact of cosmetics on humans or non-humans or the application of tools for impact assessment, such as life cycle assessment, were categorized into the group of "Environmental and social impact." "Business and management" and "Stakeholder behavior" are other categories consisting of studies focusing on concepts related to business management and the behavior of different stakeholders, respectively. The "other" category consists of publications focused on applying cosmetics substances in other industries.

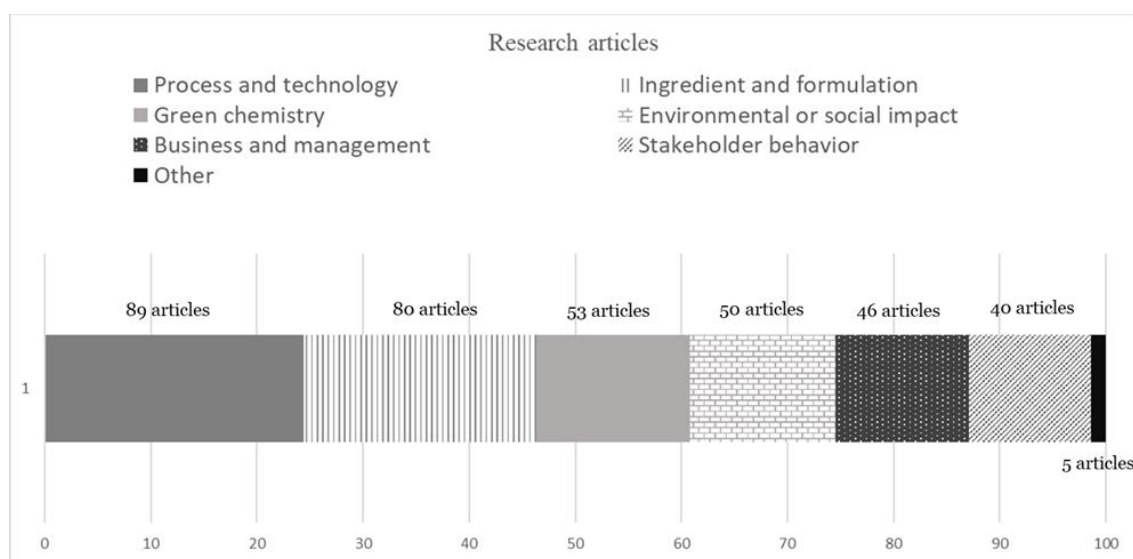


Figure 2.7: Categorization of literature on cosmetics and sustainability published between 1992 and 2022

2.4.6.1.1 Process and technology

The theme of “Process and technology” is the theme that gained the highest interest of researchers, mainly from chemistry or chemical engineering disciplines. Publications in this category focus on process or technology development for cosmetics production. This category consists of 89 research articles from 25 different countries. Spain, with 15, and China, with nine articles, are the countries with the highest number of publications focused on processes and technology related to cosmetics and sustainability. Among 1201 keywords used in this category, the most frequently used keywords were cosmetic (53 times), green chemistry (16 times),

extraction (14 times), parabens (11 times), and antioxidant (11 times). The number of authors as first or co-authors involved comes to 183 researchers. Some of the publications in this category are Becker et al. (2020), Mello, Ribeiro, and Bicas (2021), Michalkiewicz, Jakubczyk, and Skorupa (2016), and Feng et al. (2021).

2.4.6.1.2 Ingredient and formulation

The category of “Ingredient and formulation” is the second-largest publication category in the field. The research articles in this group mainly study the cosmetic ingredient development or formulation of particular cosmetic products. The publications in this category are from 29 different countries from groups of developing and developed countries. Italy has the highest number of 14 articles, followed by the United States and Portugal, with each of them having seven publications in this field. There are 1323 keywords used in these publications, while only 240 are used twice or more. This is mainly due to the variety of ingredients and formulations that can be used in cosmetics production. The keywords “cosmetic” (39 times), antioxidant (19 times), and “green chemistry” (17 times) are the most frequently used keywords. There are 172 authors and co-authors involved in developing the articles in this category. These articles are focused on various areas such as natural ingredients (Atolani et al., 2020; Casas et al., 2020), formulation of cosmetic products (Drakontis and Amin, 2020; Baldisserotto et al., 2018), and by-products as ingredients (Quina, Soares, and Quinta-Ferreira, 2017).

2.4.6.1.3 Green chemistry

“Green chemistry” is a category of research theme consisting of 53 publications from 17 different countries. Italy (11 articles) and Spain (seven articles) are two southern European countries with the highest number of publications in this area of research. There are 843 keywords used in these research articles. The most frequently used keywords are “cosmetic” (27 times), followed by “Antioxidant” (10 times) and “Green chemistry” (nine times). According to VOSviewer, there are only 136 keywords that are used two or more times. The publications are from 142 authors and co-authors, all with one publication in this category. Hanno et al. (2015), Villa et al. (2008), Capela et al. (2016), and Franca and Ueno (2020) are some of the articles in this category.

2.4.6.1.4 Environmental and social impact

The “Environmental and social impact” category consists of 50 publications. These articles study the impact of cosmetics on humans or the natural environment. There are 20 different countries with articles in this category. Brazil and the US (six articles each) are the countries with the highest number of publications in this area of research. There are 1038 keywords used among these research articles. The most frequently used keywords are “cosmetic” (31 times), followed by “sustainability” (15 times), “human” (12 times), “toxicity” (nine times), and “environmental sustainability” and “water pollutants” (eight times each). According to VOSviewer, there are only 149 keywords that are used two or more times. The publications are from 126 authors and co-authors, all with one publication in this category.

There are 24 publications in this category that focus on the impacts of cosmetic products or the cosmetic industry on the natural environment. For instance, Sánchez-Bayo and Goka (2006) look at the impact of antidandruff shampoo in experimental rice fields, Wieck et al. (2016) discuss the possible underestimations of risks of emissions of biocides from households to wastewater, and Burns and Davies (2021) focus on “coral ecotoxicological data evaluation for the environmental safety assessment of ultraviolet filters.” In this category, 17 articles investigate the impact of cosmetics on human from a sustainability perspective such as Mattioli et al. (2016), Niziol-Lukaszewska and Bujak (2018), Farias et al. (2019), and Oh and Kim (2020). Most of these articles are limited to the health aspect of social sustainability, while the social sustainability aspect is not limited to health. Some scholars, such as Bang and Park (2021), consider other aspects of social sustainability. This study focuses on the necessity of training and education for women in the cosmetic industry in developing communities to achieve sustainable development goals. Although some studies consider other aspects of social sustainability, such as worker exploitation or issues related to unfair trade, the number is minimal. The result of keyword network analysis in Section 2.4.5 is also evidence of this matter. The keywords such as toxicity, human, and keywords related to substances with health concerns are visible on the map, while keywords such as education, fair trade, and worker safety are missing.

A limited number of studies focused on applying LCA to assess cosmetics impact (9 articles). LCA is a tool that has been developed to quantify and compare the environmental impacts of different products, processes, technologies, etc., to inform decision-making and development in

various industries (Rebitzer et al., 2004). It aims to investigate the environmental impacts from a comprehensive and systematic view and introduce alternatives without burden shifting. Among the collected articles, some publications have applied LCA to assess the impact of cosmetic products. However, the number of these studies is very limited. Absenteeism of keywords of “life cycle assessment” and “LCA” in the VOSviewer result illustrated in Section 4.5 admits this case. Secchi et al. (2016) with LCA on a cosmetic product with bio-based ingredients, Glew and Lovett (2014) with LCA on shea butter for cosmetic production, Civancik-Uslu et al. (2019) with LCA on cosmetic packaging, and de Camargo et al. (2019) with LCA on an organization, are some of the publications in this category.

2.4.6.1.5 Business and management

“Business and management” has been the theme of interest in the academic and professional community, developing 46 articles among publications in the cosmetics and sustainability field. Most of the publications are from the country of Brazil, with 16 research articles, followed by Italy, with 4 publications in this group. Among 16 publications from Brazil, eight articles are related to the case of Natura & Co, the Brazilian cosmetic company. Among 335 keywords used in this category, the most frequently used keywords were sustainability (20 times), sustainable development (10 times), cosmetic industry (nine times), and cosmetic (eight times). The number of authors as first or co-authors involved comes to 94 researchers.

In articles analyzed in this research, several authors have focused on different concepts related to business and management, such as the sustainability of the supply chain (such as Borges and Herreros (2018), Cassol and Sellitto (2020), and Pereira de Carvalho and Barbieri (2012)), Corporate Social Responsibility (CSR) and circular economy (such as Kolling, Ribeiro, and de Medeiros (2022), Fortunati, Martiniello, and Morea, (2020), and Morea, Fortunati, and Martiniello (2021))

2.4.6.1.6 Stakeholder Behavior

Stakeholder behavior has been the focus of many researchers in different fields (Bray, 2008). However, as observed in the co-occurrence analysis and research categorization sections, studies related to stakeholders' behavior are minimal. Among publications in the cosmetics and sustainability field, there are 40 publications with their research focused on stakeholder behavior. Within this category, there are a total of 27 distinct countries represented through articles. Malaysia

emerges as the foremost contributor with five articles, followed by India with four articles. The remaining countries have published a modest range of scholarly outputs, ranging between one to three publications within this area of study. As observed, collaboration in research from developed countries in this area of research is very limited. The keywords employed as authors keywords or index keywords included “purchase intention” and “green cosmetics,” with a frequency of 16 occurrences each. “Planned behavior” (11 times) and “values” (eight times) were the other keywords that were used frequently. “Purchase” 16 times and “Consumption” seven times of appearance are the types of behavior that appear in the keywords. However, other types of behavior, such as disposal, are missing. Jaini is the first author of two articles in this field, and Quoquab, Hussin, and Mohammad have appeared twice as first or co-authors of two publications (Quoquab, Jaini, and Mohammad, 2020; Jaini et al., 2020a; Jaini et al., 2020b). Other authors have one publication in the field. Amberg and Fogarassy (2019) and Zahid et al. (2018) are some of the other articles in this group.

2.4.6.2 Research theme and research methodology analysis

The seven research categories consist of publications that have conducted different types of research methodology (Figure 2.8). Based on what was discussed in Section 4.4, experimental, analytical, survey/focus group research, conceptual, and descriptive were the primary methodologies conducted among selected articles. “Process and technology,” “Ingredient and formulation,” and “Green chemistry” are the three categories of research with the highest utilization of experimental methodologies followed by analytical methodology. The publications in these categories are mostly focused on the development of ingredients, technologies, processes, or applications of green chemistry. These studies conducted experiments and manipulated variables to test a hypothesis and determine a cause-and-effect relation. The group of “Environmental and social impact” has studies conducted with experimental and analytical methodologies followed by conceptual ones. The conceptual studies developed frameworks or strategies related to the impact of cosmetics. Finally, the group “Stakeholder behavior” has most of its studies conducted with survey/focus group methodology, which is in line with the nature of the behavior concept. Generally, the experimental has been the methodology with the highest interest and application, and descriptive has gained the least interest among scholars in the field.

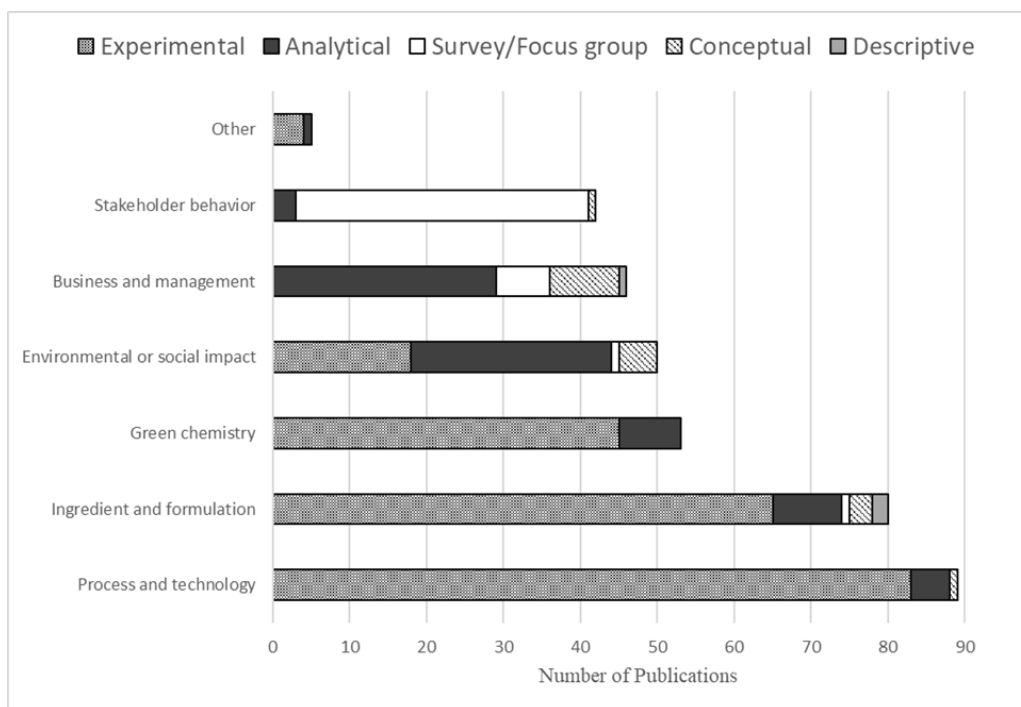


Figure 2.8: Research themes and distribution of research methodologies

2.4.6.3 A deeper dive into research related to stakeholder behavior

Stakeholder behavior is the study category with the least number of studies (40) in the cosmetic and sustainability field. This section will provide a comprehensive review of the existing literature in this category. Several academic scholars have conducted research on behavior in the field of sustainability and the cosmetics industry, exploring behavior related to sustainability and cosmetics. Understanding stakeholder behavior in the context of sustainable cosmetics is vital for several reasons. As the demand for sustainable products continues to rise (Bom et al., 2019), it becomes increasingly important for businesses to comprehend the factors influencing consumers' choices in this market segment. Additionally, this comprehensive understanding can drive innovation and transparency, fostering trust and collaboration among all stakeholders while promoting environmental and social responsibility within the industry. Sustainable cosmetics not only attempts to reduce the environmental impact, but also contributes to consumer well-being, making it crucial to explore how consumers engage with these products.

Existing literature predominantly focuses on consumer behavior concerning purchase intention or purchase behavior regarding sustainable cosmetics. While these research studies

provide valuable insights into consumers' decision-making processes, notable gaps warrant further exploration. For instance, studies in this area often overlook other dimensions of consumer behavior, such as sustainable consumption behavior or post-consumption behavior, which are equally important in understanding the holistic consumer journey in the sustainable cosmetics industry. Identifying and addressing these gaps will contribute to a more comprehensive understanding of consumer behavior in this domain and inform effective marketing strategies and product development initiatives.

Moreover, the current literature predominantly emphasizes consumer behavior. It is important to note that individuals are subjected to the influence of “upstream influencers” (i.e. policymakers and regulators) and “midstream influencers” (i.e. retailers, supply chain actors) (Khaliq et al., 2021). Therefore, the behavior of other stakeholders can have a great impact on the sustainability of the industry. Understanding the roles and behaviors of stakeholders such as retailers, social media influencers, policymakers, and supply chain actors is crucial for developing holistic strategies that foster sustainability across the entire cosmetics industry value chain. By incorporating the perspectives and actions of all stakeholders, we can better address sustainability challenges and create more impactful interventions in the industry.

2.4.6.3.1 Factors influencing purchase

Consumer behavior in the realm of sustainable cosmetics is shaped by factors, reflecting the complex interplay between individual preferences, societal values, and external influences. Understanding the various elements that drive consumer decision-making is essential for businesses striving to navigate this dynamic market successfully. This section explores key factors discussed by academic publications in this category as being influential on consumer behavior, ranging from personal values and social norms to product performance, pricing strategies, celebrity endorsements, and the pervasive influence of social media. By looking into these aspects, we gain valuable insights into the multifaceted nature of consumer choices and the implications for marketing strategies and industry practices.

Knowledge, Values, and Norms

Consumer behavior towards sustainable cosmetics is influenced by a multitude of factors, including personal values, societal norms, environmental awareness, and health concerns.

Researchers have extensively explored these dimensions to understand their impact on consumer purchasing decisions in this domain. For instance, Kim and Seock (2009) have investigated the impact of health and environmental awareness on students in the southwestern US, informing how consciousness about health and environmental issues prompts consumers to seek out sustainable cosmetic alternatives. Similarly, Graciano et al. (2021) conducted a study in Brazil and suggested that health and environmental preservation demands cannot be ignored. Furthermore, research by Sharma, Trivedi, and Deka (2021) underscores the significance of awareness in influencing consumer behavior. By examining consumers' knowledge and understanding of environmental and health-related issues associated with cosmetic products, Sharma, Trivedi, and Deka (2021) discussed how awareness levels impact consumers' decision-making processes. Similarly, Jaini et al. (2020b) have explored the role of values in shaping consumer behavior. Moreover, studies such as Askadilla and Krisjanti (2017) and Shimul et al. (2021) have investigated the influence of beliefs and subjective norms on behavior, respectively. These investigations reveal how individuals' beliefs and subjective norms influence their attitudes towards and adoption of sustainable cosmetics. On the other hand, several scholars examined the relations between demographics and their impact on dependent variables influencing sustainable purchase intention. For instance, Khan and Salim (2021) looked at Saudi females' buying behavior toward sustainable cosmetics, and Akter and Islam (2020) investigated the impact of demographic factors on purchase intention among females in Sweden. Some studies examined the role of the demographic factor of gender as a moderator of values and assessed the purchase behavior of male customers (Quoquab, Jaini, and Mohammad, 2020; Ali et al., 2023). Furthermore, several others, such as Huy (2021), whose study focused on beliefs and norms within the context of generation Z, provided insights into the unique factors driving purchasing decisions based on the factor of age. These studies highlight how consumers' values, such as environmental consciousness and ethical considerations, drive their preference for sustainable cosmetic products.

Sustainable operation and trust

Various studies have investigated the impact of organizations' practices and consumer trust on purchase behavior. For instance, Nguyen, Nguyen, and Vo (2019) and AL-Haddad et al. (2020) examined factors impacting repurchase decisions or brand loyalty in Vietnam and Jordan, respectively. Similarly, Gradinaru et al. (2022) explored the relationship between brand attachment and adherence to triple bottom line principles, illuminating its influence on consumers' propensity

to purchase green cosmetics. Lavuri et al. (2022) investigated the role of trust and attitude in shaping consumers' purchasing intention in India with implications for sustainable development. Additionally, Ha et al. (2021) investigated the impact of sustainable management practices within companies on consumer behavior, offering insights into how such practices affect consumers' decisions regarding green cosmetic purchases. Through these studies, a comprehensive understanding emerges of the factors driving consumers' loyalty and purchase behavior in the context of sustainable cosmetics.

Norms, celebrity endorsement and social media

The influence of celebrities and social media on consumer behavior in the sustainable and cosmetics field has also gained attention from researchers. Through various methodologies, these studies investigate the extent to which endorsements by celebrities and exposure on social media platforms shape consumers' perceptions and purchasing behavior regarding sustainable cosmetic products.

Several scholars have also examined norms and social influence. Gradinaru et al. (2022), Jaini et al. (2020a), and Tengli and Srinivasan (2022) focused on the impact of word-of-mouth on purchase behavior. Pop et al. (2020) investigated the impact of social media, and Lili et al. (2022) examined the influence of celebrity attractiveness and trustfulness on purchase intention among young Chinese customers. Furthermore, Zahid et al. (2018) looked at the impact of publicity on social media on purchase behavior in the Pakistani context and discussed while publicity is a contributor to positive behavior regarding sustainable products, a customer also looks for the benefits they gain from a green product as an individual. The authors suggested that marketers should not forget about the individuals' concerns and should also highlight the benefits of the products for the customers, along with sustainability-related concerns for effective marketing of the products. These studies focused on the role of interpersonal communication and social influence in shaping consumer choices.

Barriers

While numerous studies analyze the influence of various factors on purchase intention or behavior, several also investigate barriers to sustainable cosmetic purchases and the disparity between attitude and behavior. Singhal and Malik (2018) delved into this gap, exploring how

demographic factors may impact the correlation between attitudes and behaviors. Their findings indicated that while variables like education and age do not affect attitudes, income level significantly influences behavior, resulting in a negative correlation between attitude and behavior. The author proposed potential variations in these findings across different cultural contexts. Additionally, studies such as Lin et al. (2018) and Sajinčič et al. (2021) identified factors such as lack of knowledge, market confusion, product efficacy, sensory attributes, and perceived value for money as barriers to sustainable product purchase. Conversely, Sadiq et al. (2021) examined cultural perspectives, discussing barriers beyond cost, such as tradition and image.

2.4.6.3.2 Theoretical frameworks

The Theory of Planned Behavior (TPB) holds a prominent position in the literature concerning consumer behavior in the context of sustainability and cosmetics. This framework focuses on the impact of attitudes, subjective norms, and perceived behavioral control on individuals' intentions and behaviors (Ajzen, 1985; Kuhl and Beckmann, 1985). This theory was developed on the basis of the theory of reasoned action (Yzer, 2017) and have used by many scholars to study behavior (Godin and Kok, 1996; Becker-Leifhold, 2018; Saricam and Okur, 2019; Khan et al., 2019). Similarly, scholars have extensively applied TPB to understand consumers' attitudes and intentions toward purchasing in regards to sustainable cosmetics. By analyzing these factors, researchers aimed to explain consumers' decision-making processes in adopting sustainable cosmetic products. Studies such as Pop, Săplăcan, and Alt (2020), Askadill and Krisjanti (2017), Akter and Islam (2020), Ali et al. (2023), Delistavrou and Tilikidou (2022), Tengli and Srinivasan (2022) are some of the publications in this category that have chosen the theory of planned behavior as their foundation.

In addition to the Theory of Planned Behavior, several other theoretical frameworks have been employed to study consumer behavior in the domain of sustainable cosmetics. Among these, the theory of norm activation is notable for its emphasis on self-expectations regarding prosocial behavior (e.g., Munerah, Koay, and Thambiah, 2021). Norm theory used by Huy (2021), dual factor theory used by Lavuri et al. (2021) to study the impact of trust and attitude, innovation resistance theory used by Sadiq et al. (2021) to study the barriers to sustainable cosmetic purchase are some of the other theoretical foundations in this category.

2.4.6.3.3 Methodological approaches

Survey and Focus Group Studies

Surveys and focus groups have been the commonly employed methodologies in research on sustainable cosmetics consumer behavior due to their ability to gather quantitative and qualitative data, respectively. Surveys allow for the collection of large-scale data from a diverse sample, providing statistical insights into consumer preferences and behaviors. On the other hand, focus groups facilitate in-depth exploration of attitudes, perceptions, and motivations behind consumer choices, offering rich qualitative insights (Creswell and Creswell, 2017). However, surveys may suffer from response biases and lack of detailed exploration, while focus groups may be influenced by group dynamics and limited generalizability.

Research on sustainable cosmetics consumer behavior spans various geographical locations, reflecting the global interest in sustainable products. Several studies such as Jaini et al. (2020a) and Quoquab et al. (2020) in Malaysia, Askadilla and Krisjanti (2017) in Indonesia, Shimul, Cheah, and Khan (2021) in South Africa, Khan and Salim (2021) in Saudi Arabia, Akter and Islam (2020) in Sweden, and Huy (2021) in Vietnam have examined the influence of cultural norms and personal values on purchase behavior. While some countries like Malaysia and Indonesia have been prominent in research on this topic, there is a noticeable gap in studies from regions like Africa and many parts of North and South America and Europe.

Insights from studies conducted in specific geographical locations are crucial for informing global marketing strategies and policy development. Factors such as culture and geographical conditions, including climate, profoundly influence consumer needs and perceptions regarding sustainable cosmetics. For example, cultural dimensions like femininity, as Hofstede outlined (Hofstede, 2011), can shape values and preferences in cosmetics. Magano et al. (2022) conducted a study on ethical buyer behavior in Portugal, emphasizing that the result is from a country with a high femininity culture and may differ in other cultural contexts. Similarly, Graciano et al. (2021) emphasized that results from the study on "consumer values in the Brazilian market for ethical cosmetics" may vary across different cultures. Moreover, diverse ethnicities may exhibit distinct values, practices, or beauty perceptions within a single country. Additionally, varying climate conditions influence consumer needs and preferences in cosmetics. Recognizing regions with

limited research can prompt future investigations, ensuring a comprehensive understanding of sustainable cosmetics consumer behavior across diverse cultural landscapes.

Research on age demographics in sustainable cosmetics consumer behavior has explored various age categories, including young adults and middle-aged individuals. For instance, studies like Grădinaru et al. (2022), which focused on ages 18-50, and Magano et al. (2022), targeting individuals above 18, aimed to gather data from a broader population of legal age to understand their attitudes and behaviors. Conversely, research by Limbu, Pham, and Nguyen (2022), Kim and Seock (2009), and Huy (2021) investigated the cosmetics purchase behavior among younger populations still above 18 years old. However, there remains a notable gap in the literature concerning the behavior of teenagers, who are also significant consumers of cosmetics, especially fast beauty, and represent a key target market. Despite their consumption patterns and potential influence on purchasing decisions within their age group and beyond, research on teenage consumers' attitudes and behaviors toward sustainable cosmetics remains limited. Future studies should aim to address this gap by investigating the unique characteristics and preferences of teenage consumers in relation to sustainable cosmetics.

Discussion

Stakeholder behavior within the sustainable cosmetics industry remains a relatively understudied area, despite its significance in shaping industry dynamics. While many studies focus on consumer behavior, there is a notable gap in studies examining the behaviors of other key stakeholders, including retailers, social media influencers, policymakers, and supply chain actors. Understanding the roles and behaviors of these stakeholders is imperative for developing comprehensive strategies that foster sustainability throughout the cosmetics industry value chain. Moreover, while existing literature predominantly focuses on purchase behavior, there is a need for broader exploration encompassing dimensions such as sustainable consumption behavior and post-consumption behavior. By addressing these gaps, researchers can provide invaluable insights that inform effective marketing strategies, product development initiatives, and policy interventions aimed at promoting sustainability within the cosmetics industry.

Furthermore, research in specific geographical locations has illuminated the diverse cultural contexts and environmental conditions that influence consumer preferences and perceptions regarding sustainable cosmetics. Cultural dimensions significantly shape values and

preferences in cosmetics. Additionally, varying climate conditions impact consumer needs and preferences, underscoring the importance of considering geographical factors in market strategies and product development efforts. Recognizing regions with limited research can prompt future investigations, ensuring a comprehensive understanding of sustainable cosmetics consumer behavior across diverse cultural landscapes.

Moreover, while research on age demographics has explored consumers in various age groups, there remains a notable gap concerning the behavior of teenage consumers. Despite their significant consumption patterns and potential influence on purchasing decisions, especially within their age group and beyond, research on teenage consumers' attitudes and behaviors toward sustainable cosmetics remains limited. Addressing this gap represents an important avenue for future research, as it holds implications for engaging and shaping the preferences of a key target market segment.

In summary, a holistic understanding of stakeholder behavior, including consumers and other key actors, coupled with insights from diverse geographical contexts and age demographics, is essential for advancing sustainability goals within the cosmetics industry. By addressing these research gaps and fostering interdisciplinary collaboration, researchers can contribute to the development of strategies and interventions that promote sustainable practices and drive positive change in the industry.

2.5 Research gap and future research agenda

The results of the systematic review of 365 articles and in-depth review of stakeholder behavior-focused articles have identified research gaps in the field of sustainability and cosmetics. The findings of this review serve as a foundation for future research agendas, aiming to advance knowledge in these areas. The following are the research gaps identified:

- Apart from Italy, Spain, the United States, France, South Korea, United Kingdom, the number of studies conducted in developed countries is minimal. Developed countries with access to resources need to invest more in research and development to improve the sustainability of the cosmetic industry. Studies performed in Canada (3 articles), Norway (2

articles), Japan (2 articles), Australia (2 articles), Denmark (1 article), Netherlands (1 article), and Iceland (1 article) are limited and require scholars' attention.

- Similarly, although there is more effort from some developing countries, such as Brazil, India, and China, the studies from other developing countries are so little or even missing from the chart. Considering the growth in the global cosmetic industry, social and environmental impacts of cosmetics, and trends in international trade, attention from the academic community from both developed and developing countries is required to eliminate the impact. It is important to acknowledge that this issue transcends geographical boundaries and demands a collaborative effort on a global scale for effective resolution.
- Chemistry, chemical engineering, pharmacy, and pharmacology are the disciplines with the highest number of research in sustainability and cosmetics. The effort from these disciplines has resulted in studies in “Ingredient and formulation,” “Process and technology,” “Green chemistry,” and some of the studies in the “Social and environmental impact” groups. However, the number of studies in social science fields is very minimal. This systematic literature review observed a concerning lack of attention from social scientists and policy researchers toward the sustainability of the cosmetic industry, indicating a critical need for increased focus and research in this area. A holistic socio-economic perspective (considering chemical science, engineering perspective, and social changes) needs to be developed within the field of cosmetics and sustainability research.
- The category of stakeholder behavior has the lowest number of research publications compared to other categories. However, the behavior of all stakeholders has a vital role in promoting the sustainability of the cosmetic industry. Understanding the interrelationship between stakeholders and how they behave is important in designing policies, products, and strategies. Furthermore, it is important to note that the way people behave changes over time due to factors such as immigration trends, information flow, and technological inventions. Therefore, continuous investigation of stakeholder behavior is vital in improving the sustainability of the industry.
- Currently, the highest number of behavior research is from Malaysia, and other developed or developing countries have minimum research in this field. In addition, countries such as Canada, Germany, the US, and the UK are accepting immigrant countries and are experiencing culture and social change even faster. Despite this fact, scholars' attention to

the behavior of stakeholders in different stages of the product life cycle in the cosmetic industry is limited and highlights the opportunity for future research.

- Additionally, cross-cultural studies are required to understand stakeholders' behavior after immigration. Understanding the connection between individuals' cultural backgrounds and how it impacts their current behaviors is beneficial in developing policies and strategies and designing products to enhance the sustainability of the industry.
- While many studies focus on consumer behavior, there is a notable gap in research examining the behaviors of other key stakeholders, including retailers, social media influencers, policymakers, and supply chain actors. Understanding the roles and behaviors of these stakeholders is imperative for developing comprehensive strategies that foster sustainability throughout the cosmetics industry value chain. Retailers, for instance, can influence sustainable purchasing decisions through their sourcing and marketing practices, while social media influencers can shape consumer attitudes and behaviors towards sustainable products. Policymakers play a crucial role in establishing regulations and incentives that promote sustainability, and supply chain actors are essential in ensuring the sustainable production and distribution of cosmetics.
- Moreover, while existing literature predominantly focuses on purchase behavior, there is a need for broader exploration encompassing dimensions such as sustainable consumption behavior and post-consumption behavior. Sustainable consumption behavior includes not only the choice of products but also how consumers use and dispose of these products. Post-consumption behavior, such as recycling and the disposal of cosmetic packaging, is critical for reducing environmental impact. Expanding research to include these areas will provide a more holistic understanding of how sustainability can be integrated at every stage of the product lifecycle, ultimately leading to more effective and comprehensive sustainability strategies in the cosmetics industry.
- This study identified a smaller number of studies of publications in the area of cosmetics and sustainability with the application of the LCA tool. Considering the variety of ingredients, technologies, strategies, and different life cycle stages from sourcing to waste management, the lack of application of LCA is evident. The researchers, practitioners, and policymakers are strongly recommended to apply LCA in the process of product and strategy development

- and decision-making process. Additionally, this tool can provide information to assist environmentally informed decisions in the process of procurement and consumption choices.
- There are opportunities for a deep literature review of publications grouped in the same theme category. Most review articles focused on particular ingredients, technologies, or processes. For example, Bom et al. (2019) offer a pharmaceutical perspective focusing on reviewing publications for common ingredients used in skincare products and their sustainable replacement. Future works should review a wider range of publications focused on cosmetics ingredients or technology development. On the other hand, Bilal, Mehmood, and Iqbal (2019) focused on the social impact and adverse consequences of cosmetic products. However, this review is limited to the health side of social sustainability. Therefore, there is an opportunity for a literature review considering all aspects of cosmetics' social sustainability, from health to fair trade and human rights. In Addition, there is a clear opportunity for researchers to deeply review publications with an application of LCA. This attempt will identify the research gaps in the application of LCA in the field and introduce opportunities.

2.6 Concluding Remarks

To achieve the research objectives, we analyzed 365 publications in cosmetics and sustainability, searching Web of Science, and Scopus, databases for research articles with selected keywords in the title and keywords published between 1992 and 2022. For this Systematic Literature Review, articles resulting from the database search were read, analyzed, and classified into categories related to methodological procedures, context, and research areas.

The result showed an increasing trend in the number of publications during the last three decades, with a sharper increase during the last five years. This review identified that Italy has the largest number of research articles, and Brazil has the largest number of articles among emerging economies. Sustainability has the highest number of publications in this area. However, the selected articles are published in 219 different journals from various disciplines and countries.

Through VOSviewer keyword visualization, the most frequently used keywords were identified, and the chance for their simultaneous appearance was analyzed. The result is useful for researchers and academics to understand the chance of co-appearance of keywords and determine keywords with more or less interest for research in the field.

For the research profiling development, articles were reviewed and categorized into seven research focus categories and each category was systematically analyzed with the purpose of identifying the characteristics of the scholarly works including their research approach, the themes that emerged and global contribution in this research domain. This systematic review focused on understanding how research has evolved over the past 30 years. By exploring trends related to research topics, locations, and journals, it demonstrates a clear focus on the evolution and development of the field. The comprehensive analysis of trends, methodologies, and stakeholder behavior suggests a broader inquiry into the current state and direction of research in cosmetics and sustainability. This combination of bibliometric analysis and systematic review elements provides a richer and more nuanced picture of the field than a purely bibliometric review, synthesizing knowledge to inform future research and practice.

This systematic literature review identified gaps in recognizing the disciplines with less interest in cosmetics research areas, techniques with minimum work, and countries with the least research in the field. This article is recommended to researchers and academics interested in cosmetics and sustainability areas and practitioners in cosmetic corporations who intend to foster the corporation's sustainability to determine the areas with existing knowledge and opportunities for future research.

Finally, his study has limitations. The review used the databases of Scopus and Web of Science, and other databases are not covered. Additionally, this systematic review only focused on the general articles. Other peer-reviewed publications, such as conference papers, book chapters, and notes that may offer an important contribution, are not considered for this review. Another limitation is the slight difference between definitions of cosmetics in different regions or countries. It may result in minor differences in products under research in different countries.

Chapter 3 : Sustainability messaging in colour cosmetics: A cross-category study of communication strategies and greenwashing

Abstract

This study examines how cosmetic brands integrate sustainability into their marketing communication on online sales platforms, focusing on the colour cosmetics category—specifically lipstick products, where sustainability refers to the ongoing effort to minimize negative environmental impacts, ensure social well-being, and promote long-term economic viability within the beauty industry. Guided by message framing theory and social construction framework, the research takes a mixed method and uses a combination of content analysis and mystery shopping of 223 lipstick products from three brand categories of leading brands, fast beauty brands, and sustainable. Products were evaluated based on transparency, communicated product attributes, sustainability-related claims, labels or certifications, communication about product-end-of-life and potential greenwashing tactics. The findings reveal significant differences in transparency, the use of ethical and environmental claims, labels or certifications, and the presence of greenwashing. Sustainable brands emphasize sustainability messaging but often under-communicate product performance. Fast beauty brands frequently highlight vegan and cruelty-free claims, though many lack third-party verification—raising concerns about greenwashing, particularly the sins of “no proof” and “vagueness.” Leading brands, despite their market dominance, are the least engaged in sustainability-related communication. Across all categories, brands selectively use terms and symbols that help construct social understandings of what sustainability means in the context of cosmetics—shaping consumer perceptions and expectations.

This study contributes to sustainability marketing literature by showing how brands use framing strategies to shape the meaning of sustainability in the cosmetics sector. It underscores the importance of message credibility, the risks of unverified sustainability-related claims, and the need for clearer regulatory oversight in digital marketing. The findings offer practical implications for brand strategy, consumer trust, and policy development in the expanding cosmetics e-commerce landscape.

3.1 Introduction

3.1.1 Overview

The cosmetics industry—an industry that includes skincare, makeup, haircare, fragrance, and other personal care products—is expanding rapidly, driven by demographic shifts, changing lifestyles, and digital commerce, with the rapid growth of e-commerce significantly accelerating market expansion and reshaping consumer engagement (Ludmir, 2025; Statista, 2025; Aslam, 2023). Alongside this growth, there is rising concern over the sector’s environmental and social impacts, including overproduction, waste, labour exploitation, and misleading sustainability claims (Alviri et al., 2025; Bom et al., 2019). In this context, the market has seen the rise of distinct brand types aiming to serve different consumer segments—sustainability-oriented brands that emphasize ethical and environmental responsibility (Rocca et al., 2022), and fast beauty brands that prioritize affordability, speed, and trend responsiveness (Jeelani, 2020; Ratri & Arifianto, 2024).

Among cosmetic categories, colour cosmetics—products used for decorative purposes like lipstick and foundation—are particularly influenced by aesthetics and fashion preferences (Cunningham, 1992; Etcoff et al., 2011). As consumer expectations around sustainability grow (Bom et al., 2019), questions arise about whether, and to what extent, brands are integrating sustainability into their product communication.

Despite increased academic interest in sustainable branding, there is a notable gap in research that systematically compares how different types of cosmetic brands communicate sustainability—particularly within the colour cosmetics segment. This study addresses that gap by offering the first comparative analysis of how industry-leading brands, fast beauty brands - those characterized by rapid production, trend responsiveness, and low price- and sustainable brands integrate sustainability into their online sale platform communication.

What makes this study unique is its focus on explicit sustainability-related claims, internal and external labels or certifications, and end-of-life messaging—while also assessing the presence of greenwashing and the degree of transparency and credibility across brand types. Guided by message framing theory and a social constructionist perspective, the study explores how

sustainability narratives are constructed, substantiated, or obscured through marketing communication.

The study aims to identify how sustainability is framed through both rational and emotional appeals, to compare communication strategies across brand categories, to assess the clarity and credibility of sustainability claims, and to identify gap in existing brand communication. It further seeks to offer recommendations for improving transparency, enhancing brand differentiation, and strengthening consumer trust in the sector. Based on a predefined brand selection method, the study includes 223 lipstick products collected from brand websites: 103 from industry-leading brands, 64 from fast beauty brands, and 56 from sustainable cosmetics brands. By addressing these objectives, the study contributes to a deeper understanding of how sustainability is—or is not—being meaningfully integrated into cosmetic marketing to customers. It offers practical insights for researchers to build on current knowledge, helps consumers make more informed purchasing decisions, guides brands in developing more authentic and effective communication, and assists policymakers in establishing clearer guidelines for sustainability claims in the beauty sector.

This study also makes several distinct contributions. Empirically, it is the first comparative investigation of colour cosmetic sustainability communication across leading, fast beauty, and sustainability-oriented brands, and the first such analysis conducted in the Canadian context. Theoretically, it extends message framing theory as a lens to analyze how brands construct the meaning of sustainable colour cosmetics across categories. Methodologically, it develops a tool to assess the integration of sustainability into product-level marketing communication. Finally, it contributes to the field of marketing by shifting the focus from corporate-level sustainability narratives to product-level communication, offering new insights into how sustainability is explicitly integrated, framed, and substantiated—or left vague—in cosmetic brand messaging.

The aim of this study is to conduct a comparative analysis of how leading, fast beauty, and sustainable colour cosmetic brands communicate sustainability through their online sales platforms. To achieve this aim, the study pursues the following objectives:

- Identify how sustainability is framed through rational and emotional appeals.
- Compare communication strategies across brand categories.
- Assess the clarity, credibility, and transparency of sustainability claims.

- Identify gaps and limitations in brand communication practices.

3.1.2 Background

The cosmetics industry is experiencing rapid growth, fueled by rising populations, shifting lifestyle preferences, and the global expansion of e-commerce (Alviri et al., 2025). However, this growth has also generated significant social and environmental concerns. Research points to the industry's contribution to deforestation, overexploitation of minerals, greenhouse gas emissions, and widespread pollution (Alviri et al., 2025; Bom et al., 2019; Cinelli et al., 2019; Anagnosti et al., 2021). For instance, each year, the sector generates more than 120 billion units of packaging, of which an estimated 95% is discarded after a single use, with only 14% entering recycling streams (O'Brian, 2022). Beyond packaging waste, production processes are highly resource-intensive: in 2020 alone, the industry consumed approximately 10.4 million tonnes of water, contributing not only to inefficiencies in resource use but also to the contamination of aquatic systems (Biceika, 2022). The sector's heavy reliance on palm oil also carries severe ecological costs—around 70% of cosmetics contain palm-derived ingredients (Warn, 2021), and palm oil cultivation has been linked to extensive deforestation, with estimates suggesting that land equivalent to 300 football fields is cleared every hour, destroying habitats for endangered species (Davison, 2024).

Additionally, issues such as labour exploitation, human health risks, and limited access to affordable sustainable products challenge the industry's social sustainability (Das & Goel, 2021; Wahab, 2019; Bilal et al., 2020; Anastas & Zimmerman, 2018). For instance, mica mining in India employs more than 22,000 children in hazardous conditions (BSR, 2022). Beyond labour concerns, chemical-related health disparities are also profound. Studies indicate that 53% of Black and Latina women use personal care products containing formaldehyde-releasing preservatives on a daily basis, compounding known risks of cancer and reproductive harm (Ajasa, 2025). At the same time, the industry's marketing practices perpetuate psychological harms by reinforcing unrealistic beauty ideals, which contribute to body dissatisfaction and diminished self-esteem (Enriquez et al., 2025). Meanwhile, novel marketing strategies and the rise of fast beauty continue to fuel consumption, exacerbating these environmental and social pressures.

One emerging trend adding to this complexity is the rise of “fast beauty,” a model mirroring fast fashion in its rapid production, low-cost offerings, and trend-based marketing. Like fast fashion (Joy et al., 2015; Niinimäki et al., 2020; Bläse et al., 2023), fast beauty often introduces limited-edition products to drive impulsive purchases and stimulate frequent consumption. This overproduction leads to increased resource depletion, waste generation, and worker exploitation (Jeelani, 2020; Ratri & Arifianto, 2024). As such, fast beauty significantly burdens the industry's sustainability profile.

Colour cosmetics—a major category within the industry—illustrate these dynamics. Colour cosmetics are products applied primarily for decorative purposes (Law Insider, 2025). This segment includes items designed to enhance appearance, such as foundation, lipstick, and eye makeup (Dube & Dube, 2023). Unlike other products that might be formulated for therapeutic or protective functions, colour cosmetics focus on aesthetic enhancement. Deeply embedded in beauty norms, colour cosmetics are shaped by cultural trends, social media influence, and evolving standards of attractiveness (Cunningham, 1992; Etcoff et al., 2011). The demand for cleaner, safer, and more ethical colour cosmetics is growing, with consumers increasingly drawn to natural and organic alternatives (Statista, 2024; Coherent Market Insights, 2025). While “natural” does not fully capture all dimensions of sustainability, forecasts for the natural cosmetics segment, projected to grow at a compound annual growth rate of 5.75% between 2025 and 2030 (Statista, 2025b), indicate rising consumer interest in products perceived as environmentally and ethically aligned. Nonetheless, concerns over harmful ingredients and misleading claims remain prevalent (Drenik, 2024).

For the purposes of this study, the attention will be centered on one cosmetic product representing the colour cosmetics: lipsticks. The choice of lipsticks is influenced by the "Lipstick Index" theory, which discusses that lipsticks serve as an affordable luxury. Remarkably, even during economic downturns, consumers continue or even increase their lipstick purchases, knowing them as an accessible indulgence (Gerstell et al, 2020; Khvatova & Thakur-Weigold, 2019). Lipsticks also serve as iconic tools of identity, empowerment, and self-expression, with psychological benefits linked to confidence and well-being (Global Cosmetic Industry, 2022). Given their significance and the insight they can offer into the brands communication messaging, this study will strategically focus on lipsticks as a colour cosmetic product. Lipstick is defined as

a coloured cosmetic product for lips (Merriam-webster, 2024) that provides colour and texture (Britannica, 2024). Lip related cosmetic products are introduced to the market in various titles such as lip cream, lipstick, lip colour, lip mousse, lip gloss, and tinted lip cream. The study selected the products that provide the main functionality of lipstick as colour and texture and product with other functionality such as providing shine or just hydration were removed.

In response to growing awareness regarding sustainability-related issues among consumers, many cosmetic brands have adopted green marketing strategies for communicating their sustainability efforts. These aim to position companies as environmentally and socially responsible by highlighting sustainability initiatives (Biloslavo & Trnavčević, 2009; Seelig et al., 2021). However, green marketing is not without its limitations (Peattie & Crane, 2005). Rather than reducing consumption, it often encourages increased purchasing of "green" products, contributing to the so-called rebound effect—where sustainability benefits are offset by greater volume consumption (Binswanger, 2001). Compounding this issue is the risk of greenwashing—making misleading or unverifiable claims about sustainable practices—which can damage consumer trust (Delmas & Burbano, 2011).

Authentic sustainability communication is thus a key challenge in the cosmetics industry. While labels and third-party certifications offer a means to verify environmental and social claims, their effectiveness depends on clarity, credibility, and transparency (Horne et al., 2009; Prieto-Sandoval et al., 2016). Brands must walk a fine line between promoting their sustainability efforts and avoiding exaggerated or vague messaging that undermines consumer confidence.

Despite growing academic attention to sustainability communication in the cosmetics industry—including studies on scientific language (Kenalemang-Palm & Eriksson, 2023), the impact of environmental and social claims (Grappe et al., 2022; Oe & Yamaoka, 2022; Teixeira et al., 2023), green messaging strategies (Seelig et al., 2021), corporate social responsibility communication (Pönkänen & Wedendal, 2018), and creativity in messaging and consumer perception (Alevizou, 2021)—there remains a notable gap in research that systematically compares the communication and marketing practices of different types of cosmetic brands for colour cosmetics. This study fills that gap by comparing how three distinct brand categories—industry-leading brands, fast beauty brands, and sustainable cosmetics brands—communicate

sustainability through their online sales platforms. It evaluates transparency, sustainability-related claims in both text and visuals, labels and certifications, product end-of-life related information, and greenwashing. This study is unique in being the first to investigate how sustainability is integrated into the communication and marketing strategies of different brand categories within the colour cosmetics sector. Overview of studies on sustainability in marketing communication is provided in Table 3.1.

Table 3.1: Overview of studies on sustainability communication in the cosmetics industry

Study	Focus of the Study
Kenalemang-Palm & Eriksson (2023)	Analyzes how green anti-ageing cosmetics are marketed online using scientific cues and ethical self-care framing, while omitting scientific transparency.
Grappe et al. (2022)	Investigates how absence- vs. presence-framed health and environmental claims influence consumer attitudes and purchase intentions in personal care, showing stronger impact of absence framing.
Oe & Yamaoka (2022)	Examines the influence of communicating sustainability and ethical producer behaviour on consumer purchasing in Thailand, finding sustainability communication significantly impacts consumer behaviour more than ethical behaviour alone.
Teixeira et al. (2023)	Explores how online strategies like e-WOM and brand content shape consumer purchase intentions for green cosmetics, using the theory of planned behaviour as a framework.
Seelig et al. (2021)	Uses content analysis to assess how skin care and cosmetic websites construct green brand identity through environmental framing, finding a shift toward more substantive claims alongside persistent associative language.
Pönkänen & Wedendal (2018)	Investigates best practices in external CSR communication among leading cosmetic brands, highlighting themes such as holistic communication, product transparency, emotional narratives, and localized advocacy, offering benchmarks and future-oriented strategies.
Alevizou (2021)	Explores how beauty brands use bundles of creative on-pack sustainability claims, highlighting the risk of consumer confusion and greenwashing; emphasizes the need for originality and clarity in sustainability messaging design.
Seelig (2023)	Deconstructs how three popular skincare brands use visuals, colour, and text to build a green identity online, revealing inconsistencies between brand claims and actual environmental practices.
Current study	Compares sustainability communication across three brand categories (leading, fast beauty, sustainable) in colour cosmetics; evaluates transparency, sustainability-related claims, labels and certifications, greenwashing, end-of-life messaging, and visual/textual integration.

While some studies explore the use of visual and design-based cues—such as natural colours and symbolic imagery—to construct an environmentally responsible brand image (Segev et al., 2016; Gephart et al., 2011), this study focuses on explicit sustainability-related claims made in product marketing by investigating marketing communication of 223 products (103 leading brands products, 64 fast beauty products, and 56 sustainable products). These include verifiable terms such as vegan, cruelty-free, natural, organic, and sustainably sourced, as well as references to social and environmental responsibility, safety, or product end-of-life information. This approach aligns with the distinction between substantive and associative claims proposed by Carlson et al. (1996) and finding of Seelig et al. (2021) regarding rise of substantive claims in marketing. Substantive claims are those that offer concrete, tangible information—such as the use of biodegradable materials or third-party certifications—whereas associative claims may suggest greenness without evidentiary support, such as using nature-inspired colours like green or beige to imply naturalness, or white to suggest cleanliness. In this study, analysis is focused on substantive claims made explicitly in the product descriptions and visuals (such as vegan or safe), thereby excluding symbolic or aesthetic cues that imply greenness without directly stating it.

This research draws on message framing theory (Kahneman & Tversky, 1979) to analyze how cosmetic brands construct and communicate sustainability in their colour cosmetic marketing. Framing theory suggests that the way information is presented—through selective emphasis or repetition—shapes how it is interpreted by audiences (Entman, 1993). In the context of sustainability communication, brands frame their environmental and social sustainability by highlighting specific product attributes such as being vegan, natural, cruelty-free, or safe. These claims, whether with evidence or not, guide consumer perceptions of what constitutes a “sustainable” product. Building on the broader concept of social construction (Berger & Luckmann, 1966), this study understands framing not simply as a communication strategy but as a process through which meanings are actively shaped. By analyzing the frequency and distribution of sustainability-related claims across brand categories, along with the extent to which these claims are supported by credible evidence, the study examines how brands construct particular interpretations of sustainability. It also investigates the presence of vague or unverified claims to assess whether and how greenwashing practices are used to reinforce these framings. Rather than focusing on consumer interpretation, this research emphasizes how sustainability is

presented and positioned through marketing communication across different types of cosmetic brands.

While claims such as vegan, natural, organic, or cruelty-free are often associated with sustainability (Seelig et al., 2021), their presence does not necessarily indicate that a product is truly sustainable (Bom et al., 2019). These attributes may reflect specific ethical or environmental considerations, but they do not account for the broader lifecycle impacts of the product. Nonetheless, such claims are frequently used by brands to construct a sustainability narrative (Seelig et al., 2021)—whether accurate or not—and play a central role in how sustainability is framed in product communication.

While ethics and sustainability often overlap in brand communication (Seelig et al., 2019), they are not identical. Sustainability typically addresses environmental and social practices aimed at long-term well-being, whereas ethics involves broader moral concerns. Academic discussions note the nuances, overlaps, and trade-offs between the two (Bansal & Song, 2017). This study does not seek to unpack these concepts but includes all claims that contribute to a perceived alignment with sustainability, focusing on how they are communicated to consumers.

For this reason, the study systematically examines the presence of these predominant sustainability-related keywords, as they are among the most commonly used terms through which cosmetic brands frame their environmental and social positioning. In addition to these primary keywords, the analysis also includes other claims that signal broader value-based commitments—such as wildcrafted, from farm to beauty, or Indigenous-owned—to provide a more complete picture of how sustainability and related values are communicated. By evaluating both the frequency and evidentiary basis of these claims, the study aims to analyze brand messaging, assess the credibility of sustainability claims, and identify patterns of greenwashing across different brand categories.

This research has four main objectives. First, it aims to identify the message framing techniques used in the sustainability communication of cosmetic brands on online platforms, focusing on both rational and emotional appeals. Second, it seeks to compare communication strategies across three brand categories—leading, fast beauty, and sustainable cosmetics—in order to uncover trends, patterns, and differences in brand positioning. Third, the study highlights

communication gaps and opportunities, particularly in how brands balance messaging around product performance with sustainability-related claims. Finally, it offers actionable recommendations for sustainable brands to expand their market reach, strengthen brand differentiation, and maintain credibility and consumer trust.

By addressing these objectives, this study contributes to the literature on integrating sustainability into communication and sustainability marketing in the cosmetics sector. The insights generated will be valuable not only for researchers but also for brands, consumers, and policymakers seeking to foster more transparent and sustainable practices in an industry poised for continued growth. Figure 3.1 provides the conceptual map of the study.

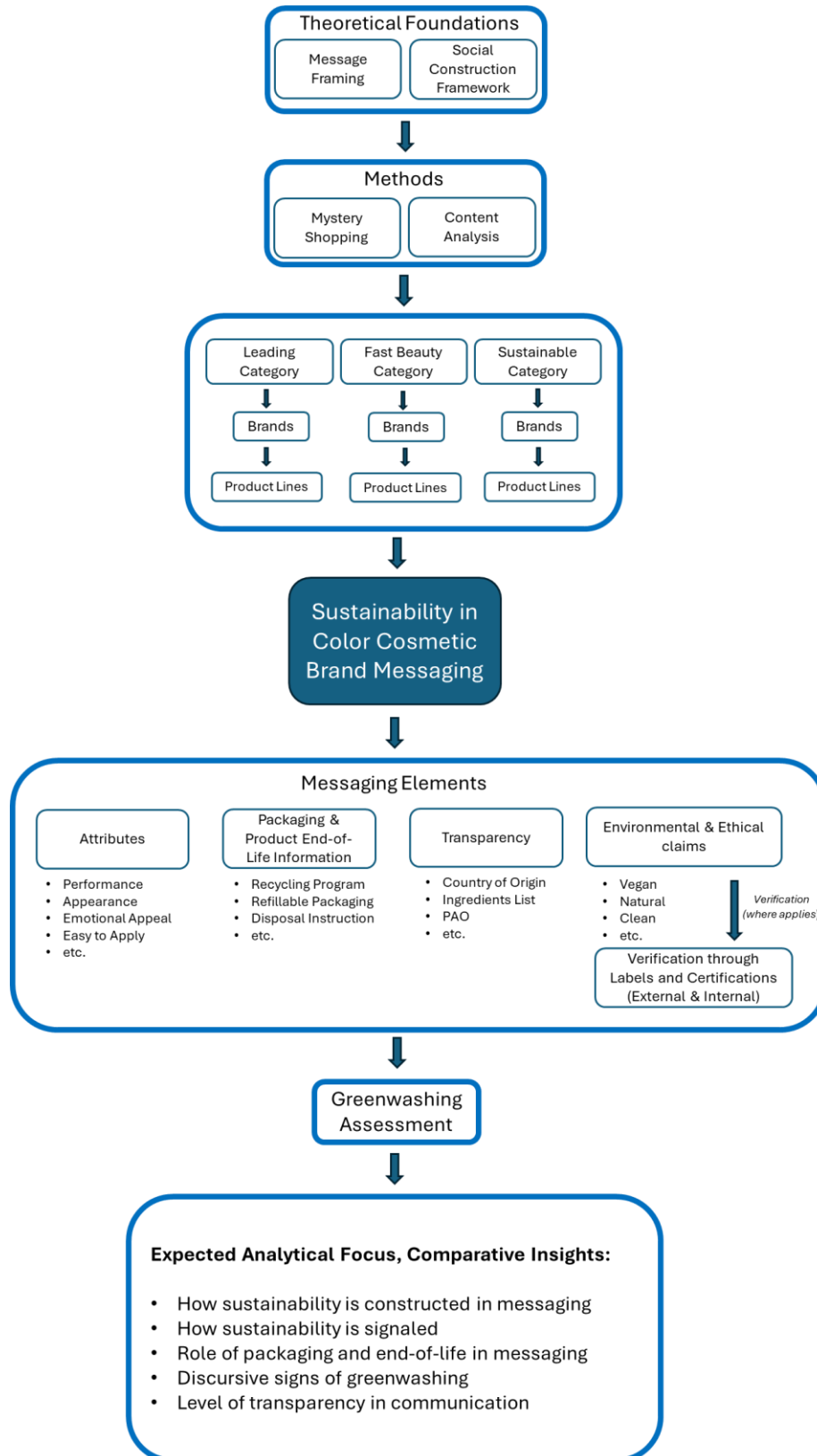


Figure 3.1: Conceptual map of the study (developed by author)

3.2 Methodology

Informed by established literature on sustainability communication (see Table 3.2), this study employed several criteria to assess how cosmetic brands convey sustainability at the product level. Transparency was evaluated through the presence or absence of information related to ingredients, sourcing practices, country of origin, and “period after opening” (PAO). A benefit emphasis analysis examined the main product advantages highlighted by brands—ranging from performance, appearance, and ease of application to emotional appeals and sustainability. Emotional appeals included terms evoking confidence, joy, or empowerment, while sustainability-related benefits referenced environmental protection, ethical sourcing, and related values.

The scope and credibility of sustainability claims were further assessed, with special attention to third-party certifications to evaluate the legitimacy of brands’ messaging. A critical part of the analysis involved identifying potential greenwashing—the use of vague, ambiguous, or unverified sustainability claims, misleading visuals, or unsubstantiated labels or certifications that could distort consumer perception.

As discussed in the background section, ethics and sustainability often overlap in brand communication but are not entirely interchangeable. While sustainability focuses on long-term environmental and social impacts, ethics refers more broadly to moral principles such as animal welfare and corporate responsibility. Academic debates underscore the nuanced distinctions and overlap between the two (Bansal & Song, 2017). For instance, cruelty-free claims—indicating that products are not tested on animals—arise from ethical considerations but are often framed within broader sustainability narratives. Similarly, fair trade certifications cover both ethical and sustainability domains. While these conceptual differences matter, this study does not seek to unpack them. Instead, it includes any claim that contributes to the impression of sustainability. Additionally, the study acknowledges that some claims made by brands, like 'fair trade' or 'safe,' may span both environmental and social domains."

Additionally, the analysis considered how brands addressed end-of-life product communication, such as recyclability, refillability, or repurposing potential. Finally, all parameters

were compared across the three brand categories—sustainable, fast beauty, and leading brands—using data collected from 223 products through mystery shopping and content analysis.

Table 3.2: Theoretical and empirical rationale for assessing sustainability communication criteria developed by the author

Assessment criteria	Relevant studies	Notes	Variable
Transparency	<p>Cambier & Poncin (2020): Transparency signals in marketing build brand integrity and trust, especially for low-reputation brands.</p> <p>Ospital et al. (2023): Defines product transparency (e.g., traceability, lifecycle info) and shows gaps in online communication.</p> <p>Health Canada (2024): Requires cosmetics to display ingredients, size, and usage instructions on labels.</p>	<p>Transparency in sustainability communication shapes brand trust and should include clear product-level details like traceability and lifecycle information. Since ingredient lists, size, and usage instructions are legally required on physical labels, the same level of disclosure is relevant and necessary on online sales platforms where consumers make purchasing decisions.</p>	<p>Country of origin Origin of at least one ingredient Ingredient list Usage instruction Size Period After Opening</p>
Product Attributes	<p>Trzebiński et al. (2023) examines the effect of abstractness in descriptions on trust and intent</p> <p>Khan et al. (2022) analyzes how different green attributes impact trust and how green marketing mediates purchasing decisions.</p> <p>Witek (2020) investigates the importance of eco-attributes in purchase decisions; finds they often rank below hedonic/economic factors.</p> <p>Jin et al. (2017) uses neuroscience to show how attribute framing (positive vs. negative) affects attention and decision-making.</p>	<p>*Concrete product descriptions enhance consumer trust and purchase intent. *Clearly marketed sustainability attributes build brand trust. *Positive attitudes toward eco-products exist, but other factors often influence purchasing. *Message framing—especially positive framing—shapes consumer perception and attention. *These findings validate the importance of analyzing how sustainability claims are communicated.</p>	<p>Performance, Appearance, Emotional Appeal, Dermatologist Tested, Sustainable Practices, Trendy/Innovative, Inclusion of Specific Ingredients, Exclusion of Certain Ingredients, Consumer Tested, Easy to Apply, Celebrity Favourite, Best Seller, Media Endorsement, Colour Intensity & Pigmentation, Comfortable Texture, Precise Application, Diverse Colour Shades, Shades for Diverse Skin Tones, Long-lasting, Moisturizing, No Drying, Plumper, Transfer Resistance</p>
Sustainability-related Claims	<p>Grappe et al., (2021) shows that consumer response to cruelty-free claims depends on their perceived credibility, highlighting why it matters what exact words are used.</p>	<p>Explicit ethical and environmental claims influence consumer trust, attitudes, and alignment with brand values. Therefore, it is important</p>	<p>Organic, Vegan, Natural, Safe, Clean, Cruelty-free, Ethical sourcing / Fair trade, Other</p>

	<p>O'Connor et al., (2017) finds that specific claims like "Fair Trade" reflect moral and identity-based motivations, which is why brands may choose to include these claims explicitly.</p> <p>Grebmer & Diefenbach, (2020) demonstrates that the format of green messages affects credibility, showing the importance of analyzing what is said in words versus what is implied.</p>	<p>to analyze the specific language brands use to communicate these claims on product pages.</p>	
Labels and certifications	<p>Varshini (2024) highlights the importance of certified labels as verified claims that help bridge consumer demand for sustainability with product authenticity. Distinguishes between certified and uncertified labels.</p> <p>Szaban et al. (2025) shows that sustainability certifications influence consumer price perception and purchase behaviour, especially for eco-conscious consumers.</p> <p>Leire & Thidell (2005) finds that while many consumers recognize and trust labels and certifications, actual use depends on context and moment of purchase.</p>	<p>Assessing labels and certifications on product webpages is relevant, as studies show that certified labels influence consumer trust, price perception, and purchase decisions when presented clearly.</p>	<p>Vegan (Internal), Vegan Society (External), Organic (Internal), Organic (External), Sustainable/Ethical sourcing (Internal), Sustainable/Ethical sourcing (External), Cruelty free (Internal), Leaping Bunny (External), PETA (External), Clean (Internal), Clean (External), B Corporation (External), 1% for the Planet (External), EWG verified (External), American Vegetarian Association (External), Other (Internal), Other (External)</p>
Product End of Life	<p>Wojciechowska & Wiszumirska (2022) Highlights the need for clear, mandatory recycling instructions on packaging to support consumer waste sorting.</p> <p>Martins & Marto (2023) supports assessing whether brands guide consumers on how to dispose of or reuse packaging as part of sustainable communication.</p> <p>Nciri et al. (2022) demonstrates that leftover cosmetic product waste (e.g., lipstick) has environmental</p>	<p>*Clear end-of-life communication is essential to effective sustainability messaging. *Recycling or reuse instructions empower consumers to make environmentally responsible choices. *Addressing the environmental impact of residual product (not just packaging) highlights the importance of comprehensive disposal guidance.</p>	<p>Recycling program and disposal instruction, Packaging sustainability claims</p>

	impact; justifies inclusion of product remainder in sustainability messaging.		
Greenwashing	<p>Gopakumar & Dananjayan (2025) shows that linking cosmetics to nature is a long-standing strategy, revealing continuity between past romanticized marketing and modern greenwashing.</p> <p>Adamkiewicz et al. (2022) emphasizes how greenwashing undermines consumer trust and the implementation of truly sustainable practices.</p> <p>TerraChoice (2010) provides a well-established typology of misleading environmental claims, which can be used to evaluate the credibility of cosmetic brands' sustainability messaging.</p>	<p>*Greenwashing is a persistent challenge in sustainability communication.</p> <p>*It erodes consumer trust and diverts attention from authentic sustainability efforts.</p> <p>*Historical use of nature-based marketing in cosmetics highlights the long-standing presence of greenwashing in the industry.</p> <p>*The “Seven Sins of greenwashing” framework provides a valuable tool for evaluating the credibility of environmental claims.</p>	<p>No proof, Vagueness, Hidden trade-offs, Irrelevant claims, Lesser of two evils, Worshiping false labels, Fibbing</p>

3.2.1 Research type and method

This study adopts a mixed-methods research design, integrating both quantitative and qualitative approaches to offer a comprehensive analysis of how cosmetic brands communicate sustainability and other values. The quantitative component involves structured criteria and statistical analysis to examine brand messaging, environmental and social claims, product attributes, and related variables across different brand categories. This approach enables the identification of patterns and relationships through numerical data.

In addition, a qualitative approach was employed to gain deeper insights into the context and content of brand communications. Using methods of mystery shopping and content analysis, the study collects rich qualitative data on how brands present themselves to consumers—particularly in relation to product attributes and sustainability claims. This dual-method strategy not only quantifies the communication of specific attributes but also uncovers the underlying narratives within brand messaging. The integration of both quantitative and qualitative methods enhances the analysis, providing a more holistic understanding of how brands convey sustainability values.

Mystery shopping is a qualitative research method commonly used to evaluate service quality, compliance with brand standards, and overall customer experience across various industries (Wilson, 1998a; Douglas, 2015). It involves trained individuals acting as regular customers to assess specific elements of business performance based on predefined criteria, such as employee behaviour, product knowledge, and brand consistency (Grove & Fisk, 1992). By offering unbiased, firsthand observations, this method reveals how businesses present themselves to consumers. In this study, mystery shopping serves as a valuable approach for analyzing how colour cosmetic brands communicate their strategies across digital platforms. While traditionally used to assess in-store shopping experiences, its application has expanded to online retail environments in response to the growth of e-commerce (Santoso et al., 2021).

To complement these experiential observations, content analysis was used to systematically examine the structure, language, and thematic framing of sustainability within brand communication. Content analysis is a method used to identify and interpret recurring patterns, claims, and visual or textual markers in media and promotional materials (Harwood & Garry, 2003). In this study, content analysis focused on sustainability-related elements in lipstick marketing, including sustainability-related claims, the use of third-party certifications, guidance on product or packaging disposal, and indicators of potential greenwashing. This structured analysis enabled consistent comparisons across brands and supported an evaluation of the credibility and depth of sustainability narratives in lipstick advertising and communication.

Together, these methods offer both a contextualized, consumer-oriented view of sustainability messaging and a systematic analysis of its content. This dual perspective provides a robust foundation for evaluating how sustainability is integrated, framed, and differentiated in lipstick marketing across various brand categories.

3.2.2 Selection of brands

This study compares three categories of cosmetic brands—leading brands, fast beauty brands, and sustainable brands—to capture differences in how sustainability is communicated across distinct market positions. Fast beauty brands were included as they mirror the fast fashion model, emphasizing speed, affordability, and trend responsiveness, and have been widely criticized for their unsustainable practices. Sustainable brands, in contrast, explicitly position

themselves around environmental and social values, making sustainability-related claims a central part of their identity. Examining these two categories side by side allows for a comparison between brands that are often criticized for unsustainability and those that present sustainability as a defining attribute. Leading brands were also included to assess how dominant, established players in the cosmetics industry integrate sustainability into their messaging, thereby enabling comparisons between market leaders and strategically differentiated brands.

Each brand category was defined using specific criteria and identified through triangulation of multiple sources:

Leading brands were defined as those with dominant market share, long-standing industry presence, and strong consumer recognition. Identification relied on U.S. industry data as the ones introduced as leading brands (Statista, 2024), used as a proxy for the Canadian market due to the high level of overlap in product availability, consumer markets, and brand influence across both countries.

Fast beauty brands were defined as those operating under the fast beauty model, characterized by rapid product development, trend-driven launches, and affordability. Since no brand self-identifies as “fast beauty,” classification was based on secondary sources, including industry journals, trade publications, and widely cited beauty media (e.g., blogs and online magazines). Brands were included when at least two independent sources consistently described them as fast beauty. Moreover, cosmetic lines developed by fast fashion brands such as lipstick from H&M or Sheglam from Shien, were also included in this category, given their alignment with fast beauty principles in terms of speed, affordability, and trend responsiveness. Additionally, the availability of these brands in Canada was a key factor in the selection process.

Sustainable brands were defined as those that explicitly position themselves around environmental and social responsibility through their business models, product offerings, or communication strategies. Categorization followed a triangulation approach, drawing on industry reports, sustainability-focused publications, and media coverage. Brands were included when at least two independent sources consistently identified them as sustainability-oriented. Availability

in the Canadian market was verified to ensure relevance, and only brands offering lipsticks were selected.

Brand selection for fast beauty and sustainable categories followed a pragmatic, reputation-based approach, reflecting the fact that these categories are constructed primarily through media and industry discourse rather than through formal self-identification by brands. Snowball sampling was also applied: beginning with well-known brands in each category, additional brands were identified through repeated references in industry reports, trade journals, and widely cited beauty media. Relying on multiple, independent sources ensured that the selected blogs and media outlets were genuinely influential within the cosmetics industry, as reflected in their readership, frequency of citation, and demonstrated role in shaping both consumer perceptions and industry narratives.

In cases where a brand could fit more than one category—for example, fast beauty brands that also rank among industry leaders (e.g. ColourPop)—the classification was determined based on the brand’s primary positioning strategy. Brands recognized in industry journals as fast beauty were categorized within the fast beauty group, even when they also rank among industry leaders economically. This approach allows for a meaningful comparison between brand categories with traditional positions and those with newer, strategically differentiated identities. The selection of brands for this study was based on specific criteria tailored to each of the three categories.

One potential ambiguity concerned the classification of ColourPop, which has been described in industry sources as both a leading brand and a fast beauty brand. To avoid duplication across categories and maintain consistency in the dataset, ColourPop was categorized within the fast beauty group. This categorization decision had the potential to influence the results, so a sensitivity analysis was performed. Specifically, all ColourPop products were excluded from the dataset and the main statistical tests (including Chi-square tests of greenwashing rates) were re-run. This approach ensured that the robustness of the findings was assessed in relation to alternative brand categorizations.

Based on the above brand selection method and collecting all lipstick product lines of each brand, 223 products (103 leading brands products, 64 fast beauty products, and 56 sustainable

cosmetics products) were chosen for this study (see Table 3.3 and Appendix A for product line details).

Table 3.3: Brand categories and number of product lines across leading, fast beauty, and sustainable cosmetic brands

Leading Brands	# of Product Lines	Fast Beauty Brands	# of Product Lines	Sustainable Brands	# of Product Lines
Avon	6	BH Cosmetics	3	100% Pure	5
bareMinerals	3	ColourPop	5	Axiology Beauty	2
Covergirl	3	elf Cosmetics	4	Cheekbone Beauty	2
Estée Lauder	5	Essence Cosmetics	7	Clarins	3
Fenty Beauty	8	H&M	2	dab herb makeup	4
Glossier	2	Kylie Cosmetics	4	Elate Beauty	2
L'Oréal Paris	15	Lime Crime Cosmetics	3	Gabriel Cosmetics	4
MAC	21	Milk Makeup	2	HIGHR Collective	1
Maybelline	16	NYX Cosmetics	6	Ilia Beauty	5
NARS Cosmetics	11	Sheglam	25	Juice Beauty	2
Revlon	9	Winky Lux	3	Kjaer Weis	4
Urban Decay	4			La Bouche Rouge Paris	1
				Lush	4
				RMS Beauty	4
				Saie	1
				The Body Shop	4
				Well People	3
				Zakiella	3
Total: 103		Total: 64		Total: 56	
Overall: 223					

3.2.3 Data Collection Channels

Online product descriptions on brands' websites are important in shaping consumer perceptions and decisions (Yang, 2010). These descriptions not only detail product features but also echo the brand's values and unique selling points. Nowadays, customers more often use e-commerce for their purchase (Vandic et al., 2018; Statista, 2025) and the webpage's approach influences purchase decisions (Wang et al., 2013; Yang, 2010). This research examines the official brand websites to investigate how brands communicate about their lipsticks. It highlights the subtle differences in language and product characteristics that they emphasize.

3.2.4 Inter-rater reliability

To collect data on brand messaging strategies, a mystery shopping method was used, where trained researchers posed as typical consumers to observe and document messaging across online platforms. Researchers received training on the coding framework and practiced with sample products to calibrate interpretations and ensure consistency before full data collection (see Appendix D for detail). Two researchers followed structured guidelines to ensure consistency and were trained to evaluate websites using predefined criteria. Inter-rater reliability was tested by having the researchers independently assess the same products; results were compared for consistency, and discrepancies were reviewed to refine the process. The inter-rater agreement was 84.5%, calculated as the number of agreements divided by the total coding decisions (Lombard et al., 2002). This level exceeds the commonly accepted 80% threshold for reliability in content analysis, demonstrating strong consistency in the coding process. This approach minimized bias and enhanced the reliability and validity of the dataset, strengthening the study's conclusions.

3.2.5 Data analysis

Data for this study were collected using Qualtrics, where a structured questionnaire was developed to gather responses (Appendix C). The questionnaire was pre-coded, with each variable already assigned specific codes within the Qualtrics platform and was designed to capture substantive claims made in communication. Researchers had access to the questionnaire and used it to collect data from products webpages. Once the data collection was complete, the data were exported from Qualtrics into SPSS. Upon import, all variables came with their pre-assigned codes, facilitating the initial steps of analysis. During the data cleaning process, the dataset was reviewed

for any inconsistencies or missing values. Minimal adjustments were required, such as adding or editing certain variables to ensure the data met the necessary analysis requirements. After cleaning, the dataset was organized and formatted appropriately for statistical analysis, ensuring all variables were accurately labeled and categorized. This preparation process ensured that the data were reliable and ready for the statistical tests conducted in SPSS.

Data analysis was conducted using SPSS IBM SPSS 29 (SPSS Inc., Chicago, IL). Descriptive statistics were first employed to assess the frequencies of various variables, providing an overview of the distribution of data related to brand messaging, sustainability claims, and other relevant product features across the selected brands. This step helped identify basic trends and patterns in the dataset. Chi-square tests were then performed to examine the association between brand categories (leading brands, fast beauty, and sustainable cosmetics) and various study variables, such as product attributes, sustainability claims, certifications, and product messaging. This test assessed whether different brand categories were significantly associated with specific sustainability practices or communication strategies. In cases where a significant association was observed, the effect size was calculated (using Cramér's V) to evaluate the strength of the relationship between the variables. Additionally, an ANOVA test was applied to compare the means across brand categories for selected variables related to the emphasis on various product attributes. Emphasis was coded on a scale where a score of 1 (mentioned once) indicated slight emphasis, 2 (mentioned twice) indicated moderate emphasis, and 3 (mentioned three or more times) indicated high emphasis. Due to lack of homogeneity of variances across groups for all variables, Welch's ANOVA was used as a more robust alternative to standard ANOVA. This adjustment accounts for unequal variances and provides more reliable results under these conditions. F-values and p -values were used to assess statistically significant differences across brand categories. This analytical approach offered a robust means of identifying variation in sustainability-related messaging strategies across brand types.

3.3 Results

3.3.1 Transparency

Transparency in marketing communication has become increasingly important as consumers seek greater insight into the products they purchase (Cambier & Poncin, 2020). Product transparency refers to the clear disclosure of information related to a product's traceability,

including details about suppliers and the product’s entire lifecycle (Ospital et al., 2023). This study investigates the level of transparency in marketing communication within the cosmetics industry, focusing specifically on the clarity and accessibility of information related to product origin, the availability of ingredient lists, the origin of at least one ingredient, the size of the product, and the availability of “period after opening” (PAO).

Country of origin:

Of the 223 products analyzed, 91% (203 products) did not specify the country of origin. Among the remaining products, 4.5% (10 products) identified the United States, 2.7% (six products) identified Canada, 1.3% (three products) identified China, and 0.4% (one product) identified the United Kingdom as the country of origin.

A chi-square test revealed significant differences in the indication of the country of origin across brand categories. As shown in Table 3.4, the majority of products across all brand categories did not specify their country of origin: 96.1% in leading brands (n = 103), 95.3% in fast beauty (n = 64), and 76.8% in sustainable cosmetics (n = 56). A statistically significant relationship was found between brand category and the indication of country of origin, with a Cramér’s *V* of 0.291, indicating a moderate association.

Table 3.4: Country of origin disclosure by brand category (in percentages and number of products)

Country of Origin	Leading Brands (n=103)	Fast Beauty (n=64)	Sustainable Brands (n=56)
Canada	2.9% (3 products)	0%	5.4% (3 products)
United States	1.0% (1 product)	0%	16.1% (9 products)
China	0%	4.7% (3 products)	0%
United Kingdom	0%	0%	1.8% (1 product)
Not specified	96.1% (99 products)	95.3% (61 products)	76.8% (43 products)

The study also examined whether product descriptions included the origin of at least one ingredient. Overall, only 2.2% (five products) out of 223 mentioned the origin of at least one ingredient, and all five were from the sustainable cosmetics category. A chi-square test showed a significant association between brand category and the mention of ingredient origin, with a Cramér’s *V* of 0.262, indicating a moderate relationship.

Usage instruction:

Among the 223 products studied, 85.2% (190 products) included usage instructions, while 14.8% (33 products) did not. Sustainable brands (n=56) had the highest inclusion rate of 92.9% (52 products), followed by leading brands (n=103) with 90.3% (93 products), and fast beauty brands (n=64) with 70.3% (45 products). A chi-square test showed a statistically significant association between brand category and the presence of usage instructions (Cramér's $V = 0.268$), suggesting a moderate relationship.

Ingredient list:

Among the 223 studied products, 92.4% (206 products) included ingredient lists, while 7.6% (17 products) did not. All sustainable products (n=56) displayed ingredient lists, compared to 96.9% (62 products) in fast beauty (n=64) and 85.4% (88 products) in leading brands (n=103). The association between ingredient list availability and brand category was also statistically significant (Cramér's $V = 0.246$), indicating a moderate relationship.

Size availability:

Among the 223 products analyzed, 65% (145 products) provided information about their sizes on their respective web pages. When examined by brand category, 66% (68 products) of the leading brands category products (n=103) included size information. In the fast beauty category (n=64), a lower proportion of 42.2% (27 products) provided size details. The sustainable cosmetics category (n=56) showed the highest rate of size transparency, with 89.3% (50 products) of products displaying size information.

A chi-square test shows a statistically significant association between brand category and the availability of size information on product web pages (p -value < 0.05). The Cramér's V value of 0.362 indicates a moderate relationship, suggesting that size transparency varies meaningfully across brand categories.

Period after opening (PAO):

Among the 223 products analyzed, only three products (1.3%) indicate their PAO on their respective websites. A chi-square test was conducted to examine the association between brand

category and the presence of PAO. Notably, none of the products in leading brand and the fast beauty category included PAO. In contrast, three products (5.4%) in sustainable brands category (n=56), all belonging to the same specific brand of Dab Herb Makeup, featured PAO. The chi-square test results show a statistically significant association between brand category and the indication of PAO, with a *p*-value of 0.011. The Cramér’s *V* of 0.202 suggests a moderate relationship.

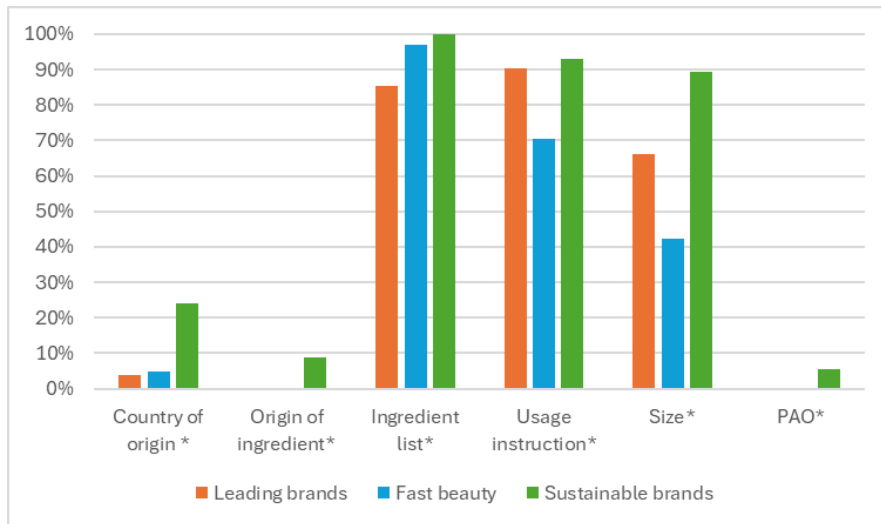


Figure 3.2: Availability of information across brand categories (“*” indicates statistically significant relationship).

The result reveals a significant association between brand categories and transparency and availability of information. Figure 3.2 provides a visual summary of transparency across brand categories.

3.3.2 Availability of multi-media

Multimedia features like images, videos, and augmented reality (AR) play a key role in enhancing online consumer engagement (Bilková & Kašparová, 2024; Cruz et al., 2019). While all 223 products featured images, 34.1% offered videos and 42.2% included AR features. AR tools allow consumers to virtually try on lipstick shades, helping them visualize how a colour might look on their own lips. Fast beauty brands (n=64) had the highest rate of video availability (38.2%),

followed by sustainable (n=56) at 35.5% and leading brands (n=103) at 26.3%. A chi-square test showed a significant association between brand category and video presence (Cramér's V = 0.287).

For AR, leading brands (n=103) had the highest adoption (80.9%), compared to fast beauty (n=64) at 10.6% and sustainable brands (n=56) at 8.5%. The association between AR presence and brand category was also significant (Cramér's V = 0.594). No significant relationship was found for image availability, which was consistent across all products. Sections 3.3.5 and 3.3.5 provide further detail on multimedia communication.

3.3.3 Communication of product attributes

3.3.3.1 *Communication in description*

Cosmetic brands use a variety of communication features on their websites to engage customers, providing information about their products through descriptions, images, and videos. These communication methods tend to highlight product attributes, appeal to consumer preferences, and differentiate brands in a competitive market.

This study analyzed product communication (N = 223) and found that descriptions—used as the primary tool for conveying product attributes—most frequently included performance (95.1%) and appearance (97.8%). Emotional appeal appeared in 63.7% of descriptions, while 61.9% included sustainability messaging. Ingredient information was commonly used, with 55.2% mentioning inclusion of specific ingredient and 48.4% noting what was excluded. Other features were less frequent: ease of application (36.8%), “best seller” claims (16.1%), innovation (22%), and consumer testing (7.2%). Celebrity endorsements and media mentions were rare. These findings reveal the range of strategies brands use to engage online consumers through product messaging.

3.3.3.2 *Cosmetic description and brand category*

To evaluate how cosmetic brands communicate various product features, chi-square tests were conducted across three brand categories: leading brands, fast beauty, and sustainable cosmetics. The results, summarized in Table 3.5, demonstrate differences in communication strategies.

Core attributes such as performance and appearance were consistently indicated across all brand categories. However, a statistically significant association was found between brand category and the communication of performance, indicating that sustainable brands are more consistent in including this attribute. Although appearance-related messaging was nearly universal, there was no significant association between brand category and appearance attribute.

Noteworthy distinctions emerged in the communication of dermatologist-tested claims, sustainable practices, and ingredient-related information. Sustainable brands were significantly more likely to highlight dermatologist approval, inclusion of specific ingredients, and sustainable positioning, aligning with their core identity. Fast beauty brands, on the other hand, stood out for their including emotional appeal and exclusion of specific ingredients, while leading brands more frequently used claims such as “best seller” or “customer favourite.”

Several features—such as ease of application, celebrity endorsements, and media endorsements—showed minimal variation and limited use across all brand categories, indicating these are not central to brand differentiation in online communication.

Overall, the analysis reveals distinct communication strategies across brand categories. Sustainable brands tend to indicate the presence of beneficial ingredients and sustainable practices, aligning with their identity as values driven. Fast beauty brands, in contrast, include more about the absence of specific ingredients—likely responding to consumer concerns and trends related to ingredient safety. Leading brands include performance and market success, often using claims such as “best seller” or “customer favourite” to reinforce their credibility. These differences reflect how each category frames product features to appeal to their target audiences and reinforce their brand identity.

Table 3.5: Percentage of products communicating specific cosmetic attributes through descriptions, by brand category (“*” indicates statistically significant relationship)

Attribute	Leading (%) (n=103)	Fast Beauty (%) (n=64)	Sustainable (%) (n=56)	Significance (p-value)
Performance	95.1	90.6	100.0	0.020*
Appearance	98.1	100	94.6	0.093
Emotional appeal	61.2	75.0	55.4	0.064
Dermatologist-tested	6.8	0	16.1	0.003*
Sustainable practices	23.3	90.6	100.0	< 0.001*

Trendiness/innovation	30.1	14.1	16.1	0.024*
Inclusion of specific ingredients	47.6	39.1	87.5	< 0.001*
Absence of specific ingredients	33.0	64.1	58.9	< 0.001*
Consumer tested	4.9	4.7	14.3	0.058
Ease of application	42.7	31.3	32.1	0.232
Celebrity favourite	4.9	3.1	0.0	0.245
Best-seller/customer favourite	20.4	18.8	5.4	0.039*
Media endorsement	0	0	1.8	0.224
Other features	10.7	12.5	7.1	0.621

3.3.3.3 *Emphasis on cosmetic attributes*

The analysis explored how different cosmetic brand categories emphasize various features in their description. The coding scale used for this analysis is outlined in Section 3.2.7. The study investigated whether the emphasis placed on features such as performance, appearance, emotional appeal, sustainable practices, and ingredient information varied across sustainable, fast beauty, and leading brands. Welch’s ANOVA results indicate statistically significant differences in how brands communicate features such as performance, appearance, emotional appeal, sustainable practices, and ingredient information (see Table 3.6 for details).

Sustainable cosmetics placed the strongest emphasis on performance, sustainable practices, and the inclusion of specific ingredients. In contrast, fast beauty brands emphasized emotional appeal and the absence of certain ingredients more than the other categories. Leading brands stood out in their emphasis on appearance and innovation. Interesting, the fast beauty brands category has higher emphasis on sustainable practices compared to the leading brands category. While some features like “consumer tested,” “easy to apply,” and “media endorsements” showed no significant differences across brand categories. Others—such as “best seller” and “celebrity favourite”—approached significance, with leading and fast beauty brands using them more frequently than sustainable brands. Figure 3.3 illustrates this pattern.

Table 3.6: Mean of emphasis on cosmetic attributes across brand categories (“*” indicates statistically significant relationship)

Attribute	Leading (out of 3)	Fast beauty (out of 3)	Sustainable (out of 3)	F-value	p-value
Performance	2.61	2.28	2.7	4.438	0.013*
Appearance	2.63	2.56	2.29	4.088	0.018*
Emotional Appeal	1.11	1.53	0.91	5.167	0.006*
Dermatologist Tested	0.09	0.0	0.23	5.952	0.003*
Sustainable Practices	0.39	1.72	2.64	169.395	< 0.001*
Trendy/Innovative	0.32	0.14	0.21	2.844	0.06*
Inclusion of Specific Ingredients	0.73	0.64	1.96	37.908	< 0.001*
Exclusion of Certain Ingredients	0.53	0.94	0.75	4.475	0.012*
Consumer Tested	0.14	0.14	0.34	1.763	0.174
Easy to Apply	0.54	0.44	0.39	0.931	0.396
Celebrity Favourite	0.14	0.03	0.0	2.246	0.108
Best Seller/Customer Favourite	0.29	0.31	0.07	2.922	0.056
Media Endorsement	0.0	0.0	0.05	1.498	0.226
Other Features	0.21	0.19	0.18	0.061	0.941

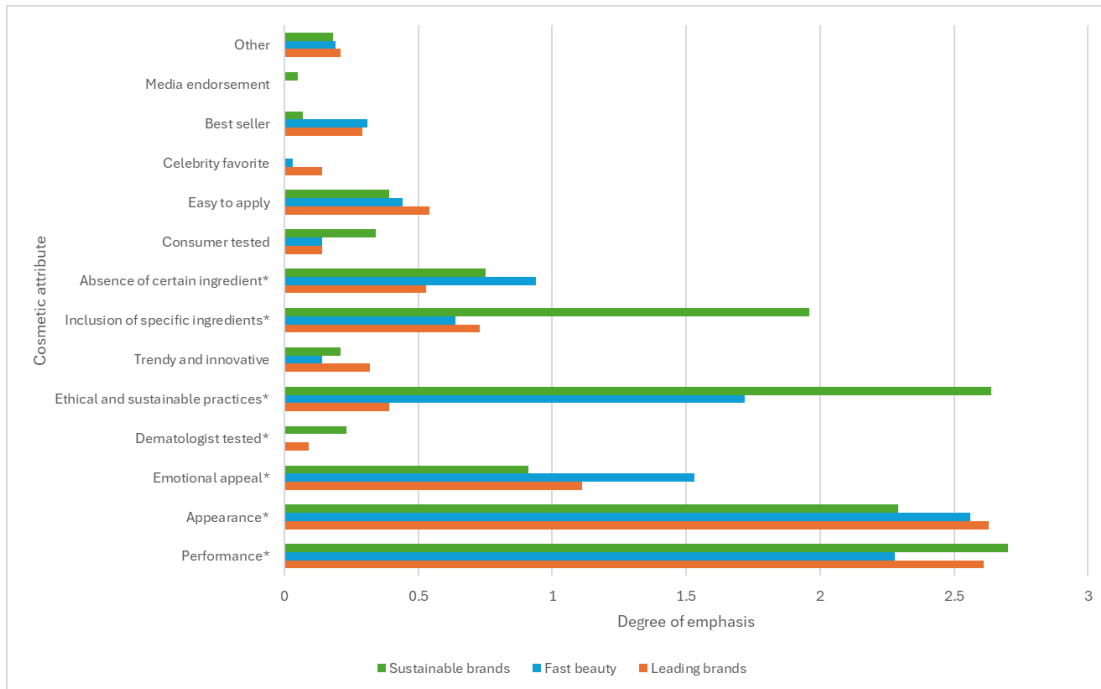


Figure 3.3: Comparison of emphasis on product attributes by leading, fast beauty, and sustainable cosmetic brands (“*” indicates statistically significant relationship)

3.3.3.4 Description for lipstick

The analysis examined how different brand categories communicate key lipstick features, such as colour intensity, moisturizing properties, and long-lasting wear (see Table 3.7). Statistically significant associations were observed across brand types for several attributes. For instance, moisturizing was far more included by sustainable brands, while long-lasting wear and comfortable texture were more frequently communicated by leading brands. Fast beauty brands, while generally less focused on these features, communicated transfer resistance more than the other categories.

Some features—such as plumper look and shades for diverse skin tones—showed no significant association with categories. Overall, the results indicate that leading and sustainable brands tend to highlight a broader range of product features, while fast beauty brands maintain a more focused communication strategy.

Table 3.7: Percentage of products communicating specific lipstick attributes through descriptions, by brand category (“*” indicates statistically significant relationship)

Lipstick Feature	Leading (%) (n=103)	Fast Beauty (%) (n=64)	Sustainable (%) (n=56)	<i>p</i> -value	Cramér's V
Colour Intensity & Pigmentation	82.5	71.9	80.4	0.249	-
Comfortable Texture	59.2	50.0	37.5	0.032*	0.176
Precise Application	80.6	92.2	94.6	0.015*	0.194
Diverse Colour Shades	53.4	28.1	42.9	0.006*	0.215
Shades for Diverse Skin Tones	17.5	9.4	16.1	0.341	-
Long-lasting	65.0	59.4	41.1	0.013*	0.197
Moisturizing	62.1	56.3	96.4	< 0.001*	0.347
No Drying	25.2	23.4	8.9	0.042*	0.168
Plumper/Fuller Look	18.4	6.3	14.3	0.086	-
Transfer Resistance	18.4	21.9	1.8	0.004*	0.221
Other Features	27.2	25.0	16.1	0.280	-

The results of the Welch's ANOVA test reveal significant differences in the emphasis placed on several key lipstick attributes across the three brand categories. Specifically, comfortable texture (p -value = 0.047) was ranked significantly higher by the leading brands category (mean score of 1.09 out of 3) and the fast beauty category (0.94 out of 3) compared to the sustainable cosmetics category (0.66 out of 3), indicating that these brands prioritize this feature more strongly. Similarly, precise application properties (p -value = 0.034) were emphasized significantly more by the leading brands category (mean score of 0.22 out of 3), which outperformed both fast beauty (mean score of 0.09 out of 3) and sustainable categories (mean score of 0.07 out of 3) in this regard. Moisturizing properties (p -value < 0.001) were notably emphasized more in the sustainable category (mean score of 1.28 out of 3), highlighting its strong association with moisturizing claims, while no drying (p -value = 0.002) was ranked lower in the sustainable cosmetics category (mean score of 0.09 out of 3) compared to the leading brands category (mean score of 0.31 out of 3) and fast beauty category (mean score of 0.31 out of 3), suggesting a distinct focus in its messaging. Higher emphasis on long lasting (p -value= 0.002) in the leading brands category (mean score of 1.41 out of 3) and the fast beauty category (mean score of 1.09 out of 3) is significant compared to the sustainable category (mean score of 0.75 out of 3). Finally, transfer resistance (p -value < 0.001) emerged as a significant differentiator, with leading brands and fast beauty categories emphasizing this feature considerably more than the sustainable cosmetics category.

Overall, the findings highlight that leading brands and fast beauty categories prioritize attributes like comfortable texture, precise application, long-lasting properties, and transfer resistance, while the sustainable cosmetics category distinguishes itself with a stronger emphasis on moisturizing but places less focus on other key features such as no drying and transfer resistance.

3.3.3.5 Product attributes in images

The chi-square analysis revealed several significant associations between brand category and the way product attributes are communicated through images on cosmetic websites (Table 3.8). Notably, fast beauty brands communicated performance-related attributes through images more frequently than leading or sustainable brands, with a moderate effect size. Emotional appeal also showed a significant association between category and this attribute, appearing more often in

fast beauty product imagery, while leading and sustainable brands rarely included this feature on the images.

In terms of inclusion and diversity, all three categories showed relatively high levels of representation in images, particularly sustainable and fast beauty brands. However, this association was not statistically significant. A notable finding was the strong association between brand category and communication of specific ingredient inclusion through images, with sustainable brands leading. Dermatologist-tested claims and celebrity endorsements were rarely featured in images across all categories and did not show significant associations.

Sustainable brands were the most likely to communicate product variety through imagery, with a statistically significant and moderately strong association observed between brand category and the communication of this attribute. Communication of sustainability itself was more common among sustainable brands but showed only a borderline significance, suggesting room for more indication even within that category.

Media endorsements were almost entirely absent, with only a few products in the sustainable category including them, yet the association with brand category was statistically significant. Trendy and innovative features were communicated more often by leading brands than by fast beauty or sustainable brands, again with significant but weak associations. Finally, “other” product aspects showed a significant association, with fast beauty brands most frequently including additional imagery cues or features not otherwise categorized. These attributes primarily consisted of visual cues highlighting the exclusion of heavy metals in lipsticks, with 15 products from fast beauty brand of Sheglam, visually communicating this claim.

Overall, the findings indicate that brands use imagery in different ways to reflect their marketing priorities:

- Fast beauty tends to focus on performance and emotional cues.
- Sustainable brands include specific ingredient inclusion, product variety, and sustainable practices.

These patterns suggest that visual communication strategies align with broader brand identities and market positioning, reinforcing the importance of framing through image in digital cosmetic marketing.

Table 3.8: Percentage of products communicating specific cosmetic attributes through images, by brand category (“*” indicates statistically significant relationship)

Attribute	Leading (%) (n=103)	Fast Beauty (%) (n=64)	Sustainable (%) (n=56)	p-value	Cramér's V
Performance	26.2	45.3	17.9	0.003*	0.231
Appearance/colour	100.0	100.0	100.0	-	-
Emotional appeal	6.8	18.8	7.1	0.032*	0.176
Inclusion & diversity	70.9	81.3	82.1	0.163	-
Inclusion of ingredients	23.3	6.3	41.1	< 0.001*	0.304
Dermatologist tested	1.9	0.0	5.4	0.136	-
Celebrity endorsement	1.9	0.0	0.0	0.309	-
Variety of shades	55.3	67.2	80.4	0.006*	0.214
Sustainability	7.8	9.4	19.6	0.066	0.156
Media endorsement	0.0	0.0	3.6	0.049*	0.164
Other features	9.7	28.1	7.1	< 0.001*	0.251

3.3.3.6 *Emphasis on cosmetic feature in image*

A Welch’s ANOVA revealed significant differences across brand categories in how certain product attributes were emphasized through images. Performance was most strongly emphasized

by fast beauty brands, followed by leading and sustainable brands, $F(2, 130.45) = 5.57$, p -value = 0.005. Appearance and colour, $F(2, 127.45) = 3.25$, p -value = 0.042, and inclusion and diversity, $F(2, 122.74) = 3.46$, p -value = 0.035, also varied significantly, with sustainable brands placing greater emphasis on inclusion.

Sustainable brands stood out in their emphasis on ingredient inclusion, $F(2, 107.73) = 6.90$, p -value = 0.002. Significant differences were also observed for variety of shades, $F(2, 116.73) = 9.03$, p -value < 0.001, and other features, $F(2, 105.29) = 4.26$, p -value = 0.017, with fast beauty and sustainable brands scoring higher than leading brands. Table 3.9 presents detailed data, while Figure 3.4 offers a visual summary of these differences in emphasis, illustrating how image-based communication aligns with broader brand positioning strategies.

Table 3.9: Mean emphasis on product attributes in images across brand categories and corresponding Welch's ANOVA results

Attribute	Leading (out of 3)	Fast Beauty (out of 3)	Sustainable (out of 3)	F-value	<i>p</i>-value
Performance	0.41	0.7	0.23	5.57	0.005*
Appearance/colour	2.83	2.92	2.71	3.25	0.042*
Emotional appeal	0.09	0.27	0.09	2.3	0.105
Inclusion & diversity	1.03	1.16	1.41	3.46	0.035*
Inclusion of ingredients	0.26	0.16	1.75	6.9	0.002*
Dermatologist tested	0.02	0.0	0.05	-	-
Celebrity endorsement	0.01	0.0	0.0	-	-
Variety of shades	0.8	1.3	1.41	9.03	<0.001*
Sustainability	0.09	0.11	0.27	2.27	0.108
Media endorsement	0.0	0.0	0.09	-	-
Other features	0.1	0.3	0.13	4.26	0.017*

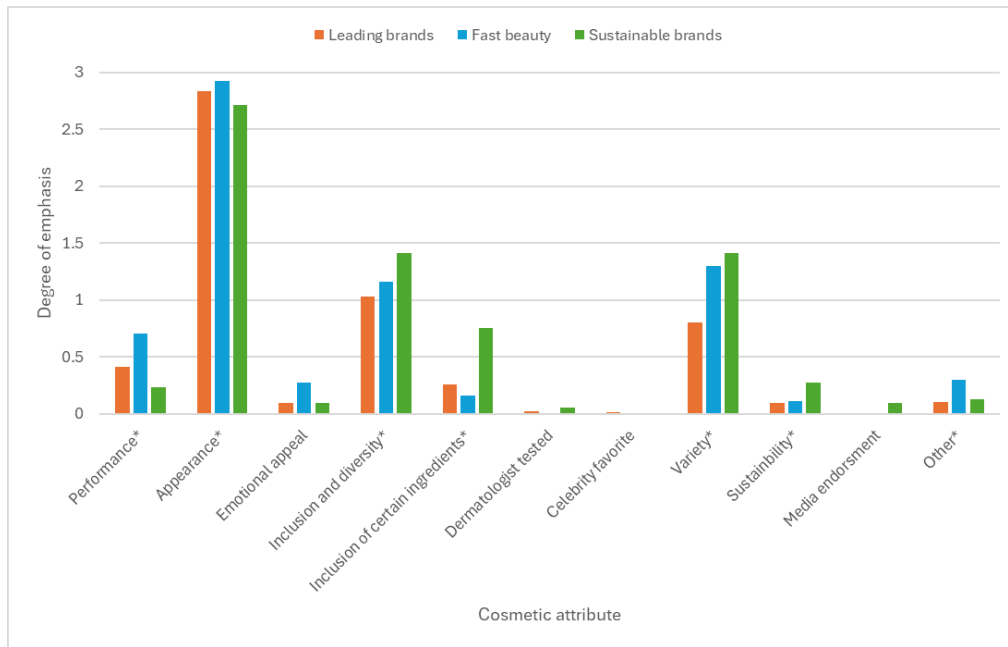


Figure 3.4: Emphasis of cosmetic attribute through image across brand categories. (“*” indicates statistically significant relationship)

3.3.3.7 Communication through videos

This analysis examined whether brand category is associated with the communication of various product attributes through video content. Although descriptive differences were observed, none of the associations tested via chi-square were statistically significant (all p -values > 0.05).

Leading brands (n=103) were more likely to communicate performance (55.0%) and emotional appeal (25.0%) compared to other categories. In contrast, sustainable cosmetics brands (n=56) most frequently communicated inclusion and diversity (48.1%) and appearance and colour (96.3%). Fast beauty brands (n=64) included application most often (93.1%) and had the highest frequency for communicating “other” features such as affordability or newness (41.4%).

Attributes like dermatologist-tested claims and celebrity endorsements were rarely communicated across all categories, with only a few instances observed in the sustainable and leading brand categories. While most attributes did not show statistically significant association across brand types, the communication of “other” features did vary significantly (p -value = 0.030), indicating that brand category may influence the inclusion of additional or unique product aspects

in video content. Table 3.10 demonstrates the percentage distribution of video-based communication of key product attributes across brand categories, revealing that while most associations are not statistically significant, the communication of "how to refill" features shows a significant difference across categories.

Table 3.10: Communication of cosmetic attributes in videos across brand categories (“*” indicates statistically significant relationship)

Attribute	Leading (%) (n=103)	Fast Beauty (%) (n=64)	Sustainable (%) (n=56)	p-value	Cramér’s <i>V</i>
Performance	55.0	31.0	25.9	0.098	-
Appearance & colour	80.0	86.2	96.3	0.213	-
Emotional appeal	25.0	13.8	22.2	0.576	-
Inclusion & diversity	30.0	34.5	48.1	0.392	-
Application	80.0	93.1	81.5	0.334	-
Dermatologist-tested	0.0	0.0	3.7	0.399	-
Celebrity favourite	5.0	0.0	0.0	0.242	-
Variety	20.0	41.4	37.0	0.279	-
How to refill	20	0	14.8	0.014*	0.277
Other aspects	15	3.4	0	0.057	-

3.3.4 Sustainability-related claims

Organic

Organic claims in marketing typically refer to the use of ingredients cultivated according to certified organic farming practices (United States Department of Agriculture, 2025). Among the studied products (N=223), this claim was found in 23 products (10.3%), all of which belonged to

sustainable brands. Neither leading brands nor fast beauty brands included any products with organic claims. The association between brand category and organic claims was statistically significant (p -value = 0.001, Cramér's V = 0.586), indicating a strong relationship. However, transparency varied: most products with organic claims ($n=23$) (82.6%) did not specify the percentage of organic ingredients, raising concerns about claim clarity.

As mentioned above, among the products with an organic claim, all were found exclusively within the sustainable beauty category. The other two categories did not feature any products with an organic claim. Within the products with the claim, labeling practices showed considerable variation. Some products have been more transparent and named the organic ingredients, while others just indicated “with certified organic ingredients” or “certified organic.” However, closer inspection reveals that these claims often pertain only to select ingredients rather than the entire product, or they lack clarity regarding the extent of organic content. Specifically, among the products with organic claim ($n=23$) only one product (4.3%) explicitly claimed to be fully organic, and three products (13%) provided a clear percentage for organic content, while the majority of these products (82.6%) did not specify the proportion of organic ingredients. This inconsistency in labeling may create ambiguity for consumers regarding the organic nature of these products.

Vegan

Vegan claims in cosmetics typically signify that the product is free from all animal-derived ingredients (Dos Santos et al., 2023). Among the 223 products, vegan claims were found in 100 products, accounting for 44.8% of the total sample. When analyzed within brand categories, fast beauty ($n=64$) had the highest proportion of vegan claims (84.4%), followed by sustainable brands ($n=56$) at 57.1% and leading brands ($n=103$) at 13.6%. The association between brand category and vegan claims was statistically significant (p -value < 0.001, Cramér's V = 0.616), showing a strong relationship.

Natural

“Natural” refers to unmodified substances derived from nature, obtained through physical processes (e.g., from plants) or biological methods (e.g., microbial fermentation) (Natrue, 2025). This claim was made in 51 products, representing 22.9% of the total sample ($N=223$). Within brand categories, 73.2% of sustainable products ($n=56$) included natural claims, compared to only 7.8%

of leading brand products (n=103) and 3.1% of fast beauty products (n=64). The chi-square test showed a significant relationship (p -value < 0.001, Cramér's $V = 0.696$). Among products with natural claims (n=51), only two indicate that they are fully natural, 30 products specify the proportion of natural ingredients, and 19 products provide no indication of this proportion. A chi-square test was conducted to examine the relationship between brand category and the indication of natural proportion, but the results did not show a significant association.

Safe

Safety-related claims appeared in 17.5% of all products (N=223). Within brand categories, these claims were most common among fast beauty (n=64) at 32.8% and sustainable brands (n=56) at 30.4%, while only 1% of leading brand products (n=103) included safety claims. The relationship between category and safety claims was significant (p -value < 0.001, Cramér's $V = 0.404$).

In addition to the frequency of safety claims, the specificity of these claims varies across brand categories. Among the products with safety claims (n=39), 33.3% (13 products) specifically highlight safety in terms of health, with no claims referring to environmental or comprehensive safety, and 66.7% (26 products) offer no further clarification. Sustainable cosmetic category (n=17) demonstrates the highest proportion of products with explicit health safety claims, comprising 92.3% (12 products) of such products. Fast beauty brand products (n=21), in contrast, do not specify what aspect of safety is implied by their claims. The only product in leading brand category specified safety to health. A chi-square test reveals a statistically significant association between brand category and the clarity of safety indication (Cramér's V of 0.77), suggesting a strong relationship. This analysis underscores that not only the presence of safety claims but also their clarity varies significantly across brand categories.

Clean

Among the studied products (n=223) clean claims were made in 36 products, representing 16.1% of the total sample. Within brand categories, sustainable brands (n=56) had the highest proportion of clean claims (32.1%), followed by fast beauty (n=64) at 18.8% and leading brands (n=103) at 5.8%. The association was statistically significant (p -value < 0.001, Cramér's $V = 0.292$) between indication of clean claim and brand category.

Some of the products are more clear about their definition of clean. For instance, in bareMineral products “clean” is defined as being paraben free + formulated without formaldehyde, synthetic fragrance, gluten, PEGs and more and some other brands such as Maybelline indicates that formulas that are clean “don’t contain certain ingredients some consumers are trying to avoid”. However, some other brands like e.l.f just states as clean formula. Overall, among 36 products with clean claim, 20 products have no clear definition of clean.

Cruelty-free

Cruelty-free products are those developed without conducting animal testing at any stage of production (Urban et al., 2022). This claim was found in 105 products, accounting for 47.1% of the total sample (N=223). Within brand categories, these claims were most prevalent among fast beauty brands (n=64) at 76.6% and sustainable brands (n=56) at 66.1%, while only 18.4% of leading brand products (n=103) included cruelty-free claims. The association was significant (p -value < 0.001, Cramér’s $V = 0.537$). Notably, 45 of the products with a cruelty-free claim (n=105) lack evidence or certification to prove this claim, raising concerns regarding its validity. This issue is further assessed from a greenwashing perspective in the following sections.

Ethical/sustainable sourcing

Ethical/sustainable sourcing claims appeared in 22 products, representing 9.9% of the total sample (N=103). Within brand categories, sustainable brands (n=56) had the highest proportion at 28.6%, followed by fast beauty (n=64) at 6.3% and leading brands (n=103) at 1.9%. Fast beauty and leading brands made these claims in 6.3% and 1.9% of cases, respectively. The association was significant (p -value < 0.001, Cramér’s $V = 0.368$) between ethical/ sustainable sourcing claim and brand category.

Other claims

Out of 223 products, 19 products (8.5%) feature claimed beyond those previously discussed. Among these, six products included the "1% for the Planet" claim, two highlighted being “eco-friendly”, and two indicating being "Indigenous-owned". Additionally, two products claimed "responsible marketing" practices, one mentioned giving back to the community, four claimed being "vegetarian", and three highlighted being "wildcrafted". Notably, “Lip Blur” from

“Saie” from sustainable category included multiple claims, such as being "plastic negative", "climate neutral", and "1% for the Planet".

A chi-square test revealed that 18 products (32.1% of sustainable category, n=56) of these 19 products belong to category of sustainable brands, with a single product from MAC claiming to give back to the community originating from the leading brands category and no products in the fast beauty category with these other claims. The test indicated a statistically significant association between brand category and the presence of these additional claims (p -value <0.001). The Cramér’s V of 0.490 indicates a moderate association. Table 3.11 shows sustainability-related claims by brand category and the p -values indicating their statistical association and Figure 3.5 illustrates this pattern.

Table 3.11: Sustainability-related claims rate across brand categories (“*” indicates statistically significant relationship)

Claim	Leading (%) (n=103)	Fast Beauty (%) (n=64)	Sustainable (%) (n=56)	p-value	Cramér's V
Organic	0.0	0.0	41.1	<0.001*	0.586
Vegan	13.6	84.4	57.1	<0.001*	0.616
Natural	7.8	3.2	73.2	<0.001*	0.696
Safe	1.0	32.8	30.4	<0.001*	0.404
Clean	5.8	18.8	32.1	<0.001*	0.292
Cruelty-free	18.4	76.6	66.1	<0.001*	0.537
Ethical/sustainable sourcing	1.9	6.3	28.6	<0.001*	0.368
Other claims	0.4	0.0	32.1	<0.001*	0.49

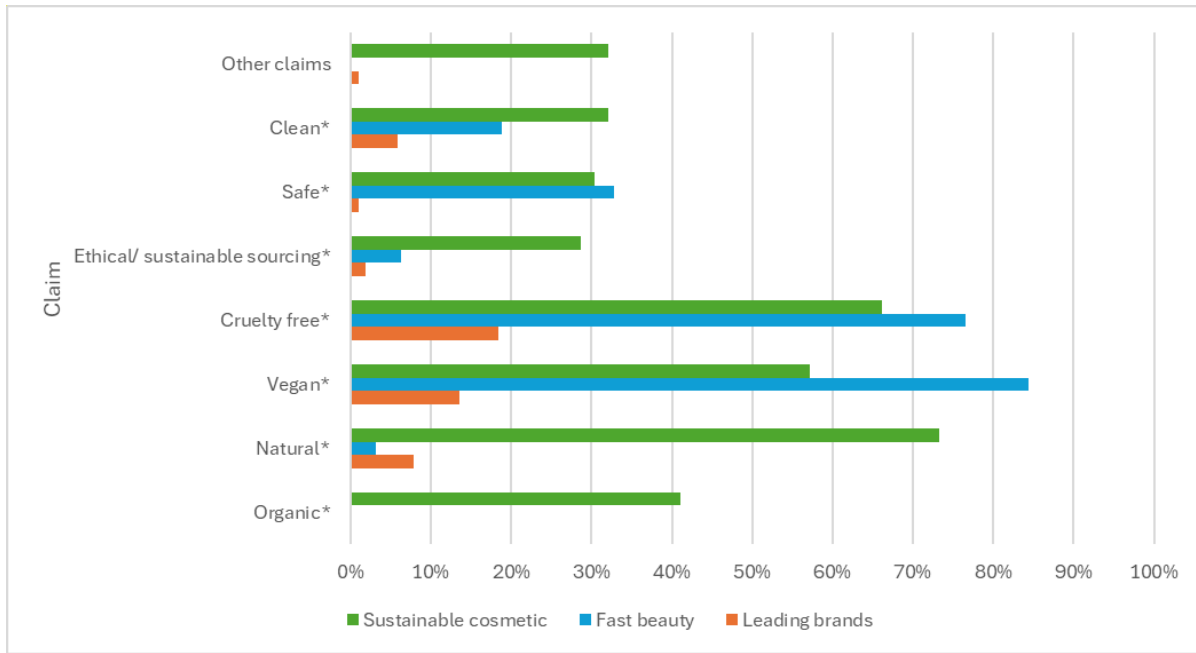


Figure 3.5: Sustainability-related claims rate across brand categories (“*” indicates statistically significant relationship)

3.3.5 Product end-of-life

3.3.5.1 Recycling program and disposal instruction

Among the products analyzed (N=223), only seven products (3.1%) mentioned a recycling initiative such as PACT, and all belong to the sustainable cosmetics category. None of the products from leading brands or fast beauty categories reference a recycling program on their webpages. A chi-square test indicates a statistically significant association between brand category and the presence of a recycling program (p -value < 0.001), with a Cramér’s V of 0.311, suggesting a moderate relationship.

Among 223 products, only 13 products (5.8%) provide disposal instructions for their packaging, and just two products (0.9%) offer guidance for both packaging and product residue. All of these belong to the sustainable cosmetics category. In contrast, leading and fast beauty brands provide no disposal information. A chi-square test revealed a statistically significant association between brand category and the availability of disposal instructions (p -value < 0.001), with a Cramér’s V of 0.328, indicating a moderate relationship. These findings underscore the

more attention from sustainable brands on end-of-life communication compared to other categories.

3.3.5.2 Packaging sustainability claims

Products employed various claims in their communication regarding packaging. Among the 223 products analyzed, 0.9% (two products) claimed their packaging is made entirely from recycled materials, while 3.1% (seven products) indicated it is partially recycled. Similarly, 3.1% (seven products) claimed their packaging is fully recyclable, and 3.6% (eight products) stated it is partially recyclable. Additionally, 3.1% (seven products) highlighted minimal packaging, using terms such as "reduced packaging" or "naked packaging." A smaller proportion, 0.9% (two products), stated that their packaging is both fully recycled and recyclable. Notably, 8.1% (18 products) offered refill options or were designed as refills, while 9.9% (22 products) presented other claims, such as reducing plastic use or vaguely mentioning "recycling" without providing a clear explanation. Among the 223 products 71.7% (160 products) provided no information about their packaging. The rates related to packaging sustainability claims are illustrated in Figure 3.6.

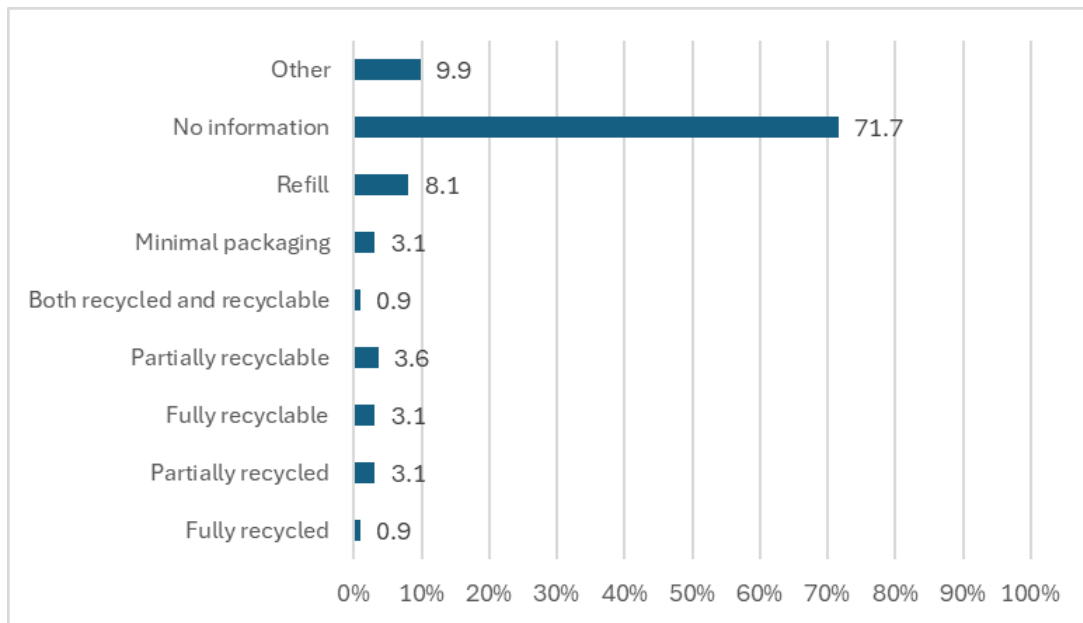


Figure 3.6: Packaging sustainability claims

3.3.5.2.1 Packaging Material Claims

Claims related to the use of recycled or recyclable materials were generally rare. Among the products analyzed (N=223), only two products (0.9%) claimed their packaging was fully recycled, and both were from sustainable cosmetics brands. No statistically significant association was found between brand category and fully recycled packaging (p -value = 0.61). Similarly, partially recycled packaging was claimed by only seven products (3.1%)—two from sustainable brands and five from leading brands—with no significant association observed (p -value = 0.83).

In contrast, fully recyclable packaging claims showed stronger association. Seven products (3.1%) from the sustainable category (n=56) claimed full recyclability, and none from the other categories did. This association was statistically significant (p -value < 0.001) with a Cramér's V of 0.311, suggesting a moderate relationship. Partially recyclable packaging was similarly limited, with eight products (3.6%) in the sample (N=223) making this claim, all within the sustainable category. The association was statistically significant (p -value < 0.001, Cramér's V = 0.333).

3.3.5.2.2 Packaging innovation and reusability

Among the studied products (N=223), minimal, naked, or reduced packaging was claimed by eight products (3.6%), all from sustainable brands. This association was significant (p -value < 0.001, Cramér's V = 0.311), indicating that sustainable brands are more likely to adopt and promote such innovations. Only two products (0.9%)—also from the sustainable category—claimed to have packaging that was both recycled and recyclable, though this was not statistically significant (p -value = 0.61).

Refillable packaging was a more prominent feature. Eighteen products (8.1%, N=223) offered refill options: 14 from sustainable brands (n=56), four from leading brands (n=103), and none from fast beauty brands (n=64). This association was statistically significant (p -value < 0.001, Cramér's V = 0.365), highlighting sustainable brands' stronger commitment to reusable packaging formats.

3.3.5.2.3 Clarity and communication of packaging information

A significant portion of products (71.7%) offered no information on packaging sustainability (N=223). This lack of communication varied by brand: 91.3% of leading brand products (n=103) omitted packaging info, compared to 65.6% of fast beauty (n=64) and 42.9% of

sustainable brands (n=56). The relationship was statistically significant (p -value < 0.05, Cramér's $V = 0.442$).

Other packaging-related claims appeared in 22 products (N=223), all from fast beauty brands. These included references to reduced plastic or vague mentions of recycling without further elaboration. While these claims were more common in fast beauty, their vagueness suggests a lack of standardized communication regarding packaging efforts.

3.3.6 Labels and certifications

Among the 223 products analyzed, 42.2% (94 products) either display or reference labels or certifications, whether internal or external, on their websites, while 58.8% (129 products) do not feature any labels or certifications. Table 3.12 presents the percentage of products featuring various labels and certifications, both across the full sample (N=223) and among products that display at least one label or certification (n=94).

A chi-square test reveals that within the leading brands category (n=103), only 6.8% (seven products) bear a label or certification, whereas 93.2% (96 products) lack any such labels. In the fast beauty category (n=64), 76.6% (49 products) possess an labels or certifications. Similarly, in the sustainable cosmetics category (n=56), 67.9% (38 products) have labels or certifications. The analysis yielded a p -value of less 0.001, indicating a statistically significant association between brand category and the presence of labels or certifications (either internal or external). Furthermore, the Cramér's V value of 0.666 suggests a strong relationship between brand category and the presence of labels or certification.

Table 3.12: Rate of products featuring different labels or certifications, across the entire sample and among products with at least one eco-label.

Label and certification	Among products with labels (n=94)	Among all products (N=223)
Vegan (Internal)	38.3% (36 products)	16.1%
Vegan Society (External)	8.5% (eight products)	3.6%
Organic (Internal)	5.3% (five products)	2.2%
Organic (External)	0	0
Sustainable/Ethical sourcing (Internal)	0	0
Sustainable/Ethical sourcing (External)	6.4% (six products)	2.7%
Cruelty free (Internal)	22.3% (21 products)	9.4%
Leaping Bunny (External)	47.9% (48 products)	20.6%
Peta (External)	19.1% (18 products)	8.1%

Clean (Internal)	9.6% (nine products)	4.0%
Clean (External)	0	0.0%
B Corporation (External)	3.2% (three products)	1.3%
1% for the Planet (External)	7.4% (Seven products)	3.1%
EWG verified (External)	3.2% (Three products)	1.3%
American Vegetarian Association (External)	2.1% (Two products)	0.9%
Other (External)	1.1% (one product)	0.4%
Other (Internal)	17% (16 products)	7.2%

3.3.6.1 Labels and certification, and comparison between categories

This section analyzes the presence and distribution of labels or certifications across three brand categories—leading brands, fast beauty, and sustainable cosmetics—with a specific focus on distinguishing between internal (brand-created) and external (third-party certified) labels. Across all categories and label types, internal labels were found to be more prevalent than external certifications, particularly in areas such as vegan, cruelty-free, clean, and organic claims.

Vegan Labels

Internal vegan labels were significantly more common than external certifications. Internal vegan labels were found on 3.9% of leading brands' products (n=103), 32.8% of fast beauty (n=64), and 19.6% of sustainable cosmetics (n=56) (p -value < 0.001, Cramér's $V = 0.335$). In contrast, external vegan certifications, such as the Vegan Society, were entirely absent in leading and fast beauty brands and present in only 14.3% of sustainable brands (n=56) (p -value < 0.05, Cramér's $V = 0.333$). This suggests a greater reliance on self-declared vegan claims rather than third-party verified assurances.

Organic Labels

Internal organic labels—used by brands like Juice Beauty and Well People—were observed in 8.9% of sustainable brands (n=56) only, and absent in leading and fast beauty brands. A chi-square test illustrated significant association between brand category and presence of internal organic label (p -value < 0.05, Cramér's $V = 0.262$). No products across any category featured an external organic certification, revealing a notable absence of recognized third-party organic validation.

Cruelty-Free Labels

Internal cruelty-free labels appeared on 1.9% of leading brands (n=103), 21.9% of fast beauty (n=64), and 8.9% of sustainable brands (n=56) (p -value < 0.05, Cramér's $V = 0.287$). In comparison, the Leaping Bunny certification appeared on 2.9% of leading brands, 37.5% of fast beauty, and 33.9% of sustainable cosmetics (p -value < 0.05, Cramér's $V = 0.407$), while PETA certifications were exclusive to fast beauty (n=64, 10.9%) and sustainable brands (n=56, 19.6%) (p -value < 0.05, Cramér's $V = 0.298$). Although external cruelty-free labels were present at higher rates in some categories, internal cruelty-free claims were still used widely by brands without formal third-party recognition.

Clean Labels

Internal clean labels, lacking a universal definition, appeared on 9.4% of fast beauty (n=64) and 5.4% of sustainable products (n=56), with none in leading brands. A chi-square test illustrated significant association between brand category and presence of internal clean label (p -value = 0.002, Cramér's $V = 0.204$). No third-party “clean” certifications were identified in the dataset, reinforcing the predominance of self-defined “clean” claims.

Ethical and Sustainable Sourcing Labels

External ethical or sustainable sourcing labels were rare, observed in 6.3% of fast beauty (n=64) and 3.6% of sustainable products (n=56), with none in leading brands. A chi-square test illustrated significant association between brand category and presence of external ethical/sustainable label where relation is weak (p -value = 0.047, Cramér's $V = 0.166$). Internal labels for ethical sourcing were entirely absent.

Other Labels and certifications

The study identified further distinctions in other certifications use. B-Corp and EWG Verified certifications were present only in sustainable brands (n=56), each at 5.4% (p -value = 0.015, Cramér's $V = 0.202$). The “1% for the Planet” label appeared on 12.5% of sustainable brands category (n=56), only (p -value = 0.001, Cramér's $V = 0.311$). Additionally, one sustainable product featured external labels for Plastic Negative and Climate Neutral, while 28.6% of sustainable products (n=56) included other internal labels (e.g., natural, plant-powered, indigenous-owned)

(p -value < 0.05, Cramér's $V = 0.480$). The chi-square tests showed statistically significant association between presence of these labels and brand category.

Overall, internal labels were significantly more common than external certifications across most label types, particularly in fast beauty and sustainable cosmetics categories. This suggests a strategic use of label by brands that may appeal to environmentally or ethically motivated consumers, but without necessarily undergoing rigorous third-party validation. While sustainable brands lead in having certified labels, the broader landscape of environmental and social claims across the industry remains largely self-regulated, raising questions about transparency and consumer trust. Table 3.13 presents the distribution of internal and external labels and certifications across brand categories, while Figure 3.7 visually illustrates these patterns.

Table 3.13: Distribution of internal and external labels and certifications across brand categories (“*” indicates statistically significant relationship)

Label or certification	Type	Leading (%) (n=103)	Fast Beauty (%) (n=64)	Sustainable (%) (n=56)	p -value	Cramér's V
Vegan	Internal	3.9	32.8	19.6	< 0.001*	0.335
Vegan	External	0	0	14.3	< 0.001*	0.333
Organic	Internal	0	0	8.9	< 0.001*	0.262
Organic	External	0	0	0	–	–
Cruelty-Free	Internal	1.9	21.9	8.9	< 0.001*	0.287
Cruelty-Free (Leaping Bunny)	External	2.9	37.5	33.9	< 0.001*	0.407
Cruelty-Free (PETA)	External	0	10.9	19.6	< 0.001*	0.298
Clean	Internal	0	9.4	5.4	0.002*	0.204
Sustainable/Ethical Sourcing	External	0	6.3	3.6	0.018*	0.166
Other Labels or Certifications	Internal	0	0	28.6	< 0.001*	0.480
B-Corp and EWG	External	0	0	5.4	0.015*	0.202
1% for the Planet	External	0	0	12.5	< 0.001*	0.311

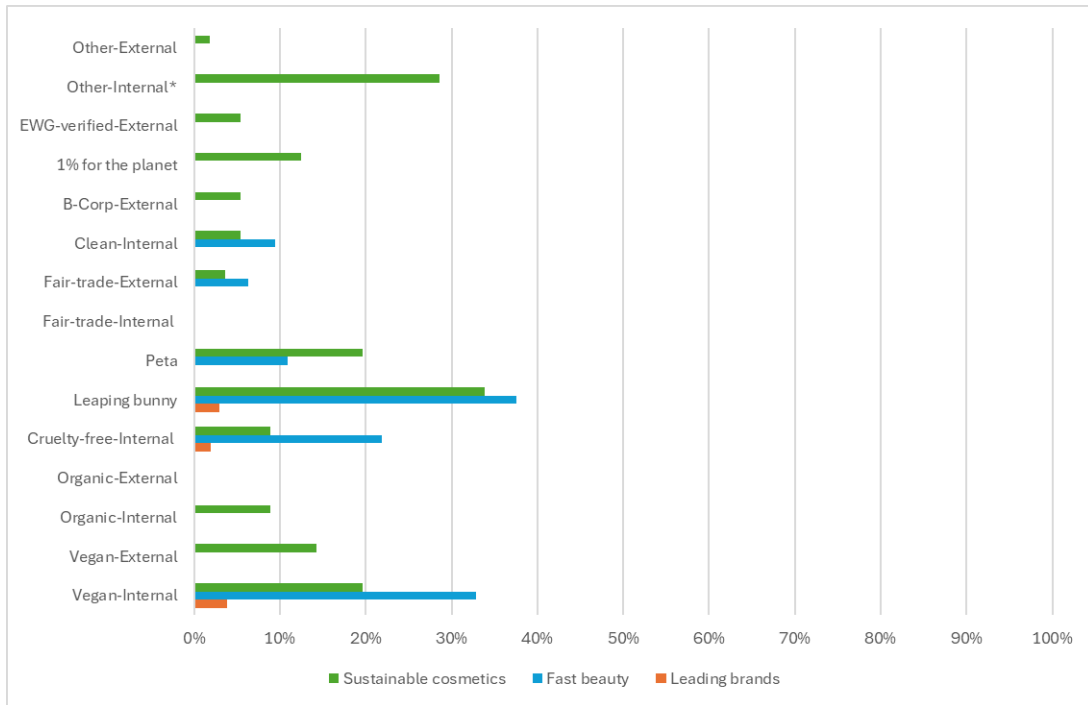


Figure 3.7: Labels and certifications across brand categories.

3.3.7 Greenwashing

According to Becker-Olsen and Potucek (2013), “Greenwashing refers to the practice of falsely promoting an organization's environmental efforts or spending more resources to promote the organization as green than are spent to actually engage in environmentally sound practices”

TerraChoice (2010) categorized various mis-leading environmental claims into "sins," such as the "sin of hidden trade off" (when claims is based on one or a few features, but ignores other significant negative environmental impacts), the "sin of irrelevance" (when green behaviours or claims have no meaningful or significant environmental impact), the "sin of lesser of two evils" (when claim is made in comparison to harmful alternatives, but is still environmentally damaging), and the "sin of fibbing" (when false claims are made about a product’s environmental impact). In terms of communication, TerraChoice identified the "sin of no proof" (when claims are made without any supporting evidence), the "sin of vagueness" (when claims are overly general or ambiguous), and the "sin of worshipping false labels" (when misleading or fraudulent certification logos are used to falsely imply a product has been recognized for environmental friendliness) (De Jong et al., 2017). Among the 223 products analyzed across three brand categories, the study

identified at least one indication of greenwashing in 59.6% of the products (133 products). This suggests that a majority of brands incorporate potentially misleading or unverifiable claims in their sustainability communication. In contrast, 40.4% of the products (90 products) showed no signs of greenwashing, indicating a significant portion of brands are refraining from making questionable environmental claims.

Greenwashing is commonly categorized into seven "sins," each representing a distinct way in which brands may mislead consumers about their environmental claims. In the analyzed sample (N=223), 44.4% of products committed the "sin of no proof," making unverifiable sustainability claims without providing evidence. The "sin of vagueness," where claims are ambiguous or poorly defined, was present in 26.7% of products, while 17.9% exhibited the "sin of worshipping false labels," using labels that falsely imply third-party certification. Less prevalent sins included "irrelevance" (7.6%), where sustainability claims are true but meaningless in context. For instance, MAC claimed that its lipsticks were free from certain toxic ingredients; however, many of these ingredients are not typically used in lipstick formulations. "Fibbing"(2.7%) is the other sin of greenwashing that involves outright false claims. For example, the description of "MATTE ALLURE LIPSTICK – CHIC" from Sheglam claimed the product contains no fragrance or parabens, yet the ingredient list included both parfum and parabens. Notably, no products in the sample committed the "sin of trade-off," which highlights one positive attribute while ignoring significant harm, or the "lesser of two evils," where claims distract from the broader unsustainability of a product category. These findings underline the varied tactics of greenwashing and the need for more transparent communication in sustainability marketing. Figure 3.8 presents a visual representation of the distribution of greenwashing sins across the sample.

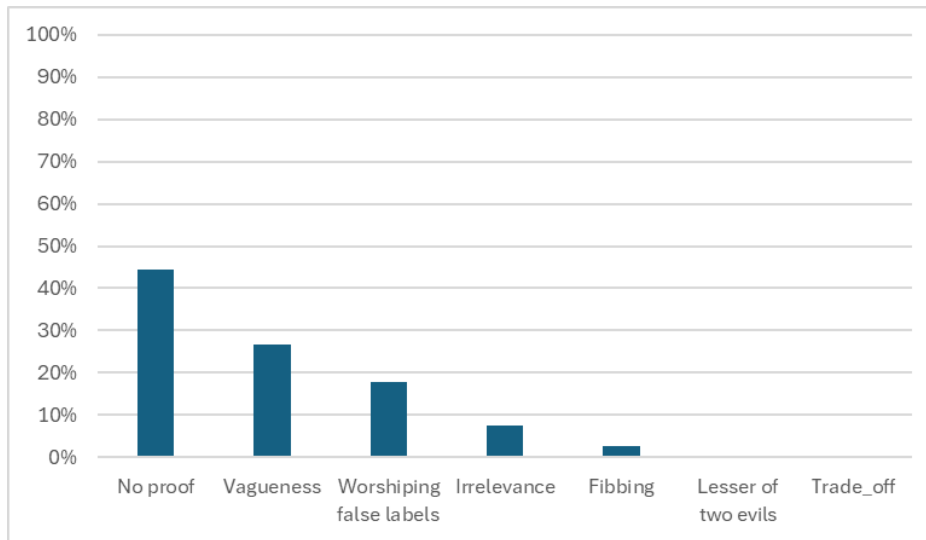


Figure 3.8: Distribution of greenwashing sins across total sample size.

The analysis shows that greenwashing practices were widespread in the products studied (N=223). Specifically, 25.1% (56 products) committed at least one greenwashing sin, indicating misleading or unverified claims about sustainability. Furthermore, 29.1% (65 products) exhibited two greenwashing sins, showcasing a deeper level of deceptive marketing. Alarming, 5.4% (12 products) were associated with three greenwashing sins, highlighting significant challenges in ensuring transparent and truthful sustainability claims within the industry.

Greenwashing frequency and comparison among categories

In the leading brands category (n=103), 35.9% (37 products) exhibit greenwashing. In the fast beauty category (n=64), the majority—90.6% (58 products)—display greenwashing, leaving only 9.4% without any indications of it. Similarly, in the sustainable cosmetics category (n=56), 67.9% (38 products) show signs of greenwashing. A chi-square test showed a statistically significant association between brand category and the presence of greenwashing on product webpages (p -value < 0.05). Furthermore, a Cramér's V value of 0.479 indicates a moderate relationship, suggesting notable differences in the presence of greenwashing practices across the three brand categories. Figure 3.9 presents a visual representation of observation of greenwashing practices across brand categories.

A sensitivity analysis was conducted by excluding ColourPop to assess whether its categorization influenced the findings. The Chi-square test of greenwashing rates produced substantively similar results (p -value < 0.05), indicating that the exclusion of ColourPop did not alter the overall conclusions. Full results of the sensitivity analysis are presented in Appendix C (Table C.1).

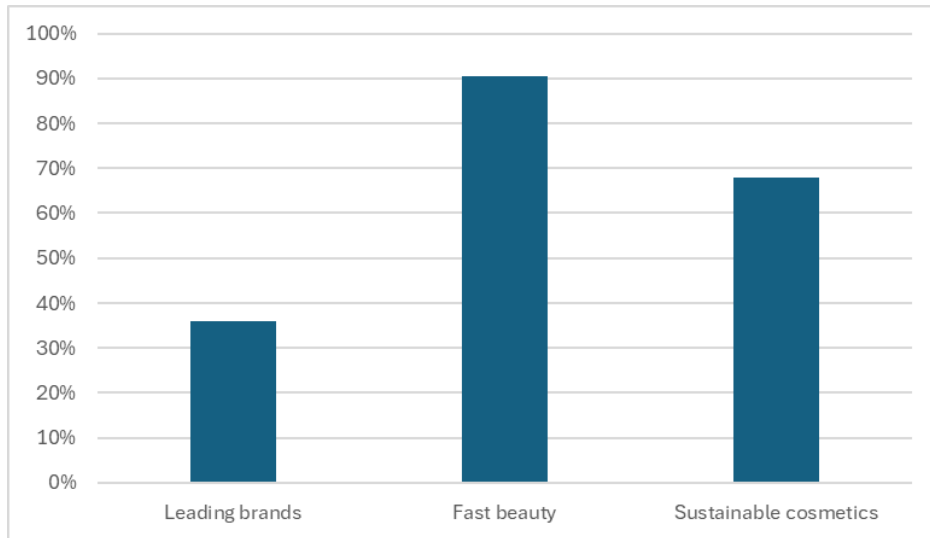


Figure 3.9: Observation of greenwashing across brand categories

3.3.7.1 Greenwashing sin and comparison across categories

To examine the relationship between brand category and the type of greenwashing sin identified in product claims, a chi-square analysis was conducted. The results showed statistically significant associations for all greenwashing sins analyzed, except for the sins of "trade-off" and "two evils," which were not observed among the products in the sample. For the sin of "no proof," 21.4% (22 products) in the leading brands category ($n=103$), 81.3% (52 products) in the fast beauty category ($n=64$), and 44.6% (25 products) in the sustainable cosmetics category ($n=56$) exhibited this issue, with a p -value of less than 0.001 and a Cramér's V value of 0.507, indicating a moderate association. The sin of "vagueness" was observed in 5.8% (six products) in the leading brands category ($n=103$), 57.8% (37 products) of the fast beauty category ($n=64$), and 30.4% (17 products) of the sustainable category ($n=56$), with a p -value less than 0.05 and a Cramér's V value of 0.495, suggesting a moderate relationship. For "fibbing," no products in the leading brands category, 4.7%

(three products) in the fast beauty category (n=64), and 5.4% (three products) in the sustainable category (n=56) were implicated, with a p -value of 0.022 and a Cramér's V value of 0.155, indicating a weak association. The sin of "worshipping false labels" was identified in 3.9% (four products) of the leading brands category (n=103), 31.3% (20 products) of the fast beauty category (n=64), and 28.6% (16 products) of the sustainable category (n=56), with a p -value less than 0.05 and a Cramér's V value of 0.340, reflecting a moderate association. Lastly, the sin of "irrelevance" was found in 15.5% (16 products) of the leading brands category (n=103), 0% of the fast beauty category (n=64), and 1.8% (one products) of the sustainable category (n=56), with a p -value of less than 0.05 and a Cramér's V value of 0.277, indicating a moderate relationship. These findings suggest distinct patterns of greenwashing practices across the different brand categories. Figure 3.10 illustrates the pattern of greenwashing sin across brand categories.

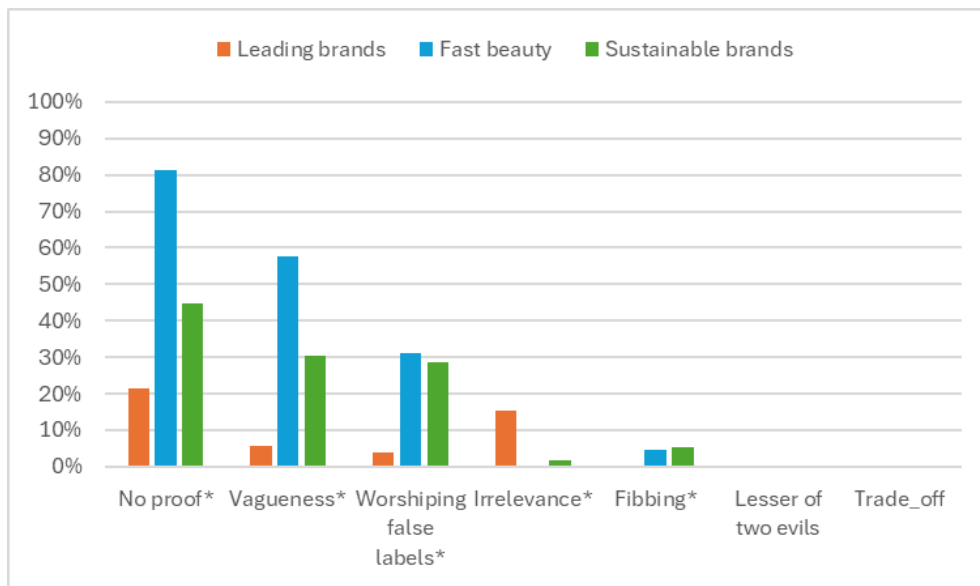


Figure 3.10: Greenwashing sins across brand categories (“*” indicates statistically significant relationship)

3.4 Discussion

This study examined how colour cosmetic brands communicate sustainability-related information across different brand categories—leading brands, fast beauty, and sustainable cosmetics—on their online sales platforms. A central focus was on transparency, sustainability-related claims, labels and certifications, greenwashing, and the communication of product

attributes. The findings highlight distinct communication strategies and notable gaps, offering insights into current industry practices and consumer-facing messaging.

Transparency and regulatory gaps in online communication

The results reveal a widespread lack of transparency regarding the country of origin and ingredient sourcing across all brand categories. Consumers increasingly demand transparency and ethical accountability (Sodhi & Tang, 2019; Cambier & Poncin, 2020). As Bitzios et al. (2017) note in the context of the food industry, disclosing detailed product information is crucial for building consumer trust and supporting informed purchasing decisions—an insight equally relevant to cosmetics. Similarly, echoing trends in the fashion sector (Ospital et al., 2023), cosmetic brands show limited transparency, especially on eCommerce platforms. Notably, although still limited, sustainable brands were more likely to communicate product and ingredient origin, suggesting a stronger alignment with transparency-driven practices.

Moreover, the results indicate a widespread absence of Period After Opening (PAO) symbols across all brand categories in their online retail environment. While such information may be present on physical packaging, online platforms are often the point of purchase, and consumers rely on them to make informed decisions. The omission of PAO information online prevents users from assessing whether they are likely to finish a product within its safe usage period. This gap is particularly concerning given the findings of Bashir and Lambert (2020), who reported microbial contamination in 70–90% of used products such as lipsticks, lip glosses, and eyeliners—products that are applied near the mouth and eyes and are therefore more susceptible to causing harm. Similarly, Giacomel et al. (2013) found that a majority of participants reported using or having used expired cosmetic products. Bashir and Lambert (2020) further emphasize the need for brands to prominently display expiry-related information and ensure that consumers understand the symbols used on packaging. This recommendation should extend to online sales platforms to support safe usage and informed consumer decision-making.

While Canadian regulation mandates the disclosure of ingredient lists and usage instructions on product packaging, no such requirement currently extends to online platforms (Health Canada, 2014). This gap is concerning, especially given the continued growth of cosmetic eCommerce, projected to exceed \$338 billion USD globally by 2029 (Statista, 2024c). The study

found that some leading and fast beauty brands fail to provide essential product details—such as ingredient lists, usage instructions, and size—on their websites. A significant association between brand category and these forms of disclosure suggests that sustainable brands are more consistent in sharing such information, underscoring the need for policy expansion to digital sales platforms.

Communicating product attributes

The analysis reveals systematic differences in how cosmetic brands frame product attributes in their product descriptions, reflecting distinct communicative strategies across brand categories. Drawing on message framing theory, which highlights the impact of selectively presented information on consumer perception (Chang, 2007), the results indicate that brands differ not only in the inclusion of specific attributes but also in the degree of emphasis placed on them. Leading brands placed greater emphasis on performance, appearance, and innovation, often communicating features such as long-lasting wear, comfort, and aesthetic appeal. These appeals align with consumer expectations for effective and stylish products (Grabenhofer et al., 2024) and suggest that brand image and performance remain central to their market positioning. Although it is often stated that consumers are increasingly seeking sustainable products (Cleanhub, 2023; Perret et al., 2025), leading brands continue to dominate the market with relatively few sustainability claims. This suggests that traditional performance-based attributes may still outweigh sustainability considerations in influencing consumer choice, despite growing media (Vogue, 2025) and scholarly attention to sustainability in cosmetics.

Fast beauty brands combined affordability with strategic messaging focused on emotional appeal and safety-related concerns. They frequently emphasized the exclusion of toxic ingredients (e.g., paraben-free), used emotional language, selective labeling such as cruelty free and vegan, and incorporated engaging visuals to highlight performance and aesthetic attributes. These practices reflect broader trends observed in fast fashion, where trend responsiveness and selective ethical labeling drive consumer interest (Adamkiewicz et al., 2022). However, the credibility of claims such as “vegan” or “cruelty-free” is often unclear, raising concerns about greenwashing—a theme explored further below.

Sustainable brands consistently included claims related to environmental responsibility, ingredient transparency, and dermatological testing. Compared to the other brand categories, they

placed more emphasis on sustainable practices and the inclusion of effective ingredients. However, they underemphasized appearance-related attributes, which may affect perceived product efficacy. This finding aligns with Rhee and Lee (2024), who observed that eco-friendly claims in colour cosmetics can reduce consumers' perception of appearance-enhancing benefits, thereby lowering purchase intention. As Chen and Wu (2020) noted, this may stem from a broader consumer perception that green products are often lower in performance. The relatively lower emphasis on appearance among sustainable brands may reflect an implicit trade-off, where sustainability-related and efficacy-based claims are prioritized at the expense of conventional beauty appeals. To remain competitive in the colour cosmetics segment, sustainable brands may benefit from more effectively communicating both sustainability and appearance-related benefits.

Finally, the limited use of interactive tools such as augmented reality (AR) among sustainable brands represents a missed opportunity. While leading brands increasingly adopt AR to enhance user experience and personalization, sustainable brands lag in this area. Integrating such features could support more immersive and competitive online engagement while maintaining a values-driven brand identity.

Overall, the results underscore how brand categories strategically frame product features to align with distinct market identities: sustainable brands foreground values-based messaging, fast beauty brands emphasize emotion and safety, and leading brands reinforce performance and aspirational appeal.

Label and certification use and the role of market pressure

The analysis revealed that vegan and cruelty-free claims were among the most frequently communicated ethical and sustainability-related claims across all brand categories for their lipstick products, particularly in fast beauty and sustainable cosmetics. This trend reflects broader consumer preferences for sustainable beauty, which has grown significantly over the past two decades (Martinelli & De Canio, 2021; Dos Santos et al., 2023). However, the study also observed a concerning disparity: while claims related to animal welfare are common, claims addressing human rights or sustainable sourcing—such as fair trade—remain rare.

This discrepancy may be market-driven. Research shows that consumer concern for different ethical issues is uneven, with some attributes resonating more strongly than others (De Pelsmacker, Driesen, & Rayp, 2005). The low prevalence of certifications related to human rights in the cosmetic supply chain, particularly in ingredients like mica or palm oil (Das & Goel, 2021; Wahab, 2019; Mei et al., 2022), raises questions about consumer priorities and industry accountability. These findings point to a critical need for increased awareness, NGO involvement, and policy interventions to ensure sustainable sourcing receives equal visibility in brand communication.

Greenwashing and the misuse of labels

A major concern emerging from this study is the prevalence of greenwashing—particularly through the “sin of no proof” and “sin of vagueness” (TerraChoice, 2010). Many products made claims such as 'cruelty-free,' 'clean,' or 'vegan' without third-party verification, relying instead on internal labels or certifications. Even when some brands did follow internal processes to support these claims, such labels remain self-regulated, lack external accountability or standardized criteria, and the process itself is rarely communicated to consumers in a transparent way. This was especially prevalent in fast beauty and, to a lesser extent, sustainable brands. Some brands even presented internal labels alongside legitimate third-party certifications, potentially misleading consumers into believing all claims were independently verified.

The misuse of labels—especially vague terms like “clean”—compromises consumer trust and undermines the credibility of legitimate sustainability efforts (Zhang et al., 2018). These findings emphasize the importance of third-party validation, clearer definitions, and stricter enforcement of marketing regulations. Addressing greenwashing is essential for strengthening the legitimacy of sustainability communication and for empowering consumers to make informed, values-aligned decisions. The lack of evidence and reliance on internal labels reflect framing strategies that create an appearance of sustainability while limiting the consumer’s ability to critically assess the claim’s validity.

Packaging and end-of-life communication

This study found that waste-related communication overwhelmingly focused on packaging, with limited attention to the disposal of product residue. While some sustainable brands included claims about recyclable or recycled packaging, few offered clear guidance on how to dispose of residual of the product. This mirrors trends in sustainability literature, where packaging dominates waste-related messaging despite growing awareness of end-of-life impacts (Jain & Singhal, 2022). Moreover, it is consistent with prior findings that emphasize the need for more clear recycling instructions to support consumer waste sorting and behavioural change (Wojciechowska & Wiszumirska, 2022). Recent work on sustainable cosmetics highlights the importance of end-of-life communication—including guidance on reuse or disposal—as a critical component of a product’s environmental performance (Martins & Marto, 2023). Addressing the entire product lifecycle in communication strategies is particularly important given the environmental risks posed by both packaging and leftover product waste (Nciri et al., 2022). Given the environmental risks of recycling contamination and the impact of product remnants, cosmetic brands should broaden their communication strategies to include clear guidance on the complete end-of-life process.

Framing sustainability and constructing meaning

Finally, beyond the presence or absence of sustainability claims, this study also reveals how different brand categories frame sustainability in ways that shape consumer understanding. For example, the frequent emphasis on vegan and cruelty-free—particularly in fast beauty and sustainable brands—highlights how animal welfare has become central markers of “sustainable beauty,” potentially overshadowing other critical concerns such as labour rights, ingredient sourcing, or full product lifecycle impacts. This selective framing contributes to a constructed definition of sustainability that is narrow, emotionally resonant, but often incomplete. In this sense, sustainability is not only being communicated, it is being strategically shaped by brands to align with consumer expectations and market trends. Equally important is the role of omission as a framing device. Brands may strategically avoid highlighting aspects such as supply chain labour practices, detailed environmental impacts, or expiry-related risks, reflecting assumptions about what consumers prioritize in purchasing decisions. Prior research shows that omission can be

deliberate, as in the case of retailers who downplay sustainability in consumer-facing marketing when factors such as price or design are stronger purchase drivers (Welinder, 2023). In cosmetics, similar silences may reflect both market pressures and the risk of consumer skepticism when claims cannot be substantiated. Message framing theory helps explain how these choices influence perception, while the broader social construction perspective highlights how brand narratives contribute to what sustainability comes to mean in the colour cosmetics sector.

3.5 Limitations and future research

This study has several limitations. First, it focuses solely on lipsticks—a key but narrow segment of the colour cosmetics market—limiting insights into how other product categories communicate sustainability. Second, the sample size is centered on Canadian market, which may not reflect global or niche market dynamics. Third, the analysis is based on product webpages, excluding other communication platforms like social media or advertising. Fourth, another limitation relates to the categorization of certain brands that could reasonably be placed in more than one group. ColourPop, for example, has been described in industry journals as both a leading brand and a fast beauty brand. To maintain consistency, it was classified within the fast beauty category. A sensitivity analysis excluding ColourPop confirmed that this decision did not affect the results; however, the need to make such classification choices highlights the complexity of brand positioning in the cosmetics market. Finally, the study does not assess consumer responses to brand messaging. Future research should broaden the product range, sample size, other channels of communications including retailers and data sources, and include consumer perspectives to deepen understanding of sustainability and inclusion in cosmetics communication.

3.6 Conclusion

This study examined how different categories of colour cosmetic brands—leading, fast beauty, and sustainable—communicate sustainability on their online sales platforms, focusing on one key product type, lipstick. The findings reveal significant variation in transparency, sustainability claims, use of labels or certifications, and greenwashing. Sustainable brands demonstrated stronger alignment with sustainable messaging, while fast beauty brands showed high responsiveness to market trends such as vegan and cruelty-free claims, often without verified

backing. Leading brands, despite their market dominance, were least engaged in sustainability-related communication.

A critical aspect of the analysis focused on the presence of greenwashing, assessed using the framework of the seven sins of greenwashing. The most prevalent sins observed were “no proof” and “vagueness,” especially among fast beauty brands, followed by sustainable brands. These practices raise concerns about the integrity and reliability of the sustainability messaging presented to consumers. Greenwashing not only undermines consumer trust but also dilutes the impact of legitimate sustainability efforts across the industry.

By providing a comparative analysis of sustainability communication across brand categories, this study contributes to the growing body of research on sustainable marketing in the colour cosmetics sector. It emphasizes the need for clearer guidelines and stronger verification mechanisms to ensure that sustainability-related claims are meaningful and trustworthy. For brands, the findings underscore the importance of aligning marketing with verifiable sustainability practices. For policymakers, the results highlight the urgency of regulating digital sustainability claims in a rapidly growing e-commerce environment.

Importantly, this study also shows that sustainability in colour cosmetics is not just communicated—it is framed and constructed through brand messaging. By applying message framing theory, the research demonstrates how brands emphasize certain claims (such as vegan or natural) to shape consumer perception, sometimes at the expense of transparency or comprehensiveness. These framing strategies contribute to a socially constructed understanding of what “sustainability” means in the beauty industry. Recognizing this framing process is essential for developing more responsible and truthful sustainability communication in consumer markets.

This study makes several important contributions. Empirically, it is the first comparative study of sustainability communication in colour cosmetics across leading, fast beauty, and sustainability-oriented brands, and the first to examine this phenomenon in the Canadian market. By focusing on a single iconic product type—lipstick—the study captures category-specific insights while generating comparative evidence that has not been documented before.

Theoretically, the study extends message framing theory by showing how sustainability is not merely presented but strategically framed in brand messaging. It demonstrates that sustainability communication is socially constructed through selective inclusion claims such as vegan or cruelty-free, and that these framings vary systematically across brand categories.

Methodologically, the study develops and applies a systematic tool for evaluating the integration of sustainability into product-level marketing communication. This framework, incorporating both substantive claims and indicators of greenwashing, provides a replicable basis for future research in cosmetics.

Practically, the findings highlight the risks of vague or unverified sustainability claims, especially in fast beauty, and underscore the need for brands to provide clearer, evidence-based communication. For policymakers, the study points to the urgency of regulating digital sustainability claims in the context of rapidly expanding e-commerce. For consumers and media, it offers insights that strengthen literacy around sustainability communication and help identify greenwashing.

For the field of marketing, this study advances understanding of sustainability communication at the product level, shifting attention away from corporate-level reporting to the messages that consumers actually encounter at the point of sale. By highlighting both the strategies and shortcomings of different brand categories, it contributes to marketing scholarship on branding, transparency, and consumer trust in sustainability communication.

This study's conceptual map (Figure 3.1) provided a foundational structure for examining how colour cosmetic brands integrate sustainability into their online product messaging. Revisiting the framework in light of the findings reinforces the interconnected roles of brand categories, messaging elements, and greenwashing indicators in shaping consumer-facing narratives. The theoretical lenses of message framing and social construction were instrumental in analyzing what attributes were communicated and how specific sustainability practices were strategically emphasized to construct perceived brand values. Notably, the distinction between sustainability claims and their verification through labels or certifications emerged as a critical insight—highlighting that while these claims were common, third-party verification was inconsistently applied. The framework also anticipated the importance of identifying inconsistencies and

potential greenwashing strategies, which became evident through the analysis. Overall, the conceptual map enabled a systematic comparison of how leading, fast beauty, and sustainable brands communicate sustainability, and how the framing strategies shape consumer perceptions of what constitutes a “sustainable” colour cosmetic product. By returning to this framework, the study underscores the value of an integrated analytical approach to critically evaluating brand communication in an increasingly sustainability-oriented marketplace.

Chapter 4 : Sustainability in skincare: A comparative study of brand communication, message framing, and greenwashing across leading, fast beauty, and sustainable brands.

Abstract

This study investigates how sustainability is integrated into the communication in the marketing of skincare products- specifically facial moisturizer products across three brand categories: leading brands, fast beauty brands, and sustainability-positioned brands. Guided by message framing theory, the research uses a combination of mystery shopping and content analysis techniques to examine product webpages of 218 products. Communication is assessed based on degree of transparency, sustainability-related claims, labels and certifications, end-of-life information, and greenwashing. The findings reveal significant variation in communication strategies. Leading brands emphasize product performance while largely neglecting sustainability. Fast beauty brands frequently highlight vegan and cruelty-free claims—often without third-party verification—reflecting a narrow, emotionally driven framing of sustainability. Sustainable brands prioritize transparency and sustainability messaging but often under-communicate performance and consumer appeal features. The study also identifies widespread greenwashing, particularly the sins of “no proof,” “vagueness,” and “false labels,” as well as a limited focus on sustainable sourcing and product end-of-life communication. These practices contribute to a socially constructed and selective understanding of sustainability in skincare. By analyzing how sustainability is framed and operationalized in brand messaging, the study offers theoretical insights into meaning-making in sustainability marketing and provides practical implications for improving transparency, credibility, and consumer trust in the cosmetics industry.

4.1 Introduction

4.1.1 Overview

The skincare segment of the global cosmetics industry is experiencing rapid growth, fueled by changing consumer preferences, lifestyle trends, and the rise of digital commerce (Fortune Business Insights, 2025). Skincare products are often marketed as both functional and emotionally supportive, blending scientific claims (Kenalemang-Palm & Eriksson, 2023) with narratives of

wellness and self-care (Hashem et al., 2020). In recent years, ethical and sustainability considerations have also become central to this messaging (Seelig et al., 2019). However, sustainability is often viewed as a trade-off against product performance (Bom et al., 2019), thus impacting consumer behaviour (White et al., 2019). Additionally, similar to observations of other industries, in which consumer trust is frequently challenged by vague or unverified claims (Adamkiewicz et al., 2022).

This evolution has given rise to a variety of brand categories within the skincare sector, each occupying a distinct position in the market. Sustainability-positioned brands explicitly frame themselves as ethical and environmentally responsible, often emphasizing values such as ingredient transparency, minimal packaging, and social impact. Furthermore, fast beauty brands follow a model similar to fast fashion—prioritizing affordability, rapid product turnover, and trend responsiveness (Jeelani, 2020; Ratri & Arifianto, 2024). Industry-leading brands, which command a larger share of the market, often maintain more established business models and broad consumer appeal. While these categories reflect different market strategies and consumer segments, it remains unclear how each communicates sustainability. This diversity offers a valuable context for exploring the ways in which sustainability is integrated into communication across different brand types.

Despite increasing scholarly interest in sustainability marketing, few studies have systematically compared how different brand categories communicate sustainability. Existing research has explored topics such as scientific language, ethical and environmental claims, green messaging, and corporate social responsibility (CSR) discourse, often focusing on specific strategies or consumer responses. This study builds on that work by examining how three brand categories—industry-leading brands, fast beauty brands, and sustainability-positioned brands—integrate sustainability into their communication on their online skincare product sales platform. It contributes a comparative, product-level perspective that enhances our understanding of how sustainability is framed across distinct segments of the cosmetics industry.

Grounded in message framing theory and informed by a social constructionist perspective, this research focuses on transparency, explicit sustainability-related claims, labels and certifications, product end-of-life messaging, and potential indicators of greenwashing. The analysis is based on a sample of 218 facial moisturizer products collected from brand websites,

including 100 from leading brands, 42 from fast beauty brands, and 76 from sustainability-positioned brands.

The study aims to identify the framing techniques used in sustainability communication on skincare product webpages, compare sustainability-related messaging across brand categories, identify communication gaps and inconsistencies, and offer actionable insights for improving transparent, credible communication in the skincare industry. Empirically, it represents the first comparative investigation of skincare sustainability communication across leading, fast beauty, and sustainability-oriented brands, and the first such analysis conducted in the Canadian context. Theoretically, it extends message framing theory to the skincare domain, showing how brand categories construct the meaning of sustainability and how communication reinforces or challenges the assumed sustainability–performance trade-off. Methodologically, it applies a systematic tool for evaluating the integration of sustainability into product-level messaging, demonstrating its adaptability across different product types. For the field of marketing, the study broadens attention from corporate-level sustainability discourse to product-level brand communication, highlighting the category-specificity of sustainability framing strategies. Practically, the research supports consumers in making informed purchasing decisions, aids brands in developing more authentic and impactful communication, and informs policymakers in establishing clearer regulations for sustainability claims in the beauty industry.

The aim of this study is to conduct a comparative analysis of how leading, fast beauty, and sustainable skincare brands communicate sustainability through their online sales platforms, with a focus on facial moisturizer products. To achieve this aim, the study pursues four objectives: 1) Identify the message framing techniques used in the sustainability communication of skincare brands on product webpages. 2) Compare sustainability-related messaging across brand categories (leading, fast beauty, sustainable). 3) Highlight communication gaps and inconsistencies, particularly around transparency, performance trade-offs, and credibility. 4) Offer actionable insights for improving transparent and credible sustainability communication in the skincare industry.

4.1.2 Background

The skincare segment of the global cosmetics industry is undergoing a period of dynamic growth. Valued at USD 115.65 billion in 2024, the global skincare market size is projected to grow to USD 194.05 billion by 2032, exhibiting a CAGR of 6.84% (Fortune Business Insights, 2025). This is fueled by population growth and novel marketing strategies. As consumers become increasingly focused on self-care, wellness, and preventative health, skincare has emerged as a dominant category within the broader cosmetics industry (Manners, 2025; Euromonitor International, 2024). However, this growth is accompanied by concerns over the environmental and social sustainability of the sector. Issues such as unsustainable sourcing of raw materials, carbon emissions from production, distribution, consumption, and the accumulation of waste are central to the industry's environmental impact (Bom et al., 2019; Cinelli et al., 2019; Anagnosti et al., 2021). For instance, The cosmetics sector generates over 120 billion units of packaging annually, of which 95% is discarded after a single use and only 14% is recycled (O'Brian, 2022). Product formulations add to this burden, with exfoliating scrubs releasing up to 95,000 microbeads per application into waterways, accelerating microplastic accumulation (Bhattacharya, 2016). Reliance on palm oil is equally concerning, as around 70% of cosmetics contain palm-derived ingredients (Warn, 2021); cultivation drives severe deforestation, with land equivalent to 300 football fields cleared every hour, destroying habitats for endangered species (Davison, 2024). Social concerns, including lack of diversity and inclusion, labour exploitation in ingredient supply chains, negative impact on health, and unequal access to safe, effective products—further complicate the sector's sustainability profile (Das & Goel, 2021; Wahab, 2019; Bilal et al., 2020; Anastas & Zimmerman, 2018). In Egypt, children as young as five have been documented on jasmine farms supplying major perfumery brands (Doyle, 2024). Beyond labour issues, health disparities are pronounced: 53% of Black and Latina women use personal care products containing formaldehyde-releasing preservatives daily, heightening risks of cancer and reproductive harm (Ajasa, 2025). The industry's marketing further compounds these harms by promoting unrealistic beauty ideals that fuel body dissatisfaction and lower self-esteem (Enriquez et al., 2025).

Unlike colour cosmetics, which are primarily decorative, skincare products are often positioned as therapeutic and functional—addressing concerns such as hydration, aging, and sun protection. As such, skincare marketing typically blends scientific credibility (Kenalemang-Palm

& Eriksson, 2023) with emotional narratives around self-care and wellness (Hashem et al., 2020). This combination not only aims to build trust in product efficacy but also aligns with consumer desires for routines that promote well-being. Recently, ethical and sustainability concerns have also become integral to this communication. Consumers increasingly seek skincare products that are not only safe and effective but also environmentally responsible and socially conscious (Ahmed et al., 2020). On one hand, sustainability and performance in skincare products have often been perceived as conflicting goals (Bom et al., 2019); on the other hand, consumer demand for sustainable options has been met with increasing skepticism, due to the fact that vague, unverifiable, or exaggerated sustainability claims remain prevalent in industry messaging (Delmas & Burbano, 2011).

For this study, the focus will be on a single skincare product category: facial moisturizers. Among skincare products, moisturizers are the most commonly used (Nolan & Marmur, 2012; Deb, 2025). Specifically, this study examines facial moisturizers, given their widespread use and significance in daily skincare routines.

A moisturizer is defined as a formulation (such as a lotion or cream) applied to the skin or hair to prevent or alleviate dryness (Merriam-Webster, 2025). These products are marketed under various labels, including creams, lotions, gels, and butters. For this study, only facial moisturizers whose primary function is hydration or dryness prevention for face were included. Products with additional secondary benefits, such as sun protection, were considered as long as hydration remained their primary function. However, products where the primary purpose is unrelated to moisturizing, such as sunscreens with moisturizing properties, were excluded.

Green branding has emerged as a popular strategy for signaling corporate responsibility, with companies leveraging terms like “clean,” “natural,” “vegan,” and “eco-friendly” to attract ethically minded consumers (Seelig et al., 2019; Biloslavo & Trnavčević, 2009). However, green marketing is not without its contradictions (Peattie & Crane, 2005). Scholars have long pointed out that such strategies can lead to overconsumption—encouraging consumers to buy more under the guise of sustainability—thus contributing to a rebound effect that undermines environmental goals (Binswanger, 2001; Hertwich, 2005; Castro et al., 2022). Compounding this challenge is the prevalence of greenwashing, whereby brands make vague or unverifiable sustainability claims that

erode consumer trust and obscure meaningful progress (Delmas & Burbano, 2011; Atkinson & Kim, 2015). In the skincare sector, where scientific language and wellness narratives are common, the line between education and persuasion can blur. This underscores the need for transparency and credibility in sustainability communication. While third-party certifications and labels offer potential solutions, their impact depends on consumer understanding and brand accountability (Horne et al., 2009; Prieto-Sandoval et al., 2016).

In recent years, the skincare sector has seen a proliferation of diverse brand types that reflect shifting consumer expectations and market strategies. Fast beauty brands mirror fast fashion in their rapid production cycles, trend-driven marketing, and emphasis on affordability (Niinimäki et al., 2020; Bläse et al., 2023). These brands often introduce frequent product launches following trends, encouraging continual consumption, contributing to environmental and social pressures similar to those seen in the broader industry sector (Jeelani, 2020). On the other hand, there are brands that identify themselves as sustainable, positioning their offerings around environmental and social conscious practices (Morosini, 2021). These brands often seek to appeal to consumers through labels or certifications, minimal packaging, and claims of ingredient safety or transparency. At the same time, well-established or leading skincare brands may vary in their sustainability commitments while maintaining traditional business models. This diversity in brand and market positioning creates a valuable context for comparing how sustainability is communicated across different types of skincare brands. Brands may include selected sustainability-related claims, such as being cruelty-free or vegan. However, the extent, framing, and consistency of such claims remain unclear. Rather than assuming where each category stands, this study investigates and compares how skincare brands across three categories—leading brands, fast beauty brands, and brands recognized for their sustainability positioning—communicate sustainability through their online product descriptions and visuals. By doing so, the study contributes to a better understanding of the integration of sustainability in skincare communication across brand categories.

Prior research has explored various dimensions of sustainability in cosmetic marketing, including the use of scientific language in cosmetic marketing (Kenalemang-Palm & Eriksson, 2023), the effectiveness of sustainability-related claims (Grappe et al., 2022; Oe & Yamaoka, 2022; Teixeira et al., 2023), green messaging strategies (Seelig et al., 2021), CSR discourse (Pönkänen

& Wedendal, 2018), and the role of creativity in shaping consumer perceptions (Alevizou, 2021). Building on this body of work, the present study advances skincare marketing research in three distinct ways. First, it examines the extent to which cosmetic brands communicate sustainability. Second, it compares communication practices across three brand categories: leading skincare brands, fast beauty brands, and sustainability-positioned skincare brands. Third, it evaluates claims related to product transparency, sustainability messaging, labels and certifications, greenwashing, and sustainability framing across both textual and visual elements on product webpages. Given the rapid growth of the cosmetics industry, the rise of innovative marketing strategies, the emergence of sustainability-focused and fast beauty brands, and increasing concerns over greenwashing, understanding how brands frame their sustainability claims is essential. Such analysis is crucial for promoting transparency, fostering consumer trust, and informing more accountable and credible sustainability communication practices.

While some studies have explored the use of visual and design-based cues—such as natural colour palettes or symbolic imagery—to convey environmental responsibility and construct a green brand image (Segev et al., 2016; Gephart et al., 2011), this study focuses specifically on the explicit sustainability-related claims made in product marketing. These include directly stated terms such as vegan, cruelty-free, natural, organic, and ethically sourced, as well as references to, product safety, and product end-of-life. This analytical focus aligns with Carlson et al.'s (1996) distinction between substantive and associative environmental claims and Seelig et al.'s, (2021) finding that substantive claims in cosmetics marketing have increased. Substantive claims offer concrete, verifiable information—for example, third-party certifications or the use of recycled material in packaging—while associative claims rely on symbolic or vague language that implies sustainability without evidence, such as using nature-inspired colours like green or beige to imply naturalness, or white to suggest cleanliness. In this study, only claims that are explicitly stated in text or imagery are analyzed, excluding symbolic cues that suggest greenness without making direct claims.

This study draws on message framing theory (Kahneman & Tversky, 1979) to examine how cosmetic brands construct and communicate sustainability through product-level marketing. Framing refers to the way information is presented—through emphasis, omission, or repetition—to shape how it is perceived by audiences (Entman, 1993). In the context of sustainability

marketing, brands frame their sustainability positioning by highlighting specific product attributes such as being vegan, natural, cruelty-free, or safe. These attributes not only influence consumer decision-making but also contribute to shaping what sustainability means within the marketplace. Informed by the broader concept of social construction (Berger & Luckmann, 1966), this study understands framing not just as a messaging technique, but as a mechanism through which brands define and perform sustainability in public discourse.

To explore this process, the study first analyzes the level of transparency in marketing communication. It then assesses the product attributes communicated through textual and visual elements, evaluating both rational appeals (e.g., ingredient safety, efficacy) and emotional appeals (e.g., luxury, self-care, nostalgia) (Ju et al., 2016; Hashem et al., 2020). Next, it examines the frequency, type, and evidentiary basis of sustainability-related claims across brand categories. The analysis also considers the use of labels and certifications—distinguishing between third-party certifications and internal symbols—and whether brands provide information on product end-of-life, such as recyclability. Particular attention is given to the prevalence of greenwashing, including vague, exaggerated, or unsupported claims. Through this lens, the study investigates how sustainability is framed as part of the brand's identity and consumer value proposition, and how these framings differ across leading, fast beauty, and sustainability-focused brands. While attributes like vegan, natural, organic, and cruelty-free are frequently associated with sustainability in cosmetics marketing (Seelig et al., 2021), their presence does not guarantee that a product is environmentally or socially responsible in a comprehensive sense (Bom et al., 2019). These claims may reflect specific values but often overlook broader lifecycle impacts, including ingredient sourcing, production practices, and labour conditions. Despite these limitations, such claims remain central to how brands frame sustainability in product communication.

To assess this framing, the study systematically examines the presence of key sustainability-related keywords, as these are among the most commonly used terms through which brands communicate their environmental and social commitments. In addition to these core claims, the analysis includes broader value-based labels—such as wildcrafted, women-owned, and Indigenous-owned—to provide a more complete picture of how sustainability and social responsibility are positioned in the marketplace. By evaluating both the frequency and the level of

evidence for these claims, this study seeks to assess the credibility of sustainability messaging and identify patterns of greenwashing across different categories of cosmetic brands.

This research has four key objectives: (1) to identify the framing techniques used in sustainability communication on skincare product webpages; (2) to compare sustainability-related messaging across leading, fast beauty, and sustainable skincare brands; (3) to uncover communication gaps and inconsistencies, particularly between performance and sustainability claims; and (4) to offer actionable insights for improving transparent, credible communication in the skincare industry. In doing so, this study contributes to the growing body of literature on sustainability marketing in cosmetics while offering practical implications for brands, regulators, and consumers committed to sustainable beauty. Figure 4.1 presents the conceptual map guiding this study, outlining the theoretical foundations, methodological approach, brand categories, and key messaging elements used to analyze how sustainability is integrated into skincare brand communication.

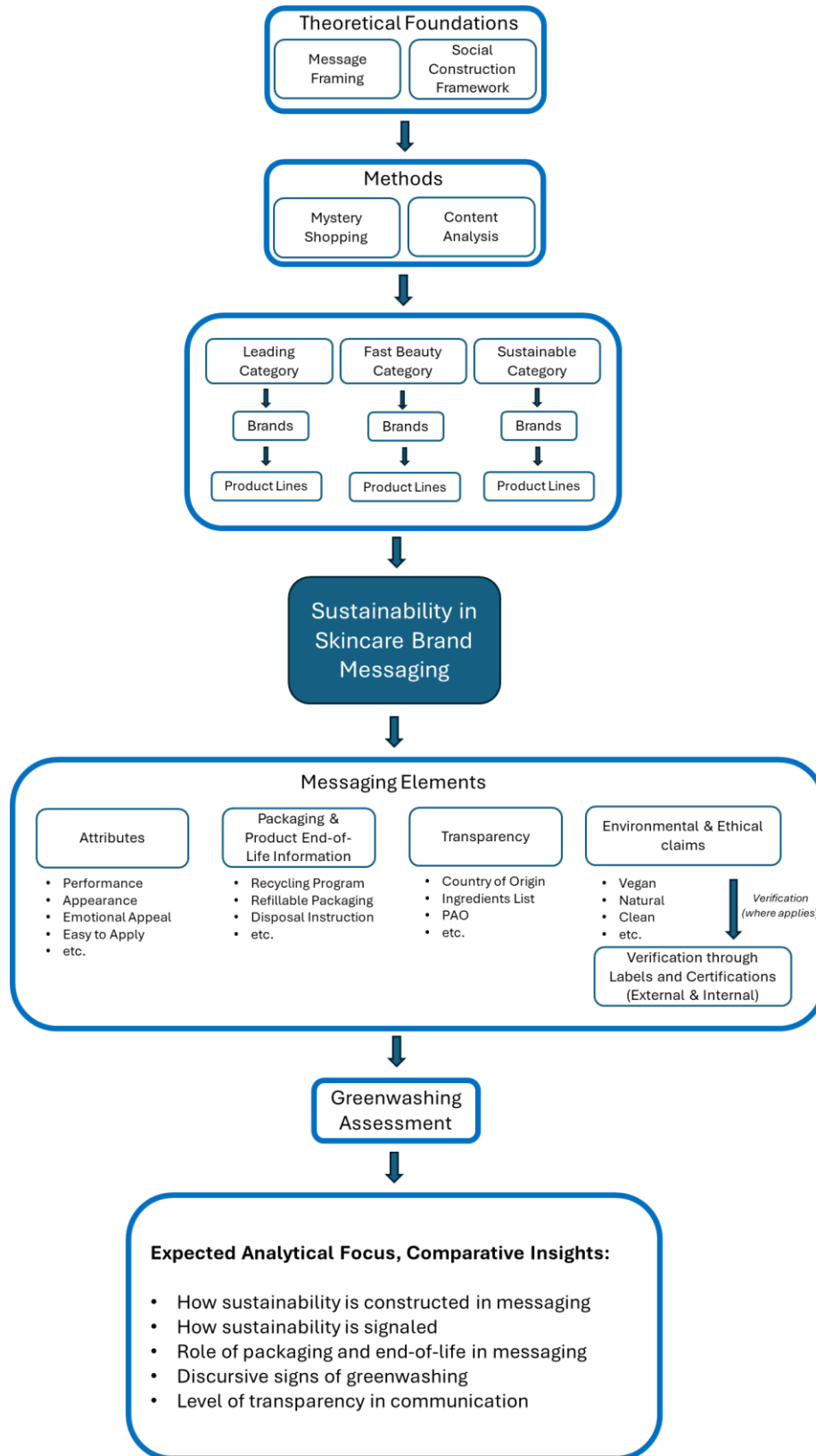


Figure 4.1: Conceptual map of current study (developed by author)

4.2 Methodology

As described in the background section the "message framing" is the theoretical foundation of this research. In online shopping, the message that make the consumer perception of the product is communicated through the description or multimedia via the webpage of their products. The aim of this research was to conduct a comparative study about communication practices of various types of cosmetic brands in the Canadian market and gain insights into how these brands appeal to their target audiences and to what extent sustainability is integrated in communications.

4.2.1 Parameters of assessment

The study applied a set of targeted criteria to evaluate the sustainability messaging strategies of cosmetic brands based on substantive claims from 218 products (100 from leading brands, 42 from fast beauty brands, and 76 from sustainable cosmetics brands). The selection of criteria and variables was guided by relevant literature on sustainability communication, as summarized in Table 3.2. The assessment included the following dimensions:

1. Benefit emphasis analysis: Evaluating the types of product attributes communicated by brands, categorized as:

- General cosmetic attributes: including performance, appearance, emotional appeal (expressed through language that evoked feelings of confidence, joy, or empowerment), ease of use, and dermatologically tested claims, sustainability practices (practices related to environmental and social responsibility)
- Facial moisturizer-specific attributes: such as anti-aging, SPF protection, hydration, and skin-firming effects

2. Transparency indicators: Assessing how clearly brands disclosed critical product information, including:

- Product size
- Country of origin
- Usage instructions
- Ingredient list

- Origin of at least one ingredient
- Period-after-opening (PAO) symbol or shelf-life information

3. Sustainability-related claims: Reviewing the nature and breadth of sustainability-related statements, such as vegan, cruelty-free, ethical sourcing, safe, clean, and natural

While ethics and sustainability often overlap in brand communication, they are distinct concepts. Sustainability typically emphasizes environmental and social practices for long-term ecological and societal well-being, whereas ethics relates to broader moral principles, such as animal welfare and corporate responsibility. Academic literature points to the nuances, overlaps, and trade-offs between the two (Bansal & Song, 2017). This study does not attempt to disentangle these boundaries but instead includes all claims that contribute to a sustainability impression, focusing on how they are communicated to consumers. Additionally, the study acknowledges that some claims may bridge both environmental and social domains (e.g., fair trade or safe).

4. Labels and certifications: Evaluating the presence and credibility of labels or certifications

5. Greenwashing Assessment: Identifying misleading or exaggerated claims using the seven sins of greenwashing (TerraChoice, 2010), which include: the sin of the hidden trade-off, no proof, vagueness, irrelevance, the lesser of two evils, fibbing, and worshiping false labels

6. Packaging and Waste Communication: Analyzed how brands addressed packaging sustainability and product end-of-life instruction, focusing on:

- Use of recyclable or recycled packaging
- Instructions for disposal or reuse and presence of recycle programs
- Communication related to product leftovers (e.g., residues)

All criteria were compared across the three brand categories—sustainable, fast beauty, and leading brands—to highlight key differences in how sustainability is framed and presented in the marketing of facial moisturizer products.

4.2.2 Research type and method

This study adopts a mixed-methods design, integrating quantitative questionnaires and statistical analysis with qualitative mystery shopping to examine how cosmetic brands communicate sustainability. The quantitative component uses structured questionnaires to analyze messaging, sustainability claims, and product attributes across brand categories, identifying key trends and relationships. The qualitative component employs mystery shopping and content analysis to capture the contextual nuances of brand communications—such as sustainability claims, product features, and greenwashing. By combining these methods, the research delivers both numerical value and in-depth insights into the strategies brands use to convey sustainability practices.

This study employed two complementary qualitative methods—mystery shopping and content analysis—to investigate how skincare brands integrate sustainability into their marketing communication. Together, these methods provide a comprehensive understanding of both how sustainability messages are constructed by brands and how they are experienced by consumers through online retail environment.

Mystery shopping is a research method commonly used to evaluate service quality, compliance with standards, and overall customer experience across various industries (Wilson, 1998a; Douglas, 2015). It involves trained individuals posing as regular customers to assess businesses based on predefined criteria and scenarios, focusing on elements such as product knowledge, staff behaviour, and brand consistency (Grove & Fisk, 1992). This approach offers objective insights into how businesses present themselves and how customers experience their offerings. In this study, mystery shopping serves as a valuable tool for analyzing the communication strategies brands use across different consumer touchpoints.

In parallel, content analysis was conducted to systematically examine the framing and presentation of sustainability in brand communication. Content analysis enables researchers to identify and interpret patterns, themes, and claims within textual and visual content (Harwood & Garry, 2003). For this study, content analysis focused on product attributes, sustainability-related claims, language used to frame sustainability, presence of labels or certifications, guidance on product-end-of-life, and signals of greenwashing. This method facilitated structured comparisons

across brands and supported a critical evaluation of the depth, credibility, and consistency of sustainability messaging.

By combining mystery shopping with content analysis, the study captures both the experiential and representational dimensions of sustainability communication, offering a more holistic assessment of how skincare brands articulate their sustainability commitments across online platforms.

4.2.3 Selection of brands

This study compares three categories of cosmetic brands—leading brands, fast beauty brands, and sustainable brands—to examine differences in how sustainability is communicated across distinct market positions. Fast beauty brands were included as they mirror the fast fashion model, emphasizing speed, affordability, and trend responsiveness, and have been widely criticized for unsustainable practices. Sustainable brands, by contrast, explicitly position themselves around environmental and social values, making sustainability-related claims a central part of their identity. Examining these two categories side by side enables a comparison between brands criticized for unsustainability and those that present sustainability as a defining attribute. Leading brands were also included to assess how dominant, established players in the cosmetics industry integrate sustainability into their messaging, thereby facilitating comparisons between market leaders and strategically differentiated brands.

Each brand category was defined using specific criteria and identified through triangulation of multiple sources:

Leading brands were defined as those with dominant market share, long-standing industry presence, and strong consumer recognition. Identification relied on U.S. industry data and market share reports (Statista, 2024), used as a proxy for the Canadian market due to the high degree of overlap in product availability, consumer markets, and brand influence across both contexts.

Fast beauty brands were defined as those operating under the fast beauty model, characterized by rapid product development, trend-driven launches, and affordability. Since no brand explicitly self-identifies as “fast beauty,” classification was based on secondary sources, including industry journals, trade publications, and widely cited beauty media (e.g., blogs and online magazines). Brands were included when at least two independent sources consistently described them as fast beauty. Cosmetic lines introduced by fast fashion retailers (e.g., H&M Beauty, Sheglam by Shein) were also included due to their clear alignment with fast beauty principles. Availability in the Canadian market was a necessary criterion for inclusion.

Sustainable brands were defined as those that explicitly position themselves around environmental and/or social responsibility through their business models, product offerings, or communication strategies. Categorization followed a triangulation approach, drawing on industry reports, sustainability-focused publications, and media coverage. Brands were included when at least two independent sources consistently identified them as sustainability-oriented. Only brands offering lipsticks and available in the Canadian market were selected.

Brand selection for the fast beauty and sustainable categories followed a pragmatic, reputation-based approach, reflecting the fact that these categories are primarily constructed through media and industry discourse rather than formal self-identification by brands. Snowball sampling was also applied: beginning with well-known brands in each category, additional brands were identified through repeated references in industry reports, trade journals, and widely cited beauty media. Reliance on multiple, independent sources ensured that the included blogs and media outlets were genuinely influential within the cosmetics industry, as reflected in their readership, frequency of citation, and role in shaping consumer perceptions and industry narratives.

In cases where a brand could fit more than one category, for example, fast beauty brands that also rank among industry leaders (e.g., ColourPop), classification was determined based on the brand’s core positioning strategy. Brands identified in industry journals as fast beauty were categorized within the fast beauty group, even when they also hold strong positions in terms of market leadership. This approach enabled meaningful comparisons between traditionally positioned brands and those adopting newer, strategically differentiated identities, such as fast

beauty or sustainability-oriented positioning. The selection of brands for this study was therefore guided by criteria tailored to each of the three categories.

One particular ambiguity concerned ColourPop, which has been described in industry sources as both a leading brand and a fast beauty brand. To avoid duplication across categories and maintain consistency in the dataset, ColourPop was categorized within the fast beauty group. As this decision had the potential to influence the findings, a sensitivity analysis was conducted. All ColourPop products were excluded from the dataset, and the main statistical tests (including Chi-square tests of transparency of country of origin) were re-run. The results remained substantively consistent, confirming the robustness of the findings to alternative brand categorizations.

The sampling process was also influenced by the availability of data for each brand. Not all fast beauty or sustainable brands met the selection criteria, such as reputation and market availability in Canada. Some sustainable brands, for example, have limited distribution in Canada, narrowing the pool of eligible brands. Similarly, certain fast beauty brands may not have enough reputation of being a fast beauty brand, further limiting the selection.

Based on the above brand selection method, data was collected for all facial moisturizer product lines for each brand, 218 products (100 leading brands products, 42 fast beauty products, and 76 sustainable cosmetics products) (see Table 4.1 and Appendix A for product line details).

Table 4.1: Brand categories and number of product lines specific to facial moisturizers across leading, fast beauty, and sustainable cosmetic brands

Leading	# of product lines	Fast Beauty	# of product lines	Sustainable	# of product lines
Avon	22	ColourPop	13	Alpyn Beauty	2
bareMinerals	5	elf Cosmetics	9	Aveda	7
Covergirl	3	Kylie Cosmetics	2	Cocoon Apothecary	2
Estee Lauder	19	NYX Cosmetics	1	Ilia Beauty	1
Fenty Beauty	6	Revolution Beauty	15	Lush	15
Glossier	4	Winky Lux	2	Sunday Riley	3

L'Oréal Paris	32		Tata Harper	7
NARS Cosmetics	2		The Body Shop	18
MAC	7		Upcircle	2
			Weleda	19
Total: 100		Total: 42		Total: 76
Overall = 218				

4.2.4 Data collection

Online product descriptions on brand websites play a key role in shaping consumer perceptions and purchase decisions (Yang, 2010; Vandic et al., 2018). They not only convey product features but also reflect brand values and positioning. This study analyzes official brand online sale platforms (i.e. websites) to examine how facial moisturizers are presented, focusing on the language and attributes included in their communication.

4.2.5 Inter-rater reliability

To gather data on messaging strategies across leading, fast beauty, and sustainable brands, a mystery shopping approach was used. Researchers underwent a training process that included detailed instruction on the coding framework and practice sessions using a subset of sample products. These sessions ensured consistent understanding of the categories and criteria before the full data collection began. Trained researchers posed as typical consumers and followed structured guidelines to observe and document brand messaging on official websites. To ensure reliability, inter-rater checks were conducted: two researchers independently evaluated the same products, and their findings were compared for consistency. The inter-rater agreement was 85.5%, calculated as the number of agreements divided by the total coding decisions (Lombard et al., 2002). This level exceeds the widely accepted 80% benchmark for content analysis, indicating strong reliability in the coding process. Discrepancies were reviewed collaboratively to refine the procedure and align interpretations. This approach minimized bias and enhanced data validity, ensuring accurate insights into brand communication strategies.

4.2.6 Data analysis

Data were collected using a structured, pre-coded questionnaire developed in Qualtrics (See Appendix A and B). Researchers used the questionnaire to record the substantive claims that

offer concrete, tangible information from product webpages. The data were then exported to SPSS, with all variables with their assigned codes. During cleaning, the dataset was reviewed for inconsistencies and missing values, with only minor adjustments needed. Once cleaned and properly labeled, the dataset was prepared for statistical analysis, ensuring reliability and readiness for analysis in SPSS.

Descriptive statistics were first used to explore the frequency and distribution of brand messaging, sustainability claims, and product features. chi-square tests examined associations between brand categories (leading, fast beauty, and sustainable) and key variables such as certifications and product attributes. Where associations were significant, effect sizes were calculated using Cramér's *V*. Together, these analyses provided a robust understanding of how sustainability communication differs across brand categories.

4.3 Results

4.3.1 Transparency

Transparency in marketing communication has become increasingly important as consumers seek more detailed information about the products they buy (Cambier & Poncin, 2020). transparency refers to the disclosure of information regarding a product's traceability, including its suppliers and full lifecycle (Ospital et al., 2023). This study examines the extent of transparency in cosmetic brand communication, focusing on the clarity and accessibility of information related to product origin, ingredient lists, the source of at least one ingredient, product size, and the availability of period after opening (PAO).

Country of origin:

Of the 218 products analyzed (N=218), 89.4% (195 products) did not specify the country of origin. Among the remaining products, 5% (11 products) identified the United States, 4.6% (10 products) identified Canada, and 0.9% (two products) identified the United Kingdom as the country of origin.

Among leading brands (n=100), 96.0% of products did not specify the origin. In the fast beauty category (n=42), 92.9% of products lacked origin information. Sustainable cosmetics (n=76) performed slightly better with 21.1% disclosing their country of origin; However, 78.9%

of sustainable brand products still failed to disclose their country of origin (see Table 4.2). These results indicate a statistically significant relationship between the indication of the country of origin and the brand category, with a p -value of less than 0.001 and a Cramér's V of 0.250, suggesting a moderate association.

A sensitivity analysis was conducted by excluding ColourPop to evaluate whether its categorization affected the findings. The Chi-square test on the transparency of country of origin yielded results that were substantively consistent with the main analysis (p -value < 0.05), indicating that the exclusion of ColourPop did not alter the overall conclusions. Detailed results of the sensitivity analysis are provided in Appendix C (Table C.2).

Table 4.2: Country of origin disclosure by brand category (in percentages and number of products)

Country of Origin	Leading Brands (n=100)	Fast Beauty Brands (n=42)	Sustainable Brands (n=76)
United States	3.0%	2.4%	9.2%
Canada	1.0%	0%	11.8%
United Kingdom	0%	4.8%	0%
Not Specified	96.0%	92.9%	78.9%

The study also examined whether product descriptions included the origin of at least one ingredient. Overall, 17% (37 products) out of 218 mentioned the origin of at least one ingredient, 32 products from sustainable brands (n=76), five products from leading brands (n=100), and no product from fast beauty brands (n=42). A chi-square test showed a significant association between brand category and the indication of at least one ingredient origin, with a p -value less than 0.001 and a Cramér's V of 0.492, indicating a strong relationship.

Content analysis of facial moisturizers from Estée Lauder, one of the leading brands, showed that products that disclose the origin of at least one ingredient have a higher price compared to other facial moisturizers from the same brand. Additionally, these products appear more luxurious in their packaging and presentation compared to other facial moisturizers, suggesting a premium positioning within the brand's offerings.

Among the sustainable brands analyzed, Aveda stood out for its use of blockchain technology to enhance transparency. Blockchain allows for secure, tamper-proof tracking of information across a decentralized network, making it possible to trace ingredients from source to shelf (Aveda, 2025). By integrating this technology, Aveda enables consumers to verify the origin

and journey of specific ingredients, reinforcing the brand’s commitment to authenticity and ethical sourcing in its sustainability communication.

Among the products analyzed, *Age Perfect Cell Renewal Anti-Aging Day Moisturizer SPF 25* by L’Oréal—representing the leading brands category—was the only item in the sample that provided information related to operational sustainability directly on the product sales webpage. Unlike other products, which primarily focused on product attributes, this facial moisturizer included details about the product’s carbon footprint, water footprint, and selected social impact and supply chain initiatives³. Its inclusion of such data highlights a rare instance of operational transparency within mainstream cosmetics marketing, setting it apart from both fast beauty and sustainable brand counterparts in the sample.

Ingredient list and usage instruction:

Among the 218 products analyzed, 91.3% (199 products) included usage instructions, while 8.7% (19 products) didn’t provide them. In the leading brands category (n=100), 83% (83 products) provided usage instruction. For the fast beauty category (n=42), all of the products included usage instructions, while in the sustainable cosmetics category (n=76), 97.4% featured usage instructions. A chi-square test revealed a statistically significant association between the availability of usage instructions and the brand category, with a Cramér’s *V* of 0.272, indicating a moderate relationship.

Regarding ingredient lists, 97.2% (212 products) provided this information, while 2.8% (six products) did not provide it. In the leading brands category (n=100), 94% (94 products) included ingredient lists, while all products in fast beauty (n=42) and sustainable (n=76) categories displayed ingredient lists on their respective websites. A chi-square test confirmed a statistically significant association between the availability of ingredient lists and brand category, with a Cramér’s *V* of 0.183, indicating a weak relationship. While Canadian legislation requires that ingredient lists and usage instruction be included on product packaging (Canada, 2024), it does not mandate their disclosure on online sales platforms—highlighting the voluntary nature of such online transparency.

³ At the time of data collection, this information was publicly available on the brand’s website. It has since been removed.

Size availability:

Among the 218 products analyzed, 96.3% (210 products) provided information about their sizes on their respective web pages. When examined by brand category, 96% of the leading brands category products (n=100) included size information. In the fast beauty category (n=42), 92.9% provided size details, while the sustainable category (n=76) showed the highest rate of size transparency, with 98.7% (75 products) displaying size information. A chi-square test showed no statistically significant association between brand category and the availability of size information.

Period after opening (PAO):

The Period After Opening (PAO) symbol indicates how long a cosmetic product remains safe after it has been opened (Cosmetics Alliance Canada, 2025), helping consumers make informed decisions. Knowing the PAO helps consumers assess whether they are likely to finish a product within its safe usage period. Despite its relevance to consumer safety and product transparency, PAO information is often overlooked in digital contexts. Among the 218 products analyzed across different brand categories, none indicated their PAO on the website. While it is possible that many products include this information on their packaging, its absence from online listings is notable—especially given the growing trend of consumers purchasing cosmetics through digital platforms.

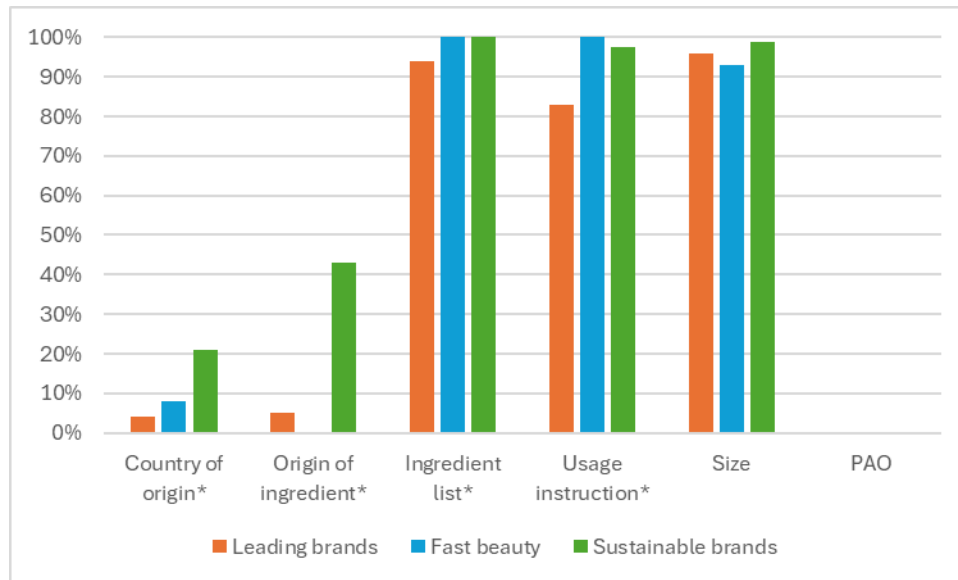


Figure 4.2: Availability of information across brand categories (“*” indicates statistically significant relationship).

The results showed a significant association between brand category and various dimensions of transparency, including country of origin, ingredient sourcing, ingredient lists, and usage instructions. Leading brands displayed the lowest transparency, while sustainable brands were more likely to disclose ingredient and product origins. Both fast beauty and sustainable brands offered more detailed ingredient and usage information. However, PAOs were absent across all categories, revealing a common transparency gap in the industry. Figure 4.2 provides a visual summary of transparency across brand categories.

Overall, transparency related to product size, ingredient lists, and usage instructions is relatively strong across all brand categories, with most products providing this information. In contrast, disclosure of the country of origin is notably weak, with the vast majority of products failing to indicate where they are made. While some sustainable brands provide information about the origin of at least one ingredient—more frequently than other categories—this practice remains uncommon across the dataset. Notably, none of the products analyzed, regardless of brand category, included PAO information, highlighting a consistent gap in this dimension of transparency.

4.3.2 Availability of multi-media

Multimedia elements such as images, videos, and augmented reality (AR) play a key role in shaping consumer engagement and purchase decisions (Bilková & Kašparová, 2024). This study examined the use of multimedia on online sales pages for facial moisturizers, focusing on differences across brand categories. All 218 products analyzed featured images, which included product shots, models, combinations of both, or visuals of ingredients.

Out of the studied population (N=218), 21.6% (47 products) provide videos on their websites, while 78.4% did not provide any videos. Additionally, 17.4% (38 products) offer AR features on their websites, while this technology is not used by 82.6% of the products. AR tools enable consumers to assess their facial skin and identify the most suitable facial moisturizer.

A descriptive analysis reveals that the fast beauty category (n=42) has the highest frequency of video availability on product websites, with 28.6% featuring videos. This is followed by the leading (n=100) and sustainable brands (n=76) with similar rates of 20% and 19.7% in their own categories, respectively. A chi-square test doesn't indicate a statistically significant association between brand category and video availability.

Descriptive analysis shows that 38% of products in the leading brands category (n=100) offer AR features, while none in the fast beauty (n=42) or sustainable categories (n=76) offer AR. A chi-square test confirms a statistically significant association between brand category and AR availability, with a Cramér's V of 0.499 indicating a moderate to strong relationship. No significant association was found between brand category and the availability of images or videos. Sections 4.3.3.2 and 4.3.3.3 provide further detail on multimedia communication and how they integrate sustainability.

4.3.3 Communication of product attributes

Cosmetic brands employ a range of communication features on their websites—including product descriptions, images, and videos—to engage consumers. These elements are strategically used to highlight product attributes, align with consumer preferences, and distinguish brands within a highly competitive marketplace.

4.3.3.1 Communication in description

4.3.3.1.1 Attributes as a cosmetic product

The product descriptions were analyzed for product attributes they communicate. Product performance was included in the majority of products webpages (N=218), appearing in 99.1% of descriptions, with only 0.9% omitting this feature. Appearance-related attributes were communicated in 73.4% of the 218 studied products, while emotional appeal was present in 27.1%. Notably, sustainability-related messaging appeared in 79.8% of product descriptions, indicating a strong inclusion of sustainability related-claims. Communication of specific ingredient inclusion was prevalent as 92.2% of products highlighted the inclusion of ingredients such as shea butter. In contrast, 42.7% of the sample population noted the absence of certain ingredients, such as fragrance or parabens. These claims differ from the standard ingredient list. Instead, they are selectively emphasized in product descriptions as part of brand messaging. Innovative attribute appeared in 20.2% of 218 studied products, while 17.4% included consumer testing claims, and “best seller” or “customer favourite” claims appeared in 11.5% of descriptions.

Other features were less commonly communicated. Ease of application was mentioned in just 4.1% of products. Mentions of being a celebrity favourite and media endorsements were rare, each appearing in only 1.4% (three products). A small number 1.8% (four products) referenced other unique or uncategorized features.

Overall, these findings highlight the wide range of strategies cosmetic brands use in the descriptions for their online product communication. Themes such as performance, appearance, emotional connection, sustainability, and innovation were central to many product narratives, reflecting brands’ efforts to align with evolving consumer values and stand out in a competitive marketplace.

Cosmetic description and brand category

The analysis revealed several significant differences in how cosmetic brand categories communicate product features. While product performance, emotional appeal, and appearance were widely included across all categories, there was no significant association between communicating these attributes and brand category.

Attributes such as dermatologist-tested claims, sustainable practices, innovation, specific ingredient inclusion, and ease of application showed significant association between their communication and brand category. Leading brands were more likely to include dermatologist testing, while sustainable and fast beauty brands indicated sustainable practices and ingredient inclusion. Notably, all categories focused more on the inclusion of beneficial ingredients than on the exclusion of harmful ones—suggesting a strategic preference for positive, efficacy-driven messaging that avoids raising consumer skepticism. More fast beauty products included the attribute of ease of application, reflecting their focus on convenience.

In contrast, claims like celebrity endorsement, best-seller status, and media mentions were rare and showed no significant association between their communication and brand category. Table 4.3 presents detailed data on the communication of product attributes, while Figure 4.3 offers a visual comparison to facilitate interpretation.

Table 4.3: Communication frequencies and statistical associations of product attributes by brand category (“*” indicates statistically significant relationship).

Attribute	Leading (%)	Fast Beauty (%)	Sustainable (%)	<i>p</i> -value	Cramér's V
Product performance (e.g. moisturizing)	99.0	100.0	98.7	0.768	-
Appearance (e.g. luxury)	34.0	19.0	21.1	0.73	-
Emotional appeal (e.g. luxury)	71.0	78.6	72.4	0.645	-
Dermatologist-tested	67.0	7.1	48.7	<0.001*	0.441
Sustainable practices (e.g. responsible sourcing)	59.0	95.2	98.7	<0.001*	0.478
Innovation/trendiness (e.g. new technology)	28.0	2.4	19.7	0.02*	0.233
Ingredient inclusion	87.0	97.6	96.1	0.03*	0.180
Ingredient exclusion	45.0	45.2	38.2	0.625	-
Consumer tested	18.0	14.3	18.4	0.834	-
Ease of application	1.0	11.9	3.9	0.012	0.21
Celebrity favourite	2.0	0.0	1.3	0.492	-

Best-seller/customer favourite	11.0	9.5	13.2	0.822	-
Media endorsement	0.0	2.4	2.6	0.155	-
Other features	3.0	2.4	0.0	0.173	-

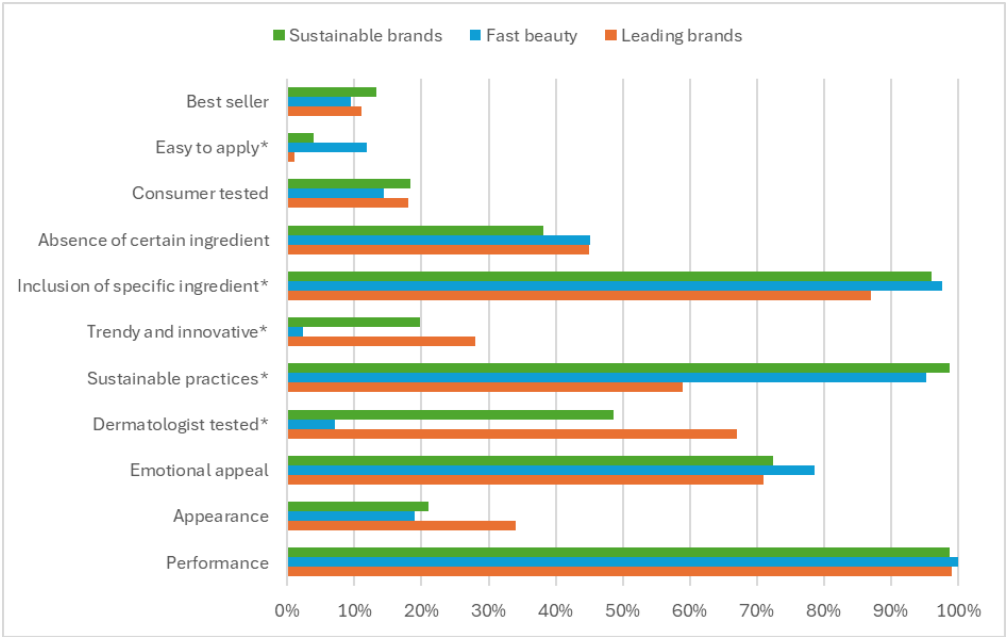


Figure 4.3: Communication of facial moisturizer attributes in product descriptions across brand categories (“*” indicates statistically significant relationship).

4.3.3.1.2 Description for a facial moisturizer

This study examined how facial moisturizer features—such as hydration, anti-aging, texture, and firming—are communicated across different brand categories. A key finding was that leading brands (n=100) included advanced skincare benefits, particularly anti-aging (40%), firming (41%), and treatment of specific skin conditions (75%). Chi-square tests confirmed statistically significant associations between communicating these attributes and brand category (p -value < 0.001; Cramér’s V s indicating moderate relationships). In contrast, fast beauty brands (n=42) showed minimal indication of these features. Sustainable brands (n=76) focused more on product suitability for specific skin types as the only attribute where they led (71.1%). No significant association was found across categories for commonly expected features such as hydration, absorption, or UV protection, suggesting that distinctions lie primarily in the framing

of advanced or specialized benefits. Figure 4.4 provides a visual comparison for how facial moisturizer attributes were communicated among categories.

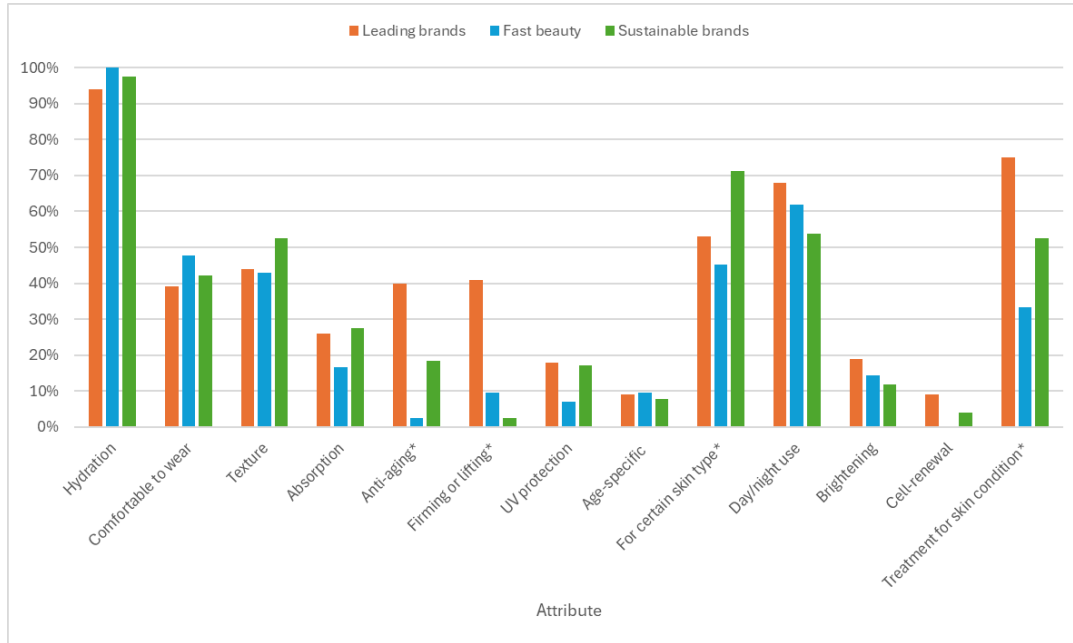


Figure 4.4: Communication of facial moisturizer attributes in descriptions across brand categories (“*” indicates statistically significant relationship).

Overall, the findings indicate that brands use descriptions in different ways to reflect their marketing priorities:

- Leading brands include dermatologically tested features, innovative, anti-aging, lifting, and treatments for specific skin conditions.
- Fast beauty brands indicate specific ingredient inclusion and ease of application.
- Sustainable brands focus on sustainability practices and suitability for certain skin types.

4.3.3.2 Product attributes in images

The analysis of product imagery revealed distinct visual communication strategies across brand categories. Leading brands (n=100) indicated performance (90%) and dermatological testing (31%), both showing statistically significant associations with brand category. Sustainable brands

(n=76) included inclusion and diversity in visual representation at the rate of 43.2% and specific ingredient inclusion at the rate of 77.6. Notably, fast beauty brands (n=42) led in visual sustainability messaging (52.4%) such as vegan and cruelty free, suggesting a deliberate effort to align with consumer expectations. While emotional appeal approached significance, no meaningful differences were observed across categories for appearance, celebrity endorsement, media recognition, or product variety. Table 4.4 presents detailed data on the communication of product attributes in image and Figure 4.5 provides a visual comparison to facilitate interpretation.

Overall, leading brands include more references to performance and dermatological testing; fast beauty brands include more sustainability-related practices; and sustainable brands include more information about ingredient inclusion and inclusion and diversity.

Table 4.4: Communication frequencies and statistical associations of product attributes in image by brand category (“*” indicates statistically significant relationship).

Visual Attribute	Leading (%)	Fast Beauty (%)	Sustainable (%)	p-value	Cramér's V
Performance	90.0	83.3	76.3	0.049*	0.166
Emotional appeal	18.0	19.0	6.6	0.06	-
Inclusion & diversity	24.0	11.9	43.2	<0.001*	0.262
Ingredient inclusion	45.0	71.4	77.6	<0.001*	0.315
Dermatologically tested	31.0	26.2	1.3	<0.001*	0.341
Sustainability	12.0	52.4	17.1	<0.001*	0.37
Appearance	100.0	100.0	98.7	0.347	-
Celebrity favourite	1.0	2.4	0.0	0.351	-
Media endorsement	0.0	2.4	2.6	0.155	-
Variety	3.0	0.0	0.0	0.094	-

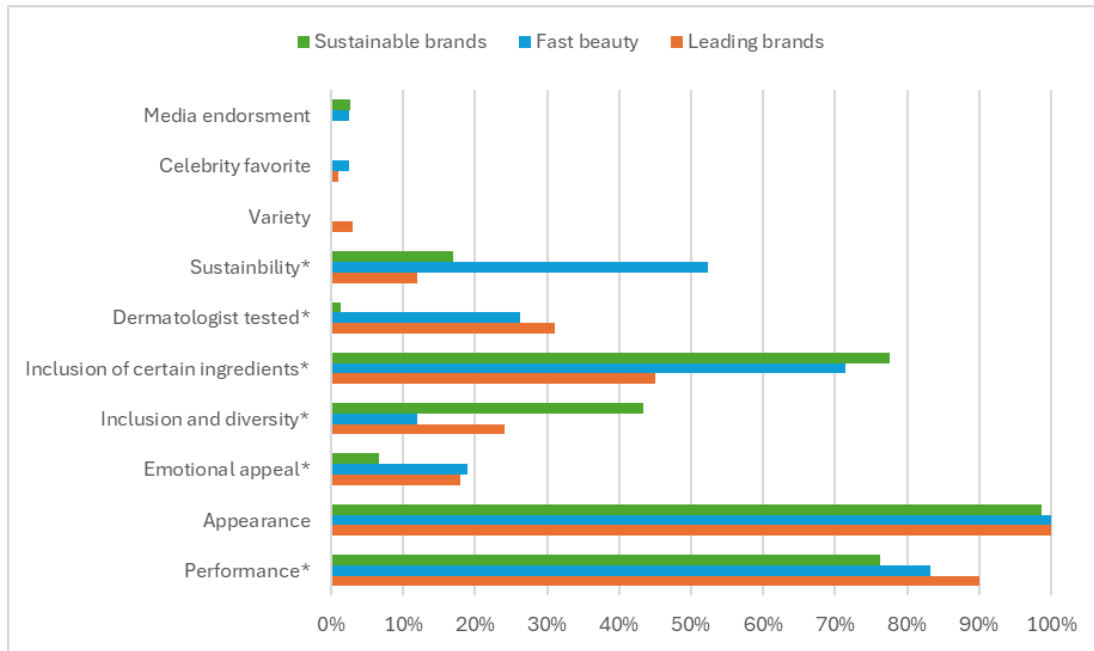


Figure 4.5: Communication of facial moisturizer attributes in images across brand categories (“*” indicates statistically significant relationship).

4.3.3.3 Communication through videos

This analysis explored whether brand category is associated with the communication of various attributes in product videos. A chi-square test was conducted for each feature. The results showed no statistically significant associations, with all p -values exceeding the 0.05 threshold. Table 4.5 presents the percentage distribution of key product attributes communicated through video across different brand categories.

Although the statistical tests did not reveal significant differences, some descriptive trends were noted. For example, fast beauty brands did not communicate sustainability at all in their videos, while leading brands had the highest rate of performance-related messaging in videos (Figure 4.6). However, these observations should be interpreted with caution, as they are not supported by statistically significant evidence.

Table 4.5: Communication of facial moisturizer attributes in videos across brand categories

Attribute	Leading (%)	Fast Beauty (%)	Sustainable (%)	p -value
Performance	55	25.0	33.3	0.196
Appearance	95	83.3	100.0	0.169
Emotional appeal	10	8.3	6.7	0.939
Inclusion and diversity	45	33.3	53.3	0.583

Application	60	66.7	80.0	0.437
Dermatologist tested	20	8.3	0.0	0.084
Sustainability	20	0.0	20.0	0.104
Celebrity favourite	15	8.3	0.0	0.168
Other	30	16.7	26.7	0.685

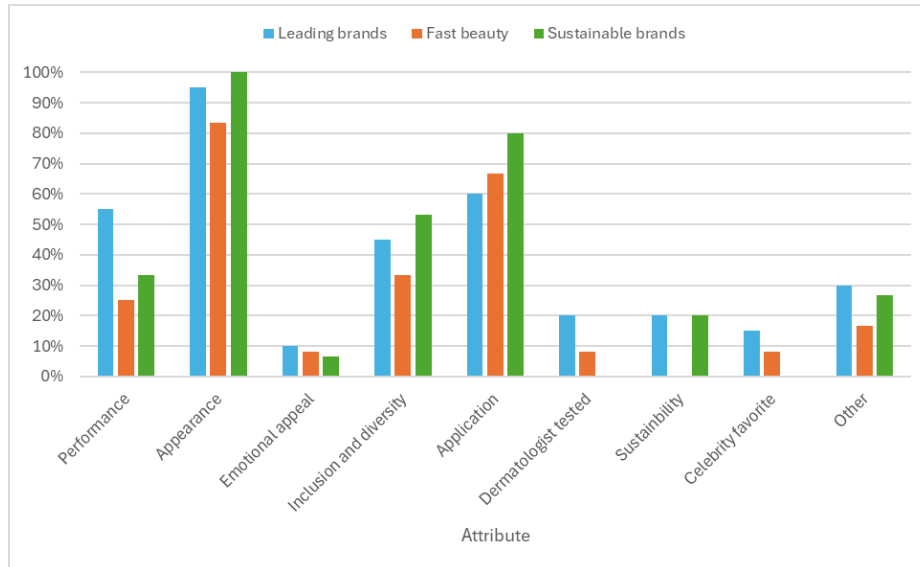


Figure 4.6: Communication of facial moisturizer attributes in videos across brand categories

4.3.4 Sustainability-related claims

Organic

Organic claims marketing typically refer to the use of ingredients grown through organic agriculture practices (United States Department of Agriculture, 2025). Out of the 218 products analyzed, 33 products (15.1%) were identified as making an organic claim or including at least one organic ingredient. A chi-square test revealed a statistically significant association between brand category and organic claims (p -value < 0.001), with a strong effect size (Cramér's $V = 0.551$). Organic claims were most common in the sustainable brand category ($n=76$) (42.1%), while only one leading brand ($n=100$) product (1%) and none from fast beauty ($n=42$) featured such claims. These results indicate that organic messaging is strongly concentrated within sustainable brands.

Among the products making organic claims, labeling practices varied considerably. Some products provided transparency by specifying the organic ingredients, while others used vague

phrases such as “with certified organic ingredients” or “certified organic” without offering further clarity.

Closer inspection revealed that these claims often referred to selected ingredients rather than the entire product, and there was a lack of clarity regarding the extent of organic content. Notably, none of the 218 facial moisturizer products claimed to be entirely organic, and only five products (15.15%) explicitly stated the percentage of organic content. The majority (84.4%) of these 218 studied products did not specify the proportion of organic ingredients. This inconsistency in labeling practices may create ambiguity for consumers, making it difficult to accurately assess the organic nature of these products.

Vegan

Vegan claims in cosmetics typically indicate that a product contains no animal-derived ingredients (Dos Santos et al., 2023). Of the 218 products analyzed, 48.2% featured a vegan claim. A chi-square test revealed a significant association between brand category and vegan claims (p -value < 0.001 , Cramér's $V = 0.530$). Fast beauty ($n=42$) had the highest rate of vegan claims, with 92.9% (39 products) of its products including such messaging, followed by 56.6% (43 products) of sustainable brands category ($n=76$) and 23% (23 products) within leading brands ($n=100$)—indicating a moderate to strong relationship between brand type and vegan messaging.

Natural

Natural claims (e.g. the use of term “natural” in messaging) in cosmetics generally refer to the use of ingredients derived from natural sources (Dayan & Kromidas, 2011). Of the 218 products studied, a total of 86 products (39.4%) featured a natural claim. Sustainable brands ($n=76$) showed the highest prevalence of this feature, with 82.9% of their products including it, compared to 19% of products within leading brands ($n=100$) and just 9.5% within fast beauty brands ($n=42$). A chi-square test confirmed a significant association between brand category and natural claims (p -value < 0.001 , Cramér's $V = 0.654$), indicating a strong relationship.

Among the products making natural claims ($n=86$), only five products (5.8%) explicitly stated that they are fully natural. Additionally, 26 of these (30.2%) specified the proportion of natural ingredients, while the remaining 55 products (64%) provided no indication of the

proportion. A chi-square test was conducted to assess the relationship between brand category and the disclosure of the natural proportion; however, the results indicated no statistically significant association between these variables.

Safe

“Safe” is one of the claims used in cosmetics marketing to frame a sustainable image of the product (Seelig et al., 2021) by associating it with safety and non-toxicity. Among the 218 analyzed products, 9.6% (21 products) included safety-related claims. These were most common within sustainable brands (n=76), appearing in 25% of their products, compared to 2% of products in leading brands (n=100) and none in fast beauty brands (n=42). A chi-square test confirmed a significant association between brand category and safety claims (p -value < 0.001, Cramér’s $V = 0.382$), indicating a moderate relationship.

In addition to the frequency of safety claims, the specificity of those claims also varied across brand categories. Among the 21 products with safety claims, only 4.8% (one product) clearly referred to safety in terms of human health, 9.5% (two products) specifically highlighted environmental safety, and 28.6% (six products) indicated safety in relation to both health and the environment. The remaining 57.1% (12 products) offered a general safety claim without specifying what aspect of safety was being addressed. For instance, Cocoon Apothecary claims that it is offering “natural skincare that safely nurtures your skin”. Almost all of the products making safety claims (19 out of 21 products with safety claims)—whether related to health, the environment, or both—were found in the sustainable brand category (n=76). Specifically, 1.3% (one product) of sustainable products claimed to be safe for health, 2.6% (two products) safe for the environment, and 7.9% (six products) safe for both. In addition, 13.2% (ten products) in sustainable brands category made general safety claims with no further clarification. Outside of the sustainable cosmetics category, only two out of 21 products making safety claims (9.5%)—from the leading brands category—included a safety claim, and both lacked clarity regarding what aspect of safety was implied.

A chi-square test showed a significant association between brand category and clarity of safety claims (p -value < 0.001, Cramér’s $V = 0.273$), indicating a moderate relationship. Safety claims were more frequent and clearly defined in sustainable brands.

Clean

“Clean” is another term claim commonly used in cosmetics marketing to construct a sustainable image (Seelig et al., 2021). Of the 218 products analyzed, 11% (24 products) featured the use of term "clean" claim, and it is important to note that there was no consistent definition of what “clean” meant across products or brands. Fast beauty brands (n=42) had the highest rate, with 26.2% of their products including this claim, compared to 8% of products in leading brands (n=100) and 6.6% in sustainable brands (n=76). A chi-square test confirmed a significant association between brand category and clean claims (p -value = 0.002, Cramér’s V = 0.238), indicating a weak to moderate relation.

Brands employ a variety of strategies to convey claims of cleanliness in their marketing communication through practices such as internal clean labels such as Kylie Cosmetics or having the term in product description such as Covergirl. Covergirl includes the term “clean” in the title of three of its facial moisturizers such as “*Clean Fresh Mattifying Oil-Free Moisturizer*™” and claims it was “Formulated with electrolyte rich TruClean™ cactus water”. The term “TruClean Cactus Water,” as used in the product description appears to represent a branded or marketing-enhanced ingredient rather than clearly defined substance. While “cactus water” is identified as effective substance in skincare formulations (Chiu et al., 2023), the addition of the prefix “TruClean” functions as a strategic message framing decision. It likely aims to evoke associations with the broader “clean beauty” movement, suggesting purity or safety, without offering a specific or verifiable definition. This kind of branding exemplifies the use of persuasive language to enhance the perceived value of an ingredient, despite the lack of transparent criteria or substantiation for what qualifies it as “clean.” As such, these can be identified as greenwashing practices, where environmental or ethical claims are made without adequate clarity or evidence.

In contrast, some brands offer a more explicit definition of what “clean” means in the context of their products. For instance, Cocoon Apothecary defines clean as being “entirely free from petroleum, parabens, synthetic fragrances, and harmful chemicals” (Cocoon Apothecary, 2025), providing consumers with a clearer understanding of the standard behind their use of label. However, other brands, such as e.l.f., use the term more vaguely, referring only to a “clean formula” without offering further clarification. This variation in how cleanliness is defined and

communicated highlights the inconsistent and often ambiguous use of clean beauty claims across the cosmetics industry.

Cruelty-free

Among the total 218 products of the study, 57.8% (126 products) featured a "cruelty-free" claim. Fast beauty brands (n=42) had the highest rate, with 95.2% of their products including this feature, followed by 55.3% of products in sustainable brands (n=76) and 44% in leading brands (n=100). A chi-square test confirmed a significant association between brand category and cruelty-free claims (p -value < 0.001, Cramér's $V = 0.384$), indicating a moderate relationship. Notably, 69% of these "cruelty-free" claims lacked supporting certification, raising concerns about credibility and potential greenwashing, especially as such claims remain largely unverified across all categories.

Ethical/sustainable sourcing

Among the 218 analyzed products, 33.5% (73 products) included ethical/ sustainable sourcing claims. These were most common within sustainable brands (n=76), appearing in 68.4% of their products, compared to 23.8% of products in fast beauty brands (n=42) and just 11% in leading brands (n=100). A chi-square test confirmed a significant association (p -value < 0.001, Cramér's $V = 0.551$), indicating a moderate to strong relationship between brand category and ethical/sustainable sourcing claims. Descriptive analysis highlighted a higher number of ethical/sustainable sourcing claims in sustainable brand category compared to other groups.

Other claims

Fourteen percent of products (31 out of 218) featured additional sustainability-related claims beyond the standard categories being analyzed. These included terms like "sustainable," "plastic neutral," "circular economy," "upcycled," "wildcrafted," and "vegan-friendly." A chi-square test showed a significant association with brand category (p -value < 0.001, Cramér's $V = 0.502$). Most of these claims (38.2%) appeared in sustainable brands (n=76), with only two in leading brands (n=100) and none in fast beauty (n=42)—suggesting that sustainable brands may adopt a wider range of sustainability messaging. Table 4.6 presents detailed data on sustainability-related claims and Figure 4.7 provides a visual comparison.

Table 4.6: Percentage of products featuring sustainability-related claims by brand category, with chi-square significance and effect sizes (“*” indicates statistically significant relationship).

Claim	Leading (%)	Fast Beauty (%)	Sustainable (%)	<i>p</i> -value	Cramér’s <i>V</i>
Organic	1.0	0.0	42.1	< 0.001*	0.551
Vegan	23.0	92.9	56.6	< 0.001*	0.53
Natural	19.0	9.5	82.9	< 0.001*	0.654
Safe	2.0	0.0	25.0	< 0.001*	0.382
Clean	8.0	26.2	6.6	0.002*	0.238
Cruelty-free	44.0	95.2	55.3	< 0.001*	0.384
Ethical/sustainable sourcing	11.0	23.8	68.4	< 0.001*	0.551
Other claims	2.0	0.0	38.2	< 0.001*	0.502

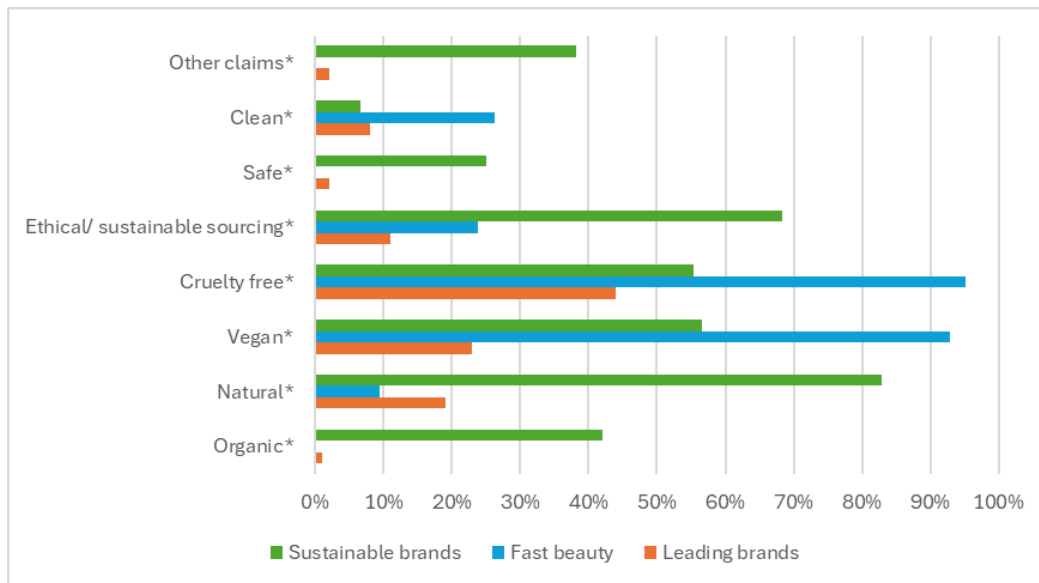


Figure 4.7: Sustainability-related claims across brand categories (“*” indicates statistically significant relationship).

4.3.5 Product end-of-life

4.3.5.1 Recycling program and disposal instruction

Recycling programs like TerraCycle and PACT allow consumers to return used cosmetics packaging for proper disposal or repurposing, supporting circularity and brand sustainability efforts (TerraCycle Global Foundation, 2025; PACT Collective, 2025). Among the 218 products analyzed, only 17 products (7.8%) referenced such programs—15 through TerraCycle and two via PACT. All of these products came from the sustainable cosmetics category (n=76), representing 22.4% of that group. In contrast, no recycling programs were mentioned by fast beauty or leading brands. A chi-square test confirmed a statistically significant association between brand category and recycling program availability (p -value < 0.001), with a Cramér's V of 0.398, indicating a moderate relationship and highlighting sustainable brands' stronger commitment to promoting end-of-life solutions.

In addition, 20.1% of the total 218 products (44 products) provided packaging disposal instructions, while only 0.9% (two products) included guidance for both packaging and leftover product content. The remaining 172 products (78.9%) offered no disposal information. Sustainable brands (n=76) led again, with 36.8% including packaging disposal guidance and 2.6% addressing leftover product disposal. Fast beauty (n=42) followed with 26.2%, while leading brands (n=100) lagged at just 5%. A chi-square test confirmed a significant association (p -value < 0.001, Cramér's $V = 0.275$), indicating a weak to moderate relationship. These results highlight a clear gap in end-of-life communication, with sustainable brands taking the lead and others offering minimal guidance.

Packaging Sustainability Claims

Products use a variety of claims to communicate the sustainability of their packaging. Among the 218 products analyzed, 33% (72 products) made claims related to sustainability of their packaging. Only 1.4% (three products) claimed that their packaging is made entirely from recycled materials, while 10.1% (22 products) stated that their packaging is fully recyclable. An additional 4.1% (nine products) indicated that their packaging is both fully recycled and recyclable. Among the sample size (N=218), 11% (22 products) and 8.7% (19 products) claimed being partially recyclable and partially recycled, respectively. Claims related to minimal packaging were present

in 6.9% (15 products), with terms such as “reduced packaging” or “naked packaging” commonly used. Furthermore, 2.8% (six products) offered refill options or were specifically designed as refills, and 4.1% (nine products) presented other claims, such as suggesting the packaging could be repurposed for other uses.

It is important to note that some products included multiple packaging-related sustainability claims, such as being both partially recycled and refillable, or recyclable and minimal. For instance, “Re-Nutriv Ultimate Diamond Transformative Brilliance Soft Creme Moisturizer” from Estee Lauder has the claim of a partially recyclable packaging with refill available. This overlap reflects efforts by some brands to address sustainability from more than one packaging perspective.

Notably, the majority of products—67% (146 products)—did not provide any information about their packaging, indicating a significant lack of transparency in this area of sustainability communication (Figure 4.8).

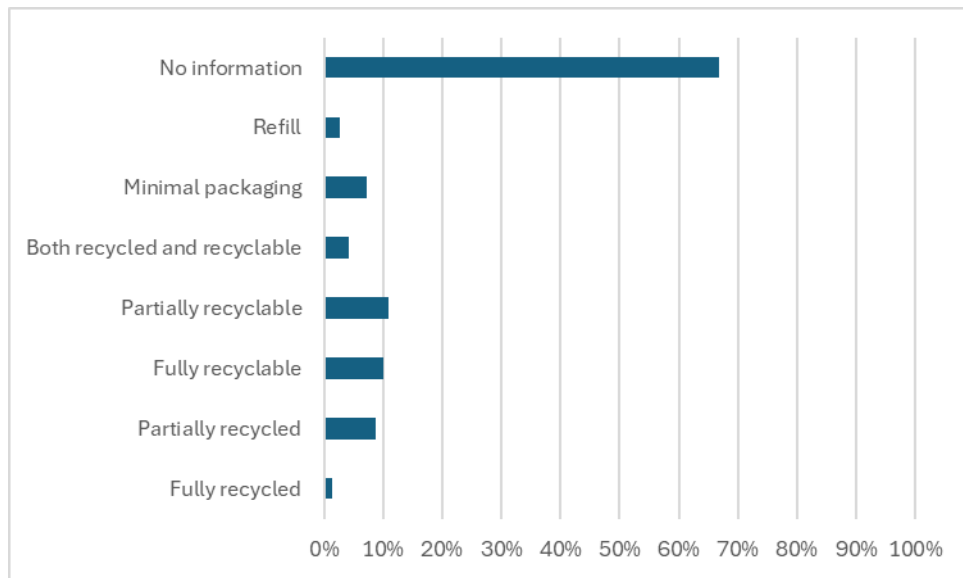


Figure 4.8: Distribution of sustainable packaging claims across all products

A Comparison Across Brand Categories

A chi-square test was conducted to compare the distribution of packaging-related claims across different brand categories. This analysis aimed to assess whether the presence and type of

packaging claims—such as recyclability, use of recycled materials, minimal packaging, or refill options—had association with brand category. The results of this test are summarized in the Table 4.7. As indicated in this table, sustainable brands are twice as likely to include packaging information or claims.

Table 4.7: Percentage of products with information regarding packaging, with chi-square significance (“*” indicates statistically significant relationship).

Claim	Leading (%)	Fast beauty (%)	Sustainable (%)	<i>p</i>-value	Cramér's <i>V</i>
Fully recycled	0	2.4	2.6	0.277	-
Partially recycled	1	4.8	21.1	≤ 0.001*	324
Fully recyclable	3	11.9	18.4	0.003*	0.230
Partially recyclable	10	11.9	11.8	0.917	-
Minimal packaging	0	0	19.7	≤ 0.001*	372
Both, recycled and recyclable	0	0	11.8	≤ 0.001*	284
Refillable	5	0	1.3	0.160	-
No information	84	73.8	40.8	≤ 0.001*	415

4.3.6 Labels and certifications

Labels and certifications are used to identify products, raw materials, or companies that meet specific environmental or ethical standards set by recognized organizations or government agencies. These standards may relate to organic content, sustainability, or the reduction of harm to humans, animals, or the environment (Whittaker et al., 2009). As discussed by Whittaker et al. (2009) labels and certifications on a product or ingredient are meant to serve as a valuable tool to inform consumers, enhance transparency, and provide a distinct market advantage by signaling a commitment to responsible practices. Labels and certifications credibility serves as a moderating variable that influences the extent to which message persuasiveness and perceived credibility impact consumers’ evaluations of a green brand’s overall credibility. When the label or certification is perceived as trustworthy, it enhances the effectiveness of sustainability claims in shaping positive brand perceptions (Kumar et al., 2021).

Among the 218 products analyzed, 55% (120 products) either display or reference labels or certifications, whether internal or external, on their websites. Internal environmental and ethical labels are symbols created and issued by the brand itself without third-party certification, while external ones are awarded by independent organizations based on verified environmental or ethical standards. A chi-square test reveals that within the leading brands category (n=100), only 17% (17 products) bear a label or certification. In the fast beauty category (n=42) 92.9% (39 products) possess a label or certification. In the sustainable cosmetics category (n=76) 84.2% (64 products) have labels or certifications. The analysis yielded a *p*-value of less than 0.001, indicating a statistically significant association between brand category and the presence of labels or certifications (either internal or external). Furthermore, the Cramér's *V* value of 0.707 suggests a strong relationship between brand category and the presence of labels or certifications. Table 4.8 provides data related to distribution of internal and external labels and certifications among all products and products with labels

Table 4.8: Distribution of internal and external labels and certifications across all products and products featuring at least one label

Labels	Among products with labels or certifications (n=120)	Among total products (N=218)
Vegan (Internal)	45%	24.8% (54 products)
Vegan Society (External)	11.7%	6.4% (14 products)
American Vegan Association (External)	0.8%	0.5% (one product)
Vegetarian (Internal)	12.5%	6.9% (15 products)
American vegetarian Association (External)	5.8%	3.2% (seven products)
Organic (Internal)	0	0
Organic (External)	0	0
Sustainable/ethical sourcing (Internal)	12.5%	6.9% (15 products)
Fair Trade Factory (External)	7.5%	4.1% (nine products)
Cruelty free (Internal)	40.8%	22.5% (49 products)
Leaping Bunny (External)	13.3%	7.3% (16 products)
Peta (External)	34.2%	18.8% (41 products)
Clean (Internal)	7.5%	4.1% (nine products)
Clean (External)	0%	0.0%
B Corporation (External)	25.8%	14.2% (31 products)
1% for the Planet (External)	0.8%	0.5% (one product)

EWG verified (External)	0.8%	0.5% (one product)
FSC (External)	10%	5.5% (12 products)
UEBT (external)	15%	8.3% (18 products)
COSMOS (external)	7.5%	4.1% (nine products)
Natrue (external)	15.8%	8.7% (19 products)
Other (external)	9.2%	5% (11 products)
Other (internal)	10%	5.5% (12 products)

4.3.6.1 Labels and certifications and comparison between categories

The analysis of internal and external labels and certifications revealed strong associations between brand category and the use of sustainability-related labeling. Internal labels—such as “vegan,” “cruelty-free,” and “clean”—were most frequently used by fast beauty brands, often without third-party verification. For example, 81% of fast beauty products (n=42) included internal vegan claims, and 76.2% featured internal cruelty-free labels, compared to substantially lower rates among sustainable and leading brands. These trends suggest a strategic reliance on self-declared claims in the fast beauty segment, supported by statistically significant associations with high Cramér’s *V*s, particularly for vegan (0.636) and cruelty-free (0.656) labeling. Notably, external labels such as Fair Trade Factory and PETA were also used more often by fast beauty brands. Fair Trade Factory appeared exclusively in this category, and PETA is considered less rigorous due to its self-reporting model compared to other certification of Leaping Bunny. Leading brands rarely used either internal or external labels, possibly relying on brand reputation rather than certification.

External labels or certifications —such as the Vegan Society, American Vegetarian Association, B Corp, COSMOS⁴, NATRUE⁵, and UEBT⁶—appeared almost exclusively in sustainable brands. In contrast, less commonly used labels like 1% for the Planet and EWG were rarely observed and showed no significant association with brand category, suggesting limited traction in cosmetics marketing. Some internal labels lacking third-party verification—such as

⁴ The COSMOS label is an internationally recognized label for organic and natural cosmetics (COSMOS 2025).
⁵ The NATRUE label is an internationally recognized label for natural and organic cosmetics, developed by the International Natural and Organic Cosmetics Association (NATRUE, 2025).
⁶ The UEBT is a recognized label for sourcing with respect to people and biodiversity (UEBT, 2025).

“Vegetarian” and “Ethical Sourcing”—were also found among sustainable brands, indicating a mix of verified and unverified claims. Among the “other” internal labels used by this category were claims such as “Plastic Neutral,” “100% Wind and Solar Manufacturing,” and “Sustainable Manufacturing,” reflecting broader self-declared sustainability efforts beyond standard certifications.

Leading brands made minimal use of both internal and external certifications, likely relying more on their established brand reputation. The only label more frequently used by leading brands was Forest Stewardship Council (FSC), which pertains solely to paper-based packaging rather than product formulation or sourcing.

Together, these findings highlight sharp contrasts in how brand categories use labels to frame their sustainability communication. Fast beauty brands rely heavily on internal labels and broadly recognizable claims, often without third-party verification. Sustainable brands, by contrast, incorporate verified certifications as a core part of their identity, though some unverified internal labels are also present. Leading brands demonstrate minimal engagement with labeling overall, suggesting a continued reliance on brand image rather than formal sustainability signaling. Table 4.9 provides detail data on the percentage of labels or certifications in each category along and Figure 4.9 presents a visual comparison of the frequency of internal and external labels.

Table 4.9: Distribution of internal and external labels and certifications across brand categories (“*” indicates statistically significant relationship)

Label and certification	Type	Leading (%)	Fast Beauty (%)	Sustainable (%)	<i>p</i> -value	Cramér’s <i>V</i>
Vegan	Internal	11.0	81.0	11.8	< 0.001*	0.636
Vegetarian	Internal	0	0	19.7	< 0.001*	0.372
American Vegetarian Association	External	0	0	9.2	< 0.001*	0.249
American Vegan Association	External	0	0	1.3	0.347	-
Vegan Society	External	0	0	18.4	< 0.001*	0.358
Fair Trade Factory	External	0	21.4	0	< 0.001*	0.425
Sustainable/ethical sourcing	Internal	0	0	19.7	< 0.001*	0.372
Cruelty-free	Internal	2	76.2	19.7	< 0.001*	0.656
Leaping Bunny	External	3	0	17.1	< 0.001*	0.227
PETA	External	0	64.3	18.4	< 0.001*	0.606

Clean	Internal	0	21.4	0	< 0.001*	0.425
B Corp	External	0	0	40.8	< 0.001*	0.557
COSMOS	External	0	0	11.8	< 0.001*	0.284
NATRUE	External	0	0	25.0	< 0.001*	0.422
UEBT	External	0	0	23.7	< 0.001*	0.41
1% for the planet	External	0	0	1.3	0.347	-
EWG verified	External	1	0	0	0.457	-
FSC	External	9	0	3.9	0.028	0.154
Other	Internal	0	0	15.8	< 0.001*	0.330
Other	External	6	0	6.6	0.088	-

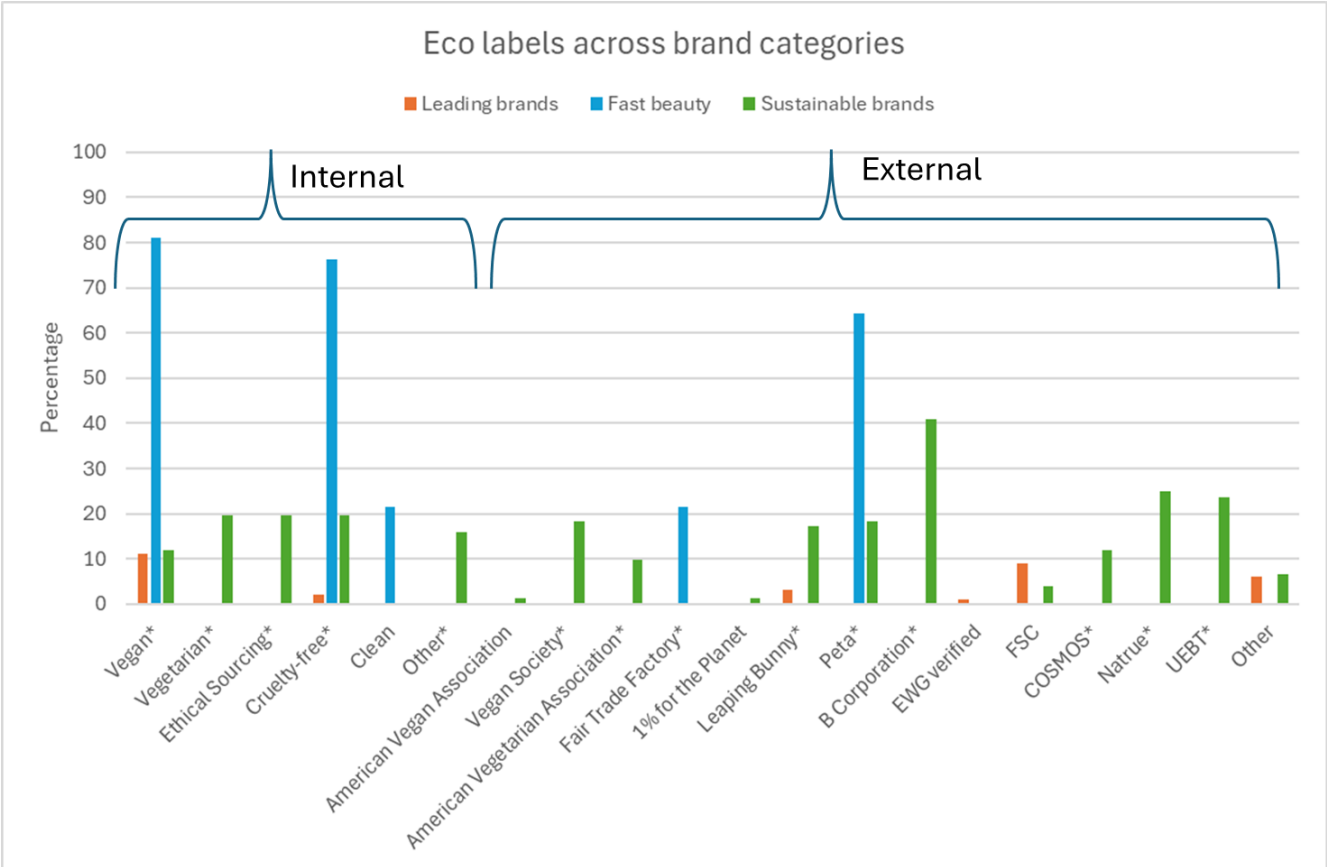


Figure 4.9: Percentage of products with internal and external labels or certifications across brand categories (“*” indicates statistically significant relationship).

4.3.7 Greenwashing

According to Becker-Olsen and Potucek, greenwashing involves falsely promoting an organization’s environmental efforts or investing more in projecting a green image than in actual

sustainable practices. TerraChoice (2010) categorized misleading environmental claims into seven “sins” of greenwashing:

- Hidden trade-off: Emphasizing one positive environmental attribute while ignoring other significant impacts.
- Irrelevance: Making claims that are true but environmentally meaningless or trivial.
- Lesser of two evils: Framing a harmful product as environmentally preferable within a problematic category.
- Fibbing: Making outright false or fabricated environmental claims.
- No proof: Providing claims without accessible or verifiable supporting evidence.
- Vagueness: Using ambiguous language that is broadly interpretable or lacks clear meaning (e.g., “eco-friendly”).
- Worshipping false labels: Using fake or misleading labels that give the impression of third-party certification.

(De Jong et al., 2017).

4.3.7.1 Greenwashing sins in the sample

Among the 218 products analyzed across three brand categories, the study identified at least one indication of greenwashing in 67% of the products (146 products). This suggests that a majority of brands incorporate potentially misleading or unverifiable claims in their sustainability communication.

In this study (N=218), 61.5% of all products committed the “sin of no proof,” making sustainability claims without offering any verifiable evidence. The “sin of vagueness,” where claims are unclear or poorly defined, appeared in 13.8% of products, while 23.4% committed the “sin of worshipping false labels,” using symbols or language that falsely suggest third-party certification. For instance, Covergirl’s use of the term “clean” in product titles and its branding of “TruClean™ cactus water” exemplifies multiple greenwashing tactics. The claim is vague and undefined, lacking any clear definition or third-party verification, aligning with the “sin of vagueness” and “sin of no proof.” By combining the term “clean” with an ingredient perceived as natural and beneficial, the brand further amplifies the persuasive power of the message without

offering clarity or evidence. Together, these elements reflect a sophisticated form of greenwashing that frames the product as safe and sustainable through carefully chosen language rather than verified practices.

Less frequent were the “sin of irrelevance” at 4.6% (N=218), where a claim is technically true but meaningless in context. For instance, MAC says products does not contain Sodium Lauryl Sulfate A.K.A SLS and Sodium Laurethsulfate A.K.A SLES, which are not moisturizers ingredients anyway. Additionally, fibbing which involves making blatantly false sustainability claims observed among 3.7% of the products. Notably, none of the products exhibited the “sin of the hidden trade-off,” which emphasizes a sustainability attribute while ignoring broader environmental harm, nor the “lesser of two evils,” where sustainability claims distract from the overall unsustainability of the product category. These findings highlight the range of misleading practices present in sustainability marketing and underscore the urgent need for clearer, more verifiable communication to build consumer trust. Figure 4.10 presents a visual overview of the distribution of greenwashing sins identified in the sample.

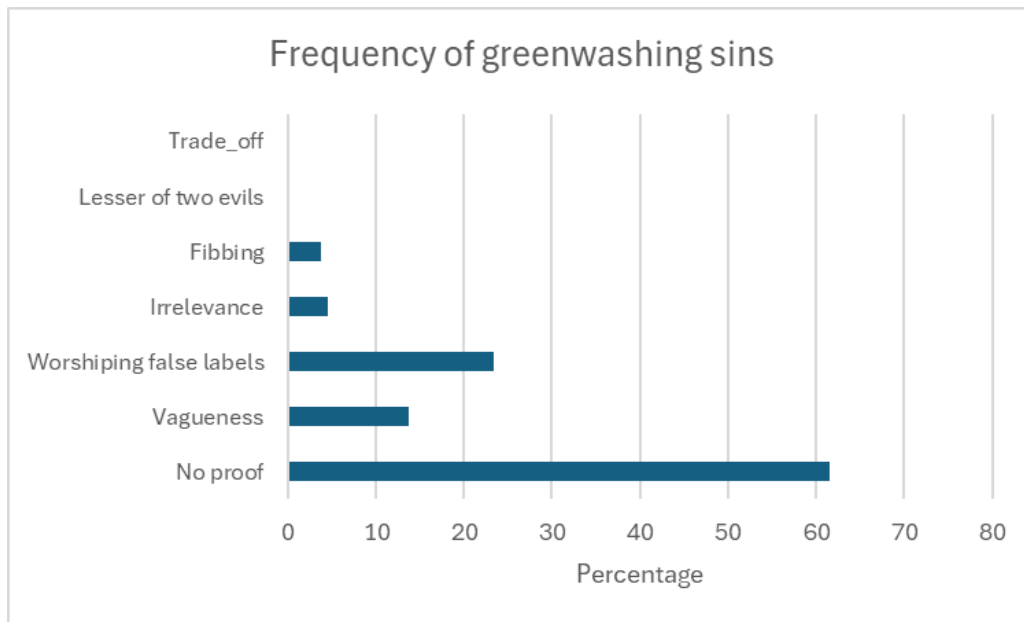


Figure 4.10: Frequency of greenwashing sins identified in product messaging

4.3.7.2 Greenwashing frequency and comparison among categories

The analysis reveals that greenwashing practices are prevalent among the 218 products studied, with 67% (146 products) committing at least one of the recognized greenwashing "sins," reflecting the use of misleading or unverified sustainability claims among brand categories. Within the leading brands category (n=100), 61% of products exhibit greenwashing. This figure is even higher in the fast beauty category (n=42), where 92.9% of products display greenwashing, leaving only 7.1% free from such claims. In the sustainable category (n=76), 60.5% of products also show signs of greenwashing (Figure 4.11).

A chi-square test confirmed a statistically significant association between brand category and the presence of greenwashing ($p < 0.001$). The Cramér's V of 0.269 indicates a moderate to weak relationship, suggesting that while greenwashing is widespread across all categories, its presence does vary by brand type. These findings highlight the need for greater transparency and verification in sustainability-related communication across the cosmetics industry.

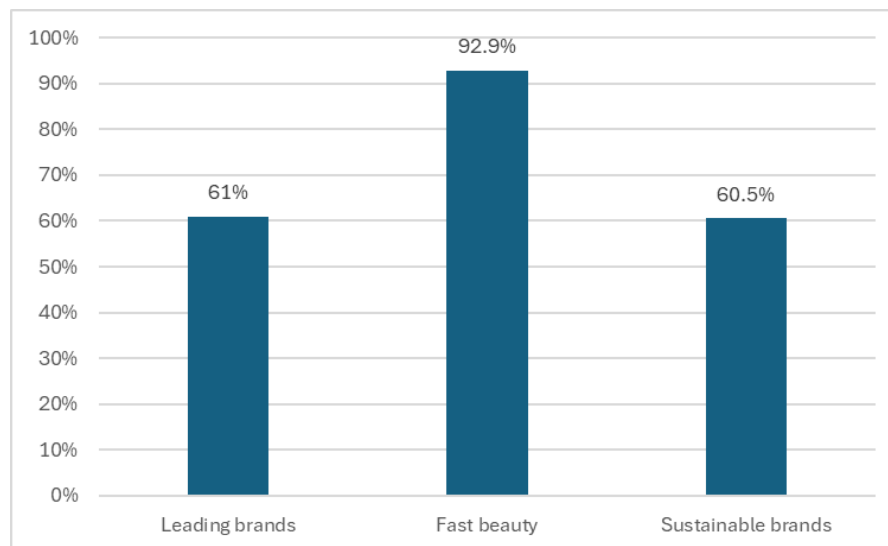


Figure 4.11: Percentage of Products Exhibiting Greenwashing by Brand Category

To assess the relationship between brand category and the type of greenwashing sin identified in product claims, a chi-square analysis was conducted. Statistically significant

associations were found for all greenwashing sins except for “hidden trade-off” and “lesser of two evils,” which did not appear in any products.

The “sin of no proof” was the most prevalent, found in 49% of leading brands (n=100), 92.9% of fast beauty products (n=42), and 60.5% of sustainable products (n=76) (p -value < 0.001, Cramér’s $V = 0.332$), indicating a moderate association. The “sin of vagueness” appeared in 13% of leading brands (n=100), 31% of fast beauty (n=42), and 5.3% of sustainable products (n=76) (p -value < 0.001, Cramér’s $V = 0.263$), suggesting a weaker relationship. The “sin of fibbing” was observed only among 10.5% of sustainable products (n=76) and was absent in the other categories (p -value < 0.001, Cramér’s $V = 0.267$). The “sin of worshiping false labels” was most common in fast beauty at 54.8% (n=42), followed by sustainable brands at 28.9% (n=76) and leading brands at 6% (n=100). This pattern showed a statistically significant association with brand category (p -value < 0.001, Cramér’s $V = 0.435$), reflecting a moderate association. The “sin of irrelevance” also showed a statistically significant association with brand category (p -value = 0.031, Cramér’s $V = 0.157$), appearing in 8% of leading brands (n=100), 2.6% of sustainable brands (n=76), and none of the fast beauty products (n=42).

These findings demonstrated that greenwashing patterns varied by brand type, with fast beauty brands most frequently relying on vague, unverifiable, or misleading sustainability claims. Figure 4.12 illustrates the distribution of greenwashing sins across the three brand categories.

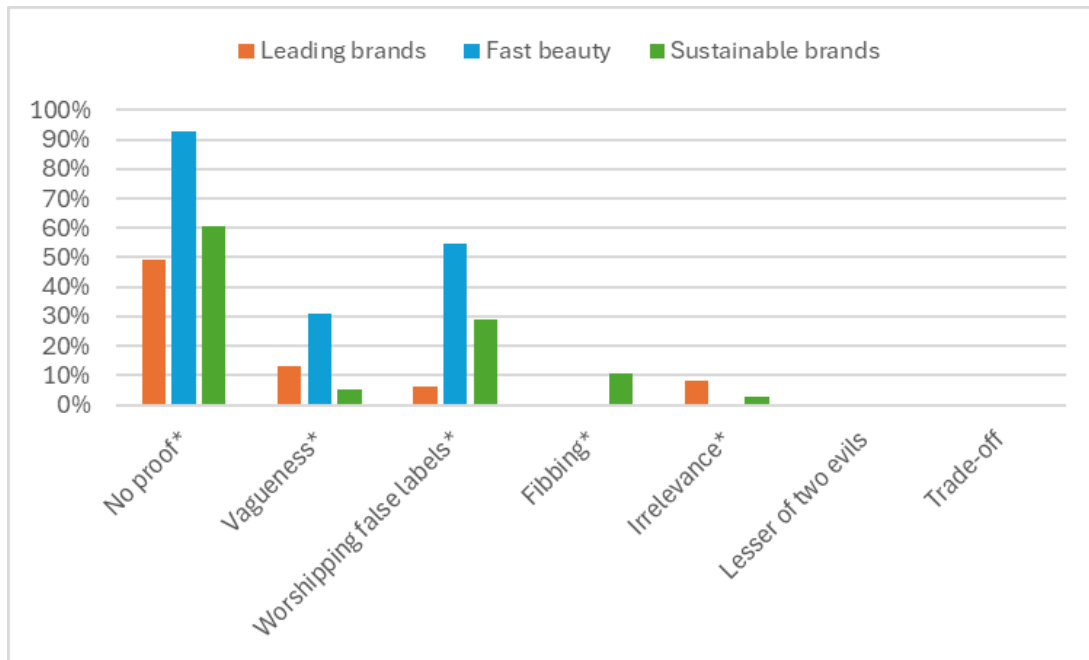


Figure 4.12: Distribution of greenwashing sins across brand categories sizes (“*” indicates statistically significant relationship).

4.4 Discussion

4.4.1 Transparency and information disclosure

This study highlights a significant lack of transparency in brand communication across all categories, particularly regarding the country of origin and ingredient sourcing. Clearly indicating where a product or its ingredients come from is critical in fostering consumer trust and enabling ethical decision-making (Sodhi & Tang, 2019). As Cambier & Poncin (2020) note, consumers increasingly demand “radical transparency,” which includes access to information about sourcing, geographic history, and the environmental and social impact of products. Consistent with findings in the fashion sector (Ospital et al., 2023), this study revealed limited disclosure of origin information brands online platforms. However, sustainable brands demonstrated relatively higher transparency in disclosing both product origin and at least one ingredient source—indicating a statistically significant association between transparency and brand category.

Moreover, the findings reveal a widespread absence of Period After Opening (PAO) symbols across all brand categories on online facial moisturizer retail platforms. High levels of microbial contamination have been found in expired skincare products, even when no visible

changes in colour, smell, or consistency were present (Skowron et al., 2017). This raises serious concerns about consumer safety, particularly in the absence of clear usage guidance and PAO. Despite the presence of PAO symbols on physical packaging, this critical information is often missing from online retail platforms—where high level of facial moisturizer purchases now take place. Without access to PAO details during the decision-making process, consumers are unable to evaluate whether a product can be safely used within its recommended timeframe. The widespread absence of PAO information in the online environment underscores the need for brands to improve digital transparency and support informed, safe usage practices.

Although Canadian regulations require that ingredient lists, usage instructions, and product size appear on physical packaging (Canada, 2024), this mandate does not extend to e-commerce platforms. Our findings show that this information is often missing online, especially for leading and fast beauty brands. This gap is concerning given the growing dominance of online purchasing, with global eCommerce revenue for cosmetics expected to rise from USD 227 billion in 2024 to over USD 338 billion by 2029 (Statistac, 2024). As consumers increasingly rely on digital platforms, the inclusion of basic product information online is essential to support informed and responsible choices.

4.4.2 Communication of product attributes

The communication strategies employed by different brand categories reveals distinct priorities. Leading brands tend to focus on product performance attributes like anti-aging, firming and lifting, and treatment for special skin conditions. Trendiness and innovation are also key themes, often conveyed through descriptions. Notably, however, leading brands were the least likely to communicate sustainability through language and visuals, despite dominating the market share. This suggests a deliberate framing strategy that prioritizes performance and innovation over sustainability messaging—reinforcing the perception that sustainability is secondary to product efficacy. From a message framing perspective, this choice shapes how consumers interpret brand values and may contribute to the continued dominance of performance over sustainability in skincare purchasing decisions. This raises an important question: if sustainability is increasingly demanded, why do the most influential brands communicate it the least?

The answer may lie in consumer priorities. While interest in sustainability is rising, many consumers still prioritize performance, aesthetics, and innovation when choosing cosmetics. This resonates what was mentioned in Bom et al. (2019) as sustainability and performance in skincare products have often been perceived as conflicting goals. Similarly, Witek (2020) found that consumers consistently ranked hedonic, health, and economic benefits above environmental attributes, indicating that sustainability remains a secondary concern in actual purchase behaviour. This presents a challenge for the industry in product development and integration of sustainability messaging in a way that resonates with consumers' broader expectations. Unless consumers actively seek sustainable options, brands will likely continue to respond to more immediate market preferences. Moreover, educating consumers about sustainability and creating demand for sustainable practices will be crucial for shifting both brand strategies and industry norms.

4.4.3 Fast beauty strategies and consumer appeal

Fast beauty brands have effectively leveraged visual storytelling, selective sustainability messaging, affordability, and ease of use to attract and engage consumers. They communicate sustainability through visuals and often incorporate emotionally compelling imagery, projecting both ethical and aesthetic appeal. Interestingly, these brands were found to communicate sustainability more prominently in visuals than even sustainable brands. Despite ongoing concerns about greenwashing (explored below), fast beauty brands frequently promote vegan and cruelty-free claims, aligning with growing ethical consumerism trends. Research shows that such claims, particularly “not tested on animals”, can significantly influence consumer attitudes and behavioural intentions, shaped by altruistic concerns, subjective norms, and even personal appearance motivations (Grappe et al., 2021). These messaging choices reflect a strategic framing of sustainability through animal welfare, which resonates with consumer values but excludes other sustainability dimensions such as labour rights or ingredient traceability.

The effectiveness of these visual and sustainability communication strategies echoes patterns found in other industries, such as fast fashion, where visual marketing significantly shapes consumer perceptions and purchase intentions. For instance, Zhang & Huang (2024) demonstrated how specific combinations of visual cues in offline fast fashion stores—such as layout clarity, tonal harmony, and display design—influence consumer behaviour. Similarly, in the online realm, fast beauty brands use visuals to construct emotional narratives and reinforce brand identity. Their

competitive price point, paired with visual cues of ethic and efficacy, enhances their desirability to a broad consumer base and contributes to a socially constructed understanding of sustainability rather than comprehensive responsibility.

4.4.4 Opportunities for sustainable brands

Sustainable brands are strong in communicating sustainability values. However, focusing exclusively on sustainability may limit their broader market appeal. To attract a wider audience, these brands should highlight product features and marketing that consumers value—such as performance, appearance, and demonstrative use of innovative technologies like AR in the online sales platform. AR, although underutilized in the online sales platforms among sustainable brands, offers opportunities for personalization and engagement, potentially strengthening brand differentiation.

Moreover, sustainable brands could benefit from integrating social proof strategies such as “consumer favourite” or “best seller” tags (Yamin et al., 2019). Highlighting a product’s popularity can enhance trust, signal quality, and motivate consumers to choose more sustainable options.

4.4.5 Claim Patterns and sustainability gaps

This study observed that vegan and cruelty-free claims were common across all brand categories, especially among fast beauty and sustainable brands. This trend aligns with global market shifts toward sustainable beauty and the broader appeal of veganism beyond its philosophical roots (Phua et al., 2020; Martinelli & De Canio, 2021; Dos Santos et al., 2023). However, other sustainability-related claims—such as sustainable sourcing, sustainable operation, and organic—were far less present. This disparity raises questions about whether brands are selectively responding to market demand or if deeper systemic factors—such as consumer priorities or industry barriers—are shaping communication strategies.

The lack of attention to sustainability concerns with regards to ingredient sourcing is particularly troubling given the well-documented human rights concerns in facial moisturizer supply chains. Shea butter and palm oil supply chains are often linked to labour exploitation (Mei et al., 2022; Wahab, 2019) but have also been shown to empower local communities when sustainably managed (Elias & Carney, 2025).

This pattern reflects not only selective marketing but also a broader construction of what sustainability means in skincare. Through repeated emphasis on marketable claims like “vegan,” brands are shaping consumer expectations and understandings of sustainable beauty—often at the expense of more complex, less visible sustainability issues such as human rights, fair labour, or ingredient origins.

Greater transparency and commitment to sustainable sourcing should be prioritized. This also calls for more active engagement from NGOs and regulatory bodies to hold brands accountable and push for improved industry standards.

4.4.6 Greenwashing and trust

Greenwashing remains a critical issue for facial moisturizer products. Using the “seven sins” framework (TerraChoice, 2010), this study found high levels of greenwashing—particularly sins of no proof, vagueness, and worshiping false labels. Claims of being “vegan” or “cruelty-free” were frequently unverified, often accompanied by internal labels that lacked third-party certification. In some cases, brands strategically placed internal labels beside legitimate certifications to suggest external endorsement, thereby misleading consumers. These practices represent not only misleading tactics but also a reframing of sustainability messaging, where internal labels are used to simulate third-party validation.

These practices echo trends observed in other sectors, such as fashion, where greenwashing has been linked to the pressure to meet sustainability expectations without adequate infrastructure (Adamkiewicz et al., 2022). The growing use of ambiguous terms like “clean” also contributes to consumer confusion and undermines trust. As Zhang et al. (2018) argue, misleading claims dilute the credibility of genuine sustainability efforts. For the industry to move forward, greater accountability, clearer standards, and regulatory enforcement are essential.

4.4.7 Waste and end-of-life communication

The majority of facial moisturizer products in this study did not provide any guidance regarding product end-of-life. This omission stands in contrast to growing calls in the literature for brands to educate consumers on appropriate disposal practices (Sisto et al., 2024). Among the limited number of products that did include end-of-life messaging, the focus was exclusively on

packaging-related claims—such as recyclability or the use of recycled materials. This narrow scope mirrors broader trends in the literature, where product end-of-life management tends to prioritize packaging (Cinelli et al., 2019; Gatt & Refalo, 2022) over residual product. However, emerging research emphasizes the importance of addressing residual product as well. Nciri et al. (2022), for example, highlight the potential for repurposing residual cosmetics in other sectors, while Klein et al. (2025) argue that product remnants contribute to both environmental harm and financial loss. Despite these concerns, communication around product residues remains notably absent from current brand practices.

The study also revealed that disposal instructions were least frequently provided by leading brands, despite their market dominance. As consumer awareness of sustainability grows, clear and comprehensive guidance on end-of-life management—including both packaging and leftover product—should be a standard component of responsible and transparent brand communication.

4.4.8 Framing and the construction of sustainability

This study shows that sustainability in skincare is not simply communicated—it is strategically framed and socially constructed through brand messaging. Brands choose which values to highlight, which claims to repeat, and which issues to omit, thereby shaping what “sustainability” comes to mean for consumers. Message framing theory helps explain how emotional and rational appeals are used to position products as sustainable or eco-conscious, while the broader tradition of social construction highlights how these repeated choices influence collective understanding. As noted by Tregidga et al., (2014), in corporate sustainability reports, organizations construct evolving identities—such as “responsible,” “leader,” or “strategic.” Similarly, cosmetic brands construct sustainability through selective claims, which signal values such as animal welfare or natural ingredients, while often avoiding more systemic or contentious issues like overproduction or labour rights. The strategic omission of such issues is itself a form of framing. Brands may deliberately avoid highlighting topics that are less appealing to consumers or that pose reputational risks, choosing instead to foreground values perceived as safe and marketable. Prior research on retail communication, for example, has shown that companies may downplay sustainability in consumer-facing contexts when factors such as price, convenience, or design are assumed to drive purchase decisions more strongly (Welinder, 2023).

This framing has implications for how consumers understand and engage with sustainability. By repeatedly emphasizing visible but narrow aspects—such as cruelty-free claims or eco-friendly packaging—brands help define the boundaries of what counts as “sustainable” or “responsible” consumption. In doing so, they do not merely reflect consumer expectations; they actively shape them. These findings underscore the importance of critically assessing how sustainability is framed—not only in terms of what is communicated, but also what is made invisible or marginalized. As consumer expectations evolve and values around sustainability deepen, there is a growing need for more transparent and comprehensive messaging strategies in the cosmetics industry.

4.5 Limitations and future research

This study has several limitations. First, it focuses solely on facial moisturizers—a key but limited segment of the skincare market—which may not reflect sustainability communication across other product types. Second, the sample is based on brands available in the Canadian market, limiting the generalizability to global or niche contexts. Third, the analysis relies only on official product webpages, excluding other platforms such as social media, retailers and advertising. Fourth, a limitation concerns the categorization of brands that could plausibly fit more than one group. ColourPop, for instance, has been described in industry journals as both a leading and a fast beauty brand, but was classified within the fast beauty category for consistency. A sensitivity analysis excluding ColourPop confirmed that this choice did not affect the results, though the need for such decisions underscores the complexity of brand positioning in the cosmetics market. Finally, it does not account for consumer interpretations of brand messaging. Future research should expand the product range, geographic scope, and communication channels examined, and incorporate consumer perspectives to offer a more holistic understanding of sustainability and inclusion in cosmetics communication.

4.6 Conclusion

This study examined how sustainability is communicated by skincare brands across three categories—leading, fast beauty, and sustainability-positioned—through product webpages and related imagery. Guided by message framing theory, the research addressed four objectives:

identifying framing techniques, comparing brand categories, uncovering communication gaps, and offering insights to improve transparency and credibility in the cosmetics industry.

The findings reveal that skincare brands use both rational and emotional framing to position sustainability—most often through claims like vegan, cruelty-free, and clean, frequently paired with self-care or wellness narratives. Clear differences emerged between brand categories: leading brands focus on performance while largely neglecting sustainability; fast beauty brands highlight sustainability-related claims but often without verification; and sustainable brands emphasize sustainability, yet sometimes under-communicate performance features that consumers value.

Significant communication gaps exist across all brand types, including limited disclosure of product origin, ingredient sourcing, and end-of-life instructions. Additionally, greenwashing—particularly the sins of no proof, vagueness, and false labels—was prevalent, underscoring the need for stronger verification standards and regulatory oversight.

The study offers comparative insights into how sustainability is framed across brand categories—a dimension underexplored in skincare literature. It also provides practical recommendations: sustainable brands can strengthen product feature messaging and adopt interactive tools like AR, while all brands must address transparency and greenwashing risks. For policymakers, the findings highlight the urgency of extending transparency regulations to online platforms and enforcing clearer certification and labeling standards. As discussed by White et al. (2025), system-level changes—such as regulatory interventions—can influence outcomes at other levels, including corporations and consumers.

As demand for sustainable skincare grows, this research offers a timely framework for understanding how sustainability is not just communicated but strategically framed and constructed in the marketplace. Improving these communication practices is essential for aligning brand narratives with meaningful environmental and social responsibility.

This study advances sustainability marketing research in multiple ways. Empirically, it is the first comparative study of sustainability communication in skincare across leading, fast beauty, and sustainability-oriented brands, and the first to examine this phenomenon in the Canadian

market. By focusing on facial moisturizers as a key skincare product, it documents how different categories position sustainability within one of the largest and most widely used cosmetic sectors.

Theoretically, the study extends message framing theory by applying it to skincare communication, showing how brand categories selectively integrate sustainability attributes to construct meaning. It reveals category-specific patterns of misleading claims, adding depth to research on greenwashing, and advances understanding of the sustainability–performance trade-off by showing how brand communication either reinforces or contests the assumption that sustainability compromises product effectiveness.

Methodologically, the study builds on and applies a systematic tool for evaluating the integration of sustainability into product-level messaging. This approach provides a replicable framework for analyzing not only colour cosmetics, as in the previous chapter, but also skincare, demonstrating its adaptability across product types.

Practically, the findings provide evidence-based insights for brands, highlighting the need to balance sustainability and performance in communication and to improve end-of-life guidance. They also underscore the risks of vague or misleading claims and the urgency of stronger regulation in digital marketing environments. By exposing unverified claims, the study contributes to consumer and media literacy, enabling stakeholders to critically evaluate sustainability messaging.

For the field of marketing, this study advances understanding of sustainability communication by moving beyond corporate-level discourse to product-level messaging in skincare. It demonstrates that sustainability communication is not uniform but category-specific, with skincare showing distinct framing patterns compared to colour cosmetics. In doing so, it challenges marketing assumptions about sustainability always being in tension with performance, providing new insights into how brands strategically frame both concepts to maintain consumer trust and competitive positioning.

This study's conceptual map served as a structural foundation for investigating how skincare brands integrate sustainability into their online product messaging. Returning to this framework, the findings validate the interconnected role of brand categories, messaging elements,

and greenwashing assessment in shaping consumer-facing narratives. The theoretical lenses of message framing and social construction proved useful in analyzing how specific sustainability attributes were selectively emphasized to construct perceived brand values. The distinction between claims and their verification through labels and certifications was particularly salient, revealing that while brands often make sustainability-related claims, only a subset are supported by third-party verifications. The conceptual map also anticipated the need to assess inconsistencies and misleading strategies, which emerged clearly through the analysis of greenwashing practices. Ultimately, the framework enabled a systematic comparison of how leading, fast beauty, and sustainable brands frame sustainability, and how these framing strategies shape consumer understanding of what constitutes a “sustainable” skincare product. By revisiting the conceptual map, this study demonstrates the value of an integrated approach to decoding brand communication in an increasingly eco-conscious marketplace.

Chapter 5 : Framing equity in beauty: How different cosmetic brand categories integrate social aspect of inclusion and diversity in communication strategies.

Abstract

This study investigates how diversity and inclusion, as elements of social sustainability, are communicated across three categories of cosmetic brands—leading, fast beauty, and sustainable—within the Canadian online marketplace. Grounded in message framing theory, the research uses content analysis and mystery shopping to examine the online sales communication of 441 cosmetic products. To capture perspectives from both colour cosmetics and skincare, one product was selected from each category—lipsticks and facial moisturizers. The analysis examines how dimensions such as race, gender, realistic portrayal, culture, and accessible design are addressed and communicated through brand messaging. Findings show that diversity is selectively emphasized: racial diversity and shade range are most visible in lipstick marketing, particularly among fast beauty and leading brands, while facial moisturizers are primarily framed around functional benefits, with limited use of inclusion cues. Sustainable brands demonstrate relatively greater attention to gender diversity and realistic portrayals compared to other categories, but the overall inclusion remains low. Cultural inclusion is minimal across all brand types, and communication of accessible design is entirely absent. These patterns suggest a narrow approach to social sustainability—one that prioritizes visible traits and neglects deeper equity considerations. The study identifies a lack of consistent attention to inclusion and diversity in brand messaging, contributing to the sustainability marketing literature and offering practical implications for brands aiming to align their communication with evolving consumer expectations around social sustainability.

5.1 Introduction

5.1.1 Overview

The sustainability of the cosmetics industry has become an increasingly pressing concern as the sector grows in size and influence (Alviri et al., 2025; Bom et al., 2019). This concern spans the three pillars of sustainability: environmental protection, social well-being, and economic viability (Purvis et al., 2019). While environmental issues—such as resource extraction, packaging

waste, and carbon emissions—have long dominated the discourse, there is a growing need to address social aspects of sustainability (Kolling et al., 2022). As consumer expectations shift toward more inclusive and values-driven consumption, equity is increasingly seen as essential to building a truly sustainable and socially responsible cosmetics industry (Nadhirahastri, 2022; Carlomagno and Veneziano, 2024).

This study examines how inclusion and diversity are communicated across three categories of cosmetic brands: leading brands (well-established, mainstream brands), fast beauty brands (which prioritize rapid production and affordability), and sustainable brands (those recognized for their sustainability commitments or certifications). Grounded in the theoretical framework of message framing—and more specifically, social identity framing—the research analyzes both visual and textual elements of brand communication to understand the extent and nature of inclusion and diversity across these brand types. Using mystery shopping and content analysis techniques, data were collected from 441 cosmetic products, including 218 facial moisturizers and 223 lipsticks, all available in the Canadian market. Canada offers a compelling context for this analysis due to its ethnically and culturally diverse population (StatCan, 2024), increasingly visible public and institutional discourse on equity, representation, and inclusion (PBC, 2022), and the notable lack of research on sustainability in the cosmetics industry—particularly from a social science perspective (Alviri et al., 2025). By focusing on how inclusion and diversity are communicated for these products and brands, this study offers new insights into the varying degrees, dimensions, and omissions of inclusive practices across the cosmetics industry. The study aims to assess the extent of inclusive brand communication, compare how inclusion and diversity are integrated across different brand categories, identify the most frequently represented aspects of diversity, and highlight inconsistencies in messaging between brand and product types.

This study makes several contributions. Empirically, it is the first comparative investigation of inclusion and diversity in cosmetic brand communication, and the first to examine this issue in the Canadian context. Theoretically, it extends message framing theory from environmental to social sustainability, applying identity framing to show how brands construct diversity narratives. Methodologically, it operationalizes social identity framing into systematic assessment criteria, offering a replicable tool for analyzing equity in marketing messages. Finally, it contributes to the field of marketing by broadening sustainability marketing beyond environmental concerns,

positioning diversity and inclusion as integral to social sustainability, and showing that diversity functions as a strategic framing decision deployed unevenly across product portfolios.

The aim of this study is to conduct a comparative analysis of how leading, fast beauty, and sustainable cosmetic brands communicate inclusion and diversity through product-level messaging, with a focus on lipsticks and facial moisturizers. To achieve this aim, the study pursues four objectives: 1) Assess the extent of inclusive brand communication across products and categories. 2) Compare how inclusion and diversity are integrated into the messaging of leading, fast beauty, and sustainable brands. 3) Identify the most frequently represented aspects of diversity. 4) Highlight inconsistencies in diversity messaging between brand categories and product types.

5.1.2 Background

Social sustainability in marketing refers to how brands communicate their commitment to societal well-being, including fair treatment, inclusion, and ethical responsibility toward communities and individuals. While the concept is part of the broader triple bottom line framework (Elkington, 1998), marketing research has largely focused on environmental aspects (so-called “green advertising”), often overlooking the social dimension (Sander et al., 2021). Social sustainability advertising—defined as messaging that highlights a firm's contributions to a better society—remains underexplored compared to green advertising, despite its potential to build brand credibility and differentiate firms in increasingly values-driven markets (Sander et al., 2021). Scholars have called for clearer conceptualization and empirical examination of how social sustainability is framed and received by consumers in marketing communication (Catlin et al., 2017; Simpson & Radford, 2014).

Social sustainability in the cosmetics industry involves ethical labour practices (Bom et al., 2019; U.S. Department of Labour, 2025) and fair access to products (Anastas & Zimmerman, 2018). Furthermore, a critical component is equity, which refers to fairness in the treatment of individuals, particularly in terms of access to opportunities and outcomes (Arsel et al., 2022), thus challenging historical marginalization of certain groups in product development, marketing, and brand communication (Eizenberg & Jabareen, 2017). Equity involves actively promoting justice, impartiality, and fairness in institutional processes, resource allocation, and decision-making structures, while recognizing that some individuals and groups have historically benefited from

greater privilege and access than others (Shultz et al., 2022). In the context of the marketplace, equity requires addressing systemic barriers and ensuring that all individuals—regardless of their background—can participate fully and benefit equally.

Accordingly, diversity and inclusion are closely tied to the concept of equity. These principles are also embedded in the United Nations Sustainable Development Goals (SDGs), particularly Goal 5 (Gender Equality) and Goal 10 (Reduced Inequalities), which call for the empowerment of all people and the elimination of discrimination in all its forms (Global Goals, n.d.-a; Global Goals, n.d.-b; Carlomagno & Veneziano, 2024). Promoting equity alongside diversity and inclusion not only supports sustainable and just business practices but also contributes to more resilient, socially responsible markets.

The concepts of diversity and inclusion in the marketplace are complex and multidimensional, encompassing a broad spectrum of individual and group identities. Henderson et al. (2023) and Arsel et al. (2022) define diversity as the recognition of individuals' physical and sociocultural differences, while inclusion involves actively integrating and valuing these differences to foster a sense of belonging and reduce marginalization. Campbell et al. (2023) similarly highlight that diversity entails acknowledging and respecting distinct characteristics and identities across groups. Patrick and Hollenbeck (2021) emphasize the multidimensional nature of identity, which includes factors such as age, sexual orientation, religion, ethnicity, socioeconomic status, and inclusive design. This perspective aligns with Arsel et al. (2022) who examine diversity, equity, and inclusion across intersecting categories, including gender, age, body image, race and ethnicity, social class, and cultural or religious identity.

While diversity refers to the description of individual and social differences of people with distinct attributes (e.g., race, age, sexual orientation, socio-economic status, physical abilities), inclusion describes the engagement with diversity and emphasizes the incorporation and valuation of the presence and perspective of different groups of people into an environment (Bernstein et al., 2020). Both diversity and inclusion relate to the fundamental human right to be treated equitably—ensuring that individuals are not disadvantaged but rather recognized, understood, and valued for their unique attributes (Eisend et al., 2023). Inclusion and diversity have become integral to brand communication (Branca et al., 2024) as consumers expect brands to reflect values of equality,

representation, and social responsibility. In advertising research, diversity refers to the representation of individuals with varied characteristics, while inclusion emphasizes the meaningful acknowledgment and integration of their presence and perspectives within the content (Eisend, 2022). Brands that embrace diversity and inclusion in their messaging and practices can foster deeper connections with a broader, more diverse customer base (Salsabila & Apriliyanty, 2022).

Alongside the growing emphasis on sustainability, the cosmetics industry is characterized by a diverse array of brand types. Sustainable brands typically position themselves around sustainable practices, while fast beauty brands prioritize rapid product turnover, trend responsiveness, and affordability—closely mirroring the fast fashion model (Niinimäki et al., 2020; Bläse et al., 2023). As with fast fashion, the high volume and short lifecycle of fast beauty products have raised concerns about their environmental and social impacts (Jeelani, 2020; Ratri & Arifianto, 2024).

For the purposes of this study, cosmetic brands are grouped into three categories based on their business models and market positioning: fast beauty brands, which emphasize rapid product turnover and affordability; sustainable brands, which focus on ethical and environmental commitments; and leading brands, which are well-established market leaders with broad consumer reach. These categories reflect strategic orientations rather than a value hierarchy. Understanding this brand diversity is crucial when examining how inclusion and diversity are communicated, as each brand type operates within distinct market logics and consumer expectations.

A number of scholars have explored how diversity and inclusion are communicated in the cosmetics industry. For example, Carlomagno and Veneziano (2024) analyzed specific inclusive branding efforts by companies such as Dove and Fenty Beauty, demonstrating how brands can redefine beauty standards through diverse representation and their messaging. Similarly, Salsabila and Apriliyanty (2022) investigated the effects of inclusive marketing—specifically the use of diverse human models in imagery and brand messaging—on consumer perceptions and found that inclusive marketing positively influences brand experience, trust, and emotional connection. In Indonesia, research by Nadhirahastri (2022) highlights that consumers expect beauty brands to

reflect the country's ethnic and cultural diversity. These studies underscore the growing importance of representation as part of brand strategy.

This study builds on such research by examining how inclusion and diversity are communicated across three categories of cosmetic brands. By doing so, the study offers insight into the varying degrees, dimensions, and omissions of inclusive practices across the cosmetics sector. As a contribution to the broader conversation on social sustainability, this study specifically focuses on the inclusion of diverse identities in marketing messaging, rather than other dimensions such as ethical labour practices or community engagement.

The theoretical foundation for this study is message framing, a concept rooted in prospect theory (Kahneman & Tversky, 1979) and extended in marketing and behavioural science to examine how the structure of messages influences decision-making. Message framing refers to how information is presented—such as emphasizing gains vs. losses, self- vs. other-focused appeals, or abstract vs. concrete details—to shape perceptions, attitudes, and behaviours (Florence et al., 2022). In marketing, framing is used to guide consumer responses through functional, emotional, or ethical cues (Leonidou & Leonidou, 2009; Florence et al., 2022), and in social marketing, it has been widely applied to promote environmental sustainability behaviours, such as recycling, energy conservation, and green purchasing (Anghelcev & Sar, 2014; White et al., 2011). However, the majority of framing studies in sustainability contexts have concentrated on environmental issues, often overlooking social dimensions.

Emerging work explores identity-based and narrative framing to enhance resonance with diverse audiences and foster deeper engagement with sustainability communication (Gómez-Román et al., 2024; Rotondi et al., 2024). Building on this development, the current study applies message framing theory to the social dimension of sustainability, specifically through the lens of social identity framing. Social identity framing refers to the alignment of brand messages with consumers' social identities, affirming their lived experiences through language, visuals, and symbolic cues (Gómez-Román et al., 2024). In the context of cosmetics marketing, this includes the use of diverse models, inclusive product descriptions, realistic portrayals, and references to gender, race, and culture. The study also distinguishes social identity framing from value-based framing, which relies on broad ethical claims (e.g., “we support inclusion”) without specific visual

or textual representation (Schmeltz, 2014). By focusing on how inclusion is selectively framed across brand categories, this research expands the application of message framing theory to social sustainability and contributes to the evolving discourse on equity and representation in sustainability communication.

By using message framing and social identity framing as the central theoretical lens, this research investigates how inclusion and diversity are integrated into the marketing of lipsticks and facial moisturizers across different brand categories. It analyzes both visual and textual elements of communication to assess who is represented, how they are portrayed, and what values are communicated. In doing so, it extends the application of message framing to brand communication and contributes to broader conversations about social sustainability in the cosmetics industry.

To examine how diversity and inclusion are integrated into cosmetic brand messaging, this study focuses on two product categories: lipsticks, representing colour cosmetics, and facial moisturizers, representing skincare. These products were selected for their distinct functions and their established roles within the cosmetics industry. Lipsticks, as decorative products, are closely tied to beauty norms, identity, and self-expression (Cunningham, 1992; Etcoff et al., 2011). The "Lipstick Index" underscores their ongoing appeal as an affordable luxury, even during economic downturns (Gerstell et al., 2020; Khvatova & Thakur-Weigold, 2019). Only lipsticks primarily offering colour and texture were included; items focused on shine or hydration (e.g., glosses or balms) were excluded for consistency. Facial moisturizers represent the functional and therapeutic side of cosmetics. As widely used products central to skincare routines, they are marketed with both scientific credibility and emotional appeals related to self-care (Nolan & Marmur, 2012; Hashem et al., 2020). Only facial moisturizers with hydration or dryness prevention as their primary function were included. Together, these two products offer a balanced lens on decorative and functional cosmetics, enabling a nuanced analysis of how inclusion and diversity are communicated across product types and brand categories.

Online product descriptions on official brand websites play a critical role in shaping consumer perceptions and influencing purchasing decisions (Yang, 2010). These descriptions not only convey product features but also communicate brand values and unique selling propositions. With the growing prevalence of e-commerce, consumers increasingly rely on digital platforms to

inform their choices, making the structure and content of webpages highly influential (Vandic et al., 2018; Wang et al., 2013). This study focuses on official brand websites to examine how cosmetic brands integrate diversity into their online communication.

The research question has four main objectives aimed at examining the communication practices of cosmetic brands in the Canadian market. Firstly, the study seeks to evaluate the extent to which different categories of cosmetic brands (leading brands, fast beauty, and sustainable brands) incorporate inclusion and diversity in their communication strategies. This objective involves analyzing language, imagery, and overall communication style to gain insights into how inclusion and diversity are reflected in brand messaging.

Secondly, the research aims to identify which dimensions of inclusion and diversity (e.g., race, gender, body type/realistic portrayal, culture, accessible design) are most commonly represented across brand categories. The study will examine sustainable, fast beauty, and industry-leading brands to provide a comprehensive understanding of their distinct communication approaches. This analysis will not only reveal current industry trends but also highlight the contrasting strategies each brand category employs.

Thirdly, the research examines the alignment between inclusive communication and sustainability positioning within the cosmetic industry. It explores how brands that claim to prioritize sustainability also incorporate—or neglect—diversity and inclusion in their messaging, visuals, and product representation.

Lastly, the study explores gaps or inconsistencies in how inclusion and diversity are addressed across different brand types. It aims to contribute to the broader discussion on social sustainability in marketing by linking inclusive communication practices with equity and representation in the cosmetics sector.

Overall, these four objectives converge to form a comprehensive research plan that will contribute valuable insights to the cosmetic industry, particularly in the Canadian market. The research benefits cosmetic brands and marketers. It guides businesses towards more inclusive and sustainable communication practices. Figure 5.1 presents the conceptual map guiding this study, illustrating the theoretical foundations, methodological approach, brand categorization,

key messaging elements, and expected analytical outcome and comparative insights on how diversity and inclusion are integrated into cosmetic brands communication.

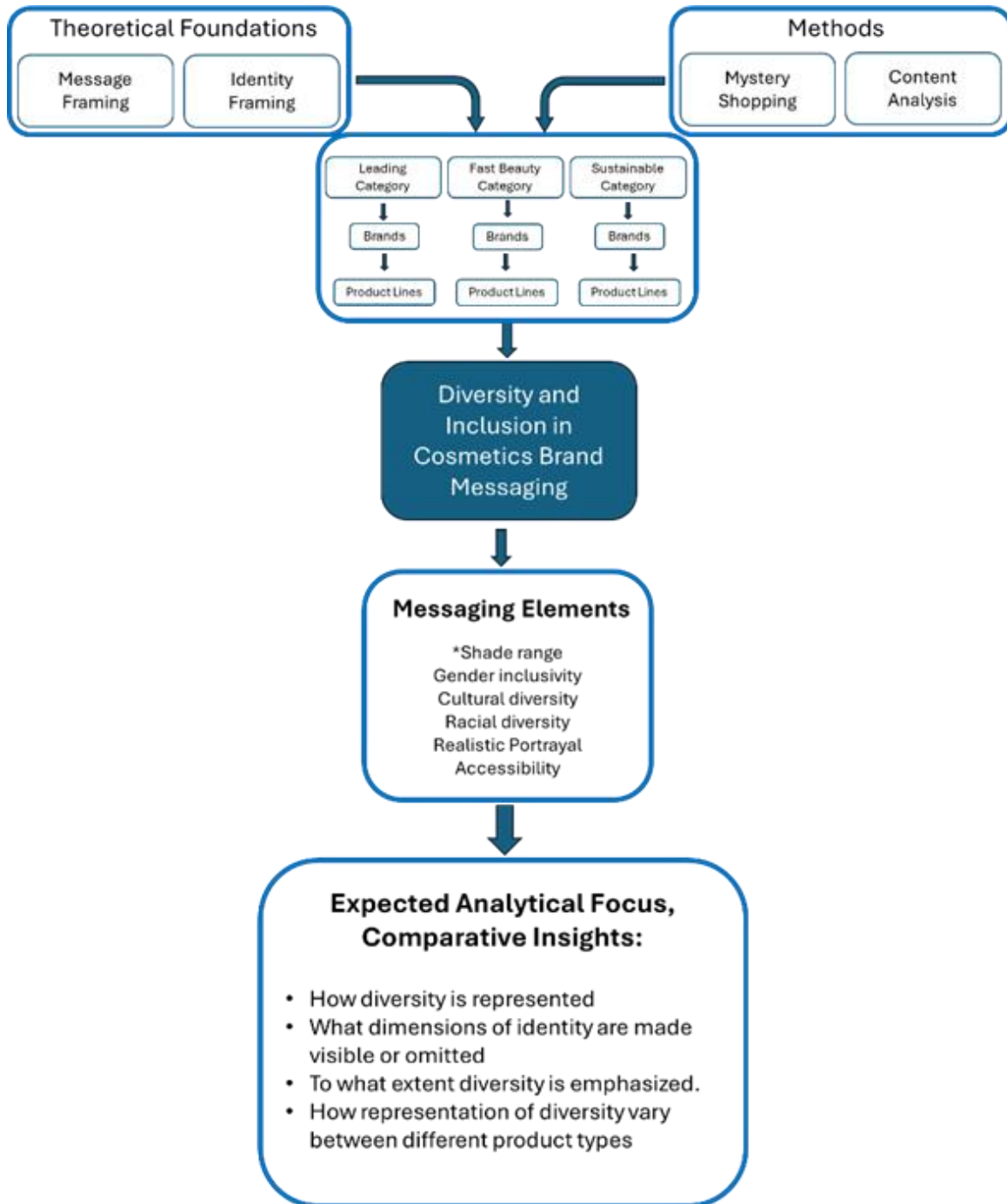


Figure 5.1: Conceptual map of the study (*applies to colour cosmetics)

5.2 Methodology

As described in the background section the concept of message framing forms the theoretical foundation of this research. In online shopping the consumer’s perception of products is developed through the descriptions or multimedia via the webpage of their products. The aim of this research was to conduct a comparative study about communication practices of various types of cosmetic brands in the Canadian market and gain insights into incorporation of diversity and inclusion in their communication and marketing.

5.2.1 Parameters of assessment

In this study, the assessment of cosmetic brand communication focuses on how inclusion and diversity are represented across different brand categories—leading brands, fast beauty brands, and sustainable brands. The analysis considers both textual and visual content presented on product webpages, including descriptions, images, and video materials. The parameters of assessment include representations of race, gender, realistic portrayal, cultural diversity (Arsel et al., 2022; Shultz et al., 2022), and accessibility or accessible design—defined as the extent to which products are designed to be usable by as many people as possible, including individuals with physical, sensory, cognitive, or other impairments, without requiring special adaptation (Patrick & Hollenbeck, 2021). The presence of inclusive language is also examined to evaluate how brands aim to reflect social diversity and foster belonging through their communication strategies. The assessment of inclusion and diversity was guided by the following criteria in Table 5.1.

Table 5.1: Dimensions of diversity in cosmetic marketing: Practices and communication strategies

Diversity Dimension	Description of practice	Examples of communication
Shade range*	Availability of lipstick shades that accommodate a wide spectrum of skin tones, reflecting inclusivity of consumers with varying complexions.	Communicating that shade ranges are developed to suit diverse skin tones.
Human model racial diversity	Presence of human models from a variety of racial backgrounds.	Human models from different race such as white, black and African

		decent, east Asian, south Asian, indigenous.
Gender diversity	Representation of different gender identities.	Individuals with different genders such as female, male, non-binary, transgender.
Realistic portrayal/body type	Use of models with realistic face and body types and unretouched features, deviating from idealized beauty standards.	Individuals with realistic portrayal or body type such as unretouched images, visible skin conditions, varying ages, physical impairment
Cultural diversity	Inclusion of cultural cues such as traditional attire, religious symbols, or language that reflects specific cultural backgrounds.	Visual representation: Featuring models who visibly express their traditional/religious culture—such as hijabs, African headwraps (e.g., gele, duku), Sikh turbans, or models with Jewish kippahs or head coverings Linguistic representation: Using culturally meaningful language in product naming—for instance, lipstick shades named after Indigenous words
Accessible design	Communication of inclusive product design features that enable usage by individuals with cognitive or physical disabilities.	Communication of inclusive design features, such as easy-to-open packaging, one-handed applicators, Braille labels, and easy to understand instruction for physical or cognitive impairments.

*For lipstick only

Mystery shopping and content analysis techniques were used to collect data from 223 lipsticks (103 leading brands products, 64 fast beauty products, and 56 sustainable cosmetics products) and 218 facial moisturizers (100 leading brands products, 42 fast beauty products, and 76 sustainable cosmetics products).

5.2.2 Research type and method

This study employed a mixed-methods research design, integrating both quantitative and qualitative approaches to comprehensively analyze how cosmetic brands communicate diversity and inclusion. The quantitative component involved the use of structured criteria and statistical analysis to identify trends and relationships in brand messaging. Complementing this, qualitative methods provided contextual depth, capturing the nuances of brand strategies that may not be evident through numbers alone. Together, these approaches offered a holistic understanding of how diversity and inclusion are embedded in online cosmetic marketing communication.

The key qualitative method used in this study was mystery shopping, a technique traditionally applied to assess in-store customer experiences but increasingly adapted for e-commerce environments (Santoso et al., 2021). Mystery shopping is a research technique used to assess the quality of service, compliance with standards, and overall customer experience within various industries (Wilson, 1998a; Douglas, 2015). It involves deploying individuals to pose as regular customers to interact with and evaluate businesses. Mystery shoppers follow defined evaluation criteria and scenarios to assess different aspects of the customer journey, such as product knowledge, staff behaviour, or branding consistency (Grove & Fisk, 1992). In this study, shoppers followed defined criteria to assess product presentation, diversity and inclusion in visuals and messaging language across cosmetic product listings. This approach allowed the study to capture insights into how inclusion is enacted in customer-facing brand communication.

In parallel, the study employed content analysis to systematically examine brand messaging related to inclusion and diversity. This method involved coding and interpreting patterns in textual and visual content across 441 cosmetic product webpages. Drawing on established protocols (Harwood & Garry, 2003), the analysis focused on inclusion of social identity markers—such as gender, race, culture, and realistic body type—as well as indicators of inclusive design for individuals with disabilities, encompassing both physical and cognitive dimensions (Patrick & Hollenbeck, 2021). These elements were examined in both product descriptions and visual content. Content analysis enabled structured cross-category comparisons, providing quantifiable insights into the frequency, depth, and framing of inclusion in marketing content.

By combining mystery shopping and content analysis within a mixed-methods framework, this study captured both the strategic intent and consumer-facing execution of inclusion and diversity messaging in the online cosmetics retail environment.

5.2.3 Selection of brands

The study compared three categories of cosmetic brands: leading brands, fast beauty brands, and sustainable brands. Leading brands were classified based on market dominance and industry influence, while fast beauty and sustainable brands were categorized according to their strategic positioning—such as speed-to-market and emphasis on sustainability. This classification supports the study’s aim to compare how established versus strategically positioned brands communicate sustainability online.

In cases where a brand could plausibly fit more than one category—for example, fast beauty brands that also rank among industry leaders (e.g., ColourPop)—classification was determined based on the brand’s core positioning strategy. Brands identified in industry journals as fast beauty were categorized within the fast beauty group, even when they also perform strongly in terms of market leadership. This approach enabled meaningful comparisons between legacy-driven, traditionally positioned brands and those adopting newer, strategically differentiated identities, such as fast beauty or sustainability-oriented positioning. Brand selection for this study was therefore guided by criteria tailored to each of the three categories.

One specific ambiguity concerned ColourPop, which has been described in industry sources as both a leading brand and a fast beauty brand. To avoid duplication across categories and maintain consistency in the dataset, ColourPop was categorized within the fast beauty group. Recognizing that this decision could potentially influence the findings, a sensitivity analysis was conducted. All ColourPop products were excluded from the dataset, and the main statistical tests (including Chi-square tests on the presence of diversity and inclusion in messaging) were re-run. The results remained substantively consistent, confirming the robustness of the findings to alternative brand categorizations.

The selection of brands for this study was guided by clearly defined criteria across three distinct categories: leading brands, fast beauty brands, and sustainable brands. To ensure relevance

and comparability, only brands available in the Canadian market and offering products in the selected categories—lipsticks and facial moisturizers—were included.

Leading brands were identified using U.S. market data, particularly industry reports that highlight brands with significant market share in the cosmetics sector (Statista, 2024b). While Canada-specific data on brand leadership was limited, U.S. market data was considered a reasonable proxy due to the close economic and cultural proximity between the two countries and the overlap in consumer markets and product availability. This approach ensured the inclusion of widely recognized and influential brands that are also present in the Canadian market.

In the fast beauty category—characterized by brands that release trend-driven cosmetic products at affordable price points—brand selection was based on reputation, as reflected in influential blogs and industry journals. These sources helped identify brands making a notable impact within the fast beauty segment. Cosmetic lines launched by fast fashion retailers, such as H&M’s lipstick line or Sheglam by Shein, were also included due to their strong alignment with fast beauty principles of speed, affordability, and trend responsiveness. The final selection also considered the availability of these brands in the Canadian market to ensure contextual relevance.

For the sustainable brand category—defined as brands that position themselves as environmentally and socially responsible through their practices, product development, or communication was primarily based on reputation. This reputation was established through a review of influential blogs, industry publications, sustainability-focused journals, and media coverage highlighting brands recognized for their commitment to sustainability. Once identified, each brand’s availability in the Canadian market was confirmed to ensure relevance to the study’s context. Additionally, it was essential to verify that the selected brands offered products aligned with the study’s focus on lipsticks and facial moisturizers.

Due to the limited availability of centralized data on brand sustainability practices, a pragmatic sampling strategy was adopted. Brands were identified through reliable industry sources and supplemented using snowball sampling, particularly for fast beauty and sustainable brands. This involved tracing mentions and references in media, industry networks, and related content to expand the sample (see Appendix A for product line details).

5.2.4 Products of focus

For this study, the focus was on one skincare product category, facial moisturizers, and one colour cosmetic product category, lipstick, with data collected from a total of 441 products.

Moisturizers were selected as the skincare product focus because they are the most commonly used (Nolan & Marmur, 2012; Deb, 2025). Specifically, this study examined facial moisturizers, given their widespread use and significance in daily skincare routines. A moisturizer is defined as a formulation (such as a lotion or cream) applied to the skin or hair to prevent or alleviate dryness (Merriam-Webster, 2025). These products are marketed under various labels, including creams, lotions, gels, and butters. For this study, only facial moisturizers whose primary function is hydration or dryness prevention were included. Products with additional secondary benefits, such as sun protection, were considered as long as hydration remained their primary function. However, products where the primary purpose was unrelated to moisturizing, such as sunscreens with moisturizing properties, were excluded. Based on the above brand selection method and collecting all facial moisturizer products of each brand, 218 products (100 leading brand products, 42 fast beauty products, and 76 sustainable cosmetics products) were chosen for this study.

The choice of lipsticks was influenced by the "Lipstick Index" theory, which discusses that lipsticks serve as an affordable luxury. Remarkably, even during economic downturns, consumers continue or even increase their lipstick purchases, knowing them as an affordable indulgence (Gerstell et al, 2020; Khvatova & Thakur-Weigold, 2019). Given their significance and the insights they can offer into the brands communication consumer perceptions, this study strategically focused on lipsticks as a colour cosmetic product. Lipstick is defined a coloured cosmetic product for lips (Merriam-webster, 2024) that provides colour and texture (Britannica, 2024). Lip related cosmetic products are introduced to the market in various titles such as lip cream, lipstick, lip colour, lip mousse, lip gloss, and tinted lip cream. The study selected the products that provided the main functionality of lipstick as colour and texture and product with other functionality such as providing shine or just hydration were removed. Based on the above brand selection method and collecting all lipstick products of each brand, 223 products (103 leading brand products, 64 fast beauty products, and 56 sustainable cosmetics products) were chosen for this study.

5.2.5 Inter-rater reliability

To collect data on the messaging strategies of leading, fast beauty, and sustainable brands, a mystery shopping approach was employed. This method involved the use of trained researchers who were tasked with posing as typical consumers to observe, document, and analyze the messaging presented by various brands across online platforms. The researchers were trained to follow a structured set of guidelines, ensuring consistency in the data collection process. The training included detailed instructions on how to navigate websites and assess brand messaging according to predefined criteria.

To ensure the quality and reliability of the collected data, inter-rater reliability tests were conducted. Two researchers independently conducted mystery shopping activities for the same product lines of the same brands, and the data collected from these independent evaluations were compared for consistency. This process assessed the degree of agreement between the researchers, ensuring that the data collected was both reliable and accurate. Any discrepancies were reviewed and discussed to refine the data collection process and align interpretations of the messaging strategies. The inter-rater reliability was 87.5%, calculated as the number of agreements divided by the total coding decisions (Lombard et al., 2002), which exceeds the widely accepted 80% benchmark for content analysis and indicates a strong level of agreement in the coding and evaluation of the data.

5.2.6 Data analysis

Data for this study were collected using Qualtrics, where a structured questionnaire was developed to gather responses. The questionnaire was pre-coded, with each variable already assigned specific codes within the Qualtrics platform. Researchers had access to the questionnaire and used it to collect data from product webpages. Once the data collection was complete, the data were exported from Qualtrics into SPSS. Upon import, all variables came with their pre-assigned codes, facilitating the initial steps of analysis. During the data cleaning process, the dataset was reviewed for any inconsistencies or missing values. Minimal adjustments were required, such as adding or editing certain variables to ensure the data met the necessary analysis requirements. After cleaning, the dataset was organized and formatted appropriately for statistical analysis, ensuring

all variables were accurately labeled and categorized. This preparation process ensured that the data were reliable and ready for the statistical tests conducted in SPSS.

Data analysis was conducted using IBM SPSS 29 (SPSS Inc., Chicago, IL). Descriptive statistics were first employed to assess the frequencies of various variables, providing an overview of the distribution of data related to brand messaging. This step helped identify basic trends and patterns in the dataset. Chi-square tests were then performed to examine the association between brand categories (leading brands, fast beauty, and sustainable cosmetics) and various study variables. These tests assessed whether the different brand categories were significantly associated with specific inclusion and diversity practices or communication strategies. In cases where a significant association was observed, the effect size was calculated (using Cramér's V) to evaluate the strength of the relationship between the variables.

Additionally, a Welch's ANOVA tests were applied to compare the means of different brand categories across selected variables, such as the emphasis on various types of diversity. In this case, a four-point scale was used to assess the degree of emphasis placed on different aspects of diversity and inclusion in brand communication, where 0 indicates no emphasis, 1 indicates slight emphasis, 2 indicates moderate emphasis, and 3 indicates high emphasis. These scores were assigned based on frequency of mention: a score of 1 was given when the element was mentioned once, 2 when it appeared twice, and 3 when it was mentioned three or more times within the product webpage content. Due to the lack of homogeneity of variances across groups for all variables, the decision was made to proceed with Welch's ANOVA adjustment.. This analysis enabled the assessment of significant differences in the communication across brand categories. These analytical methods together provided a robust approach to understanding the relationships and differences between brand categories and their sustainability-related messaging strategies.

5.3 Results

In advertising research, diversity refers to the representation of individuals with varied attributes in advertisements, whereas inclusion focuses on valuing their presence and perspectives within the advertising content (Eisend, 2022). This study examined inclusion and diversity across various dimensions, including shade range (for lipstick), gender, cultural, and racial diversity in human model imagery, realistic portrayals, and accessible design for individuals living with

disabilities. It assessed the overall inclusion and diversity in the communication of two cosmetic products within different brand categories, analyzed the focus on each diversity dimension within those brand categories, and evaluated the overall emphasis on inclusion and diversity across brand categories.

Results present analytical findings from across product types (lipstick and facial moisturizer), and brand categories (leading, fast beauty, and sustainable). The dataset consists of a total of 441 products— 223 lipsticks (103 from leading brands, 64 from fast beauty brands, and 56 from sustainable brands) and 218 facial moisturizers (100 from leading brands, 42 from fast beauty brands, and 76 from sustainable brands). The analysis examines how diversity and inclusion are framed in both visual and textual brand communication.

5.3.1 Lipstick

Of the 223 products analyzed ($N = 223$), 179 (80.3%) included at least one type of diversity and inclusivity in their communication, while 44 products (19.7%) did not. The findings revealed that 72.8% (75 products) of leading brands category products ($n=103$) incorporate diversity. In fast beauty brands category ($n=64$), 87.5% (56 products) included diversity. Similarly, in sustainable cosmetic brands category ($n=56$), 85.7% (48 products) featured diversity in their communication.

A chi-square test was performed to examine the association between the presence of diversity and inclusivity in communication and brand category. This test showed a p -value of 0.034, indicating a statistically significant association between brand category and the presence of diversity and inclusivity in communication. However, the Cramér's V of 0.174 suggested a weak relationship, indicating that while diversity and inclusivity vary across brand categories, the association is not strong. Figure 5.2 shows presence of diversity and inclusivity across brand categories.

A sensitivity analysis was conducted by excluding ColourPop to evaluate whether its categorization affected the findings. The Chi-square test of the presence of diversity and inclusion in messaging yielded results that were substantively consistent with the main analysis (p -value < 0.05), indicating that the exclusion of ColourPop did not alter the overall conclusions. Detailed results of the sensitivity analysis are provided in Appendix C (Table C.3).

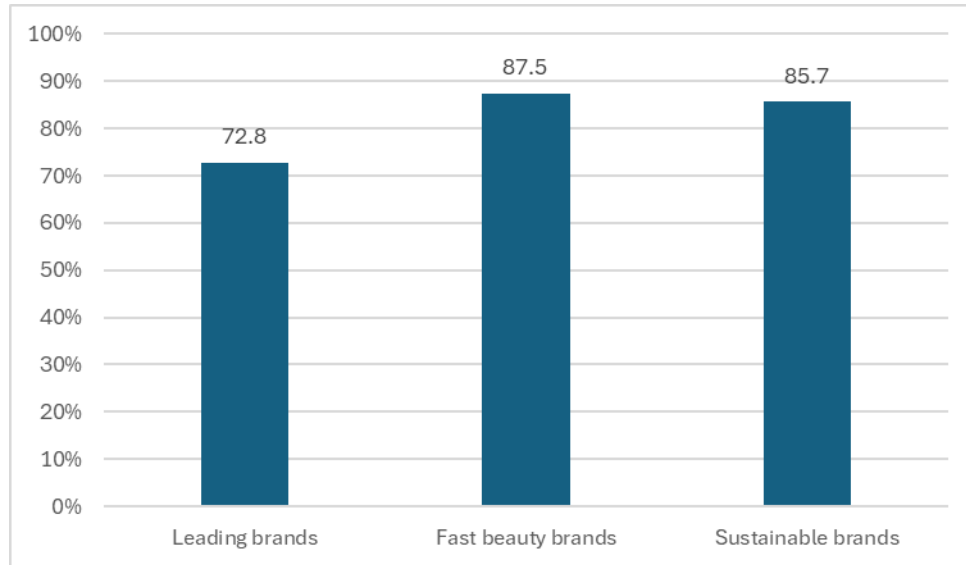


Figure 5.2: Percentage of products including diversity and inclusion by brand category

5.3.1.1 Different types of diversity and inclusion across categories

Shade range: Lipstick shade range for diverse users is a key aspect of diversity and inclusion examined across product categories. Among the 223 lipstick products analyzed, 48.4% (108 products) included this form of diversity in their communication, while 51.6% (115 products) did not. Within the leading brands category (n=103), 43.7% (45 products) incorporated such material, in the fast beauty brands category (n=64), 60.9% (39 products) included this diversity type, and the sustainable brands category (n=56) had 42.9% (24 products) with such form of diversity. A *p*-value of 0.06 suggests a marginal association between brand category and the presence of various shade ranges for diverse audiences; however, this result does not reach the conventional threshold for statistical significance ($p < 0.05$).

Gender Inclusivity: Gender inclusivity, focusing on the inclusion of different genders, was assessed across lipstick products (N=223). Overall, only 7.6% (17 products) demonstrated gender inclusivity, while 92.4% (206 products) did not. In the leading brands category (n=103), 4.9% (five products) included this aspect, the fast beauty category (n=64) showed 6.3% (four products) with gender inclusivity, and in sustainable cosmetics category (n=56), 14.3% (eight

products) included this feature. A p -value of 0.90 indicates no statistically significant association between brand category and the inclusion of gender inclusivity.

Cultural diversity: Cultural diversity, reflected through imagery or descriptions, was infrequently observed. Only 1.8% (four products) included this type of diversity, while 98.2% (219 products) did not. Neither leading brands category ($n=103$) nor fast beauty category ($n=64$) featured cultural diversity, whereas 7.1% (four products) in sustainable cosmetics category ($n=56$) included it. Examples included references to cultural identity, such as one product from sustainable cosmetics category named different shades with indigenous names. A p -value of 0.02 indicates a statistically significant association between brand category and cultural diversity, with a Cramér's V of 0.233 suggesting a moderate relationship.

Racial diversity in human model images: Racial diversity in images of human model was a more prevalent form of inclusion, with 74.4% (166 products) including it and 25.6% (57 products) excluding it. In the leading brands category ($n=103$), 69.9% (72 products) featured racial diversity. The fast beauty category ($n=64$) showed higher representation in its category, with 84.4% (54 products) including it and the sustainable category ($n=56$) included 71.4% (40 products) with racial diversity. However, a p -value of 0.95 indicates no significant association between brand category and racial diversity in model images.

Realistic Portrayal: Realistic portrayals of individuals in images, which refers to the presence of a shift away beauty standards in terms of body shape and size, were analyzed as another dimension of diversity. Of the 223 lipstick products, 16.1% (36 products) included realistic portrayals, while 83.9% (187 products) did not. In the leading brands category ($n=103$), 4.9% (five products) featured realistic portrayals, in the fast beauty category ($n=64$), 9.4% (six products) included this aspect, while the sustainable brands category ($n=56$) showed a higher proportion, with 44.6% (25 products) featuring realistic portrayals. A p -value of less than 0.001 indicates a statistically significant association between brand category and realistic portrayals, with a Cramér's V of 0.452 pointing to a moderate relationship.

Accessible design: One important dimension of diversity in marketing communication is accessibility—or accessible design—which refers to designing products in ways that are inclusive of individuals living with cognitive or physical disabilities and effectively communicating these

features. According to the World Health Organization, approximately 15% of the global population lives with some form of disability. Therefore, designing products that are inclusive—and clearly communicating these inclusive features—is essential for ensuring accessibility and promoting equity in consumer markets (Chitrakorn, 2021). In the context of lipstick products, accessible design may include packaging that is easy to open, products that are easy to apply, or tactile features for users with visual impairments. When brands incorporate such features, the communication of these design choices becomes a key indicator of their commitment to inclusion. However, analysis of the lipstick products in this study revealed that none of the products from leading brands, fast beauty brands, or sustainable brands communicated any accessibility-related features. This absence highlights a critical gap in the integration of inclusive design principles within the marketing messaging of the lipsticks.

Other Types of Diversity: Uncommon forms of diversity were nearly absent across categories. Only 0.9% (two products) demonstrated unique diversity claims, both from the sustainable brands category, with no instances in the leading brands and the fast beauty brands categories. The sustainable category (n=56) has 3.6% (two products) with other types of diversity and inclusion from Juice Beauty which indicated that the lipsticks are designed for all “skin types” and “all ages”. However, this type of messaging appeared more generic and broad rather than specifically tailored to the context of lipsticks. A *p*-value of 0.061 showed no statistically significant association between brand category and the inclusion of the other types of diversity.

These findings reveal significant variations in the representation of diversity and inclusion across product categories which is discussed in following sections. Figure 5.3 illustrates the distribution of different types of diversity across brand categories.

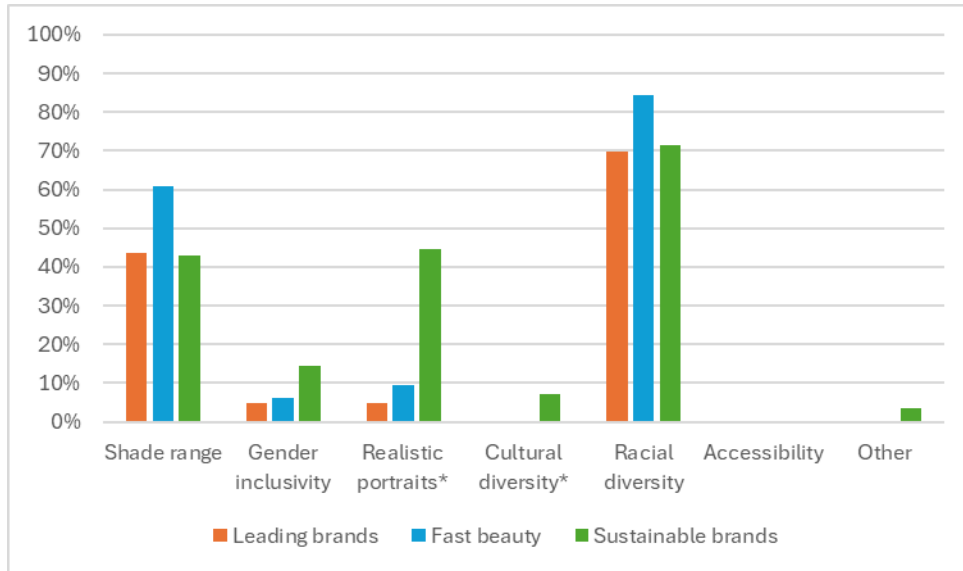


Figure 5.3: Presence of diversity across brand categories (“*” indicates statistically significant relationship).

5.3.1.2 *The degree to which diversity was emphasized*

An assessment of the degree of emphasis on various types of diversity was conducted using a four-point scale, where 0 indicates no emphasis, 1 slight emphasis, 2 moderate emphasis, and 3 high emphasis. Among all dimensions analyzed, racial diversity of human models received the highest overall emphasis, with mean scores of 0.95 (out of 3) for the leading brands, 1.23 (out of 3) for the fast beauty, and 1.23 (out of 3) for the sustainable brands. Welch’s ANOVA indicated a statistically significant difference across brand categories in the emphasis on human model diversity in imagery ($F(2, 121.14) = 3.25, p\text{-value} = 0.042$). Similarly, realistic portrayals, which reflect a shift from traditional beauty standards, also showed significant variation across brand categories. Sustainable brands emphasized this most strongly (mean score of 0.86 out of 3), compared to much lower levels in fast beauty (mean score of 0.22 out of 3) and leading brands (mean score of 0.07 out of 3), with Welch’s ANOVA confirming a highly significant difference ($F(2, 89.40) = 14.31, p\text{-value} < 0.001$).

Other diversity dimensions—shade range, gender inclusivity, and cultural diversity—were also assessed. Shade range emerged as the second most emphasized dimension overall, with mean scores of 0.62 (out of 3) for the leading brands, 0.75 (out of 3) for the fast beauty brands, and 0.59 (out of 3) for the sustainable brands. Gender inclusivity showed slightly higher emphasis in the

sustainable brands (mean of 0.21 out of 3) compared to the fast beauty (0.08) and the leading brands (0.07). Cultural diversity received minimal attention overall, with only the sustainable brands showing an emphasis (mean score of 0.05 out of 3), while the other two categories showed none. However, Welch’s ANOVA found no statistically significant differences across brand categories for these three dimensions. The distribution of emphasis across all diversity types is illustrated in Figure 5.4.

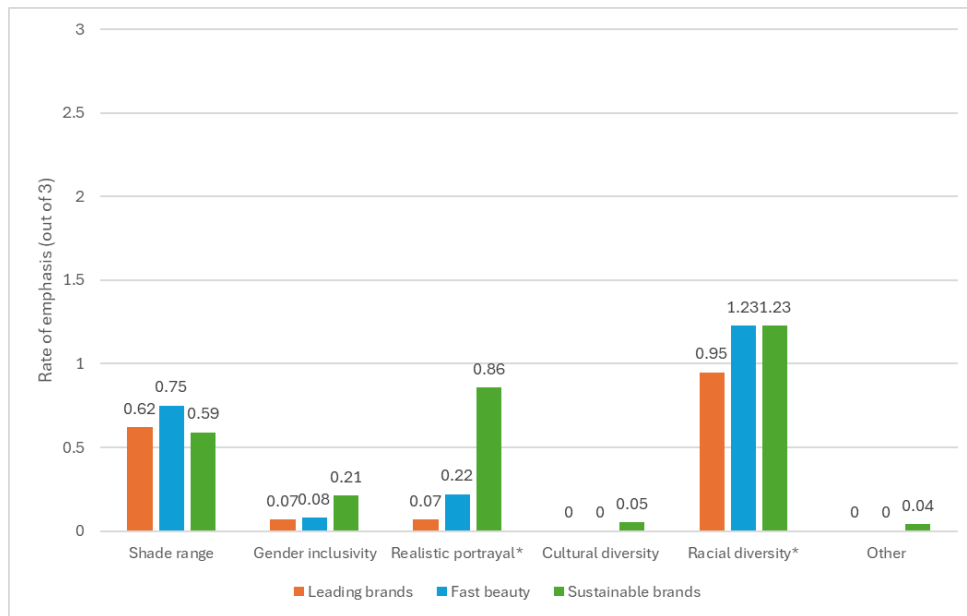


Figure 5.4: Emphasis on diversity and inclusion across brand categories (“*” indicates statistically significant relationship).

Figures 5.5–5.9 illustrate how different dimensions of diversity were emphasized across the three brand categories. As shown in Figure 5.5, all brand categories had some products with different levels of emphasis on this diversity dimension, and there was no major difference in the distribution across categories. Figure 5.6 shows that all three brand categories incorporated some level of racial diversity in human models in their communication, with varying degrees of emphasis. Figure 5.7 highlights the absence of cultural diversity, with the leading and fast beauty brands showing no representation, and the sustainable brands demonstrating only minimal emphasis. As illustrated in Figure 5.8, gender diversity received low emphasis overall, although

the sustainable brands showed a relatively higher focus on this dimension compared to the other categories. Finally, Figure 5.9 illustrates the distribution of emphasis levels on the realistic portrayal dimension across brand categories, with the sustainable brands exhibiting a higher frequency of strong emphasis compared to the leading and fast beauty brands.

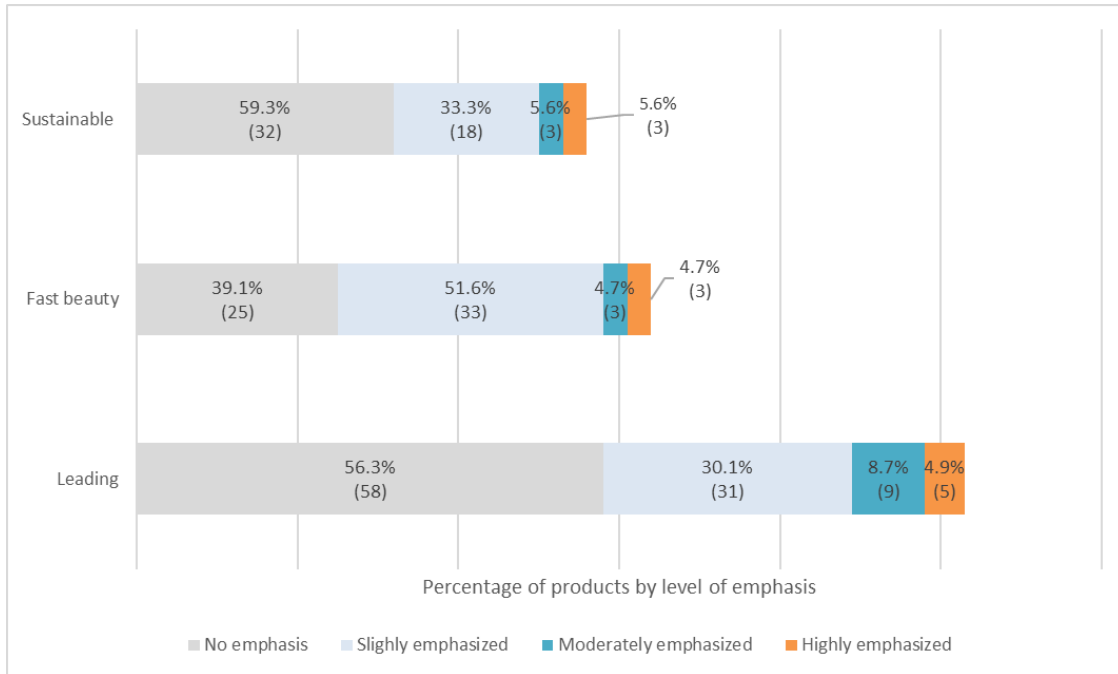


Figure 5.5: Distribution of emphasis levels on shade range diversity in brand communication, by brand category.

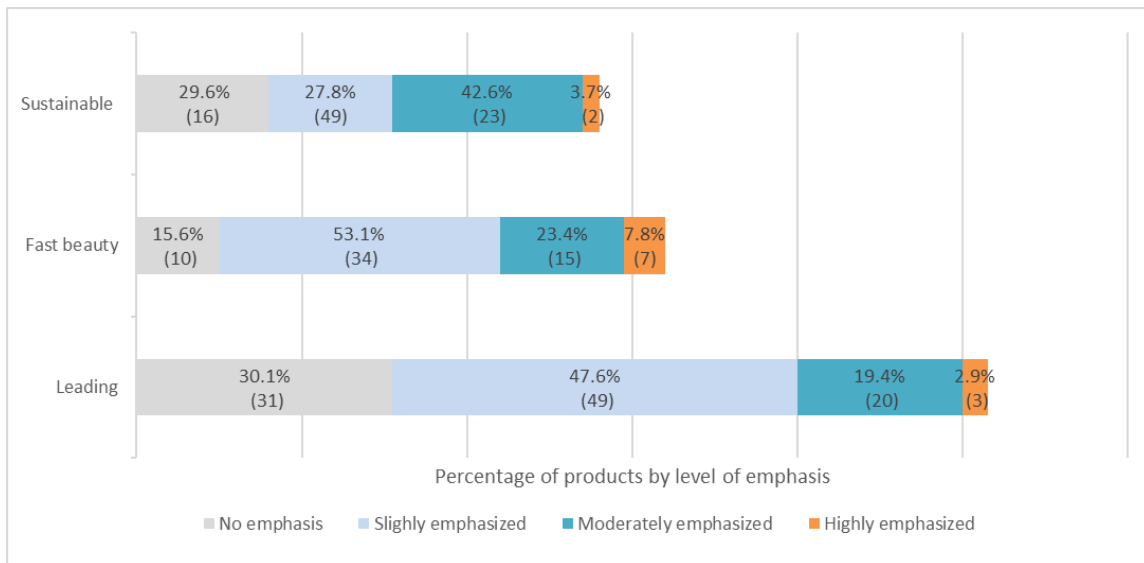


Figure 5.6: Distribution of emphasis levels on model racial diversity in brand communication, by brand category.

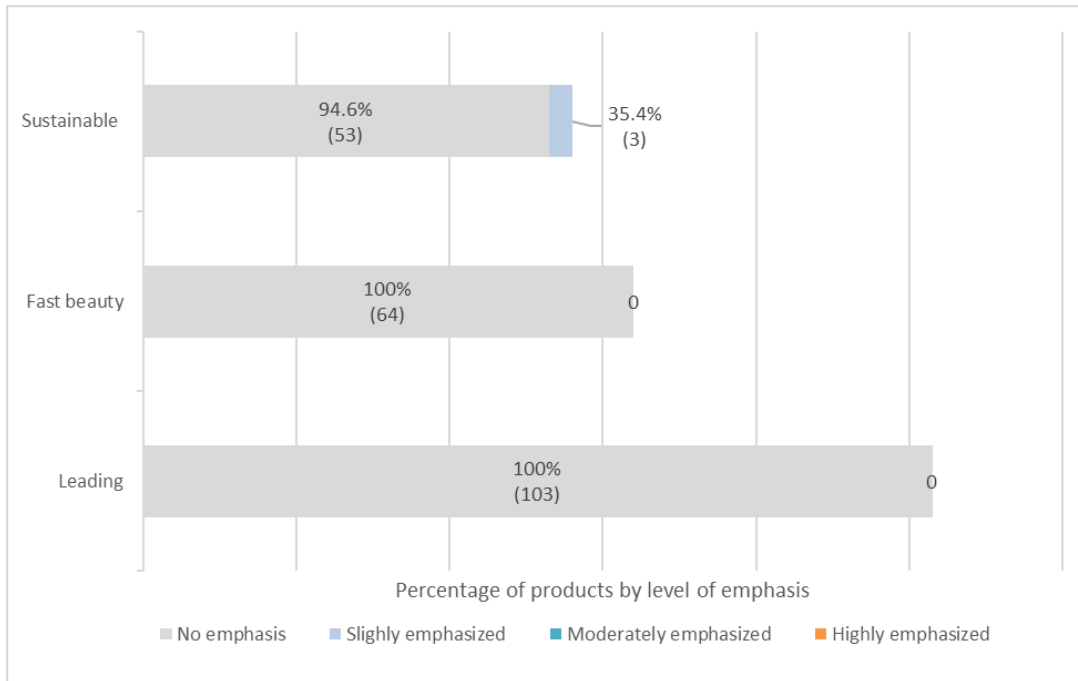


Figure 5.7: Distribution of emphasis levels on cultural diversity in brand communication, by brand category.

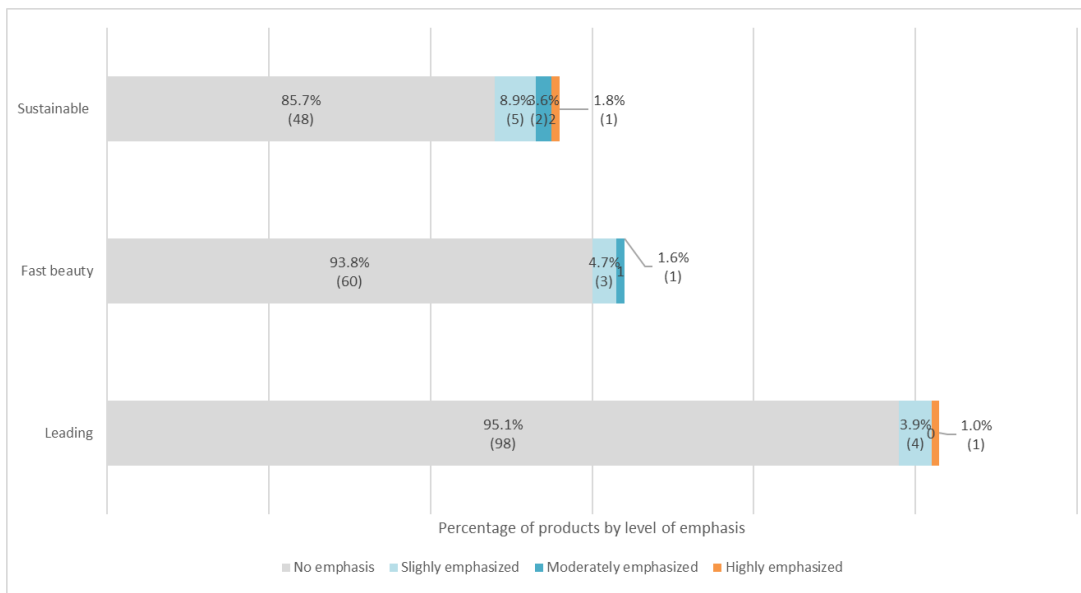


Figure 5.8: Distribution of emphasis levels on gender diversity in brand communication, by brand category.

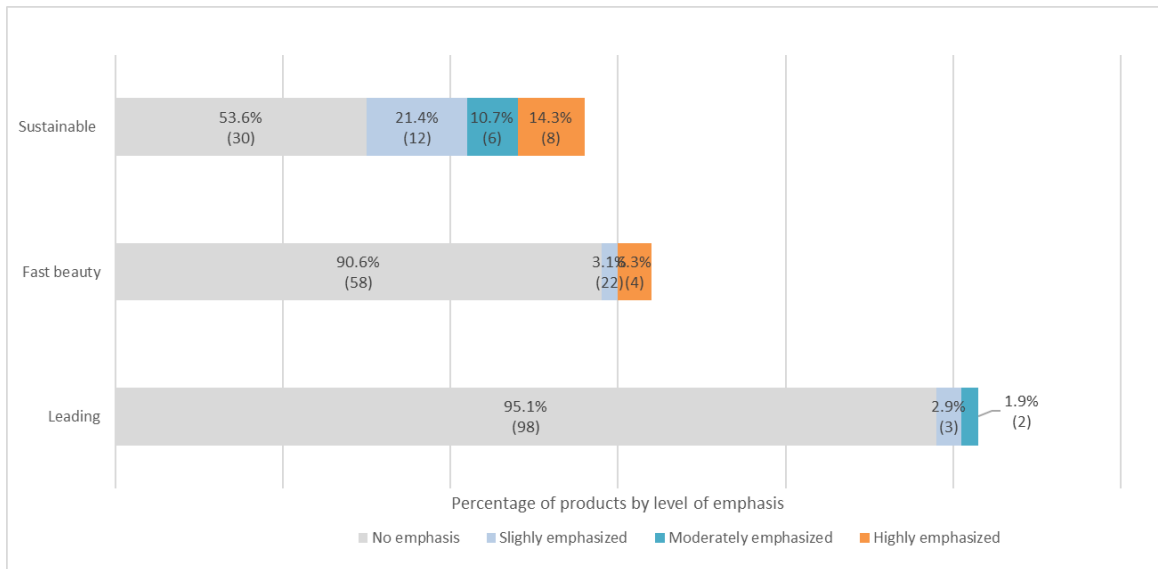


Figure 5.9: Distribution of emphasis levels on realistic portrayal in brand communication, by brand category.

An assessment of the total emphasis on diversity and inclusion among all products was conducted by combining the emphasis scores for each type of diversity—shade range (out of 3), racial diversity (out of 3), cultural diversity (out of 3), gender diversity (out of 3), and realistic portrayal (out of 3)—for each product, resulting in a total possible score of 15. The sustainable category achieved a mean total diversity emphasis score of 2.98, with individual scores ranging from 0 to 8. The fast beauty category recorded a mean score of 2.28, spanning a range of 0 to 8. The leading brands category showed the lowest mean score of 1.71, with scores ranging from 0 to 6. Notably, all groups shared a minimum score of 0. A Welch’s ANOVA was performed to evaluate the relationship between brand category and overall emphasis on diversity. The results revealed a statistically significant difference among the groups. The results revealed a statistically significant difference among the groups (Welch’s $F(2, 112.869) = 7.411, p\text{-value} < 0.001$) indicating that the difference in total emphasis on diversity is significant across brand categories.

Figure 5.10 visually reinforces these findings by illustrating the distribution of total diversity emphasis scores across the three brand categories. As shown in the box plot, the sustainable brands not only had the highest mean score but also had the widest range and variability in diversity emphasis, suggesting that while some brands in this category are actively engaging with inclusion and diversity, others remain less consistent. The fast beauty brands showed a slightly

higher level of diversity emphasis than leading brands, with a few notable outliers indicating different levels of effort at integrating inclusion and diversity. Leading brands demonstrated the lowest mean and a narrower range, reflecting more uniform but limited integration of diversity in their communication. Importantly, all three brand categories fall well below the maximum possible score of 15, highlighting missed opportunities to reflect social diversity in lipstick marketing. These results suggest that the sustainable brands may be more open to integrating diverse identities into their messaging, yet overall, diversity remains underutilized in lipstick marketing communication.

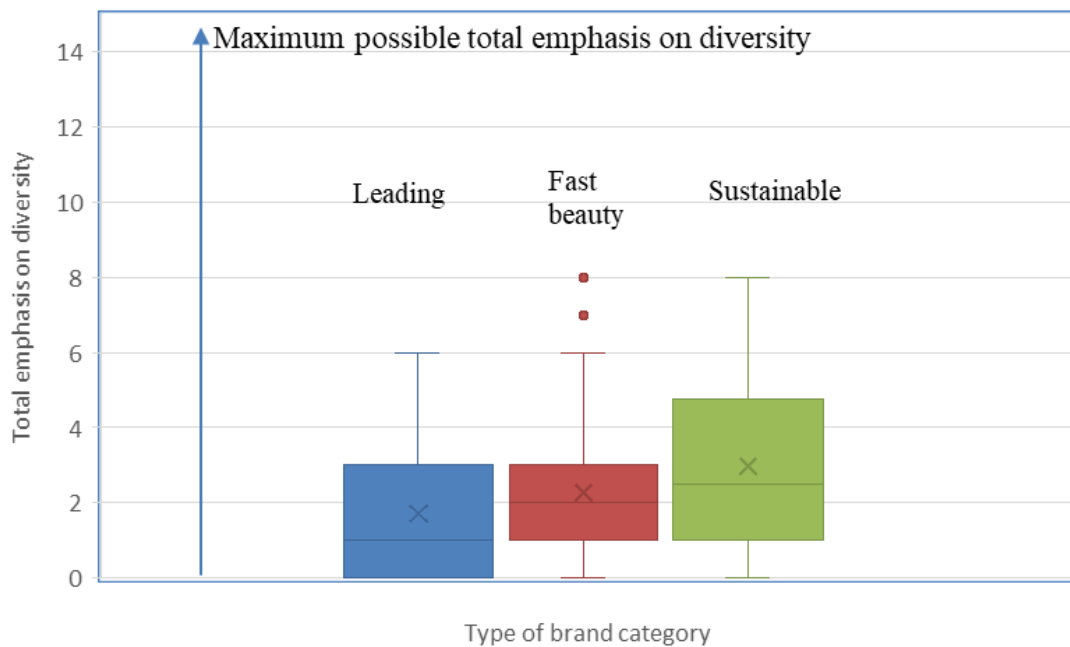


Figure 5.10: Box Plot showing distribution of total diversity emphasis scores (out of 15) across brand categories

5.3.2 Facial moisturizer

Out of the 218 facial moisturizer products analyzed, 76 products (34.9%) included at least one form of diversity or inclusivity in their communication, while 142 products (64.8%) did not. The results revealed notable differences across categories: 31% of products from the leading brands category (n=100) or 31 products incorporated diversity, compared to 19% (eight products)

in the fast beauty category (n=42). In contrast, the sustainable brands (n=76) demonstrated the highest inclusion, with 48.7% (37 products) highlighting diversity. A chi-square test was conducted to examine the association between the presence of diversity and inclusivity and brand category. The association was statistically significant (p -value = 0.003), with a Cramér's V of 0.231, indicating a moderate relationship between the presence of inclusion and diversity and brand category in product communication. Figure 5.11 shows the percentage rate of presence of diversity and inclusivity across brand categories.

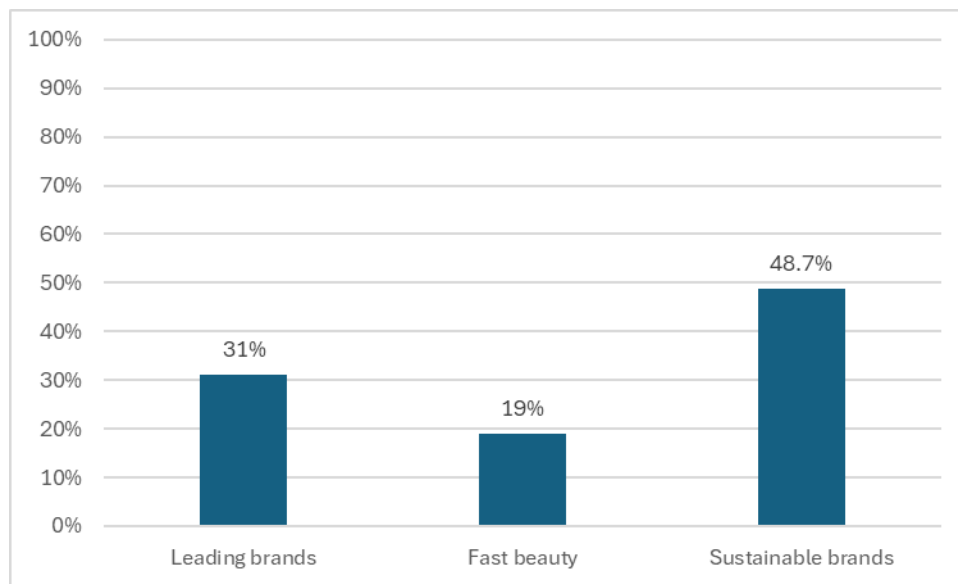


Figure 5.11: Presence of diversity and inclusion across brand categories

5.3.2.1 Different types of diversity and inclusion across categories

Gender Inclusivity: Gender inclusivity, defined as the representation of diverse genders, was evaluated across product categories. Overall, only 8.7% of products (19 out of 218) demonstrated gender-inclusive communication. Within the leading brands category (n=100), 8% of moisturizer products included gender inclusivity. The fast beauty category (n=42) had the lowest representation, with 4.8% (two products), while the sustainable cosmetics category (n=76) showed a slightly higher rate of 11.8% (nine products). However, a p -value of 0.402 indicates that no statistically significant association exists between brand category and the inclusion of gender inclusivity in product communication.

Cultural diversity: Cultural diversity, whether conveyed through imagery or product descriptions, was rarely observed in the sample (N=218). Only 0.5% of products included any form of cultural representation (e.g., a woman wearing a traditional head covering). This single instance was found in the sustainable cosmetics category from the brand UpCircle Beauty. A *p*-value of 0.391 indicates that there is no statistically significant association between brand category and the presence of cultural diversity in product communication.

Racial diversity in human model images: Racial diversity in human model imagery emerged as a more common form of inclusion, was present in 11.5% of products (N=218). Among brand categories, the leading brands category (n=100) had the highest representation, with 16% (16 products) featuring racially diverse models. The fast beauty category (n=42) showed lower representation at 7.1% (three products), while the sustainable category (n=76) included racial diversity in 7.9% (six products). Despite these differences, the *p*-value of 0.153 indicates no statistically significant association between brand category and the inclusion of racial diversity.

Realistic Portrayal: Realistic portrayals of individuals in product imagery was analyzed as another dimension of diversity. Out of the 218 products, 29.4% (64 products) featured realistic portrayals. Within the leading brands category (n=100), 22% (22 products) included this element, while the fast beauty category (n=42) had a lower representation at 14.3% (six products). In contrast, the sustainable cosmetics category (n=76) demonstrated a notably higher inclusion, with 47.4% (36 products) incorporating realistic portrayals. A *p*-value of less than 0.001 indicates a statistically significant association between brand category and the use of realistic portrayals, and a Cramér's *V* of 0.296 suggests a moderate relationship between the two variables.

Accessible design: Accessible design or accessibility is a key dimension of diversity in marketing communication, referring to product design and messaging that is inclusive of individuals living with physical or cognitive disabilities. In the context of the facial moisturizer, this may include easy-to-open packaging or simplified instructions. This study found that none of the analyzed products (N=218)—across leading, fast beauty, or sustainable brands—communicated accessible design, revealing a significant gap in inclusive design within facial moisturizer marketing.

Other types of diversity: Uncommon forms of diversity were almost absent across all brand categories. Only 0.5% of products (one product), from the sustainable cosmetics category, featured a unique diversity claim, with no instances observed in either the leading brands or fast beauty categories. A p -value of 0.391 indicates no statistically significant association between brand category and the inclusion of these less common types of diversity. The inclusion and diversity across different categories is illustrated in Figure 5.12.

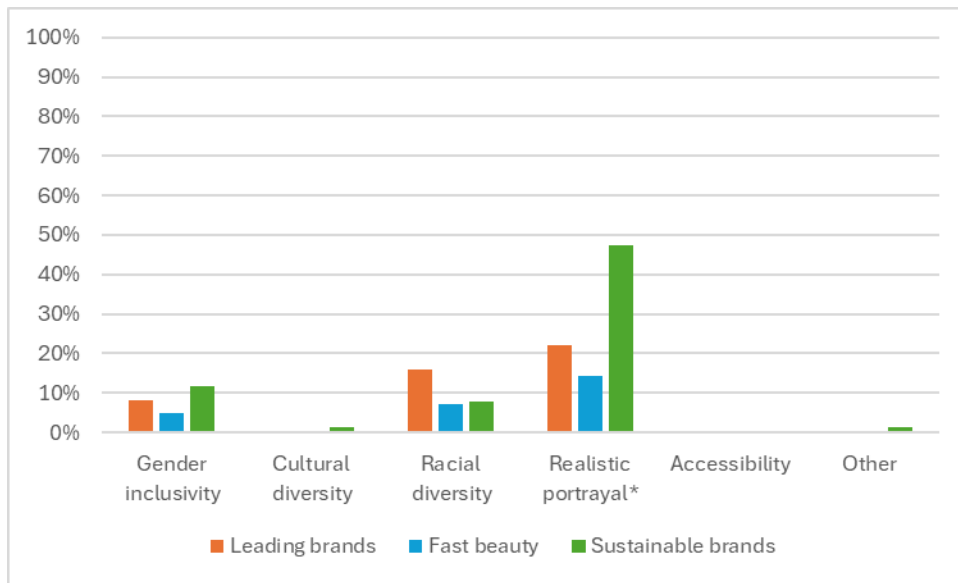


Figure 5.12: Presence of diversity across brand categories (“*” indicates statistically significant relationship).

5.3.2.2 *The degree to which diversity was emphasized*

Using the same scale (0 – 3) and scoring method as was used for lipsticks (Section 3.1.2), an assessment was conducted to examine the degree of emphasis on diversity-related themes across facial moisturizers. Racial diversity of human model imagery received average emphasis scores of 0.34 (out of 3) for leading brands, 0.07 (out of 3) for fast beauty brands, and 0.16 (out of 3) for sustainable brands. Welch’s ANOVA indicated a statistically significant difference between brand categories in emphasis on racial diversity in product imagery ($F(2, 142.338) = 4.224, p\text{-value} = 0.017$).

In addition, realistic portrayal—another type of diversity—also showed a statistically significant association with brand category. This element was most emphasized in the sustainable category, with a mean score of 0.63 (out of 3), compared to 0.32 (out of 3) in the leading brands and 0.19 (out of 3) in the fast beauty brands. Welch’s ANOVA confirmed these differences as significant ($F(2, 122.254) = 7.085, p\text{-value} < 0.001$). These findings suggest that sustainable brands are more likely to prioritize realistic portrayals in their marketing communication, compared to leading and fast beauty brands.

The study also examined the emphasis placed on gender, cultural, and other types of diversity across different brand categories. Among these, gender diversity was the most commonly represented, while cultural and other forms of diversity were either minimally emphasized or entirely absent. However, a Welch’s ANOVA test did not reveal any significant difference in emphasis on these types of diversity across categories. The average emphasis scores for each diversity type across brand categories are illustrated in Figure 5.13 below.

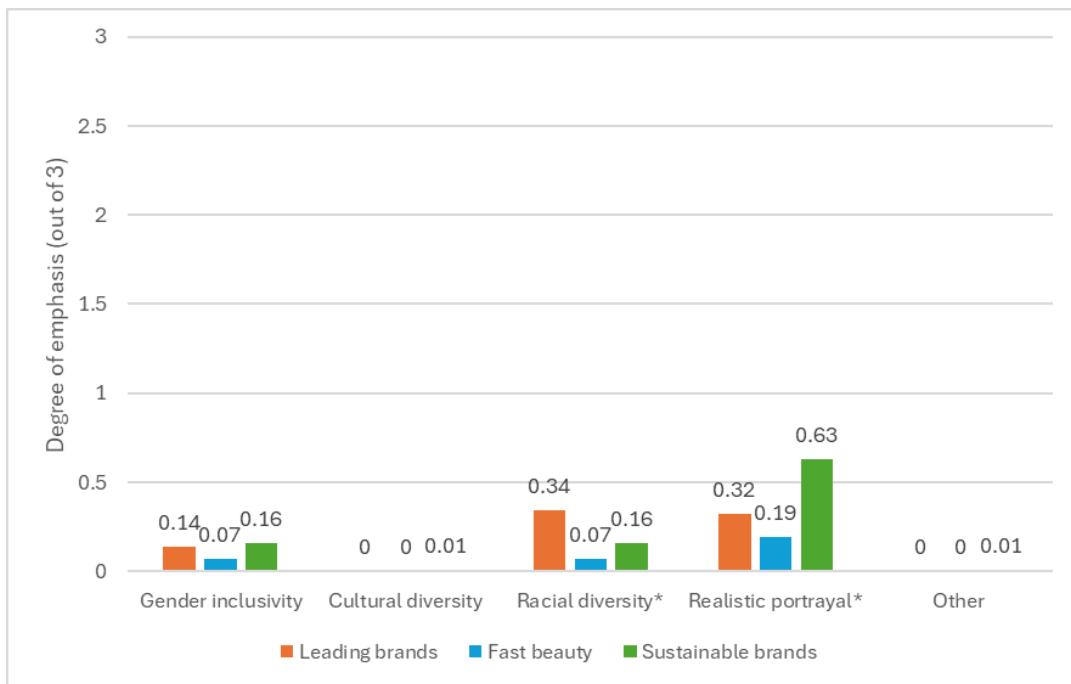


Figure 5.13: Average of emphasis on diversity and inclusion in each category (“*” indicates statistically significant relationship).

Figures 5.14 to 5.18 illustrate the emphasis placed on various dimensions of diversity across the three brand categories. These visualizations provide insight into how different forms of diversity were prioritized and how these priorities varied across brand types.

As shown in Figure 5.14, all three categories incorporated some level of racial diversity in human model imagery, though the degree of emphasis varied. Figure 5.15 highlights the minimal to absent emphasis on cultural diversity, with the leading and fast beauty brands showing no representation, while sustainable brands demonstrated only limited focus. Figure 5.16 shows a generally low emphasis on gender diversity, although the sustainable category placed relatively more focus on this aspect.

Similar to Figure 5.9 (which presented lipstick data), Figure 5.17 illustrates the emphasis on realistic portrayals across brand categories, with sustainable brands showing a higher frequency of strong emphasis compared to leading and fast beauty brands.

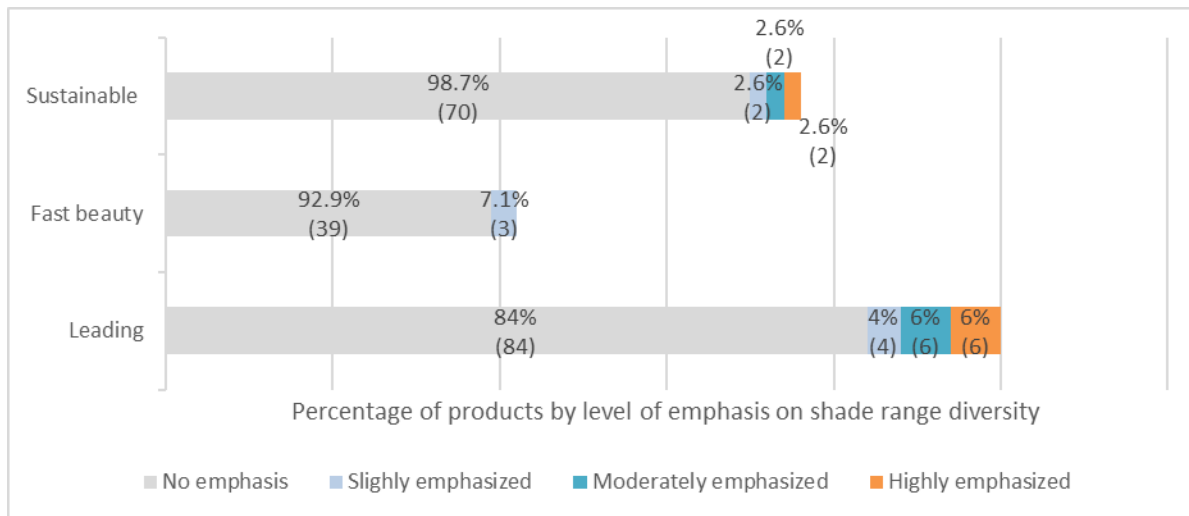


Figure 5.14: Distribution of emphasis levels on model race diversity in brand communication, by brand category.

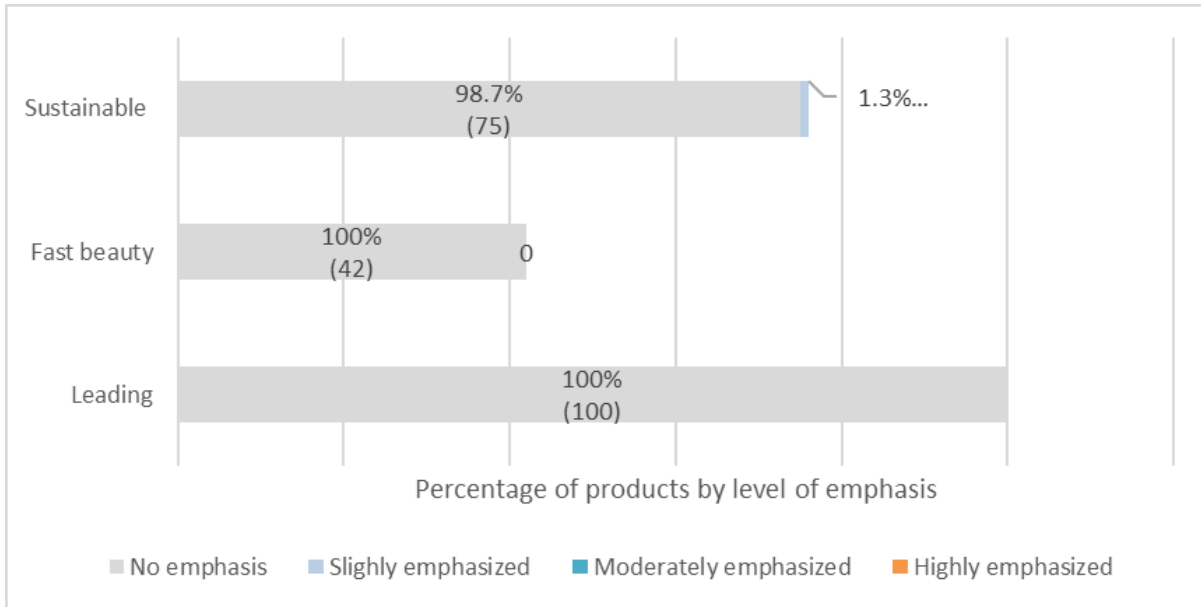


Figure 5.15: Distribution of emphasis levels on cultural diversity in brand communication, by brand category.

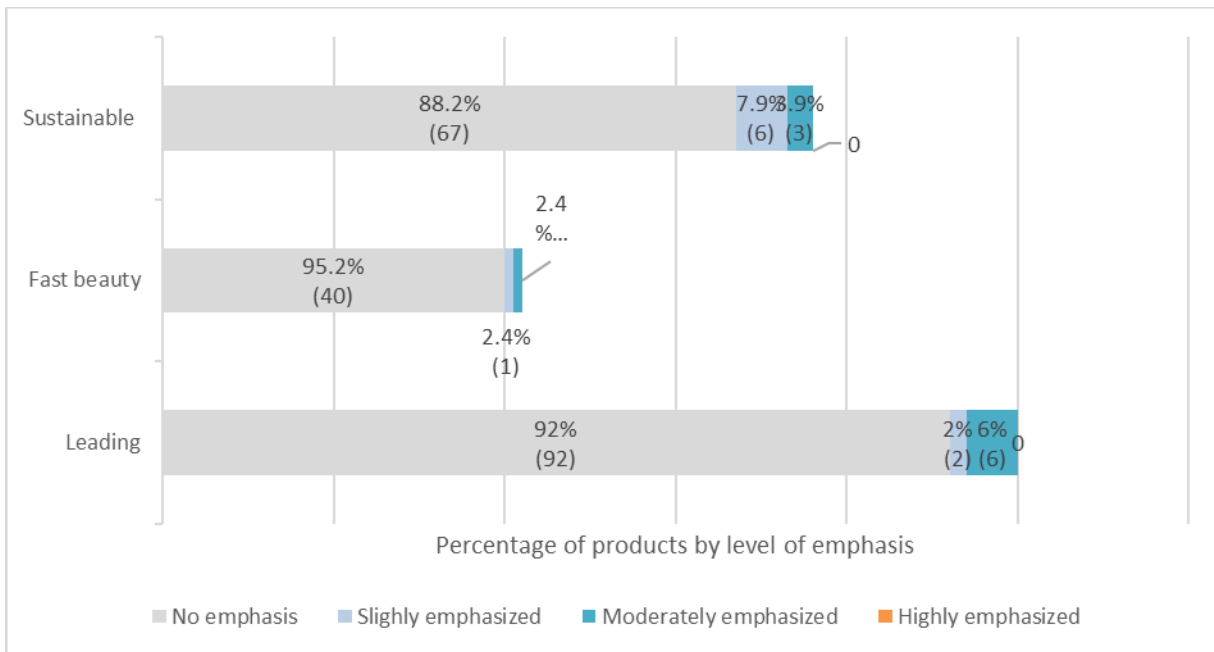


Figure 5.16: Distribution of emphasis levels on gender diversity in brand communication, by brand category.

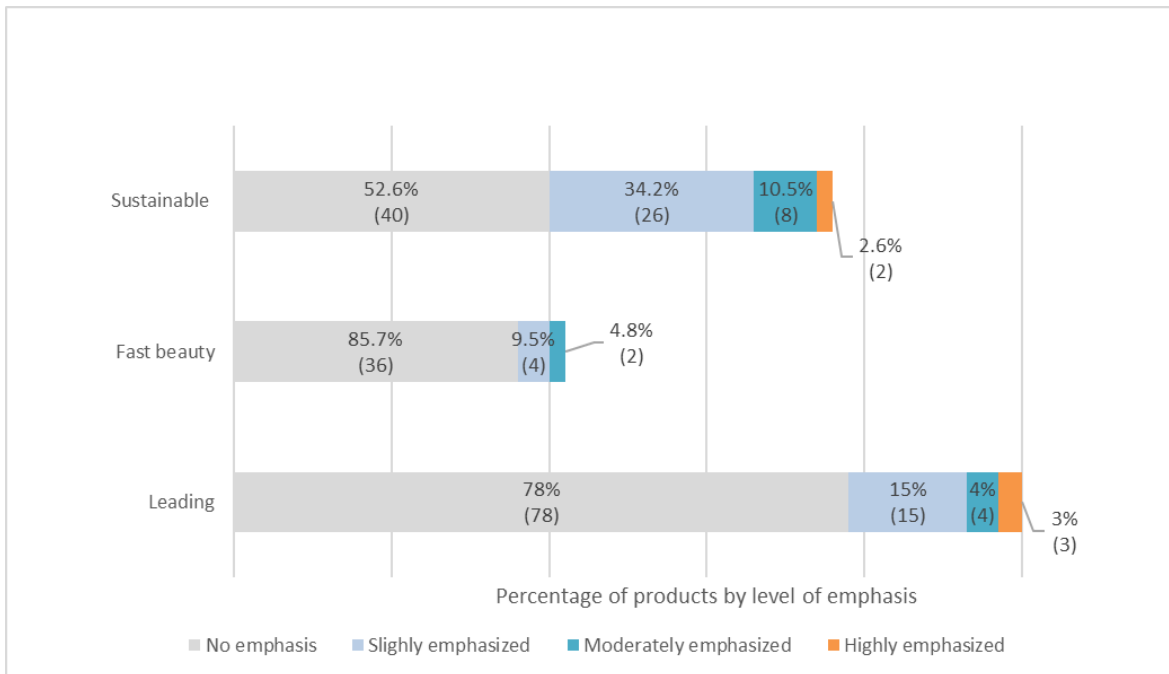


Figure 5.17: Distribution of emphasis levels on realistic portrayal in brand communication, by brand category.

An analysis was conducted to evaluate the overall emphasis on diversity and inclusion across all product categories by summing the emphasis scores for each type of diversity associated with each product, for a total possible score of 12. The products in sustainable category demonstrated the highest diversity emphasis, with a mean score of 0.96 and individual facial moisturizer product scores ranging from 0 to 7. The leading brands category followed with a mean score of 0.80, spanning a range of 0 to 8, while the fast beauty category recorded the lowest emphasis, with a mean score of 0.33 and scores ranging from 0 to 5. Notably, all three categories shared a minimum score of 0, indicating a lack of diversity emphasis in some products.

To determine whether these differences were statistically significant, a Welch's ANOVA was performed, which revealed a significant difference in overall emphasis on diversity across brand categories (Welch's $F(2, 134.324) = 4.432, p\text{-value} = 0.014$). This suggests that the extent of diversity emphasis varies meaningfully by brand category.

Figure 5.18 illustrates the distribution of total diversity emphasis across the three brand categories. Each product was assessed on four diversity dimensions, and the total score reflects the sum of these dimensions, with a maximum possible score of 12.

As shown in the plot, the sustainable brands demonstrate the highest mean and overall spread in diversity emphasis. Although their mean score remains modest, the presence of higher outliers (up to a score of 8) suggests that some sustainable brands make notable efforts to integrate diversity in their marketing. The fast beauty and leading brands show similarly low means and a narrower distribution, with most products scoring near the lower end of the scale.

The visual distribution supports earlier statistical findings that brand category significantly influences the extent of diversity emphasis, as confirmed by Welch's ANOVA. While sustainable brands appear more proactive in incorporating diversity, the low overall scores across all categories suggest that diversity and inclusion remain under-communicated in the cosmetics industry, especially at the product level.

These findings point to a critical gap between brand-level commitments to diversity and their actual expression in individual product marketing. Even brands positioned as sustainable, while showing relatively stronger performance, often fall short of using the full range of diversity dimensions in their messaging—highlighting both missed opportunities and the need for greater alignment between brand values and communication practices.

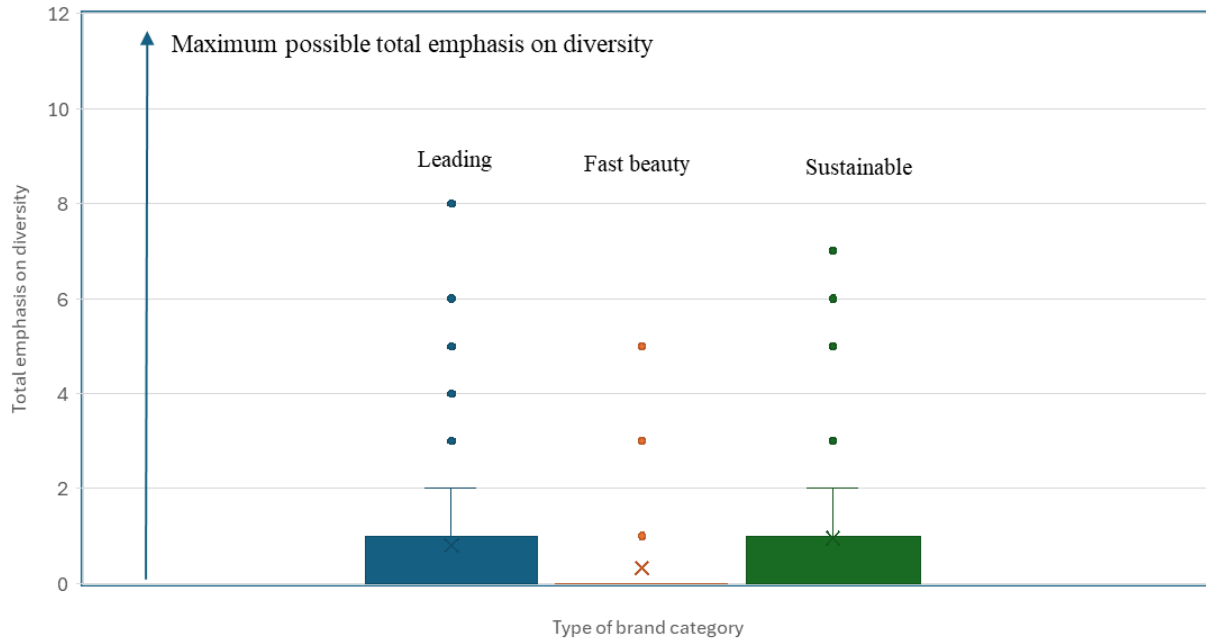


Figure 5.18: Box Plot showing distribution of total diversity emphasis scores (out of 12) across brand categories

5.3.3 Comparing diversity and inclusion in lipstick and facial moisturizer marketing communications

This section compares how inclusion and diversity are communicated in the marketing of two types of cosmetic products—lipsticks and facial moisturizers—across the three brand categories. The analysis follows the theoretical framework of message framing, which emphasizes how the selective presentation of content can influence consumer perception and behaviour (Chang et al., 2015). Two complementary framing approaches were employed: presence-based framing, which identifies whether specific dimensions of diversity are included at all (Table 5.1), and emphasis-based framing, which measures the extent to which these dimensions are highlighted using the scales described in previous sections (Table 5.2). Together, these approaches allow for an examination of how brands include diversity in different product contexts.

Table 5.2: Presence of diversity and inclusion dimensions across brand categories in lipstick and facial moisturizer marketing messaging

Diversity dimension	Lipstick			Facial moisturizer		
	Leading (%)	Fast beauty (%)	Sustainable (%)	Leading (%)	Fast beauty (%)	Sustainable (%)
Racial	69.9	84.4	71.4	16	7.1	7.9
Gender	4.9	6.3	14.3	8	4.8	11.8
Cultural	0	0	7.1	0	0	1.3
Realistic portrayals	4.9	9.4	44.6	22	14.3	47.4
Shade range	43.7	60.9	42.9	N/A	N/A	N/A

Table 5.3: Mean emphasis on diversity and inclusion dimensions across brand categories in lipstick and facial moisturizer marketing messaging

Diversity dimension	Lipstick			Facial moisturizer		
	Leading	Fast beauty	Sustainable	Leading	Fast beauty	Sustainable
Racial	0.95	1.23	1.23	0.34	0.07	0.16
Gender	0.07	0.08	0.21	0.14	0.07	0.16
Cultural	0	0	0.05	0	0	0.01
Realistic portrayals	0.07	0.22	0.86	0.32	0.19	0.63
Shade range	0.62	0.75	0.59	N/A	N/A	N/A

The findings reveal a consistent pattern across both lipstick and facial moisturizer categories. Sustainable brands demonstrate the strongest commitment to diversity and inclusion, both in terms of presence and emphasis. For example, in the lipstick category, compared to other brand categories, the sustainable brands category exhibited the highest levels of inclusion in gender, cultural, and realistic portrayals, as well as the strongest emphasis scores for gender and realistic portrayals. These patterns are largely mirrored in the facial moisturizer category, where sustainable brands again lead in both presence and emphasis for realistic portrayals and gender diversity, albeit with lower scores compared to lipsticks.

Leading brands, by contrast, show a strong presence and emphasis on racial and shade diversity in lipsticks but substantially lower levels in facial moisturizers. This suggests that their diversity messaging is more prevalent in products traditionally associated with visible identity cues (e.g., lipsticks). Fast beauty brands emphasize racial and shade diversity in lipstick but are less

engaged across most diversity and inclusion dimensions in facial moisturizers, with a few exceptions such as realistic portrayals of human models in advertising imagery.

Taken together, the results indicate that brand messaging around inclusion, via diversity-based messaging and framing, is not only category-specific but also product-specific. Lipstick, as a product more directly linked to visual identity, appears to be a stronger with diversity-related framing. Meanwhile, facial moisturizers—positioned closer to function and skin health—show less diversity communication, especially among leading and fast beauty brands. This underscores the need to critically examine how diversity messaging is shaped not just by brand positioning but also by the perceived function and visibility of the product itself.

5.4 Discussion

This study investigated how inclusion and diversity are communicated across three categories of cosmetic brands—leading, fast beauty, and sustainable—within the Canadian online marketplace. Grounded in message framing theory, with a specific focus on social identity framing, the research analyzed how textual and visual elements reflect various dimensions of diversity including race, gender, culture, realistic portrayal/body type, and accessible design.

The findings reveal a selective and uneven use of inclusion across brand categories and product types. Lipstick products, particularly those marketed by fast beauty and leading brands, featured a higher emphasis on racial diversity and inclusive shade ranges. This aligns with prior research highlighting the role of identity cues in enhancing consumer engagement in visually-driven product categories (Carlomagno & Veneziano, 2024). The heightened representation in lipstick marketing suggests that these brands may be strategically using identity framing to appeal to consumers seeking racial representation, especially in products where personalization and visibility are key. In contrast, facial moisturizers were largely positioned through functional framing, with minimal use of identity markers. The only area where moisturizers—especially those from leading brands—scored higher than lipsticks was in realistic portrayals, likely because moisturizers are seen more as everyday skincare products than as beauty-enhancing items. This contrast underscores the product-specific nature of inclusive marketing and indicates a missed opportunity to integrate inclusion in the skincare segment.

Among brand categories, sustainable brands showed comparatively stronger engagement with realistic portrayals. These brands consistently outperformed their fast beauty and leading brand counterparts on this dimension across both product types. However, even within the sustainable category, the absolute levels of inclusion were modest. For example, while realistic portrayals were more frequently observed in sustainable products, their overall frequency remained low across the dataset. These results suggest that sustainable brands may be more committed to values-based communication but still fall short of consistently or comprehensively representing social diversity.

Other dimensions—such as gender and cultural diversity—were notably underrepresented. Gender inclusivity was slightly more emphasized in sustainable brands but remained marginal overall. Cultural diversity was nearly absent, with only minimal references found among a few sustainable products. As Nadhirahastri (2022) discusses in the case of Indonesia, consumers in multi-cultural markets expect beauty brands to reflect the country's ethnic and cultural diversity. The near absence of cultural cues is particularly concerning in a multicultural country like Canada, where over 450 cultural and ethnic origins are recognized (StatCan, 2024). Brands appear to be missing the opportunity to authentically connect with this diverse consumer base by incorporating cultural identity cues into their product-level messaging.

Most notably, none of the products analyzed featured references to design for inclusivity with a focus on accessible design for individuals living with disabilities. This finding supports earlier critiques that ability/disability dimension is often the most overlooked dimension of inclusion in marketing (Carlomagno & Veneziano, 2024). According to *Vogue Business*, only 4% of cosmetic brands design products with accessibility for people living with disabilities in mind. While the fashion industry has made progress in accessible design through adaptive clothing, the cosmetics sector continues to lag behind in implementing inclusive design practices (Chitrakorn, 2021). It reveals a narrow construction of inclusion that prioritizes specific diversity dimensions, such as race, while excluding dimensions that may be more complex to incorporate into marketing communication. As Patrick and Hollenbeck (2021) argue, accessible design is a foundational aspect of inclusivity—centered on creating products that are usable by as many people as possible, including those with physical, sensory, or cognitive impairments, without requiring special adaptation. They further note that accessible design not only benefits those directly affected but

also signals broader social values and ethical commitments that enhance brand perceptions. The absence of accessible design-related messaging in this sample thus reflects a missed opportunity for brands to align with inclusion principles and connect with consumers through prosocial branding.

From a theoretical perspective, this study expands the application of message framing theory to social sustainability, particularly through the lens of identity framing. While previous research has primarily used framing to influence pro-environmental behaviours (Anghelcev & Sar, 2014; Gómez-Román et al., 2024), this study illustrates how message framing can also reinforce—or neglect—social values through brand messaging. The findings suggest that current branding practices often rely on limited and superficial forms of identity signaling, falling short of meaningful or multidimensional inclusion and diversity.

In summary, although sustainable brands showed relatively more attention to inclusion, and lipsticks were more likely than moisturizers to feature diversity cues, the findings point to the minimal application of inclusive messaging. Most products across all categories scored very low on diversity emphasis—well below the maximum possible—highlighting a critical gap in product-level communication. Brands seeking to align with sustainability principles must recognize that social inclusion is not optional but central to their legitimacy. Inclusive marketing should not be limited to selective inclusion in a few high-visibility products but must be embedded as a consistent and comprehensive strategy across product lines.

5.5 Limitations and future research

This study has several limitations that should be acknowledged. First, the analysis focused exclusively on two product types—lipsticks and facial moisturizers—which, while significant in the cosmetics market, do not capture the full breadth of product categories that may present different approaches to diversity and inclusion. Future research could expand the scope to include a broader range of cosmetic products to better assess industry-wide patterns.

Second, the study sample was limited in size and focused on a specific set of brands within the Canadian market. While the study tried to ensure that the selected brands represent three distinct categories (leading, fast beauty, and sustainable), the findings may not be fully

generalizable to the global cosmetics industry or to smaller, niche brands that were excluded from the sample. Future studies could employ a larger, more diverse sample across multiple regions and market levels to strengthen the generalizability of findings.

Third, the analysis relied on publicly available product digital website pages, which may not fully reflect the entirety of a brand's communication strategy in elements such as social media content and advertising campaigns. Since many shoppers purchase cosmetics through retailers rather than directly from brand websites, future research should also examine how retailer platforms communicate brand messaging. Future research may benefit from incorporating a more holistic analysis of brand communication across multiple channels.

Fourth, another limitation concerns the categorization of brands that could plausibly be placed in more than one group. ColourPop, for instance, has been described in industry journals as both a leading brand and a fast beauty brand. For consistency, it was classified within the fast beauty category. A sensitivity analysis excluding ColourPop confirmed that this decision did not affect the results; however, the necessity of making such classification choices underscores the complexity of brand positioning within the cosmetics market.

Lastly, the study did not include direct consumer perspectives. While it assesses what brands communicate through their product websites, it does not measure how consumers interpret or respond to those messages. Integrating qualitative or survey-based research could offer richer insight into consumer perceptions of inclusion and diversity in cosmetic branding.

Together, these limitations suggest directions for future research and highlight the importance of continuous monitoring of inclusive practices as the beauty industry evolves in response to social and sustainability expectations.

5.6 Conclusion

This study examined how different categories of cosmetic brands—leading, fast beauty, and sustainable—communicate diversity and inclusion on their online sales platforms, focusing on two key product types: lipsticks and facial moisturizers. The findings reveal that, across all brand categories, diversity and inclusion are inconsistently represented, with low overall communication of gender diversity, cultural representation, realistic portrayals, and accessible design. However,

racial diversity and shade range are more frequently emphasized in lipstick communication, particularly among fast beauty brands, suggesting a product-specific approach to inclusivity that is closely tied to visibility and consumer expectations.

To better interpret these patterns, the study draws on message framing theory. Sustainable brands demonstrate relatively higher levels of diversity across both product types, yet they still fall short in fully embracing inclusive representation. This is especially notable in the Canadian market, where multiculturalism and equity are core societal values. Despite progress in some areas—such as racial inclusion in colour cosmetics—the absence of cultural, gender, realistic portrayal, and accessible design in messaging, points to ongoing gaps between brand messaging and evolving consumer expectations for diversity and inclusion.

Brands tend to highlight some aspects of diversity while overlooking others, depending on how the product is positioned. For example, lipsticks are often marketed as tools for self-expression, which leads brands to frame them using more visible forms of inclusion—such as showing a range of skin tones and diverse models. In contrast, facial moisturizers are typically framed around function (e.g., hydration, anti-aging), which results in less emphasis on diversity in the imagery or messaging. This suggests that inclusion in cosmetic marketing is not only about who is represented, but also about how diversity is communicated and in what context. Brands use framing to shape how consumers perceive diversity—deciding what to show, how to show it, and to whom it is targeted.

The complete absence of communicating accessible design for individuals living with diverse abilities/disabilities in product communication across all brand categories is especially concerning. This gap reflects a framing decision that continues to marginalize people on the basis of ability/disability within current narratives of inclusivity and sustainability in the beauty industry. As equity and representation become central to consumers' definitions of brand responsibility, the continued lack of inclusive framing risks alienating key segments and undermining social sustainability efforts.

Taken together, these insights highlight the urgent need for brands to go beyond surface-level representation and adopt more authentic and comprehensive message framing strategies that reflect the full spectrum of human identity. As consumers become more values-driven, inclusive

communication will be essential to building trust, fostering belonging, and advancing the sustainability agenda in the cosmetics industry.

This study makes several contributions to scholarship and practice. Empirically, it is the first comparative analysis of how leading, fast beauty, and sustainability-positioned brands communicate inclusion and diversity in cosmetics, and the first to do so in the Canadian context. By focusing on lipsticks and facial moisturizers, the study demonstrates how inclusion is framed differently across product categories, highlighting important patterns in inclusion.

Theoretically, the study extends message framing theory from environmental to social sustainability, showing how identity framing can be used to analyze diversity in marketing communication. It demonstrates that diversity is not simply an outcome of representation counts but a framing process through which brands emphasize or downplay specific identity markers. By doing so, the study provides new theoretical depth to sustainability marketing and expands its scope to include social sustainability.

Methodologically, the study develops and applies a systematic tool based on social identity framing for evaluating equity in brand communication. This operationalization offers a replicable framework for analyzing inclusion in other products, enabling researchers to move beyond descriptive representation measures.

Practically, the findings guide brands toward more balanced communication by integrating multi-dimensional diversity. They highlight the persistent absence of accessibility inclusion and call for authentic cultural representation, which is particularly critical in multicultural markets such as Canada. The results also provide support for industry guidelines on diversity and inclusion, reinforcing the need for clearer standards to prevent superficial inclusion.

For the field of marketing, this study broadens the boundaries of sustainability marketing by demonstrating that diversity and inclusion are integral to social sustainability in brand communication. It advances evaluative tools for analyzing equity in marketing messages and challenges current practice by revealing that many brands rely on symbolic identity signals. By positioning diversity as a strategic framing decision, deployed unevenly across product portfolios

rather than uniformly at the brand level, the study provides a more nuanced, theory-driven approach to understanding diversity in marketing communication.

This study's conceptual framework (Figure 5.1) provided a structured lens for examining how diversity and inclusion are integrated into cosmetic brand messaging. Grounded in message framing and social identity framing theories, the framework connects brand categories with key messaging elements to enable a systematic comparison across product types and brand categories. Revisiting this framework in light of the findings reveals that inclusion in brand communication is not randomly applied but strategically constructed. The absence of cues related to accessibility (via communicating design for ability/disability) and the uneven representation of diversity dimensions underscore how identity is selectively framed. The conceptual map thus not only guided the analytical approach but also highlights the broader implications: brand messaging around inclusion remains fragmented and performative. As societal expectations around equity and representation grow, brands must adopt more intentional and authentic framing strategies to advance social sustainability in the beauty industry.

Chapter 6

6.1 Summary of findings

This dissertation brings together four interrelated studies that examine how sustainability—both environmental and social—is communicated by cosmetic brands through product-level marketing. Collectively, the findings offer a comprehensive analysis of the ways brands construct and frame sustainability in an increasingly values-driven marketplace. Grounded in message framing theory and informed by the broader social construction framework, this research reveals how brand communication selectively defines what sustainability means for consumers—often emphasizing emotionally resonant claims while omitting deeper or more complex dimensions.

The first manuscript laid the foundation by conducting a systematic literature review of scholarly research on sustainability in the cosmetics industry between 1992 and 2022. This review revealed a notable disciplinary imbalance: the vast majority of research stems from science and engineering fields, with minimal engagement from the social sciences. Topics such as stakeholder behaviour and marketing communication remain broadly underexplored. In the Canadian context, research on sustainability in the cosmetics sector—across disciplines—is particularly limited. Where studies do exist globally, they tend to focus on consumer behaviour, with relatively little attention given to how sustainability is constructed through brand messaging or how other key stakeholders, such as marketers, retailers, and regulators, shape these narratives. These gaps framed the rationale for the three empirical studies that followed.

To investigate how different values, priorities, and market pressures shape sustainability messaging, the empirical studies compare three distinct brand categories: leading brands, fast beauty brands, and sustainability-positioned brands. This idea reflects important changes in the cosmetics industry. The rise of fast beauty—a model inspired by fast fashion—is to responding consumer expectations through rapid product turnover, affordability, and trend-driven marketing. At the same time, a growing number of brands are explicitly positioning themselves as sustainable, aligning with consumer demand for ethical and environmentally responsible products. At the same time, there are leading brands who represent legacy players with established reputations and broader reach. This comparative approach allows for a more nuanced understanding of how sustainability is communicated across a spectrum of cosmetic brands.

The second manuscript addressed these gaps by examining how sustainability is integrated into the marketing of colour cosmetics, focusing on lipstick products across the three brand categories. Drawing on message framing theory and the social construction framework, the study found significant differences in how sustainability is communicated. Fast beauty brands relied heavily on sustainability-related claims such as “cruelty-free” and “vegan,” often without supporting evidence. Sustainable brands offered broader sustainability messaging, but prominently emphasized “natural”, following with “cruelty free” and “vegan” as their leading claims. Leading brands, while least engaged with sustainability, also leaned on cruelty-free and vegan labels when claims were present. Across all categories, transparency was limited, and end-of-life communication focused almost exclusively on packaging. Greenwashing was widespread—particularly through lack of evidence, vague language, and unverified internal labels—suggesting a strategic framing of sustainability to align with consumer trends rather than holistic responsibility.

The third manuscript extended this analysis to skincare products, specifically facial moisturizers. The findings echoed the patterns seen in colour cosmetics: sustainability claims were again dominated by “vegan,” “cruelty-free,” and “natural” labels, varying in prominence across brand categories. Transparency remained low, with little information shared online about ingredient sourcing or product origin, especially by leading and fast beauty brands. Sustainable brands disclosed more, but rarely addressed performance features or used digital tools such as augmented reality to enhance engagement. Notably, greenwashing was again prevalent, and sustainable operation or sustainable sourcing—such as fair labour practices—were seldom communicated. Most waste-related messaging focused on packaging, while product residue was largely ignored. The study found that brands construct a socially acceptable version of “sustainable skincare” by repeating familiar claims while omitting complex or controversial topics.

The fourth manuscript brought focus to a social dimension of sustainability by analyzing how brands communicate inclusion and diversity in lipstick and facial moisturizer marketing. Using message framing theory and social identity framing as the theoretical foundation, the study found generally low levels of inclusion across all brand categories. Human model racial diversity and shade range diversity dimensions were most visible in lipstick products—especially among leading and fast beauty brands—while facial moisturizers prioritized functional messaging over

representational diversity. Cultural inclusion and gender diversity were largely absent, and accessible design for people living with disabilities was not communicated in any product examined. Sustainable brands showed slightly stronger attention to gender variation and realistic portrayals, but overall, inclusion was narrowly framed and inconsistently applied. As in the sustainability-focused studies, inclusion was often communicated in ways that aligned with marketable ideals, reinforcing a socially constructed and selective definition of “inclusive beauty.”

Taken together, these four manuscripts offer a rich, multi-dimensional picture of how sustainability is framed in the cosmetics industry. Across product categories and brand types, the research finds that communication is often selective, emotionally driven, and strategically aligned with consumer expectations. Sustainability-related claims—especially around animal welfare and “natural” positioning—are used prominently, while issues such as labour rights, sustainable operation, accessible design, and end-of-life product impacts are often neglected. The recurrence of vague or unverified claims highlights an ongoing risk of greenwashing, which undermines the credibility of brand messaging impacting consumer trust. Whether addressing environmental or social sustainability, the findings suggest that sustainability is not just marketed—it is shaped and defined through the framing choices brands make.

By integrating message framing theory with social construction and social identity framing frameworks, this dissertation offers critical insight into how communication practices actively shape consumer perceptions of sustainability in the marketplace. It underscores the importance of more transparent, inclusive, and substantively responsible messaging if brands are to contribute meaningfully to sustainability goals rather than merely reflect them.

6.2 Limitations and future research

While this dissertation offers valuable insights into how sustainability and inclusion are communicated by cosmetic brands, several limitations must be acknowledged, along with directions for future research.

First, the empirical focus of the thesis is limited to the Canadian online marketplace. Although Canada presents a relevant context—given its culturally-diverse population and growing sustainable consumption trends—communication strategies may differ across global markets, particularly in countries with different cultural values, regulatory structures, and consumer

expectations. Future research should explore brand communication practices across additional contexts. In line with this, although it falls outside the formal scope of this dissertation, a parallel study was conducted during the PhD period examining facial moisturizer products in the Indian online market. India, as an emerging economy with a high volume of research in sustainability and cosmetics, offers a contrasting context that can enrich cross-market comparisons in future publications.

Second, the empirical research is focused exclusively on product-level communication, drawing on publicly available information such as descriptions, imagery, and sustainability-related claims found on product webpages. While this approach enables consistent comparison across brands, it excludes other influential marketing channels, including retailer, social media, advertising campaigns, and in-store messaging. These alternative channels play a critical role in shaping brand narratives and consumer perceptions (Varghese & Agrawal, 2021). Future studies should consider a multi-channel approach to develop a more complete picture of how sustainability and inclusion are communicated and experienced by consumers.

Third, while the analysis provides insights into what brands communicate, it does not investigate consumer perceptions or responses to these messages. During the PhD period, a consumer survey was developed and received ethics approval (ORE). This forthcoming study will explore what Canadian consumers expect from cosmetic products, including sustainability and inclusion dimensions. The findings will offer a valuable basis for comparison with the communication strategies analyzed in this dissertation, helping to assess alignment or disconnect between brand messaging and consumer values. This follow-up study represents a promising direction for postdoctoral research.

Lastly, the empirical work focuses on two core product types—lipstick and facial moisturizer—from the broader category of cosmetics. While these are key products within colour cosmetics and skincare, extending future studies to other categories such as haircare or fragrance lines could offer deeper insights into how sustainability and inclusion are integrated across the full product spectrum.

In summary, while this dissertation provides a significant contribution to understanding sustainability communication in the cosmetics industry, future research should build on this foundation by expanding to different markets, incorporating multiple communication channels,

integrating consumer perspectives, and exploring additional product types. Together, these efforts will advance both academic understanding and practical accountability in an industry increasingly defined by values-driven branding.

6.3 Conclusion

This dissertation set out to investigate how sustainability—both environmental and social—is integrated into the marketing communication of cosmetic brands. Grounded in message framing theory and informed by the broader tradition of social construction and social identity framing, the research examined how sustainability is framed, presented, and made meaningful through product-level brand communication in the Canadian cosmetics market. It addressed significant gaps in the literature by shifting attention from technological innovation and consumer behaviour to the strategic messaging practices of brands, with particular focus on how sustainability-related claims are constructed and conveyed across different brand types and product categories.

The four manuscripts that comprise this thesis collectively offer a multi-layered understanding of the current state of sustainability communication in the cosmetics industry. The literature review revealed that most scholarly attention remains centered in the natural sciences and engineering, with minimal engagement from business, marketing, or social science disciplines—especially in the Canadian context. This insight shaped the direction of the subsequent empirical work.

The studies that followed provided comparative analyses of three key brand categories—leading brands, fast beauty brands, and sustainability-positioned brands—across two major product types: lipstick and facial moisturizer. The findings revealed recurring patterns in how sustainability is communicated. Fast beauty brands tend to emphasize emotional, easily marketable claims such as “cruelty-free” and “vegan,” often without third-party verification. Sustainable brands communicate more extensively on sustainability topics but frequently underplay performance and product innovation. Leading brands focus heavily on product efficacy and aesthetics, engaging minimally with sustainability claims.

Across all categories, greenwashing emerged as a critical issue, particularly through the use of vague, unverifiable claims. Transparency around ingredient sourcing, country of origin, and

end-of-life product management remains limited. The inclusion and diversity study revealed similar inconsistencies: while some progress has been made in areas like human model racial representation in colour cosmetics, meaningful attention to cultural diversity, gender identity, and accessible design remains lacking. These patterns suggest that diversity and equity are often communicated selectively—framed to align with dominant consumer expectations, rather than as part of a holistic commitment to sustainable practice.

To support the analysis, this dissertation developed a conceptual framework that integrates message framing theory, social construction theory, and social identity framing. This framework served as a guiding structure for identifying and interpreting how brands construct sustainability in their marketing communication. It linked theoretical lenses to research questions, analytical dimensions, and methods, offering a cohesive model for evaluating both environmental and social messaging at the product level. While designed specifically for the cosmetics context, the conceptual map offers broader utility. Its structure and logic are adaptable to other industries where sustainability communication is critical—making it a transferable tool for future research in marketing, branding, and corporate communication across sectors.

By integrating theoretical insights from message framing and social construction, this dissertation shows that sustainability is not simply described in brand messaging—it is actively shaped. Brands play a central role in constructing public understanding of what constitutes “sustainable” beauty. This framing influences consumer perceptions, shapes marketplace norms, and ultimately determines which aspects of sustainability are prioritized or ignored.

Empirically, this dissertation provides the first comprehensive comparative analysis of sustainability communication in the cosmetics industry across both brand categories, leading, fast beauty, and sustainability-positioned, and product types, lipsticks and facial moisturizers. It represents the first systematic investigation of this kind in the Canadian context, where multiculturalism and consumer concern for sustainability add further relevance. By combining environmental and social dimensions, the research broadens empirical understanding of how sustainability is communicated at the product level, moving beyond prior studies focused on corporate-level reporting or consumer perceptions. The findings document recurring and underexplored patterns in transparency, the use and verification of sustainability claims, the prevalence of greenwashing strategies, and the selective communication of inclusivity. Taken

together, this contribution establishes a robust evidence base for future research on how sustainability is constructed across different brand logics and product categories in consumer-facing industries.

Theoretically, this dissertation advances and extends framing research in several important ways. First, it extends message framing theory from a persuasive tool to a lens for analyzing how brand categories construct the meaning of sustainability. In doing so, it shows that framing is not only about influencing consumer attitudes but also about defining which aspects of sustainability are emphasized, downplayed, or ignored in the marketplace. Second, it advances message framing theory by integrating social identity framing, demonstrating how brands integrate inclusion and diversity in both textual and visual communication. This integration moves framing research beyond environmental to encompass social sustainability, showing how identity categories are strategically included in marketing messages. Third, the dissertation positions diversity as a strategic framing decision, revealing that inclusion is deployed unevenly across product categories rather than as a consistent brand-level commitment. This insight challenges the assumption that diversity is uniformly embedded in corporate responsibility and instead highlights its selective and tactical use in product-level messaging. Fourth, the research extends message framing theory from environmental to social sustainability, applying the lens of identity framing to demonstrate how social sustainability is communicated through narratives of inclusion and exclusion. By bridging environmental and social dimensions of sustainability, it broadens the scope of sustainability marketing research. Finally, the dissertation develops a transferable conceptual framework for examining sustainability communication. While applied here to the cosmetics industry, the framework can be adapted to analyze how sustainability, both environmental and social, is framed in other industries and product categories. This integrative perspective offers a more comprehensive theoretical foundation for future research on how organizations construct and communicate sustainability.

Methodologically, this dissertation develops and applies a novel assessment tool for analyzing how sustainability is integrated into cosmetic brand messaging at the product level. The tool operationalizes environmental and social dimensions of sustainability, incorporates indicators of transparency, credibility, greenwashing, and inclusivity, and provides a structured, replicable approach for evaluating communication practices across brand categories. By applying this tool to

both colour cosmetics and skincare, the research demonstrates its robustness and adaptability for comparative analysis. While designed for lipsticks and facial moisturizers, the tool offers a transferable method that future researchers can adapt to assess sustainability communication in other product categories, ensuring systematic evaluation and comparability across contexts.

Practically, the findings provide guidance for brands to strengthen transparency, balance product performance with authentic sustainability and inclusion narratives, and address the absence of accessibility inclusion. For policymakers, the research highlights the urgency of regulating sustainability claims in online retail environments. For consumers and media, it enhances literacy by exposing vague or misleading claims and promoting critical engagement with brand messaging.

For the field of marketing, the dissertation broadens the boundaries of sustainability marketing by showing that diversity and inclusion are integral to social sustainability, not just environmental responsibility. It also shifts attention from corporate-level reporting to product-level communication, highlighting how the messages consumers encounter at the point of sale actively shape public perceptions of sustainability and equity. Importantly, it demonstrates that diversity should be studied not only as a brand-level commitment but also as a strategic framing decision that brands deploy unevenly across their product portfolios.

Ultimately, this dissertation demonstrates that sustainability communication is not a neutral reflection of corporate practices but a constitutive force that shapes how sustainability itself is understood, legitimized, and pursued in consumer markets. In a rapidly evolving cosmetics industry—and in consumer-facing industries more broadly—meaningful and accountable communication will be essential to bridging the gap between brand narratives and the broader goals of sustainable development.

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Appendices

Appendix A: Data collection

This study analyzed a total of 441 cosmetic products (223 lipsticks and 218 facial moisturizers) across three brand categories: leading brands, fast beauty brands, and sustainable brands.

Step 1: Brand selection

Brands were selected based on prior industry reports, availability in the Canadian market, and alignment with each category's defining characteristics.

- Leading brands defined as brands with dominant market share and strong consumer recognition in the cosmetics industry, were identified using U.S. industry reports and market share data, highlighting those with significant market presence.
- Fast beauty brands were characterized by reputation for being fast beauty, affordable, trend-driven production, and rapid product turnover
- Sustainable brands were defined by reputation for being sustainable, commitments to sustainability, or third-party certifications (e.g., B-Corp, Ecocert)

Step 2: Product line selection

Each category included multiple brands, and products were selected from their Canadian websites-based product type. All available product lines of lipsticks and facial moisturizers from each selected brand were included. For lipsticks, the study included only products that provided the main functionality of lipstick—namely, colour and texture. Products with alternative primary functions, such as clear balms, glosses, or hydrating sticks that lacked significant colour payoff, were excluded from the sample. The lipstick sample size and associated brands are included in Table A.1. Facial moisturizers are marketed under various labels, including creams, lotions, gels, and butters. For the purpose of this study, only facial moisturizers whose primary function is hydration or the prevention of dryness were included. Products offering additional secondary benefits, such as sun protection or anti-aging properties, were considered eligible only if hydration remained the primary purpose. In contrast, products primarily marketed for other functions—such

as sunscreens with moisturizing properties—were excluded. The facial moisturizer sample size and associated brands are included in Table A.2.

Table A.1: Sample-size lipstick products by brand and brand category

Brand category	Brand name	Product name	URL
Leading	Avon	fmg Cashmere Essence Lipcream	https://www.avon.ca/product/fmg-cashmere-essence-lipcream-3668?rep=nuzum
Leading	Avon	fmg Cashmere Rouge Lacquer Lip Color & Clear Lacquer	https://www.avon.ca/product/fmg-cashmere-rouge-lacquer-lip-color-and-clear-lacquer-3865?rep=nuzum
Leading	Avon	fmg Glimmer Lip & Cheek Stain	https://www.avon.ca/product/fmg-glimmer-lip-and-cheek-stain-3902?rep=nuzum
Leading	Avon	fmg Glimmer Matte Lipstick	https://www.avon.ca/product/fmg-glimmer-matte-lipstick-9864?rep=nuzum
Leading	Avon	fmg Glimmer Satin Lipstick	https://www.avon.ca/product/fmg-glimmer-satin-lipstick-3669?rep=nuzum
Leading	Avon	TPSY Forever Lip Marker	https://www.avon.ca/product/tpsy-forever-lip-marker-3879?rep=nuzum
Leading	baremineral	MINERALIST® HYDRA-SMOOTHING LIPSTICK	https://www.bareminerals.com/products/mineralist-hydra-smoothing-lipstick?variant=40494128693333&nosto_source=cmp&nosto=675630234&_gl=1*1gsahsx*_up*MQ..&gclid=EAIaIQobChMIqyRhvqyhgMVETUIBR13Zw5pEAAYASAAEgKZjPD_BwE
Leading	baremineral	MINERALIST® LASTING MATTE LIQUID LIPSTICK	https://www.bareminerals.com/products/mineralist-lasting-matte-liquid-lipstick?variant=40494128660565&nosto_source=cmp&nosto=675630234&_gl=1*nlfcte*_up*MQ..&gclid=EAIaIQobChMIqyRhvqyhgMVETUIBR13Zw5pEAAYASAAEgKZjPD_BwE
Leading	baremineral	STATEMENT MATTE LIQUID LIPSTICK	https://www.bareminerals.com/products/statement-matte-liquid-lipstick?variant=40499122962517&nosto_source=cmp&nosto=675630234&_gl=1*1k2df1w*_up*MQ..&gclid=EAIaIQobChMIqyRhvqyhgMVETUIBR13Zw5pEAAYASAAEgKZjPD_BwE
Leading	Covergirl	Exhibitionist Cream Lipstick	https://www.covergirl.ca/lip-makeup/lipsticks/colorlicious-exhibitionist-cream-0
Leading	Covergirl	Simply Ageless Moisture Renew Core Lipstick	https://www.covergirl.ca/lip-makeup/lipsticks/simply-ageless-moisture-renew-core-lipstick
Leading	Covergirl	Outlast All-Day Lip Colour	https://www.covergirl.ca/lip-makeup/liquid-lipsticks/long-lasting-lip-color-outlast-all-day
Leading	Estee Lauder	Pure Color Creme Lipstick	https://www.esteelauder.ca/product/649/110671/product-catalog/makeup/lips/lipstick/pure-color/creme-lipstick?shade=420 Rebellious Rose
Leading	Estee Lauder	Pure Color Hi-Lustre Lipstick	https://www.esteelauder.ca/product/649/110674/product-catalog/makeup/lips/lipstick/pure-color/hi-lustre-lipstick?shade=111 Tiger Eye

Leading	Estee Lauder	Pure Color Matte Lipstick	https://www.esteelauder.ca/product/649/110676/product-catalog/makeup/lips/lipstick/pure-color/matte-lipstick?shade=333 Persuasive
Leading	Estee Lauder	Pure Color Crystal Lipstick	https://www.esteelauder.ca/product/649/110705/product-catalog/makeup/lips/lipstick/pure-color/crystal-lipstick?shade=564 Crystal Baby&size=3.4g
Leading	Estee Lauder	Pure Color Explicit Slick Shine Lipstick	https://www.esteelauder.ca/product/649/122947/product-catalog/makeup/lips/lipstick/pure-color-explicit/slick-shine-lipstick?shade=404 No Tomorrow
Leading	Fenty	CHERRY POUT LIP STAIN + LIP OIL DUO	https://fentybeauty.com/en-ca/products/cherry-pout-lip-stain-lip-oil-duo?variant=41674406101037
Leading	Fenty	FENTY ICON SEMI-MATTE REFILLABLE LIPSTICK SET	https://fentybeauty.com/en-ca/products/fenty-icon-semi-matte-refillable-lipstick-set?variant=40197435752493
Leading	Fenty	FENTY ICON THE FILL SEMI-MATTE REFILLABLE LIPSTICK	https://fentybeauty.com/en-ca/products/fenty-icon-the-fill-semi-matte-refillable-lipstick-miss-candy-venom?variant=41524413333549
Leading	Fenty	FENTY ICON VELVET LIQUID LIPSTICK	https://fentybeauty.com/en-ca/products/fenty-icon-velvet-liquid-lipstick-pink-limoscene?variant=41637729173549
Leading	Fenty	MATCH STIX COLOR ADAPTIVE CHEEK + LIP STICK	https://fentybeauty.com/en-ca/products/match-stix-color-adaptive-cheek-lip-stick-strawberry-pop?variant=41593197297709
Leading	Fenty	POUSICLE HYDRATING LIP STAIN	https://fentybeauty.com/en-ca/products/poutsicle-hydrating-lip-stain-mai-type?variant=40383201968173
Leading	Fenty	SLIP SHINE SHEER SHINY LIPSTICK	https://fentybeauty.com/en-ca/products/slip-shine-sheer-shiny-lipstick-goji-gang?variant=35110458228781
Leading	Fenty	STUNNA LIP PAINT LONGWEAR FLUID LIP COLOR	https://fentybeauty.com/en-ca/products/stunna-lip-paint-longwear-fluid-lip-color-uncuffed?variant=35110472679469
Leading	Glossier	Generation G	https://www.glossier.com/en-ca/products/generation-g?variant=44209550557429
Leading	Glossier	Ultralip	https://www.glossier.com/en-ca/products/ultralip?variant=43922869256437
Leading	L'oreal paris	AGE PERFECT HYDRATING CORE LIPSTICK	https://www.lorealparis.ca/en-ca/age-perfect/age-perfect-hydrating-core-lipstick-brilliant-brown
Leading	L'oreal paris	AGE PERFECT SATIN LIPSTICK WITH PRECIOUS OILS	https://www.lorealparis.ca/en-ca/age-perfect/age-perfect-satin-lipstick-with-precious-oils-pink-petal
Leading	L'oreal paris	Colour Riche Intense Volume Matte Lipstick	https://www.lorealparis.ca/en-ca/colour-riche/colour-riche-intense-volume-matte-lipstick/113-le-nude-admirable
Leading	L'oreal paris	COLOUR RICHE LIP COLOUR	https://www.lorealparis.ca/en-ca/colour-riche/colour-riche-lip-colour/350-british-red
Leading	L'oreal paris	COLOUR RICHE LIPSTICK NU	https://www.lorealparis.ca/en-ca/colour-riche/colour-riche-lipstick/colour-riche-lipstick-les-nu-authentique-nu-authentique

Leading	L'oreal paris	COLOUR RICHE LIPSTICK NU	https://www.lorealparis.ca/en-ca/colour-riche/colour-riche-lipstick/colour-riche-lipstick-les-nu-authentique-nu-authentique
Leading	L'oreal paris	COLOUR RICHE MATTE LIP COLOUR	https://www.lorealparis.ca/en-ca/colour-riche/colour-riche-matte-lip-colour/colour-riche-matte-lip-colour-matte-ly-in-love-102
Leading	L'oreal paris	COLOUR RICHE PLUMP & SHINE LIPSTICK	https://www.lorealparis.ca/en-ca/colour-riche/colour-riche-plump--shine-lipstick/colour-riche-plump--shine-lipstick-coconut-plump
Leading	L'oreal paris	COLOUR RICHE REDS OF WORTH	https://www.lorealparis.ca/en-ca/colour-riche/colour-riche-reds-of-worth/colour-riche-reds-of-worth-prosperous-red
Leading	L'oreal paris	COLOUR RICHE SHINE LIPSTICK	https://www.lorealparis.ca/en-ca/colour-riche/colour-riche-shine-lipstick/colour-riche-shine-lipstick-glossy-fawn-900
Leading	L'oreal paris	COLOUR RICHE ULTRA MATTE LIPSTICK	https://www.lorealparis.ca/en-ca/colour-riche/colour-riche-ultra-matte-lipstick/colour-riche-ultra-matte-lipstick-full-blown-fawn
Leading	L'oreal paris	LA COULEUR HAUTE COUTURE LIPSTICK	https://www.lorealparis.ca/en-ca/elic-saab-limited-edition/la-couleur-haute-couture-lipstick-royal-attitude
Leading	L'oreal paris	BALM-IN-LIPSTICK	https://www.lorealparis.ca/en-ca/glow-paradise/balm-in-lipstick/pastel-exaltation
Leading	L'oreal paris	INFALLIBLE MATTE RESISTANCE LIQUID LIPSTICK	https://www.lorealparis.ca/en-ca/infallible/infallible-matte-resistance-liquid-lipstick/breakfast-in-bed
Leading	L'oreal paris	Rouge Signature Liquid Lip Colour	https://www.lorealparis.ca/en-ca/rouge-signature-liquid-lip-colour/rouge-signature-liquid-lip-colour-i-dont-422
Leading	MAC	M·A·C LOCKED KISS INK 24HR LIPCOLOUR	https://www.maccosmetics.ca/product/13854/110037/products/makeup/lips/lipstick/mac-locked-kiss-ink-24hr-lipcolour?shade=Ruby_True
Leading	MAC	M·A·C LOCKED KISS 24HR LIPSTICK	https://www.maccosmetics.ca/product/13854/119065/products/makeup/lips/lipstick/mac-locked-kiss-24hr-lipstick?shade=MULL_IT_OVER_%26_OVER&_gl=1*1k0kebi*_up*MQ..&gclid=Cj0KCCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhlEALw_wcB&gclsrc=aw.ds
Leading	MAC	M·A·CXIMAL SILKY MATTE VIVA GLAM LIPSTICK	https://www.maccosmetics.ca/product/13854/122830/products/makeup/lips/lipstick/macximal-silky-matte-viva-glam-lipstick?shade=VIVA_EQUALITY_&_gl=1*gogala*_up*MQ..&gclid=Cj0KCCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhlEALw_wcB&gclsrc=aw.ds
Leading	MAC	M·A·CXIMAL SILKY MATTE LIPSTICK	https://www.maccosmetics.ca/product/13854/123863/products/makeup/lips/lipstick/macximal-silky-matte-lipstick?shade=Velvet_Teddy&_gl=1*umv5vj*_up*MQ..&gclid=Cj0KCCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaY

			SciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	CREMESHEEN LIPSTICK	https://www.maccosmetics.ca/product/13854/36169/products/makeup/lips/lipstick/cremesheen-lipstick?shade=Cr%C3%A8me_Cup&gl=1*itn62z*_up*MQ..&gclid=Cj0KCCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NP h9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	RETRO MATTE LIQUID LIPCOLOUR	https://www.maccosmetics.ca/product/13854/37620/products/makeup/lips/lipstick/retro-matte-liquid-lipcolour?shade=High_Drama&gl=1*zz8aip*_up*MQ..&gclid=Cj0KCCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	LIPSTICK / MINI M·A·C	https://www.maccosmetics.ca/product/13854/49693/products/makeup/lips/lipstick/lipstick-mini-mac?shade=Please_Me&gl=1*zz8aip*_up*MQ..&gclid=Cj0KCCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	RETRO MATTE LIPSTICK	https://www.maccosmetics.ca/product/13854/52593/products/makeup/lips/lipstick/retro-matte-lipstick?shade=Ruby_Woo&gl=1*umv5vj*_up*MQ..&gclid=Cj0KCCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYS ciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	FROST LIPSTICK	https://www.maccosmetics.ca/product/13854/52595/products/makeup/lips/lipstick/frost-lipstick?shade=Angel&gl=1*6a7le5*_up*MQ..&gclid=Cj0KCCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	SATIN LIPSTICK	https://www.maccosmetics.ca/product/13854/52597/products/makeup/lips/lipstick/satin-lipstick?shade=Amorous&gl=1*zz8aip*_up*MQ..&gclid=Cj0KCCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	AMPLIFIED LIPSTICK	https://www.maccosmetics.ca/product/13854/52598/products/makeup/lips/lipstick/amplified-lipstick?shade=Dallas&gl=1*dls7d*_up*MQ..&gclid=Cj0KCCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	RETRO MATTE LIQUID LIPCOLOUR METALLICS	https://www.maccosmetics.ca/product/13854/53464/products/makeup/lips/lipstick/retro-matte-liquid-lipcolour-

			metallics?shade=Gemz_%26_Roses&gl=1*1bqvsl*_up*MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	POWDER KISS LIPSTICK	https://www.maccosmetics.ca/product/13854/60284/products/makeup/lips/lipstick/powder-kiss-lipstick?shade=A_Little_Tamed&gl=1*1x78t9v*_up*MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	POWDER KISS LIQUID LIPCOLOUR	https://www.maccosmetics.ca/product/13854/75919/products/makeup/lips/lipstick/powder-kiss-liquid-lipcolour?shade=Over_The_Taupe&gl=1*umv5vj*_up*MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	LUSTREGLASS SHEER-SHINE LIPSTICK	https://www.maccosmetics.ca/product/13854/88565/products/makeup/lips/lipstick/lustreglass-sheer-shine-lipstick?shade=Beam_There%2C_Done_That&gl=1*1sa7rls*_up*MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	POWDER KISS VELVET BLUR SLIM STICK	https://www.maccosmetics.ca/product/13854/99908/products/makeup/lips/lipstick/powder-kiss-velvet-blur-slim-stick?shade=Stay_Curious&gl=1*umv5vj*_up*MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYS ciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	LUSTREGLASS SHEER-SHINE LIPSTICK / LOVETRUCK LUCK	https://www.maccosmetics.ca/product/18579/121826/products/collections/all-products/lustreglass-sheer-shine-lipstick-lovestruck-luck?shade=Luck_Has_It&gl=1*1pt0wjb*_up*MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYS ciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	MACXIMAL MINI MAC SILKY MATTE LIPSTICK	https://www.maccosmetics.ca/product/18579/123864/products/collections/all-products/macximal-mini-mac-silky-matte-lipstick?shade=Diva&gl=1*ez1v3o*_up*MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds
Leading	MAC	AMPLIFIED LIPSTICK / M·A·C 40 DISNEY FAVOURITES IN DARK DEED	https://www.maccosmetics.ca/product/18579/126097/products/collections/all-products/amplified-lipstick-mac-40-disney-favourites-in-dark-deed?shade=DARK_DEED&gl=1*zz8aip*_up*MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYSciTw28WU6I3uroaZEaAnhIEALw_wcB&gclsrc=aw.ds

			MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYS ciTw28WU6I3uroaZEaAnhlEALw_wcB&gclsrc=aw.ds
Leading	MAC	LUSTREGLASS LIPSTICK / M·A·C 40 DISNEY FAVOURITES IN ROYAL BALL	https://www.maccosmetics.ca/product/18579/126241/products/collections/all-products/lustreglass-lipstick-mac-40-disney-favourites-in-royal-ball?shade=ROYAL BALL& gl=1*zz8aip* up*MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYS ciTw28WU6I3uroaZEaAnhlEALw_wcB&gclsrc=aw.ds
Leading	MAC	MATTE LIPSTICK / M·A·C 40 DISNEY FAVOURITES IN PRINCESS INCOGNITO	https://www.maccosmetics.ca/product/18579/126317/products/collections/all-products/matte-lipstick-mac-40-disney-favourites-in-princess-incognito?shade=Princess Incognito& gl=1*umv5vj* up*MQ..&gclid=Cj0KCQjw3tCyBhDBARIsAEY0XNIG1JQ7a480T5PsXJe6Bga78QvGb6NPh9oaYS ciTw28WU6I3uroaZEaAnhlEALw_wcB&gclsrc=aw.ds
Leading	Maybelline	COLOR SENSATIONAL: INTI-MATTE NUDES	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/color-sensational-inti-matte-nudes?variant=Brown+Blush
Leading	Maybelline	COLOR SENSATIONAL: LIP COLOR	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/color-sensational-lip-color?variant=Are+You+Red+Dy
Leading	Maybelline	COLOR SENSATIONAL: MADE FOR ALL LIP COLOR	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/color-sensational-made-for-all-lip-color?variant=Mauve+For+Me
Leading	Maybelline	COLOR SENSATIONAL: THE CREAMS, CREAM FINISH LIPSTICK MAKEUP	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/color-sensational-the-creams-cream-finish-lipstick-makeup?variant=Pink+Sand
Leading	Maybelline	COLOR SENSATIONAL: THE MATTES, MATTE FINISH LIPSTICK MAKEUP	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/color-sensational-the-mattes-matte-finish-lipstick-makeup?variant=Peach+Buff
Leading	Maybelline	COLOR SENSATIONAL ULTIMATTE: NEO-NEUTRALS SLIM LIPSTICK MAKEUP	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/color-sensational-ultimatte-neo-neutrals-slim-lipstick-makeup?variant=More-Auburn
Leading	Maybelline	COLOR SENSATIONAL ULTIMATTE: SLIM LIPSTICK	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/color-sensational-ultimatte-slim-lipstick-makeup?variant=More+Berry
Leading	Maybelline	GREEN EDITION LIP MAKEUP BALMY LIP BLUSH FORMULATED WITH MANGO OIL	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/green-edition-lip-makeup-balmy-lip-blush-formulated-with-mango-oil?variant=bonfire
Leading	Maybelline	GREEN EDITION BUTTER CREAM HIGH PIGMENT BULLET LIPSTICK	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/green-edition-lip-makeup-butter-cream-lipstick-with-cocoa-butter?variant=Ecliptic
Leading	Maybelline	SUPERSTAY 24: LIQUID LIPSTICK SMILE BRIGHTENERS	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/super-stay-24-liquid-lipstick-smile-brighteners?variant=Crisp+Magenta

Leading	Maybelline	SUPERSTAY 24: LIQUID LIPSTICK	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/super-stay-24-liquid-lipstick?variant=All+Day+Cherry
Leading	Maybelline	SUPER STAY: INK CRAYON LIPSTICK BIRTHDAY EDITION	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/super-stay-ink-crayon-lipstick-matte-longwear-lipstick-birthday-edition?variant=Throw+a+Party
Leading	Maybelline	SUPERSTAY INK CRAYON LIPSTICK: MATTE LONGWEAR LIPSTICK MAKEUP	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/super-stay-ink-crayon-lipstick-matte-longwear-lipstick-makeup?variant=Accept+A+Dare
Leading	Maybelline	SUPERSTAY MATTE INK: CITY EDITION LIQUID LIPSTICK MAKEUP	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/super-stay-matte-ink-city-edition-liquid-lipstick-makeup?variant=Artist
Leading	Maybelline	SUPERSTAY MATTE INK: LIQUID LIPSTICK	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/super-stay-matte-ink-liquid-lipstick?variant=Believer
Leading	Maybelline	SUPER STAY VINYL INK LONGWEAR LIQUID LIPCOLOR	https://www.maybelline.ca/en-ca/all-products/lip-makeup/lip-color/super-stay-vinyl-ink-longwear-liquid-lipstick?variant=capricious
Leading	Nars Cosmetics	AFTERGLOW SENSUAL SHINE LIPSTICK	https://www.narscosmetics.ca/CA/afterglow-sensual-shine-lipstick/999NAC0000154.html?dwvar_999NAC0000154_color=4251133683&cgid=lipstick
Leading	Nars Cosmetics	AIR MATTE LIP COLOR	https://www.narscosmetics.ca/CA/air-matte-lip-color/999NAC0000114.html?dwvar_999NAC0000114_color=GIPSY&cgid=lipstick
Leading	Nars Cosmetics	AUDACIOUS LIPSTICK	https://www.narscosmetics.ca/CA/audacious-lipstick/999NARS000011.html?dwvar_999NARS000011_color=7845094609&cgid=lipstick
Leading	Nars Cosmetics	LIPSTICK	https://www.narscosmetics.ca/CA/iconic-lipstick/999NAC0000096.html?dwvar_999NAC0000096_color=7845029151&cgid=lipstick
Leading	Nars Cosmetics	LUNAR NEW YEAR POWERMATTE LIPSTICK	https://www.narscosmetics.ca/CA/lunar-new-year-powermatte-lipstick/0194251142777.html?cgid=lipstick
Leading	Nars Cosmetics	LIPSTICK	https://www.narscosmetics.ca/CA/original-lipstick/999NAC0000104.html?dwvar_999NAC0000104_color=7845029670&cgid=lipstick
Leading	Nars Cosmetics	POWERMATTE LIP PIGMENT	https://www.narscosmetics.ca/CA/powermatte-lip-pigment/999NAC0000053.html?dwvar_999NAC0000053_color=7845027720&cgid=lipstick
Leading	Nars Cosmetics	POWERMATTE LIPSTICK	https://www.narscosmetics.ca/CA/powermatte-lipstick/999NAC0000147.html?dwvar_999NAC0000147_color=4251139920&cgid=lipstick
Leading	Nars Cosmetics	STARLIGHT POWERMATTE LIPSTICK	https://www.narscosmetics.ca/CA/starlight-powermatte-lipstick/999NAC0000173.html?dwvar_999NAC0000173_color=4251141312&cgid=lipstick
Leading	Nars Cosmetics	VELVET LIP GLIDE	https://www.narscosmetics.ca/CA/velvet-lip-glide/999NAC0000040.html?dwvar_999NAC0000040_color=7845027140&cgid=lipstick

Leading	Nars Cosmetics	VIP AUDACIOUS LIPSTICK	https://www.narscosmetics.ca/CA/vip-audacious-lipstick/999NAC0000119.html?cgid=lipstick
Leading	Revlon	ColorStay Suede Ink Lipstick	https://www.revlon.com/lips/lipstick/colorstay-suede-ink-lipstick
Leading	Revlon	ColorStay Ultimate Suede Lipstick	https://www.revlon.com/lips/lipstick/colorstay-ultimate-suede-lipstick
Leading	Revlon	Super Lustrous Glass Shine Lipstick	https://www.revlon.com/lips/lipstick/super-lustrous-glass-shine-lipstick
Leading	Revlon	Super Lustrous Lipstick	https://www.revlon.com/lips/lipstick/super-lustrous-lipstick
Leading	Revlon	Super Lustrous The Luscious Mattes Lipstick	https://www.revlon.com/lips/lipstick/super-lustrous-the-luscious-mattes
Leading	Revlon	ColorStay Satin Ink	https://www.revlon.com/lips/liquid-lipstick/colorstay-satin-ink
Leading	Revlon	Revlon ColorStay Ultimate Liquid Lipstick	https://www.revlon.com/lips/liquid-lipstick/colorstay-ultimate-liquid-lipstick
Leading	Revlon	Revlon Ultra HD Matte Lip Mousse	https://www.revlon.com/lips/liquid-lipstick/revlon-ultra-matte-lip-mousse
Leading	Revlon	Revlon Ultra HD Matte Lipcolor	https://www.revlon.com/lips/liquid-lipstick/ultra-hd-matte-lipcolor
Leading	Urban Decay	VICE LIP BOND - CUFFED UP	https://www.urbandecay.ca/en/lip-gloss/vice-lip-bond---liquid-lipstick/ud1230.html
Leading	Urban Decay	VICE LIPSTICK SUPER-PIGMENTED LONGWEAR	https://www.urbandecay.ca/en/lipstick/vice-lipstick-super-pigmented-longwear/UD1066.html
Leading	Urban Decay	VICE LIPSTICK	https://www.urbandecay.com/urban-decay-vice-lipstick-vegan-longwear/ud771.html?dwvar_ud771_color=BACKTALK%20%28MATTE%29#tab=description
Leading	Urban Decay	VICE LIP BOND GLOSSY LONGWEAR LIQUID LIPSTICK	https://www.urbandecay.com/vice-lip-bond-liquid-lipstick/ud1230.html#tab=benefits
Fast beauty	BH Cosmetics	Cashmere Cream - Comfort Lipstick: 100	https://www.bhcosmetics.com/cashmere-cream-comfort-lipstick-100/14022314.html
Fast beauty	BH Cosmetics	Double Dare Creamy Liquid Lipstick	https://www.bhcosmetics.com/double-dare-creamy-liquid-lipstick/13872963.html
Fast beauty	BH Cosmetics	MIRAGE - Lip Balm - Heavy Tint	https://www.bhcosmetics.com/mirage-lip-balm-heavy-tint/14007191.html
Fast beauty	ColourPop	just imagine	https://colourpop.com/collections/liquid-lipsticks/products/just-imagine-lux-liquid-lipstick
Fast beauty	ColourPop	ultra matte lip	https://colourpop.com/collections/liquid-lipsticks/products/ultra-matte-liquid-lip
Fast beauty	ColourPop	crème lux lipstick	https://colourpop.com/collections/lux-lipstick/products/creme-lux-lipstick
Fast beauty	ColourPop	Digits	https://colourpop.com/collections/lux-lipstick/products/digits-lux-lipstick
Fast beauty	ColourPop	ultra blotted lip	https://colourpop.com/collections/ultra-lips/products/ultra-blotted-lip
Fast beauty	elf Cosmetics	O FACE Satin Lipstick	https://www.elfcosmetics.com/en_CA/o-face-satin-lipstick/81781.html
Fast beauty	elf Cosmetics	Pout Clout Lip Plumping Pen	https://www.elfcosmetics.com/en_CA/pout-clout-lip-plumping-pen/82291.html
Fast beauty	elf Cosmetics	Sheer Slick Lipstick Black Cherry	https://www.elfcosmetics.com/en_CA/sheer-slick-lipstick-black-cherry/82158.html

Fast beauty	elf Cosmetics	SRSLY Satin Lipstick	https://www.elfcosmetics.com/en_CA/srsly-satin-lipstick/29696.html
Fast beauty	Essence Cosmetics	8H Matte Liquid Lipstick	https://essencemakeup.com/collections/lips/products/8h-matte-liquid-lipstick
Fast beauty	Essence Cosmetics	ELECTRIC GLOW color changing lipstick	https://essencemakeup.com/collections/lips/products/electric-glow-color-changing-lips
Fast beauty	Essence Cosmetics	Emily in Paris Matte Lipstick	https://essencemakeup.com/collections/lips/products/emily-in-paris-matte-lipstick
Fast beauty	Essence Cosmetics	META GLOW COLOUR CHANGING LIPSTICK	https://essencemakeup.com/collections/lips/products/meta-glow-colour-changing-lipstick
Fast beauty	Essence Cosmetics	Space Glow Colour Changing Lipstick	https://essencemakeup.com/collections/lips/products/space-glow-colour-changing-lipstick
Fast beauty	Essence Cosmetics	THE slim STICK	https://essencemakeup.com/collections/lips/products/the-slim-stick
Fast beauty	Essence Cosmetics	this is nude lipstick	https://essencemakeup.com/collections/lips/products/this-is-nude-lipstick
Fast beauty	H&M	Satin Lipstick	https://www2.hm.com/en_us/productpage.1143045001.html
Fast beauty	H&M	Matte Lipstick	https://www2.hm.com/en_us/productpage.1143046001.html
Fast beauty	Kylie Cosmetics	crème lipstick	https://kyliecosmetics.com/en-ca/collections/kylie-cosmetics-lips-lipsticks-creme-lipsticks
Fast beauty	Kylie Cosmetics	matte lipstick	https://kyliecosmetics.com/en-ca/collections/kylie-cosmetics-lips-lipsticks-matte-lipsticks
Fast beauty	Kylie Cosmetics	lip blush	https://kyliecosmetics.com/en-ca/collections/kylie-cosmetics-lips-liquid-lipsticks-lip-blush
Fast beauty	Kylie Cosmetics	matte liquid lipstick	https://kyliecosmetics.com/en-ca/collections/kylie-cosmetics-lips-liquid-lipsticks-matte-liquid-lipstick
Fast beauty	Lime Crime Cosmetics	Plushies Soft Matte Liquid Lipstick	https://limecrime.com/products/plushies-liquid-lipstick
Fast beauty	Lime Crime Cosmetics	Soft Touch Lipstick	https://limecrime.com/products/soft-touch-lipstick?variant=42116400611381
Fast beauty	Lime Crime Cosmetics	Velvetines Liquid Lipstick	https://limecrime.com/products/velvetines-liquid-lipstick?variant=39913043066933
Fast beauty	Milk Makeup	Cooling Water Jelly Tint	https://milkmakeup.com/products/cooling-water-jelly-tint?variant=burst-poppy-pink
Fast beauty	Milk Makeup	Lip + Cheek	https://milkmakeup.com/products/lip-cheek?variant=dash-light-pink-shimmer
Fast beauty	NYX Cosmetics	LIP LINGERIE XXL MATTE LIQUID LIPSTICK	https://www.nyxcosmetics.ca/en/-lip-lingerie-xxl-matte-liquid-lipstick-NYX_955.html
Fast beauty	NYX Cosmetics	SHINE LOUD HIGH SHINE LIP COLOUR	https://www.nyxcosmetics.ca/en/-shine-loud-high-shine-lip-colour-NYX_935.html
Fast beauty	NYX Cosmetics	SUEDE MATTE LIPSTICK	https://www.nyxcosmetics.ca/en/-suede-matte-lipstick-NYX_630.html
Fast beauty	NYX Cosmetics	POWDER PUFF LIPPIE LIP CREAM	https://www.nyxcosmetics.ca/en/powder-puff-lippie-lip-cream-NYX_586.html
Fast beauty	NYX Cosmetics	SMOOTH WHIP MATTE LIP CREAM	https://www.nyxcosmetics.ca/en/smooth-whip-matte-lip-cream-NYX_1047.html
Fast beauty	NYX Cosmetics	SOFT MATTE LIP CREAM	https://www.nyxcosmetics.ca/en/soft-matte-lip-cream-NYX_007.html

Fast beauty	Sheglam	COSMIC CRYSTAL MATTE LIPSTICK - MIXED EMOTIONS	https://www.sheglam.com/collections/lips/products/cosmic-crystal-matte-lipstick-mixed-emotions-sbbeauty42210325323
Fast beauty	Sheglam	CREME ALLURE LIPSTICK - NUDE	https://www.sheglam.com/collections/lips/products/creme-allure-lipstick-nude-sbbeauty03200529380
Fast beauty	Sheglam	DYNAMATTE BOOM LONG-LASTING MATTE LIPSTICK (EMBER ROSE VER.)	https://www.sheglam.com/collections/lips/products/dynamatte-boom-long-lasting-matte-lipstick-ember-rose-ver-bliss-sb2311236901044853
Fast beauty	Sheglam	DYNAMATTE BOOM LONG-LASTING MATTE LIPSTICK- STRONGER THAN EVER	https://www.sheglam.com/collections/lips/products/dynamatte-boom-long-lasting-matte-lipstick-stronger-than-ever-sb2212235444302035
Fast beauty	Sheglam	CORPSE BRIDE COLLECTION EVERLASTING LOVE LIQUID LIPSTICK	https://www.sheglam.com/collections/lips/products/everlasting-love-liquid-lipstick-beating-heart-sb2207203620939812
Fast beauty	Sheglam	FOR THE FLUSH LIP & CHEEK TINT-FRUIT PUNCH	https://www.sheglam.com/collections/lips/products/for-the-flush-lip-cheek-tint-fruit-punch-sb2308026720081163
Fast beauty	Sheglam	GLAM 101 LIPSTICK & LINER DUO-DEEP CARAMEL	https://www.sheglam.com/collections/lips/products/glam-101-lipstick-liner-duo-deep-caramel-sb2106255206109589
Fast beauty	Sheglam	HI-BEAM MINI LIPSTICK SET-NOVO SET	https://www.sheglam.com/collections/lips/products/hi-beam-mini-lipstick-set-stella-set-sb2308020106705953
Fast beauty	Sheglam	JUST KISSED LIPSTICK CRAYON-BREAD PUDDING	https://www.sheglam.com/collections/lips/products/just-kissed-lipstick-crayon-bread-pudding-sb2308221967211589
Fast beauty	Sheglam	LIVE TO ROAM EPIC ADVENTURE LIQUID LIPSTICK	https://www.sheglam.com/collections/lips/products/live-to-roam-epic-adventure-liquid-lipstick-on-vacay-sb2302144606936855
Fast beauty	Sheglam	MATTE ALLURE LIPSTICK - CHIC	https://www.sheglam.com/collections/lips/products/matte-allure-lipstick-chic-sbbeauty03200402710
Fast beauty	Sheglam	MATTE ALLURE LIQUID LIPSTICK - MOMOJO	https://www.sheglam.com/collections/lips/products/matte-allure-liquid-lipstick-momojo-sbbeauty03200611839
Fast beauty	Sheglam	MEGA LIP STACKS-BROWN-BROWNIE STACK	https://www.sheglam.com/collections/lips/products/mega-lip-stacks-brown-brownie-stack-sb2305099914419938
Fast beauty	Sheglam	MIRROR KISS HIGH-SHINE LIPSTICK-IT TAKES GUTS	https://www.sheglam.com/collections/lips/products/mirror-kiss-high-shine-lipstick-it-takes-guts-sb2311302809229767
Fast beauty	Sheglam	SOFT 90'S GLAM LIP LINER AND LIP DUO SET-MOODY TAUPE LIP SET	https://www.sheglam.com/collections/lips/products/soft-90s-glam-lip-liner-and-lip-duo-set-moody-taupe-lip-set-sb2204085050236315
Fast beauty	Sheglam	SOFT HAZE LIP BLUR	https://www.sheglam.com/collections/lips/products/soft-haze-lip-blur-another-round-sb2402289254058066
Fast beauty	Sheglam	STARLIGHT VELVET LIPSTICK - MAGICAL D-LIGHT	https://www.sheglam.com/collections/lips/products/starlight-velvet-lipstick-magical-d-light-sbbeauty03190911328

Fast beauty	Sheglam	TAKE A HINT LIP TINT-LEVEL UP	https://www.sheglam.com/collections/lips/products/take-a-hint-lip-tint-level-up-sbbeauty13201230854
Fast beauty	Sheglam	MARILYN MONROE X SHEGLAM THE ICON LIPSTICK-XOXO, MARILYN	https://www.sheglam.com/collections/lips/products/the-icon-lipstick-sb2403056089905352
Fast beauty	Sheglam	VERY CHERRY CHEEK & LIP CREAM STACK	https://www.sheglam.com/collections/lips/products/very-cherry-cheek-lip-cream-stack-sb2110263173432234
Fast beauty	Sheglam	MARILYN MONROE X SHEGLAM VINTAGE LIP DUO	https://www.sheglam.com/collections/lips/products/vintage-lip-duo-sb2403147067937936
Fast beauty	Sheglam	X CARE BEARS SHARE A SMILE LIP SET	https://www.sheglam.com/collections/lips/products/x-care-bears-share-a-smile-lip-set-sb2308081491624690
Fast beauty	Sheglam	X FRIDA KAHLO FLORA LIP TINT-SURREAL	https://www.sheglam.com/collections/lips/products/x-frida-kahlo-flora-lip-tint-surreal-sb2210131195011665
Fast beauty	Sheglam	MATTE ALLURE MINI LIQUID LIPSTICK SET - FEEL REAL	https://www.sheglam.com/products/matte-allure-mini-liquid-lipstick-set-feel-real-sbbeauty03200814306
Fast beauty	Sheglam	PEEL TALK LIP TINT-TONGUE TWISTER	https://www.sheglam.com/products/peel-talk-lip-tint-tongue-twister-sb2308188585264358
Fast beauty	Winky lux	Matte Lip Velour Lipstick	https://www.winkylux.com/collections/lipstick-liners/products/matte-lip-velour?variant=33235550306413
Fast beauty	Winky lux	Purrfect Pout Lipstick	https://www.winkylux.com/collections/lipstick-liners/products/purrfect-pout-lipstick?variant=39772697362541
Fast beauty	Winky lux	Skinny Plump Demi-Matte Lipstick	https://www.winkylux.com/collections/lipstick-liners/products/skinny-plump-demi-matte-lipstick?variant=40737534967917
Sustainability -oriented	100% Pure	Fruit Pigmented® Cocoa Butter Matte Lipstick	https://www.100percentpure.com/products/fruit-pigmented-cocoa-butter-matte-lipstick?variant=3332681269272
Sustainability -oriented	100% Pure	Fruit Pigmented® Pomegranate Oil Moisturizing Lipstick	https://www.100percentpure.com/products/fruit-pigmented-pomegranate-oil-moisturizing-lipstick?variant=3427446390808
Sustainability -oriented	100% Pure	Fruit Pigmented® Lip Glaze	https://www.100percentpure.com/collections/lips/products/fruit-pigmented-lip-glaze?variant=3429883510808
Sustainability -oriented	100% Pure	Lip Caramel	https://www.100percentpure.com/collections/lips/products/lip-caramel?variant=39657763373134
Sustainability -oriented	100% Pure	Fruit Pigmented® Cherry Lip & Cheek Stain	https://www.100percentpure.com/collections/lips/products/fruit-pigmented-lip-cheek-stain-cherry?variant=36541099918
Sustainability -oriented	100% Pure	Fruit Pigmented® Lip & Cheek Tint	https://www.100percentpure.com/collections/lips/products/fruit-pigmented-lip-cheek-tint?variant=3427447635992
Sustainability -oriented	Axiology Beauty	COLOR CREAM MULTI-STICKS	https://axiologybeauty.com/collections/makeup/products/multi-stick-color-cream?variant=46055360561450

Sustainability-oriented	Axiology Beauty	TINTED DEW MULTI-STICKS	https://axiologybeauty.com/collections/makeup/products/multi-stick-tinted-dew?variant=46055360725290
Sustainability-oriented	cheekbone Beauty	SUSTAIN Lipstick	https://www.cheekbonebeauty.com/collections/sustain-lips/products/sustain-lipstick
Sustainability-oriented	cheekbone Beauty	Warrior Liquid Lipstick	https://www.cheekbonebeauty.com/collections/sustain-lips/products/sustain-liquid-lipstick
Sustainability-oriented	Clarins	Joli Rouge Shine	https://www.clarins.ca/en/joli-rouge-shine/80094267.html
Sustainability-oriented	Clarins	Joli Rouge Velvet	https://www.clarins.ca/en/joli-rouge-velvet/80099091.html
Sustainability-oriented	Clarins	Joli Rouge	https://www.clarins.ca/en/joli-rouge/80094249.html
Sustainability-oriented	dab herb makeup	Herb Lip Paint	https://www.dabhms.com/product-page/organic-herb-lip-paint
Sustainability-oriented	dab herb makeup	Black Lipstick	https://www.dabhms.com/product-page/organic-black-lipstick
Sustainability-oriented	dab herb makeup	Luxe Lip Paint	https://www.dabhms.com/product-page/lip-paint
Sustainability-oriented	dab herb makeup	Root Lip Tint	https://www.dabhms.com/product-page/root-lip-tint
Sustainability-oriented	Elate Beauty	Capsule LipColour	https://elatebeauty.com/en-ca/products/capsule-lipcolour
Sustainability-oriented	Elate Beauty	Lip Stick	https://elatebeauty.com/en-ca/products/lipcolour-pencil
Sustainability-oriented	Gabriel Cosmetics	Gabriel Lipstick	https://gabrielcosmeticsinc.com/collections/gabriel/products/gabriel-lipstick
Sustainability-oriented	Gabriel Cosmetics	Gabriel Lipstick	https://gabrielcosmeticsinc.com/collections/gabriel/products/gabriel-lipstick
Sustainability-oriented	Gabriel Cosmetics	Zuzu Luxe: Matte Luxe Lip	https://gabrielcosmeticsinc.com/collections/lipstick/products/matte-luxe-lip
Sustainability-oriented	Gabriel Cosmetics	Zuzu Luxe: Lip Colour	https://gabrielcosmeticsinc.com/collections/lipstick/products/zuzu-luxe-lip-color
Sustainability-oriented	HIGHR Collective	TRUEST	https://highrcollective.com/products/rose-lipstick-truest
Sustainability-oriented	Ilia Beauty	Multi-Stick	https://iliabeauty.com/en-ca/products/all-of-me
Sustainability-oriented	Ilia Beauty	Lip Sketch Hydrating Crayon	https://iliabeauty.com/en-ca/products/banquette
Sustainability-oriented	Ilia Beauty	Balmy Tint Hydrating Lip Balm	https://iliabeauty.com/en-ca/products/hold-me
Sustainability-oriented	Ilia Beauty	Balmy Gloss Tinted Lip Oil	https://iliabeauty.com/en-ca/products/maybe-violet
Sustainability-oriented	Ilia Beauty	Color Block Lipstick	https://iliabeauty.com/en-ca/products/rosewood
Sustainability-oriented	Ilia Beauty	Color Haze	https://iliabeauty.com/en-ca/products/stutter
Sustainability-oriented	Juice Beauty	PHYTO-PIGMENTS LIQUID LIP	https://juicebeauty.com/collections/makeup-shop-by-category-lips/products/phyto-pigments-liquid-lip
Sustainability-oriented	Juice Beauty	PHYTO-PIGMENTS LUMINOUS LIP CRAYON	https://juicebeauty.com/collections/makeup-shop-by-category-lips/products/phyto-pigments-luminous-lip-crayon
Sustainability-oriented	Kjaer Weis	Lip Tint	https://kjaerweis.com/collections/lip/products/lip-tint-goddess

Sustainability -oriented	Kjaer Weis	Lipstick	https://kjaerweis.com/collections/lip/products/lipstick-kw-red
Sustainability -oriented	Kjaer Weis	Matte, Naturally Liquid Lipstick	https://kjaerweis.com/collections/lip/products/matte-naturally-liquid-lipstick-kw-red
Sustainability -oriented	Kjaer Weis	Tinted Lip Balm	https://kjaerweis.com/products/tinted-lip-balm-gracious
Sustainability -oriented	La Bouche Rouge Paris	Lipstick	https://laboucherogetherparis.com/products/lipstick
Sustainability -oriented	Lush	Ankara	https://www.lush.com/ca/en_ca/p/ankara-lipstick-refill
Sustainability -oriented	Lush	Kigali	https://www.lush.com/ca/en_ca/p/kigali-lipstick-refill
Sustainability -oriented	Lush	Minsk	https://www.lush.com/ca/en_ca/p/minsk-lipstick-refill
Sustainability -oriented	Lush	Riga	https://www.lush.com/ca/en_ca/p/riga-lipstick-refill
Sustainability -oriented	rms Beauty	Legendary Serum Lipstick	https://www.rmsbeauty.com/products/legendary-serum-lipstick
Sustainability -oriented	rms Beauty	Lip2Cheek	https://www.rmsbeauty.com/products/lip2cheek
Sustainability -oriented	rms Beauty	Lip2Cheek Glow Quad Mini	https://www.rmsbeauty.com/products/lip2cheek-glow-quad
Sustainability -oriented	rms Beauty	Wild With Desire Lipstick	https://www.rmsbeauty.com/products/wild-with-desire-lipstick
Sustainability -oriented	Saie	Lip Blur	https://saiehello.com/products/lip-blur
Sustainability -oriented	The Body Shop	Freestyle Multi-Tasking Makeup Pigments	https://www.thebodyshop.com/en-ca/makeup/cheeks/freestyle-multi-tasking-makeup-pigments/p/p119014
Sustainability -oriented	The Body Shop	Freestyle Multi-Tasking Crayons	https://www.thebodyshop.com/en-ca/makeup/lips/freestyle-multi-tasking-crayons/p/p119012
Sustainability -oriented	The Body Shop	Peptalk Lipstick Bullet Refill	https://www.thebodyshop.com/en-ca/makeup/lips/peptalk-lipstick-bullet-refill/p/p129013
Sustainability -oriented	The Body Shop	Sheer Touch Lip & Cheek Tint	https://www.thebodyshop.com/en-ca/makeup/lips/sheer-touch-lip-cheek-tint/p/p119010
Sustainability -oriented	Well People	Lip Butter SPF 15 Tinted Balm	https://www.wellpeople.com/lip-butter/1101001-C.html
Sustainability -oriented	Well People	Lush Lip Tinted Oil	https://www.wellpeople.com/lush-lip-tinted-oil/1000009.html
Sustainability -oriented	Well People	Optimist Lipstick	https://www.wellpeople.com/optimist-lipstick/60000111.html
Sustainability -oriented	Zakiella	Beautifully Imperfect™ Lipstick	https://zakiella.com/collections/lips/products/beautifully-imperfect-lipstick
Sustainability -oriented	Zakiella	Matte Lipstick	https://zakiella.com/collections/lips/products/matte-lipstick
Sustainability -oriented	Zakiella	Satin Lipstick	https://zakiella.com/collections/lips/products/satin-lipstick

Table A.2. Sample-size facial moisturizer products by brand and brand category

Brand Category	Brand Name	Product Name	URL
Leading	Avon	Avon Solutions Nurtura Replenishing Cream	https://www.avon.ca/product/avon-solutions-nurtura-replenishing-cream-3341?rep=nuzum
Leading	Avon	Anew Platinum Night Cream	https://www.avon.ca/product/ane-new-platinum-night-cream-3357?rep=nuzum
Leading	Avon	Anew Skinvincible Deep Recovery Cream	https://www.avon.ca/product/ane-new-skinvincible-deep-recovery-cream-5224?rep=nuzum
Leading	Avon	Isa Knox LXNEW Ultimate Rejuvenating Day Cream	https://www.avon.ca/product/isa-knox-lxnew-ultimate-rejuvenating-day-cream-3579?rep=nuzum
Leading	Avon	belif The true cream Mini Aqua Bomb	https://www.avon.ca/product/belif-the-true-cream-mini-aqua-bomb-3556?rep=nuzum
Leading	Avon	Anew Hydra Fusion Gel Cream	https://www.avon.ca/product/ane-new-hydra-fusion-gel-cream-3483?rep=nuzum
Leading	Avon	Isa Knox Anew Clinical Collagen Booster Firming Cream	https://www.avon.ca/product/isa-knox-ane-new-clinical-collagen-booster-firming-cream-4016?rep=nuzum
Leading	Avon	Anew Ultimate Supreme Advanced Performance Crème	https://www.avon.ca/product/ane-new-ultimate-supreme-advanced-performance-cr%a8me-3395?rep=nuzum
Leading	Avon	Beyond Glow Snail Mucin Complex + Panthenol Cream	https://www.avon.ca/product/beyond-glow-snail-mucin-complex--panthenol-cream-10617?rep=nuzum
Leading	Avon	belif The true cream Aqua Bomb	https://www.avon.ca/product/belif-the-true-cream-aqua-bomb-3555?rep=nuzum
Leading	Avon	Isa Knox LXNEW Ultimate Rejuvenating Dual Night Cream	https://www.avon.ca/product/isa-knox-lxnew-ultimate-rejuvenating-dual-night-cream-3580?rep=nuzum
Leading	Avon	Isa Knox LXNEW Platinum Sculpting Night Cream	https://www.avon.ca/product/isa-knox-lxnew-platinum-sculpting-night-cream-3712?rep=nuzum
Leading	Avon	belif The True Cream Try-it-size Moisturizing Bomb	https://www.avon.ca/product/belif-the-true-cream-tryitsize-moisturizing-bomb-3558?rep=nuzum
Leading	Avon	Isa Knox LXNEW Platinum Sculpting Day Cream	https://www.avon.ca/product/isa-knox-lxnew-platinum-sculpting-day-cream-3713?rep=nuzum
Leading	Avon	Anew Ultimate Night Multi-Performance Cream	https://www.avon.ca/product/ane-new-ultimate-night-multi-performance-cream-3391?rep=nuzum
Leading	Avon	Avon Solutions Anti-Aging Cream	https://www.avon.ca/product/avon-solutions-antiaging-cream-3628?rep=nuzum
Leading	Avon	Anew Vitamin C Illuminating Priming Moisturizer	https://www.avon.ca/product/ane-new-vitamin-c-illuminating-priming-moisturizer-4722?rep=nuzum
Leading	Avon	Farm Rx Bakuchiol Cream	https://www.avon.ca/product/farm-rx-bakuchiol-cream-3808?rep=nuzum

Leading	Avon	Farm Rx Super Greens Multivitamin Moisture Cream	https://www.avon.ca/product/farm-rx-super-greens-multivitamin-moisture-cream-3649?rep=nuzum
Leading	Avon	Farm Rx Super Greens Cooling Gel	https://www.avon.ca/product/farm-rx-super-greens-cooling-gel-3646?rep=nuzum
Leading	Avon	belif The true cream Moisturizing Bomb	https://www.avon.ca/product/belif-the-true-cream-moisturizing-bomb-3557?rep=nuzum
Leading	Avon	Avon Solutions Dramatic Firming Cream	https://www.avon.ca/product/avon-solutions-dramatic-firming-cream-3340?rep=nuzum
Leading	bareMinerals	SMOOTHNESS Bare Haven® Soft Moisturizer	https://www.bareminerals.com/products/smoothness-bare-haven-soft-moisturizer?variant=40497817026645&_gl=1*14wylmv*_up*MQ..&gclid=Cj0KCOiAwbitBhDIARIsABfFYIKDGhBWRi9qkGEGC4DYKKWbUbskdzUPcbwAGuRpFcQjeTrmmCLex0EaAmPCEALw_wcB
Leading	bareMinerals	Skinlongevity® Phyto-Vitamin C Brightening Moisturizer Mineral SPF 30	https://www.bareminerals.com/products/skinlongevity-brightening-moisturizer-mineral-spf-30?variant=40550317162581&_gl=1*ylrjeh*_up*MQ..&gclid=Cj0KCOiAwbitBhDIARIsABfFYIKDGhBWRi9qkGEGC4DYKKWbUbskdzUPcbwAGuRpFcQjeTrmmCLex0EaAmPCEALw_wcB
Leading	bareMinerals	BUTTER DRENCH™ Restorative Rich Cream	https://www.bareminerals.com/products/butter-drench-restorative-rich-cream?variant=40497816928341&_gl=1*xd8dl0*_up*MQ..&gclid=Cj0KCOiAwbitBhDIARIsABfFYIKDGhBWRi9qkGEGC4DYKKWbUbskdzUPcbwAGuRpFcQjeTrmmCLex0EaAmPCEALw_wcB
Leading	bareMinerals	AGELESS 10% Phyto ProCollagen Firming Anti-Age Cream	https://www.bareminerals.com/products/ageless-10-phyto-procollagen-firming-anti-age-cream?variant=40494135378005&_gl=1*14wylmv*_up*MQ..&gclid=Cj0KCOiAwbitBhDIARIsABfFYIKDGhBWRi9qkGEGC4DYKKWbUbskdzUPcbwAGuRpFcQjeTrmmCLex0EaAmPCEALw_wcB
Leading	bareMinerals	AGELESS Phyto-Retinol Face Cream	https://www.bareminerals.com/products/ageless-phyto-retinol-face-cream?variant=40497816698965&_gl=1*14wylmv*_up*MQ..&gclid=Cj0KCOiAwbitBhDIARIsABfFYIKDGhBWRi9qkGEGC4DYKKWbUbskdzUPcbwAGuRpFcQjeTrmmCLex0EaAmPCEALw_wcB
Leading	Covergirl	Clean Fresh Dry Skin Corrector Cream™	https://www.covergirl.ca/skincare/skincare-moisturizer/cf-skincare-dry-skin-corrector-cream
Leading	Covergirl	Clean Fresh Weightless Water Cream™	https://www.covergirl.ca/skincare/skincare-moisturizer/cf-skincare-weightless-water-cream
Leading	Covergirl	Clean Fresh Mattifying Oil-Free Moisturizer™	https://www.covergirl.ca/skincare/skincare-moisturizer/cf-skincare-mattifying-moisturizer
Leading	Estee Lauder	Resilience Multi-Effect Moisturizer Tri-Peptide Face and Neck Creme SPF 15	https://www.esteelauder.ca/product/688/61744/product-catalog/skincare/moisturizer/resilience-multi-effect-moisturizer/tri-peptide-face-and-neck-creme-spf-15?size=50ml

Leading	Estee Lauder	NightWear Plus Moisturizer Night Detox Creme	https://www.esteelauder.ca/product/688/37349/product-catalog/skincare/moisturizer/nightwear-plus-moisturizer/night-detox-creme?size=50ml
Leading	Estee Lauder	Revitalizing Supreme+ Bright Moisturizer Power Soft Milky Lotion	https://www.esteelauder.ca/product/688/99516/product-catalog/skincare/moisturizer/revitalizing-supreme-bright-moisturizer/power-soft-milky-lotion?size=100ml
Leading	Estee Lauder	Resilience Multi-Effect Night Moisturizer Tri-Peptide Face and Neck Creme	https://www.esteelauder.ca/product/688/46658/product-catalog/skincare/moisturizer/resilience-multi-effect-night-moisturizer/tri-peptide-face-and-neck-creme?size=75ml
Leading	Estee Lauder	Re-Nutriv Ultimate Diamond Transformative Brilliance Soft Creme Moisturizer	https://www.esteelauder.ca/product/677/122945/product-catalog/re-nutriv/re-nutriv-moisturizer/re-nutriv/ultimate-diamond-transformative-brilliance-soft-creme-moisturizer?size=30ml
Leading	Estee Lauder	Re-Nutriv Ultimate Lift Regenerating Youth Moisturizer Creme	https://www.esteelauder.ca/product/677/75655/product-catalog/re-nutriv/re-nutriv-moisturizer/re-nutriv/ultimate-lift-regenerating-youth-moisturizer-creme?size=50ml
Leading	Estee Lauder	Re-Nutriv Ultimate Lift Regenerating Youth Emulsion Moisturizer	https://www.esteelauder.ca/product/677/71208/product-catalog/re-nutriv/re-nutriv-moisturizer/re-nutriv/ultimate-lift-regenerating-youth-emulsion-moisturizer?size=75ml
Leading	Estee Lauder	Re-Nutriv Ultimate Diamond Sculpted Transformation Creme Moisturizer	https://www.esteelauder.ca/product/677/105505/product-catalog/re-nutriv/re-nutriv-moisturizer/re-nutriv/ultimate-diamond-sculpted-transformation-creme-moisturizer?size=50ml
Leading	Estee Lauder	Re-Nutriv Ultimate Lift Regenerating Youth Moisturizer Creme Rich	https://www.esteelauder.ca/product/677/94736/product-catalog/re-nutriv/re-nutriv-moisturizer/re-nutriv/ultimate-lift-regenerating-youth-moisturizer-creme-rich?size=50ml
Leading	Estee Lauder	Re-Nutriv Moisturizer Creme	https://www.esteelauder.ca/product/677/1858/product-catalog/re-nutriv/re-nutriv-moisturizer/re-nutriv/moisturizer-creme?size=50_ml
Leading	Estee Lauder	Re-Nutriv Lightweight Moisturizer Creme	https://www.esteelauder.ca/product/677/1913/product-catalog/re-nutriv/re-nutriv-moisturizer/re-nutriv/lightweight-moisturizer-creme?size=50ml
Leading	Estee Lauder	Revitalizing Supreme+ Youth Power Soft Milky Lotion Moisturizer	https://www.esteelauder.ca/product/688/105514/product-catalog/skincare/moisturizer/revitalizing-supreme/youth-power-soft-milky-lotion-moisturizer?size=100ml
Leading	Estee Lauder	Revitalizing Supreme+ Moisturizer Youth Power Creme	https://www.esteelauder.ca/product/688/97386/product-catalog/skincare/moisturizer/revitalizing-supreme-moisturizer/youth-power-creme?size=30ml
Leading	Estee Lauder	Revitalizing Supreme+ Night Moisturizer Intensive Restorative Creme	https://www.esteelauder.ca/product/688/97387/product-catalog/skincare/moisturizer/revitalizing-supreme-night-moisturizer/intensive-restorative-creme?size=50ml
Leading	Estee Lauder	Revitalizing Supreme+ Youth Power Creme SPF 25 Moisturizer	https://www.esteelauder.ca/product/688/122944/product-catalog/skincare/moisturizer/revitalizing-supreme/youth-power-creme-spf-25-moisturizer?size=50ml

Leading	Estee Lauder	Revitalizing Supreme+ Moisturizer Travel Size Youth Power Creme	https://www.esteelauder.ca/product/688/95394/product-catalog/skincare/moisturizer/revitalizing-supreme-moisturizer-travel-size/youth-power-creme?size=15ml
Leading	Estee Lauder	Nutritious Airy Lotion Moisturizer	https://www.esteelauder.ca/product/688/112201/product-catalog/skincare/moisturizer/nutritious/airy-lotion-moisturizer?size=100ml
Leading	Estee Lauder	Swiss Performing Extract Moisturizer	https://www.esteelauder.ca/product/688/2065/product-catalog/skincare/moisturizer/swiss-performing-extract-moisturizer?size=100ml
Leading	Estee Lauder	Revitalizing Supreme+ Bright Moisturizer Power Soft Creme	https://www.esteelauder.ca/product/688/99515/product-catalog/skincare/moisturizer/revitalizing-supreme-bright-moisturizer/power-soft-creme?size=50ml
Leading	Fenty Beauty	Hydra Vizor Huez SPF 30 Refillable Tinted Moisturizer Set	https://fentybeauty.com/en-ca/products/hydra-vizor-huez-spf-30-refillable-tinted-moisturizer-set?variant=42396560326701
Leading	Fenty Beauty	Hydra Vizor Invisible Moisturizer Broad Spectrum SPF 30 Sunscreen with Niacinamide + Kalahari Melon	https://fentybeauty.com/en-ca/products/hydra-vizor-invisible-moisturizer-broad-spectrum-spf-30-sunscreen-with-niacinamide-kalahari-melon-us?variant=35110454722605
Leading	Fenty Beauty	Instant Reset Brightening Overnight Recovery Gel-Cream with Niacinamide + Kalahari Melon Oil	https://fentybeauty.com/en-ca/products/instant-reset-brightening-overnight-recovery-gel-cream-with-niacinamide-kalahari-melon-oil?variant=43010325315629
Leading	Fenty Beauty	Hydra Vizor Mini Broad Spectrum Mineral SPF 30 Sunscreen Moisturizer	https://fentybeauty.com/en-ca/products/hydra-vizor-mini-broad-spectrum-mineral-spf-30-sunscreen-moisturizer?variant=41547459559469
Leading	Fenty Beauty	Hydra Vizor Fragrance-Free Broad Spectrum Mineral SPF 30 Sunscreen Moisturizer	https://fentybeauty.com/en-ca/products/hydra-vizor-fragrance-free-broad-spectrum-mineral-spf-30-sunscreen-moisturizer?variant=41630283759661
Leading	Fenty Beauty	Hydra Vizor Fragrance-Free Invisible Moisturizer Broad Spectrum SPF 30 Sunscreen with Niacinamide + Kalahari Melon	https://fentybeauty.com/en-ca/products/hydra-vizor-fragrance-free-invisible-moisturizer-broad-spectrum-spf-30-sunscreen-with-niacinamide-kalahari-melon?variant=40245267595309
Leading	Glossier	After Baume	https://www.glossier.com/en-ca/products/travel-after-baume?variant=44070150340853
Leading	Glossier	Priming Moisturizer	https://www.glossier.com/en-ca/products/priming-moisturizer?variant=43781983142133
Leading	Glossier	Priming Moisturizer Rich	https://www.glossier.com/en-ca/products/priming-moisturizer-rich?variant=43781983076597
Leading	Glossier	Priming Moisturizer Balance	https://www.glossier.com/en-ca/products/priming-moisturizer-balance?variant=43781981602037
Leading	L'Oreal Paris	Collagen Moisture Fragrance-Free Moisturizer	https://www.lorealparis.ca/en-ca/collagen-moisture-filler/collagen-fragrance-free-volume-filler

Leading	L'Oreal Paris	Collagen Moisture Daily Moisturizer	https://www.lorealparis.ca/en-ca/skin/skin-care/collagen-moisture-filler/collagen-moisture-filler-cream
Leading	L'Oreal Paris	Wrinkle Expert 65+ Day Cream	https://www.lorealparis.ca/en-ca/wrinkle-expert/wrinkle-expert-65-day-cream
Leading	L'Oreal Paris	Collagen Expert Day Moisturizer	https://www.lorealparis.ca/en-ca/age-perfect/age-perfect-collagen-expert-day-moisturizer
Leading	L'Oreal Paris	55+ Anti-Wrinkle Day Moisturizer	https://www.lorealparis.ca/en-ca/wrinkle-expert/wrinkle-expert-55-anti-wrinkle-day-moisturizer
Leading	L'Oreal Paris	Anti-Sagging Anti-Age Spot Day Moisturizer	https://www.lorealparis.ca/en-ca/age-perfect/age-perfect-anti-sagging-anti-age-spot-day-moisturizer
Leading	L'Oreal Paris	Age Perfect Cell Renewal Anti-Aging Day Moisturizer SPF 25	https://www.lorealparisusa.com/skin-care/facial-moisturizers/cell-renewal-anti-aging-day-moisturizer-spf-25
Leading	L'Oreal Paris	Rosy Tone Day Cream	https://www.lorealparis.ca/en-ca/age-perfect/age-perfect-rosy-tone-day-cream
Leading	L'Oreal Paris	Anti-Wrinkle + Firming Day Cream SPF 25	https://www.lorealparis.ca/en-ca/revitalift/anti-wrinkle--firming-day-cream-spf-25
Leading	L'Oreal Paris	Revitalift Triple Power LZR Anti-Aging Day Lotion SPF 30	https://www.lorealparis.ca/en-ca/revitalift/revitalift-triple-power-lzr/triple-power-lzr-anti-aging-day-lotion-spf-30
Leading	L'Oreal Paris	Revitalift Triple Power LZR Anti-Aging Day Moisturizer	https://www.lorealparis.ca/en-ca/revitalift/revitalift-triple-power-lzr/triple-power-lzr-anti-aging-day-moisturizer
Leading	L'Oreal Paris	Derm Intensives Water Cream Moisturizer Hyaluronic Acid & Ceramides	https://www.lorealparis.ca/en-ca/revitalift/derm-intensives/hyaluronic-acid-water-cream
Leading	L'Oreal Paris	Revitalift Triple Power LZR Day Cream Fragrance-Free	https://www.lorealparis.ca/en-ca/revitalift/revitalift-triple-power-lzr/revitalift-triple-power-lzr-day-cream-fragrance-free
Leading	L'Oreal Paris	Revitalift Triple Power LZR Anti-Aging Night Moisturizer Pressed Cream	https://www.lorealparis.ca/en-ca/revitalift/revitalift-triple-power-lzr/revitalift-triple-power-lzr-retinol-anti-aging-night-moisturizer-pressed-cream
Leading	L'Oreal Paris	Face Moisturizer Deep-Set Wrinkle Revitalift	https://www.lorealparis.ca/en-ca/revitalift/revitalift-pro-retinol-vitafibrine-moisturizer
Leading	L'Oreal Paris	Wrinkle Defense: Day Moisturizer	https://www.lorealparis.ca/en-ca/wrinkle-defense/wrinkle-defense-day-moisturizer
Leading	L'Oreal Paris	35+ Anti-Fine Line Moisturizer	https://www.lorealparis.ca/en-ca/wrinkle-expert/wrinkle-expert-35-anti-fine-line-moisturizer
Leading	L'Oreal Paris	55+ Day & Night Moisturizers	https://www.lorealparis.ca/en-ca/wrinkle-expert/wrinkle-expert-55-day--night-moisturizers
Leading	L'Oreal Paris	Revitalift Triple Power LZR Day & Night Moisturizers	https://www.lorealparis.ca/en-ca/revitalift/revitalift-triple-power-lzr/revitalift-triple-power-lzr-day--night-moisturizers
Leading	L'Oreal Paris	Anti-Wrinkle + Firming Day Moisturizer Fragrance-Free	https://www.lorealparis.ca/en-ca/revitalift/anti-wrinkle--firming-day-moisturizer-fragrance-free
Leading	L'Oreal Paris	Volume Filler Day Moisturizer	https://www.lorealparis.ca/en-ca/revitalift/volume-filler-day-moisturizer

Leading	L'Oreal Paris	Water-Gel Moisturizer For Normal To Dry Skin	https://www.lorealparis.ca/en-ca/hydra-genius/hydra-genius-water-gel-moisturizer-for-normal-to-dry-skin
Leading	L'Oreal Paris	Hydra-Nutrition Ultra-Nourishing Day Cream	https://www.lorealparis.ca/en-ca/age-perfect/age-perfect-hydra-nutrition-ultra-nourishing-day-cream
Leading	L'Oreal Paris	Hydra-Nutrition Multi-Purpose Honey Balm	https://www.lorealparis.ca/en-ca/age-perfect/age-perfect-hydra-nutrition-multi-purpose-honey-balm
Leading	L'Oreal Paris	45+ Anti-Wrinkle Day Moisturizer	https://www.lorealparis.ca/en-ca/wrinkle-expert/wrinkle-expert-45-anti-wrinkle-day-moisturizer
Leading	L'Oreal Paris	Deep Set Wrinkle Day Moisturizer	https://www.lorealparis.ca/en-ca/revitalift/revitalift-deep-set-wrinkle-day-moisturizer
Leading	L'Oreal Paris	Cicacream Day Cream	https://www.lorealparis.ca/en-ca/revitalift/revitalift-cicacream-day-cream
Leading	L'Oreal Paris	Moisturizer for normal + combination skin	https://www.lorealparis.ca/en-ca/hydra-total-5/hydra-total-5-moisturizer-for-normal--combination-skin
Leading	L'Oreal Paris	Futur-E: Moisturizer	https://www.lorealparis.ca/en-ca/futur-e/futur-e-moisturizer
Leading	L'Oreal Paris	Moisturizer for uneven skin	https://www.lorealparis.ca/en-ca/hydra-total-5/hydra-total-5-moisturizer-for-uneven-skin
Leading	L'Oreal Paris	Water-Gel Moisturizer For Normal To Oily Skin	https://www.lorealparis.ca/en-ca/hydra-genius/hydra-genius-water-gel-moisturizer-for-normal-to-oily-skin
Leading	L'Oreal Paris	Moisturizer for dry + sensitive skin	https://www.lorealparis.ca/en-ca/hydra-total-5/hydra-total-5-moisturizer-for-dry--sensitive-skin
Leading	MAC	Lightful C3 Radiant Hydration Skin Renewal Lotion	https://www.maccosmetics.ca/product/13824/87558/products/skincare/moisturizers/lightful-c3-radiant-hydration-skin-renewal-lotion?size=140_mL
Leading	MAC	Hyper Real SkinCanvas Balm™ Moisturizing Cream	https://www.maccosmetics.ca/product/13824/108908/products/skincare/moisturizers/hyper-real-skincanvas-balmtm-moisturizing-cream?size=15ML
Leading	MAC	Strobe Cream	https://www.maccosmetics.ca/product/13824/364/products/skincare/moisturizers/strobe-cream?shade=Pinklite_(Original_Strobe_Cream)
Leading	MAC	Hyper Real Serumizer™ Serum-Moisturizer Hybrid	https://www.maccosmetics.ca/product/13824/105333/products/skincare/moisturizers/hyper-real-serumizertm-serum-moisturizer-hybrid?size=15ml
Leading	MAC	Lightful C ³ Radiant Hydration Skin Renewal Emulsion	https://www.maccosmetics.ca/product/13824/87555/products/skincare/moisturizers/lightful-c3-radiant-hydration-skin-renewal-emulsion?size=95_mL
Leading	MAC	Mineralize Charged Water Moisture Gel	https://www.maccosmetics.ca/product/13824/19309/products/skincare/moisturizers/mineralize-charged-water-moisture-gel?size=50_ml_%2F_1.7_US_fl_oz

Leading	MAC	Complete Comfort Creme	https://www.maccosmetics.ca/product/13824/13268/products/skincare/moisturizers/complete-comfort-creme?size=50 ml %2F 1.7 US fl oz.
Leading	NARS Cosmetics	Pure Radiant Tinted Moisturizer	https://www.narscosmetics.ca/CA/pure-radiant-tinted-moisturizer/80000002352.html
Leading	NARS Cosmetics	Light Reflecting™ Moisturizer	https://www.narscosmetics.ca/CA/light-reflecting%E2%84%A2-moisturizer/0194251039466.html
Fast Beauty	ColourPop	Matcha: face milk	https://colourpop.com/collections/fourth-ray-moisturizer/products/matcha
Fast Beauty	ColourPop	Rose: face milk	https://colourpop.com/collections/fourth-ray-moisturizer/products/rose
Fast Beauty	ColourPop	Pore Perfect Refining Priming Moisturizer	https://colourpop.com/collections/fourth-ray-moisturizer/products/pore-perfect-priming-moisturizer
Fast Beauty	ColourPop	Good Mood Gel Moisturizer	https://colourpop.com/collections/fourth-ray-moisturizer/products/good-mood
Fast Beauty	ColourPop	Strawberry: Face Milk	https://colourpop.com/collections/fourth-ray-moisturizer/products/strawberry-face-milk
Fast Beauty	ColourPop	The Daily Face Cream	https://colourpop.com/collections/fourth-ray-moisturizer/products/the-daily-face-cream
Fast Beauty	ColourPop	Papaya: Face Milk	https://colourpop.com/collections/fourth-ray-moisturizer/products/papaya
Fast Beauty	ColourPop	Watermelon: Face Milk	https://colourpop.com/collections/fourth-ray-moisturizer/products/watermelon
Fast Beauty	ColourPop	Coconut: Face Milk	https://colourpop.com/collections/fourth-ray-moisturizer/products/coconut-face-milk-moisturizer
Fast Beauty	ColourPop	Turmeric: Face Milk	https://colourpop.com/collections/fourth-ray-moisturizer/products/turmeric
Fast Beauty	ColourPop	The Lightweight: Face Moisturizer	https://colourpop.com/collections/fourth-ray-moisturizer/products/the-lightweight-moisturizer
Fast Beauty	ColourPop	Hello Sunshine: Brightening Priming Moisturizer	https://colourpop.com/collections/fourth-ray-moisturizer/products/hello-sunshine-brightening-priming-moisturizer
Fast Beauty	ColourPop	Oat: Face Milk	https://colourpop.com/collections/fourth-ray-moisturizer/products/oat-face-milk-moisturizer
Fast Beauty	elf Cosmetics	Holy Hydration! Gel-Yeah Moisturizer	https://www.elfcosmetics.com/en_CA/holy-hydration-gelyeah-moisturizer/57430.html
Fast Beauty	elf Cosmetics	Holy Hydration! Hydro-Gel Moisturizer	https://www.elfcosmetics.com/en_CA/holy-hydration-hydrogel-moisturizer/59905.html
Fast Beauty	elf Cosmetics	Nourishing Night Cream	https://www.elfcosmetics.com/en_CA/nourishing-night-cream/57017.html
Fast Beauty	elf Cosmetics	Pure Skin Moisturizer	https://www.elfcosmetics.com/en_CA/pure-skin-moisturizer/57531.html
Fast Beauty	elf Cosmetics	Mini Holy Hydration! Face Cream	https://www.elfcosmetics.com/en_CA/mini-holy-hydration-face-cream/57482.html
Fast Beauty	elf Cosmetics	Mini Daily Hydration Moisturizer	https://www.elfcosmetics.com/en_CA/mini-daily-hydration-moisturizer/57481.html
Fast Beauty	elf Cosmetics	Blemish Breakthrough Acne Calming Water Cream Mini	https://www.elfcosmetics.com/en_CA/blemish-breakthrough-acne-calming-water-cream-mini/57568UP.html
Fast Beauty	elf Cosmetics	Holy Hydration! Face Cream - SPF 30	https://www.elfcosmetics.com/en_CA/holy-hydration-face-cream--spf-30/81570.html

Fast Beauty	elf Cosmetics	Holy Hydration! Daily Hydration Moisturizer	https://www.elfcosmetics.com/en_CA/holy-hydration-daily-hydration-moisturizer/57016.html
Fast Beauty	Kylie Cosmetics	Mini Clarifying Gel Cream	https://kyliecosmetics.com/en-ca/collections/kylie-skin-face-moisturizers/products/mini-clarifying-gel-cream?variant=43927624351986
Fast Beauty	Kylie Cosmetics	Face Moisturizer	https://kyliecosmetics.com/en-ca/collections/kylie-skin-face-moisturizers/products/face-moisturizer?variant=43927614193906
Fast Beauty	NYX Cosmetics	FACE FREEZIE COOLING PRIMER + MOISTURIZER	https://www.nyxcosmetics.ca/en/face-freezie-cooling-primer-moisturizer-NYX_1052.html
Fast Beauty	Revolution Beauty	Revolution Skincare Ultimate Skin Strength Daily Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-ultimate-skin-strength-daily-moisturizer/1621427.html
Fast Beauty	Revolution Beauty	Revolution Skincare x Sali Hughes Gel Quench Light Anytime Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-x-sali-hughes-gel-quench-light-anytime-moisturizer/1526708.html
Fast Beauty	Revolution Beauty	Revolution Skincare Watermelon Hydrating Gel Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-watermelon-hydrating-gel-moisturizer/1262859.html
Fast Beauty	Revolution Beauty	Revolution Skincare Bakuchiol Toning Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-bakuchiol-toning-moisturizer/1262866.html
Fast Beauty	Revolution Beauty	Revolution Skincare Hyaluronic Acid Hydrating Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-hyaluronic-acid-hydrating-moisturizer/1262842.html
Fast Beauty	Revolution Beauty	Revolution Skincare Cica Comfort Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-cica-comfort-moisturizer/1617987.html
Fast Beauty	Revolution Beauty	Revolution Skincare SPF50 Daily Defender Lightweight Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-spf50-daily-defender-lightweight-moisturizer/1417334.html
Fast Beauty	Revolution Beauty	Revolution Skincare Vitamin E & B3 Hydrating Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-vitamin-e-and-b3-hydrating-moisturizer/1670357.html
Fast Beauty	Revolution Beauty	Revolution Skincare Hyaluronic Acid Hydrating Gel Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-hyaluronic-acid-hydrating-gel-moisturizer/1631563.html
Fast Beauty	Revolution Beauty	Revolution Skincare Vitamin C Glow Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-vitamin-c-glow-moisturizer/1631600.html
Fast Beauty	Revolution Beauty	Revolution Skincare x Sali Hughes Cream Drench Rich Anytime Moisturiser	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-x-sali-hughes-cream-drench-rich-anytime-moisturiser/1759861.html
Fast Beauty	Revolution Beauty	Revolution Skincare Collagen Boosting Moisturizer	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-collagen-boosting-moisturizer/1621403.html
Fast Beauty	Revolution Beauty	Revolution Skincare Salicylic Acid & Zinc PCA Gel Cream	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-salicylic-acid-and-zinc-pca-gel-cream/1631624.html

Fast Beauty	Revolution Beauty	Revolution Pro Miracle Cream	https://www.revolutionbeauty.com/us/us/makeup/face/makeup-primer/revolution-pro-miracle-cream/1694681.html
Fast Beauty	Revolution Beauty	Revolution Skincare Ceramides Moisture Lotion	https://www.revolutionbeauty.com/us/us/skincare/moisturizers/revolution-skincare-ceramides-moisture-lotion/1692885.html
Fast Beauty	Winky Lux	Rose Moringa Facial Oil	https://winkylux.com/collections/skincare/products/rose-moringa-facial-oil
Fast Beauty	Winky Lux	Mermaid Moisture Hydrating Face Lotion	https://winkylux.com/collections/skincare/products/mermaid-moisture-hydrating-face-lotion
Sustainability-Oriented	Alpyn Beauty	Super Peptide & Ghostberry Moisturizer	https://alpynbeauty.com/products/super-peptide-ghostberry?variant=43859905970388
Sustainability-Oriented	Alpyn Beauty	Melt Moisturizer with Bakuchiol and Squalane	https://alpynbeauty.com/products/facial-moisturizer?variant=45524118536404
Sustainability-Oriented	Aveda	botanical kinetics™ oil control lotion	https://www.aveda.com/product/6743/52485/skincare/moisturizer/botanical-kinetics-oil-control-lotion?size=1.7_fl_oz%2F50_ml
Sustainability-Oriented	Aveda	tulasara™ renewing radiance creme	https://www.aveda.com/product/6743/77164/skincare/moisturizer/tulasara-renewing-radiance-creme?size=1.7_fl_oz%2F50_ml
Sustainability-Oriented	Aveda	botanical kinetics™ all-sensitive™ lotion	https://www.aveda.com/product/6743/46724/skincare/moisturizer/botanical-kinetics-all-sensitive-lotion?size=5_fl_oz%2F150_ml
Sustainability-Oriented	Aveda	botanical kinetics™ hydrating lotion	https://www.aveda.com/product/6743/16663/skincare/moisturizer/botanical-kinetics-hydrating-lotion?size=5_fl_oz%2F150_ml
Sustainability-Oriented	Aveda	botanical kinetics™ intense hydrating rich creme	https://www.aveda.com/product/6743/34714/skincare/moisturizer/botanical-kinetics-intense-hydrating-rich-creme?size=1.7_fl_oz%2F50_ml
Sustainability-Oriented	Aveda	inner light™ mineral tinted moisture	https://www.aveda.com/product/5335/58644/makeup/face/inner-light-mineral-tinted-moisture?shade=01%2FAspen
Sustainability-Oriented	Aveda	botanical kinetics™ intense hydrating soft creme	https://www.aveda.com/product/6743/34713/skincare/moisturizer/botanical-kinetics-intense-hydrating-soft-creme?size=1.7_fl_oz%2F50_ml
Sustainability-Oriented	Cocoon Apothecary	Rosey Cheeks Facial Cream	https://cocoonapothecary.com/products/rosey-cheeks-facial-cream
Sustainability-Oriented	Cocoon Apothecary	Orange Blossom Facial Cream	https://cocoonapothecary.com/products/orange-blossom-facial-cream-oily-skin
Sustainability-Oriented	Iliia Beauty	The Base Face Milk	https://iliibeauty.com/en-ca/products/the-base-face-milk-essence-lightweight-moisturizer
Sustainability-Oriented	Lush	Skin Drink (Preserved)	https://www.lush.com/ca/en_ca/p/skin-drink-moisturiser
Sustainability-Oriented	Lush	Celestial	https://www.lush.com/ca/en_ca/p/celestial-moisturiser
Sustainability-Oriented	Lush	Skin's Shangri La Self-Preserving	https://www.lush.com/ca/en_ca/p/skins-shangri-la-self-preserving-moisturiser
Sustainability-Oriented	Lush	Vanishing Cream Self-Preserving	https://www.lush.com/ca/en_ca/p/vanishing-cream-self-preserving-moisturiser
Sustainability-Oriented	Lush	Cosmetic Lad Self-Preserving	https://www.lush.com/ca/en_ca/p/cosmetic-lad-self-preservingmoisturiser
Sustainability-Oriented	Lush	Celestial Self-Preserving	https://www.lush.com/ca/en_ca/p/celestial-self-preserving-moisturiser
Sustainability-Oriented	Lush	Gorgeous Self-Preserving	https://www.lush.com/ca/en_ca/p/gorgeous-self-preservingmoisturiser

Sustainability-Oriented	Lush	Enzymion Self-Preserving	https://www.lush.com/ca/en_ca/p/enzymion-self-preserving-moisturiser
Sustainability-Oriented	Lush	Skin Drink Self-Preserving	https://www.lush.com/ca/en_ca/p/skin-drink-self-preserving-moisturiser
Sustainability-Oriented	Lush	Peace	https://www.lush.com/ca/en_ca/p/peace-moisturiser
Sustainability-Oriented	Lush	Enzymion (Preserved)	https://www.lush.com/ca/en_ca/p/enzymion-moisturiser
Sustainability-Oriented	Lush	Cosmetic Lad (Preserved)	https://www.lush.com/ca/en_ca/p/cosmetic-lad-moisturiser
Sustainability-Oriented	Lush	Vanishing Cream (Preserved)	https://www.lush.com/ca/en_ca/p/vanishing-cream-moisturiser
Sustainability-Oriented	Lush	Skin Drink (Preserved)	https://www.lush.com/ca/en_ca/p/skin-drink-moisturiser
Sustainability-Oriented	Lush	Gorgeous	https://www.lush.com/ca/en_ca/p/gorgeous-moisturiser
Sustainability-Oriented	Sunday Riley	C.E.O. Afterglow	https://sundayriley.com/products/c-e-o-afterglow-brightening-vitamin-c-gel-cream
Sustainability-Oriented	Sunday Riley	Ice	https://sundayriley.com/products/ice-ceramide-moisturizing-cream
Sustainability-Oriented	Sunday Riley	C.E.O.	https://sundayriley.com/products/ceo-antioxidant-moisturizer
Sustainability-Oriented	Tata Harper	Calming Crème	https://tataharperskincare.com/collections/moisturizers/products/calming-creme
Sustainability-Oriented	Tata Harper	Illuminating Moisturizer	https://tataharperskincare.com/collections/moisturizers/products/illuminating-moisturizer?variant=44885476606236
Sustainability-Oriented	Tata Harper	Water Lock Moisturizer	https://tataharperskincare.com/collections/moisturizers/products/water-lock-moisturizer
Sustainability-Oriented	Tata Harper	Crème Riche	https://tataharperskincare.com/collections/moisturizers/products/creme-riche
Sustainability-Oriented	Tata Harper	Superkind Fortifying Moisturizer	https://tataharperskincare.com/collections/moisturizers/products/superkind-fortifying-moisturizer
Sustainability-Oriented	Tata Harper	Repairative Moisturizer	https://tataharperskincare.com/collections/moisturizers/products/repairative-moisturizer
Sustainability-Oriented	Tata Harper	Hyaluronic Gel Moisturizer	https://tataharperskincare.com/collections/moisturizers/products/hyaluronic-gel-moisturizer
Sustainability-Oriented	The Body Shop	Vitamin E Moisture Day Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/vitamin-e-moisture-day-cream/p/p146003
Sustainability-Oriented	The Body Shop	Vitamin C Glow-Boosting Moisturizer	https://www.thebodyshop.com/en-ca/face/moisturizers/vitamin-c-glow-boosting-moisturizer/p/p111000
Sustainability-Oriented	The Body Shop	Vitamin E Moisture Gel Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/vitamin-e-moisture-gel-cream/p/p146002
Sustainability-Oriented	The Body Shop	Edelweiss Intense Smoothing Day Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/edelweiss-intense-smoothing-day-cream/p/p093008
Sustainability-Oriented	The Body Shop	Vitamin C Glow Boosting Intense Moisturizer	https://www.thebodyshop.com/en-ca/face/moisturizers/vitamin-c-glow-boosting-intense-moisturizer/p/p184007
Sustainability-Oriented	The Body Shop	Edelweiss Smoothing Day Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/edelweiss-smoothing-day-cream/p/p093001

Sustainability-Oriented	The Body Shop	Aloe Soothing Day Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/aloe-soothing-day-cream/p/p147001
Sustainability-Oriented	The Body Shop	Vitamin E Intense Moisture Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/vitamin-e-intense-moisture-cream/p/p146001
Sustainability-Oriented	The Body Shop	Aloe Soothing Night Cream	https://www.thebodyshop.com/en-ca/face/night-care/aloe-soothing-night-cream/p/p147002
Sustainability-Oriented	The Body Shop	Green Tea & Lemon Mattifying Moisturizer for Men	https://www.thebodyshop.com/en-ca/face/moisturizers/green-tea-lemon-mattifying-moisturizer-for-men/p/p002832
Sustainability-Oriented	The Body Shop	Oils Of Life™ Sleeping Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/oils-of-life-sleeping-cream/p/p073001
Sustainability-Oriented	The Body Shop	Aloe Multi-use Soothing Face & Body Gel	https://www.thebodyshop.com/en-ca/face/moisturizers/aloe-multi-use-soothing-face-body-gel/p/p147004
Sustainability-Oriented	The Body Shop	Guarana and Coffee Energizing Moisturizer For Men	https://www.thebodyshop.com/en-ca/face/moisturizers/guarana-and-coffee-energizing-moisturizer-for-men/p/p002834
Sustainability-Oriented	The Body Shop	Oils Of Life™ Intensely Revitalizing Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/oils-of-life-intensely-revitalizing-cream/p/p087006
Sustainability-Oriented	The Body Shop	Tea Tree Skin Clearing Hydrator	https://www.thebodyshop.com/en-ca/face/moisturizers/tea-tree-skin-clearing-hydrator/p/p167007
Sustainability-Oriented	The Body Shop	Edelweiss Smoothing Day Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/edelweiss-smoothing-day-cream/p/p093001
Sustainability-Oriented	The Body Shop	Seaweed Oil-Control Gel Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/seaweed-oil-control-gel-cream/p/p142038
Sustainability-Oriented	The Body Shop	Vitamin E Nourishing Night Cream	https://www.thebodyshop.com/en-ca/face/moisturizers/vitamin-e-nourishing-night-cream/p/p146007
Sustainability-Oriented	Upcircle	Face Moisturizer with Vitamin E	https://us.upcirclebeauty.com/products/vegan-face-moisturizer
Sustainability-Oriented	Upcircle	Night Cream with Hyaluronic Acid + Niacinamide	https://us.upcirclebeauty.com/products/night-cream-with-hyaluronic-acid
Sustainability-Oriented	Weleda	Skin Food Light Nourishing Cream	https://www.weleda.com/product/skin-food-light-nourishing-cream-g007756
Sustainability-Oriented	Weleda	Plumping Day Cream	https://www.weleda.com/product/plumping-day-cream-g006220
Sustainability-Oriented	Weleda	Hydrating Day Cream - Iris	https://www.weleda.com/product/hydrating-day-cream---iris-g008876
Sustainability-Oriented	Weleda	Sensitive Care Facial Cream - Almond	https://www.weleda.com/product/sensitive-care-facial-cream---almond-g008600
Sustainability-Oriented	Weleda	Hydrating Lotion - Iris	https://www.weleda.com/product/hydrating-lotion---iris-g008175
Sustainability-Oriented	Weleda	Renewing Lotion - Wild Rose	https://www.weleda.com/product/renewing-lotion---wild-rose-g008687
Sustainability-Oriented	Weleda	Skin Food Face Care Nourishing Night Cream	https://www.weleda.com/product/skin-food-face-care-nourishing-night-cream-g006611

Sustainability-Oriented	Weleda	Renewing Night Cream - Wild Rose	https://www.weleda.com/product/renewing-night-cream---wild-rose-g008601
Sustainability-Oriented	Weleda	Hydrating Night Cream - Iris	https://www.weleda.com/product/hydrating-night-cream---iris-g008026
Sustainability-Oriented	Weleda	Plumping Night Cream	https://www.weleda.com/product/plumping-night-cream-g006222
Sustainability-Oriented	Weleda	Skin Food Original Ultra-Rich Cream - Small	https://www.weleda.com/product/skin-food-original-ultra-rich-cream---small-g9864
Sustainability-Oriented	Weleda	Skin Food Light Nourishing Cream - Small	https://www.weleda.com/product/skin-food-light-nourishing-cream---small-g7755
Sustainability-Oriented	Weleda	Sheer Hydration Daily Dew Lotion	https://www.weleda.com/product/sheer-hydration-daily-dew-lotion-g006442
Sustainability-Oriented	Weleda	Sheer Hydration Daily Crème	https://www.weleda.com/product/sheer-hydration-daily-creme-g4001638523219
Sustainability-Oriented	Weleda	Rejuvenating Day Cream	https://www.weleda.com/product/rejuvenating-day-cream-g006820
Sustainability-Oriented	Weleda	Skin Food Face Care Nourishing Day Cream	https://www.weleda.com/product/skin-food-face-care-nourishing-day-cream-g006610
Sustainability-Oriented	Weleda	Sensitive Care Facial Lotion - Almond	https://www.weleda.com/product/sensitive-care-facial-lotion---almond-g008688
Sustainability-Oriented	Weleda	Deep Moisture Facial Balm	https://www.weleda.com/product/deep-moisture-facial-balm-g008187
Sustainability-Oriented	Weleda	Rejuvenating Night Cream	https://www.weleda.com/product/rejuvenating-night-cream-g006821

Step 3: Mystery shopping and content analysis procedure

Mystery shopping involved visiting the official Canadian websites of each selected brand and navigating to individual product pages for lipsticks and moisturizers. Product pages were evaluated for both visual and textual elements, including marketing messages, product descriptions, and multimedia content (e.g., images, videos). Each product was documented through screenshots and manually entered into a data spreadsheet at the time of analysis. Figures A.3 and A.4 provide sample of mystery shopping on a lipstick and moisturizer.

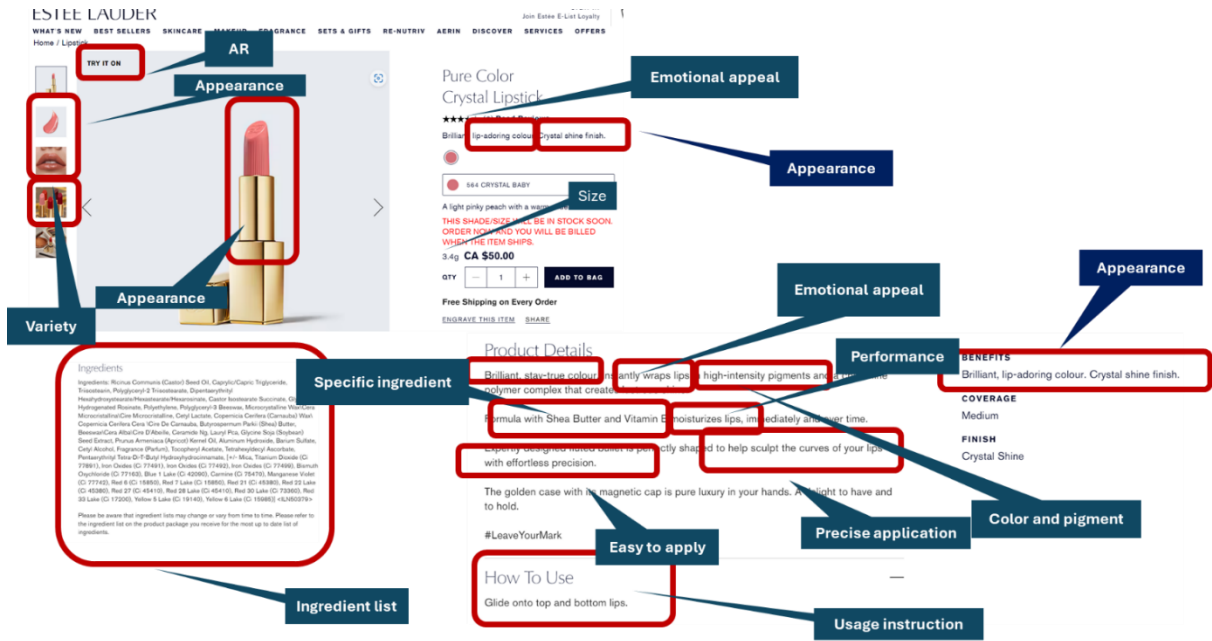


Figure A.3: Sample of mystery shopping on a lipstick product

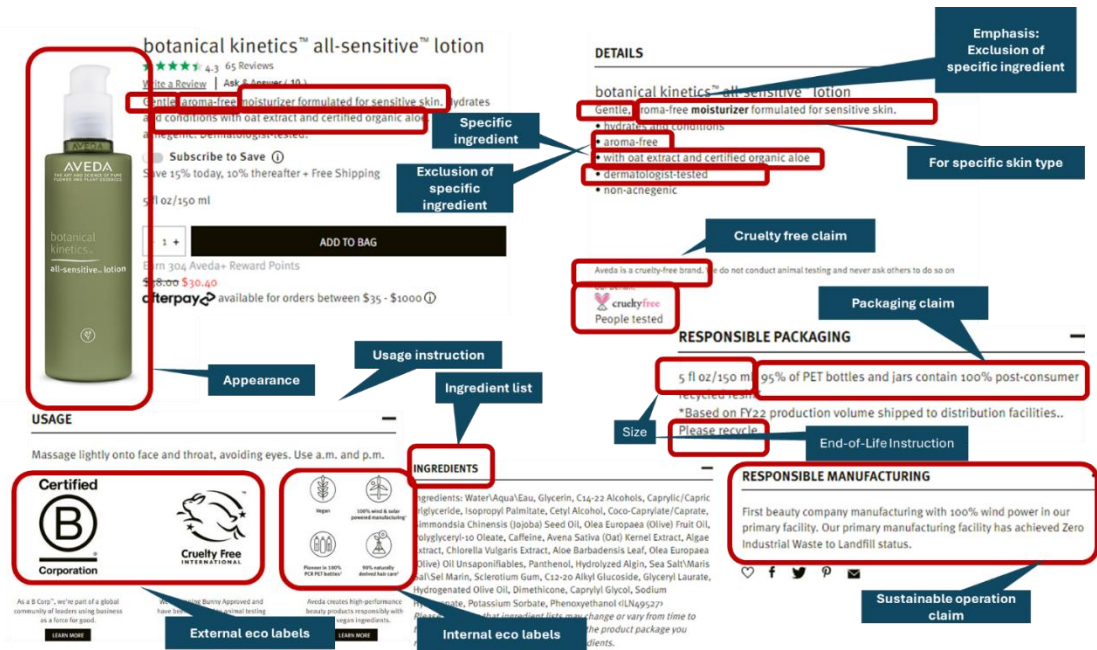


Figure A.4: Sample of mystery shopping on a moisturizer product

The following questions guided the mystery shopping process and content analysis for each product page. These questions were developed based on the theoretical frameworks and key themes identified in the literature on sustainability communication and inclusive marketing. They

served to structure the systematic observation of both visual and textual elements, allowing for consistent documentation of how brands present environmental and social responsibility. The questions also ensured that comparable data could be collected across a diverse range of products, brands, and brand categories. To enhance the reliability of the coding process, a portion of the data was independently coded by two second researcher familiar with the coding scheme. The results were then compared to identify any discrepancies and refine category definitions where necessary. Minor inconsistencies were resolved through discussion, ensuring consistency in the interpretation and application of the codes. This process contributed to greater coding clarity and analytical rigor across the full dataset.

Questions related to lipstick:

Start of Block: Default questions

For online communication, what is the URL of the product webpage?

Which list is the brand of product from?

- A
- B
- C

What is the brand?

- L'Oreal Paris
 - Revlon
 - Avon
 - Cover girl
 - Maybelline
 - Estee Lauder
 - M.A.C
 - bareMinerals
 - Fenty Beauty
 - Urban Decay
 - Glossier
 - Nars
-

What is the brand?

- Colour Pop
 - Kylie Cosmetics
 - E.L.F. Cosmetics
 - Winky Lux
 - BH Cosmetics
 - Lime Crime
 - Milk make-up
 - NYX
 - Sheglam
 - H&M
 - Essence Cosmetics
-

What is the brand?

- Tata Harper
- Ilia
- The Body Shop
- Axiology
- Clarins
- Lush
- Kjaer Weis
- Zakiella
- Elate
- Wellpeople
- Cheekbone
- Gabriel
- Aleph
- RMS beauty
- Juice beauty
- 100% Pure
- La bouche rouge
- highrcollective
- Dab Herb
- Saie

End of Block: Default questions

Start of Block: Product title

What is the product description title?

What is the date today?

	Month	Day	Year
Please Select:	▼ January ... December	▼ 1 ... 31	▼ 2024 ... 2049

End of Block: Product title

Start of Block: Price and size/ Transparency

How many sizes of the product are available?

- One
 - Two
 - Three or more
-

From here, we look at the smallest size available. Is the price indicated?

- Yes
 - No
-

What is the price?

Is the size mentioned?

- Yes
- No
- Not applicable

What is the size (gr)?

What is the unit (1 gr) price (CAD)?

Where is the country of origin?

- France
 - Canada
 - Mexico
 - USA
 - Japan
 - China
 - Spain
 - Brazil
 - Not applicable
 - Not indicated
 - Other _____
-

Is there any indication about ingredients origin?

- Yes
 - No
-

Is the expiry indicated?

- Yes
- No
- Not applicable

Is the product ingredients list available?

Yes

No

Does the communication channel provide usage instructions?

Yes

No

Does the description provide consumers' review claim?

Yes

No

Does the description provide consumers' review stars?

Yes

No

End of Block: Price and size/ Transparency

Start of Block: Multi-media

Is there an image available?

Yes

No

What is the image of?

Product

Person

Both, product and person

Other _____

What are the main aspects communicated through the image? (can select multiple)

- Performance
 - Appearance and color
 - Emotional appeal
 - Inclusion and diversity
 - Inclusion of certain ingredients
 - Dermatologist tested
 - Celebrity favourite
 - Variety
 - Media endorsement
 - Other _____
-

What does the image communicate? Rank according to the most communicated one.

	Slightly emphasized	Moderately emphasized	Highly emphasized
Performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appearance and color	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional appeal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inclusion and diversity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inclusion of certain ingredient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dermatologist tested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Celebrity favourite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Variety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Media endorsement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Is there a video available that is specific to the product?

Yes

No

What are the main aspects communicated through the video? (can select multiple)

Performance

Appearance and color

Emotional appeal

Inclusion and diversity

Application

Dermatologist tested

Celebrity favourite

Other _____



What does the video communicate? Rank according to the most communicated one.

	Slightly emphasized ⁷	Moderately emphasized ⁸	Highly emphasized ⁹
Performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appearance and color	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional appeal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inclusion and diversity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Application	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dermatologist tested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Celebrity favourite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Is augmented reality available on the website?

Yes

No

⁷ Mentioned once

⁸ Mentioned twice

⁹ Mentioned three times or more

Does the product have any themes?

Yes

No

End of Block: Multi-media

Start of Block: Description

As a cosmetic product, what are the main features communicated in the description? (multiple answers allowed)

- Performance
 - Appearance
 - Emotional Appeal
 - Dermatologist Tested
 - Ethical and Sustainable Practices
-

- Trendy and Innovative
 - Inclusion of specific ingredient
 - Absence of Certain Ingredient
 - Consumer tested
 - Easy to apply
 - Celebrity favourite
 - Best seller or customer favourite
 - Media endorsement
 - Other _____
-

Rank according to the message emphasized in the communication (as a general cosmetic product).

	Slightly emphasized	Moderately emphasized	Highly emphasized
Performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional Appeal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dermatologist Tested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ethical and Sustainable Practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trendy and Innovative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inclusion of specific ingredient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Absence of Certain Ingredient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumer tested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Easy to apply	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Celebrity favourite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Best seller or customer favourite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Media endorsement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

As a lipstick, what are the main features communicated in the description? (multiple answers allowed)

- Color Intensity and Pigmentation
 - Comfortable Texture
 - Precise Application
 - Diverse color shades
 - Shades for diverse skin tones
 - Long lasting
 - Moisturizing
 - No drying
 - Plumper and fuller look
 - Transfer resistance
 - Other _____
-

Rank according to the message that is emphasized about the lipstick.

	Slightly emphasized	Moderately emphasized	Highly emphasized
Color Intensity and Pigmentation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comfortable Texture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Precise Application	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diverse color shades	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shades for diverse skin tones	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long lasting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moisturizing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No drying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plumper and fuller look	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transfer resistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Does the brand have any awards?

Yes

No

What category is the award in?

Industrial

Environmental

Other _____

What is the title of the award?

End of Block: Description

Start of Block: Diversity and Inclusivity

Do you observe diversity and inclusivity in communication?

Yes

No

Which categories of DI do you observe?

Shade Range

Gender Inclusivity

Accessibility (indicate about product or communication)

Cultural Diversity

Model Diversity (image)

Focus on realistic portrayals rather than certain beauty standards

Other

Which categories are more emphasized?

	Slightly emphasized	Moderately emphasized	Highly emphasized
Shade Range	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gender Inclusivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accessibility (indicate about product or communication)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultural Diversity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model Diversity (image)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focus on realistic portrayals rather than certain beauty standard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Diversity and Inclusivity

Start of Block: Ethical and environmental claims

Which of the following eco, health or social claims are made about the product?

	Yes	No
Organic	<input type="checkbox"/>	<input type="checkbox"/>
Vegan	<input type="checkbox"/>	<input type="checkbox"/>
Natural	<input type="checkbox"/>	<input type="checkbox"/>
Safe ingredients	<input type="checkbox"/>	<input type="checkbox"/>
Clean	<input type="checkbox"/>	<input type="checkbox"/>
Ethically sourced/fair trade	<input type="checkbox"/>	<input type="checkbox"/>
Cruelty-free	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>

To what extent does it say it is organic?

- All
 - Some
 - Not indicated
-

To what extent does it say it is natural?

- All
 - Some
 - Not indicated
-

Does the brand claim it is ingredient-safe?

- To health
- To planet
- To both
- Doesn't say

End of Block: Ethical and environmental claims

Start of Block: Product end-of-life

How is packaging?

- Recycled material
 - Partially recycled material
 - Recyclable material
 - Partially recyclable material
 - Minimal packaging
 - Both, Recycled and Recyclable
 - Refillable
 - Other _____
 - No information
-

Is there any recycling program indicated?

- Yes
 - No
-

What is the recycling program?

- TerraCycle
 - PACT
 - Other _____
-

Does it communicate disposal instruction?

- Yes - packaging
- Yes - contents
- Yes - packaging and contents
- No information is provided

End of Block: Product end-of-life

Start of Block: Eco-labels

Does the product have an label/ certification?

- Yes
 - No
-

Does the lipstick product bear any labels/certifications from the following list? Select if it is external or internal.

	External	Internal
Vegan	<input type="checkbox"/>	<input type="checkbox"/>
Organic	<input type="checkbox"/>	<input type="checkbox"/>
Fairtrade	<input type="checkbox"/>	<input type="checkbox"/>
1% for the Planet	<input type="checkbox"/>	<input type="checkbox"/>
Leaping Bunny	<input type="checkbox"/>	<input type="checkbox"/>
Peta	<input type="checkbox"/>	<input type="checkbox"/>
Clean	<input type="checkbox"/>	<input type="checkbox"/>
Vegan Society	<input type="checkbox"/>	<input type="checkbox"/>
B Corporation	<input type="checkbox"/>	<input type="checkbox"/>
Fair trade certified	<input type="checkbox"/>	<input type="checkbox"/>
EWG verified	<input type="checkbox"/>	<input type="checkbox"/>
American Vegetarian Society	<input type="checkbox"/>	<input type="checkbox"/>
FSC	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>
Other 2	<input type="checkbox"/>	<input type="checkbox"/>

End of Block: Eco-labels

Start of Block: Greenwashing

Do you observe greenwashing?

Yes

No

Which greenwashing sin?

Hidden trade-off _____

No proof _____

Vagueness _____

Worshiping false labels

Irrelevance _____

Lesser of two evils _____

Fibbing _____

Include other observations here

End of Block: Greenwashing

Questions related to moisturizers:

Start of Block: Default Question Block

For online communication, what is the URL of the product webpage?

Which list is the brand of product from?

A

B

C

What is the brand?

L'Oreal Paris

Avon

Cover girl

Estee Lauder

M.A.C

bareMinerals

Fenty Beauty

Glossier

Nars

What is the brand?

- Colour Pop
 - Kylie Cosmetics
 - E.L.F. Cosmetics
 - Winky Lux
 - BH Cosmetics
 - The ordinary
 - NYX
 - H&M
 - Revolution beauty
-

What is the brand?

- upcircle beauty
- Weleda
- Albyn
- Tata Harper
- Aveda
- Ilia
- The Body Shop
- Sunday Riley
- Cocoon Apothecary
- Lush

End of Block: Default Question Block

Start of Block: Product title

What is the product description title?

What is the date today?

	Month	Day	Year
Please Select:	▼ January ... December	▼ 1 ... 31	▼ 2024 ... 2049

End of Block: Product title

Start of Block: Price and size/ Transparency

How many sizes of the product are available?

- One
 - Two
 - Three or more
-

From here, we look at the smallest size available. Is the price indicated?

- Yes
 - No
-

What is the price?

Is the size mentioned?

- Yes
 - No
 - Not applicable
-

What is the size (ml)?

What is the unit (1 ml) price (CAD)?

Where is the country of origin?

France

Canada

Mexico

USA

Japan

China

Spain

Brazil

Not applicable

Not indicated

Other _____

Is there any indications about ingredients origin?

Yes

No

Is the product ingredients list available?

- Yes
 - No
-

Is the expiry indicated?

- Yes
 - No
 - Not applicable
-

Does the communication channel provide usage instructions?

- Yes
 - No
-

Does the description provide consumers' review claim?

- Yes
 - No
-

Does the description provide consumers' review stars?

- Yes
- No

End of Block: Price and size/ Transparency

Start of Block: Multi-media

Is there an image available?

Yes

No

What is the image of?

Product

Person

Both, product and person

Other _____

What are the main aspects communicated through the image? (can select multiple)

- Performance
- Appearance
- Emotional appeal
- Inclusion and diversity
- Inclusion of certain ingredients
- Dermatologist tested
- Celebrity favourite
- Variety
- Sustainability and ethical practices

Media endorsement

Other _____

What does the image communicate? Rank according to the most communicated one.

	Slightly emphasized	Moderately emphasized	Highly emphasized
Performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional appeal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inclusion and diversity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inclusion of certain ingredient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dermatologist tested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Celebrity favourite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Variety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainability and ethical practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Media endorsement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Is there a video available that is specific to the product?

Yes

No

What are the main aspects communicated through the video? (can select multiple)

- Performance
- Appearance
- Emotional appeal
- Inclusion and diversity
- Application
- Dermatologist tested
- Celebrity favourite
- Sustainability and ethical practices

Media endorsement

Other _____

What does the video communicate? Rank according to the most communicated one.

	Slightly emphasized	Moderately emphasized	Highly emphasized
Performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional appeal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inclusion and diversity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Application	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dermatologist tested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Celebrity favourite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainability and ethical practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Media endorsement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Is augmented reality available on the website?

Yes

No

Does the product have any themes?

Yes

No

End of Block: Multi-media

Start of Block: Description

As a cosmetic product, what are the main features communicated in the description? (multiple answers allowed)

- Performance
 - Appearance
 - Emotional Appeal
 - Dermatologist Tested
 - Ethical and Sustainable Practices
-
- Trendy and Innovative
 - Inclusion of specific ingredient
 - Absence of Certain Ingredient
 - Consumer tested
 - Easy to apply
 - Celebrity favourite
 - Best seller or customer favourite
 - Media endorsement
 - Multi-tasking
 - Other _____
-

Rank according to the message emphasized in the communication (as a general cosmetic product).

	Slightly emphasized	Moderately emphasized	Highly emphasized
Performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional Appeal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dermatologist Tested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ethical and Sustainable Practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trendy and Innovative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inclusion of specific ingredient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Absence of Certain Ingredient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumer tested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Easy to apply	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Celebrity favourite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Best seller or customer favourite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Media endorsement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multi-tasking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

As a moisturizer, what are the main features communicated in the description? (multiple answers allowed)

- Hydration and moisturizing
- Comfortable to wear
- Texture
- Absorption
- Anti aging
- Firming or lifting
- Protection (UV or environmental condition)
- For an age group
- For a certain type of skin
- Day or/and night cream
- Brightening
- Cell renewal or exfoliating
- Treatment of specific skin conditions
- Other _____

Rank according to the message that is emphasized about the moisturizer.

	Slightly emphasized	Moderately emphasized	Highly emphasized
Hydration and moisturizing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comfortable to wear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Texture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Absorption	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anti aging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Firming or lifting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Protection (UV or environmental condition)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For an age group	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For a certain type of skin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Day or/and night cream	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brightening	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cell renewal or exfoliating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Treatment of specific skin conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Does the brand have any awards?

Yes

No

What category is the award in?

Industrial

Environmental

Other _____

What is the title of the award?

End of Block: Description

Start of Block: Diversity and Inclusivity

Do you observe diversity and inclusivity in communication?

Yes

No

Which categories of DI do you observe?

- Gender Inclusivity
 - Accessibility (indicate about product or communication)

 - Cultural diversity
 - Model Diversity (image)
 - Focus on realistic portrayals rather than certain beauty standards
 - Other
-

Which categories are more emphasized?

	Slightly emphasized	Moderately emphasized	Highly emphasized
Gender Inclusivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accessibility (indicate about product or communication)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultural Sensitivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model Diversity (image)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focus on realistic portrayals rather than certain beauty standard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Skin tones	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Diversity and Inclusivity

Start of Block: Ethical and environmental claims

Which of the following eco, health or social claims are made about the product?

	Yes	No
Organic	<input type="checkbox"/>	<input type="checkbox"/>
Vegan	<input type="checkbox"/>	<input type="checkbox"/>
Natural	<input type="checkbox"/>	<input type="checkbox"/>
Safe ingredients	<input type="checkbox"/>	<input type="checkbox"/>
Clean	<input type="checkbox"/>	<input type="checkbox"/>
Ethically sourced/fair trade	<input type="checkbox"/>	<input type="checkbox"/>
Cruelty-free	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>

To what extent does it say it is organic?

- All
 - Some
 - Not indicated
-

To what extent does it say it is natural?

- All
 - Some
 - Not indicated
-

Does the brand claim it is ingredient-safe?

- To health
- To planet
- To both
- Doesn't say

End of Block: Ethical and environmental claims

Start of Block: Product end-of-life

How is packaging?

- Recycled material
 - Partially recycled material
 - Recyclable material
 - Partially recyclable material
 - Minimal packaging
 - Both, Recycled and Recyclable
 - Refillable
 - Other _____
 - No information
-

Is there any recycling program indicated?

- Yes
 - No
-

What is the recycling program?

- TerraCycle
 - PACT
 - Other _____
-

Does it communicate disposal instruction?

- Yes - packaging
- Yes - contents
- Yes - packaging and contents
- No information is provided

End of Block: Product end-of-life

Start of Block: Eco-labels

Does the product have an label/certification?

- Yes
 - No
-

Does the moisturizer product bear any labels from the following list? Select if it is external or internal.

	External	Internal
Vegan	<input type="checkbox"/>	<input type="checkbox"/>
Organic	<input type="checkbox"/>	<input type="checkbox"/>
Fairtrade	<input type="checkbox"/>	<input type="checkbox"/>
1% for the Planet	<input type="checkbox"/>	<input type="checkbox"/>
Leaping Bunny	<input type="checkbox"/>	<input type="checkbox"/>
Peta	<input type="checkbox"/>	<input type="checkbox"/>
Clean	<input type="checkbox"/>	<input type="checkbox"/>
Vegan Society	<input type="checkbox"/>	<input type="checkbox"/>
B Corporation	<input type="checkbox"/>	<input type="checkbox"/>
Fair trade factory	<input type="checkbox"/>	<input type="checkbox"/>
EWG verified	<input type="checkbox"/>	<input type="checkbox"/>
American Vegetarian Association	<input type="checkbox"/>	<input type="checkbox"/>
American Vegan Association	<input type="checkbox"/>	<input type="checkbox"/>
FSC	<input type="checkbox"/>	<input type="checkbox"/>
COSMOS NATURAL	<input type="checkbox"/>	<input type="checkbox"/>
Natrue	<input type="checkbox"/>	<input type="checkbox"/>
Cruelty free	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>

End of Block: Eco-labels

Start of Block: Greenwashing

Do you observe greenwashing?

Yes

No

Which greenwashing sin?

Hidden trade-off _____

No proof _____

Vagueness _____

Worshipping false labels

Irrelevance _____

Lesser of two evils _____

Fibbing _____

Include other observations here

End of Block: Greenwashing

Step 4: Coding categories and criteria

The table A.5 outlines the coding scheme and criteria used to systematically assess the presence and emphasis of attributes, sustainability, and inclusion-related elements across the product pages. Each variable was assigned numerical or binary values to capture the degree of communication, the type of claims, or the visibility of specific attributes. This structured approach enabled consistent comparisons across brand categories, while also facilitating statistical analysis of patterns and associations in brand messaging.

Table A.5: Overview of variables and coding criteria used in the study

Variables	Codes/Values
Brand category	1= Leading; 2= Fast beauty; 3=Sustainable
What brand	1= L'Oreal Paris; 2= Revlon; 3= Avon; etc.
Size availability	Binary
Country of origin	1= France ; Canada= 2 ; 3= Mexico ; etc.
Ingredient origin	Binary
Expiry availability	Binary
Ingredients list availability	Binary
Usage instruction availability	Binary
Consumers' review claim availability	Binary
Image availability	Binary
Image of	1= Product; 2= Person; 3= Both, and qualitative notes
Aspects communicated in image	1= Performance; 2= Appearance; 3= Emotional appeal; and etc.
Degree of emphasis	0= not emphasized; 1= slightly emphasized (mentioned ones); 2= Moderately emphasized (mentioned twice); 3= Highly emphasized (mentioned three times or more)
Video availability	Binary
Aspects communicated in video	1= Performance; 2= Appearance; 3= Emotional appeal; and etc.

Degree of emphasis	0= not emphasized; 1= slightly emphasized (mentioned ones); 2= Moderately emphasized (mentioned twice); 3= Highly emphasized (mentioned three times or more)
Augmented reality availability	Binary
Aspects communicated in Description (as a cosmetic)	1= Performance; 2= Appearance; 3= Emotional appeal; and etc.
Degree of emphasis	0= not emphasized; 1= slightly emphasized (mentioned ones); 2= Moderately emphasized (mentioned twice); 3= Highly emphasized (mentioned three times or more)
Aspects communicated in Description (as a lipstick) ¹⁰	1= colour intensity and pigmentation; 2= comfortable texture; 3= precise application
Degree of emphasis ¹¹	0= not emphasized; 1= slightly emphasized (mentioned ones); 2= Moderately emphasized (mentioned twice); 3= Highly emphasized (mentioned three times or more)
Aspects communicated in Description (as a moisturizer) ¹²	1=hydration; 2= comfortable to wear; 3; Texture, etc.
Degree of emphasis ¹³	0= not emphasized; 1= slightly emphasized (mentioned ones); 2= Moderately emphasized (mentioned twice); 3= Highly emphasized (mentioned three times or more)
Award	Binary
Award category	1= industrial; 2= environmental; 3=other
Presence of diversity and inclusion	Binary
Dimension of diversity	1= shade range ¹⁴ ; 2= gender; 3=accessibility; and etc.
Degree of emphasis	0= not emphasized; 1= slightly emphasized (mentioned ones); 2= Moderately emphasized (mentioned twice); 3= Highly emphasized (mentioned three times or more)
Type of eco-claims	Binary for each: organic, vegan, natural, etc.
Extend of being organic	1= All; 2= Some; 3= Not indicated
Extend of being natural	1= All; 2= Some; 3= Not indicated
Safe to what	1= To health; 2= To planet; 3= To both; 4= Not indicated
Packaging:	1= Recycle material; 2= Partially recycled material; Recyclable material; and etc. and qualitative notes

¹⁰ For lipstick

¹¹ For lipstick

¹² For moisturizer

¹³ For moisturizer

¹⁴ For lipstick

Recycle program presence	Binary
Recycle program	1= TerraCycle; 2= PACT; qualitative notes
Disposal instruction	1=Yes, packaging; 2= content; 3= packaging and content; 4= no information
Labels/certifications presence	Binary
Label type:	Binary for each: Vegan, internal; Vegan Society. external; Organic, internal, etc.
Greenwashing presence	Binary
Greenwashing sin	Binary for each: Hidden trade-off; No proof; Vagueness, etc. and qualitative notes.
Observation:	Qualitative notes

Appendix B: Data organization and analysis

Step 1: Data sorting and cleaning

All statistical analyses were conducted using IBM SPSS 29 (SPSS Inc., Chicago, IL). The coded data were entered directly into SPSS for sorting, cleaning, and analysis. During the cleaning phase, the dataset was reviewed for inconsistencies and missing values, with only minor adjustments required. Once cleaned and properly labeled, the dataset was prepared for statistical analysis, ensuring reliability and consistency. The screenshot below (Figure B.1) provides a portion from the SPSS data file used in this study. Each row represents a single product (lipstick or moisturizer), and each column corresponds to a coded variable based on predefined categories such as product attributes, sustainability claims, labels or certifications, packaging features, diversity representation, and communication emphasis. The numerical coding enabled systematic comparison and statistical analysis across brand categories. This example illustrates how the data were organized, labeled, and prepared for analysis using SPSS.

Rec orde dDat	URL	BRAND_ LIST	BRAND_A	PROD_ TITLE	ORG ANIC	ORGANI C_TEXT	VEGAN	VEGAN _TEXT	NATURAL	NATURAL _TEXT	SAFE	SAFE_TO_H LTH_ENV	SAFE_ TEXT	CLEA N
19-Au...	https://www.avo...	1	3	Avon Sol...	2		2		2		2	0		2
25-Au...	https://www.avo...	1	3	Anew Pl...	2		2		2		2	0		2
25-Au...	https://www.avo...	1	3	Anew Sk...	2		2		2		2	0		2
25-Au...	https://www.avo...	1	3	Isa Knox...	2		2		2		2	0		2
25-Au...	https://www.avo...	1	3	belif The...	2		2		2		2	0		2
25-Au...	https://www.avo...	1	3	Anew Hy...	2		2		2		2	0		2
25-Au...	https://www.cov...	1	4	Clean Fr...	2		1		1		2	0		1
26-Au...	https://www.cov...	1	4	Clean Fr...	2		1		1		2	0		1
26-Au...	https://www.cov...	1	4	Clean Fr...	2		1		1		2	0		1
26-Au...	https://www.avo...	1	3	Isa Knox...	2		2		2		2	0		2
26-Au...	https://www.avo...	1	3	Anew Ult...	2		2		2		2	0		2
26-Au...	https://www.avo...	1	3	Beyond ...	2		2		2		2	0		2
27-Au...	https://www.avo...	1	3	belif The...	2		2		2		2	0		2
28-Au...	https://www.avo...	1	3	Isa Knox...	2		2		2		2	0		2
28-Au...	https://www.avo...	1	3	Isa Knox...	1		2		2		2	0		2
28-Au...	https://www.avo...	1	3	belif The...	2		2		2		2	0		2
29-Au...	https://www.avo...	1	3	Isa Knox...	2		2		2		2	0		2
29-Au...	https://www.avo...	1	3	Anew Ult...	2		2		2		2	0		2
29-Au...	https://www.avo...	1	3	Avon Sol...	2		2		2		2	0		2
30-Au...	https://www.lore...	1	1	Collagen...	2		2		2		2	0		2
30-Au...	https://www.lore...	1	1	Collagen...	2		2		1	"Natural Co...	2	0		2

Figure B.1: Sample of coded product-level data in SPSS

Step 2: Data analysis

Quantitative comparisons across brand categories were conducted using chi-square tests to identify statistically significant relationships between brand type and communication features. Cramér's V was used to assess the strength of associations. In addition, a Welch's ANOVA tests were conducted where appropriate to compare mean differences across brand categories. Qualitative observations were also noted during the coding process and used to enrich interpretation in the discussion sections of each manuscript.

To illustrate the analytical procedures used in this study, an example of the SPSS output is provided below (Figure B.2). This output represents one of the statistical tests conducted to examine the relationship between brand category and specific communication features. It demonstrates how coded variables were analyzed to identify significant patterns and associations across the dataset.

			Does it say product is clean?		
			Yes	No	Total
Which list is the product brand from?	A	Count	6	97	103
		% within Which list is the product brand from?	5.8%	94.2%	100.0%
	B	Count	12	52	64
		% within Which list is the product brand from?	18.8%	81.3%	100.0%
	C	Count	18	38	56
		% within Which list is the product brand from?	32.1%	67.9%	100.0%
Total	Count	36	187	223	
	% within Which list is the product brand from?	16.1%	83.9%	100.0%	

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.011 ^a	2	<.001
Likelihood Ratio	19.292	2	<.001
Linear-by-Linear Association	18.924	1	<.001
N of Valid Cases	223		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.04.

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.292	<.001
	Cramer's V	.292	<.001

Figure B.2: Sample of test result in SPSS

This detailed overview of the sampling, coding, data preparation, and analysis procedures is intended to provide transparency and support the replicability of the study. By combining systematic data collection with both qualitative observations and quantitative analysis, this approach offered a robust foundation for understanding how sustainability is communicated at the product level across

Appendix C: Sensitivity analysis

presents the results of the sensitivity analysis excluding ColourPop. The outputs are compared with the main analysis to demonstrate that results remain consistent.

Table C.1. Results of sensitivity analysis excluding ColourPop

Test	With ColourPop	Without ColourPop
Greenwashing rate – Leading brands	35.9%	35.9%
Greenwashing rate – Fast beauty	90.6%	89.8%
Greenwashing rate – Sustainable brands	67.9%	67.9%
Cramér's V (p -value)	0.479 (p -value <0.05)	0.467 (p -value <0.05)

Table C.2. Results of sensitivity analysis excluding ColourPop

Test	Not indicated with ColourPop	Not indicated without ColourPop
Transparency of country of origin – Leading brands	96%	96%
Transparency of country of origin – Fast beauty	92.9%	89.7%
Greenwashing rate – Sustainable brands	78.9%	78.9%
Cramér's V (p -value)	0.250 (p -value <0.001)	0.266 (p -value <0.001)

Table C.3. Results of sensitivity analysis excluding ColourPop

Test	With ColourPop	Without ColourPop
Inclusion of diversity rate – Leading brands	72.8%	72.8%
Inclusion of diversity rate – Fast beauty	87.5%	91.5%
Inclusion of diversity rate – Sustainable brands	85.7%	85.7%
Cramér's V (p -value)	0.174 (p -value <0.05)	0.210 (p -value <0.05)

Appendix D: Data collection protocols and training materials

D1. Mystery Shopping Protocol (Structured Guidelines)

Researchers followed a structured protocol to ensure consistency and replicability in data collection. The steps were:

- Navigate to the official brand website and identify the lipstick/facial moisturizer pages.
- Document all relevant product information directly visible to a consumer, including: basic product details (size, price, product description).
- Sustainability-related claims (e.g., vegan, cruelty-free, organic, natural).
- Labels and certifications (internal vs. third-party).
- Transparency indicators (e.g., ingredient list, country of origin, usage instructions, PAO).
- End-of-life communication (e.g., packaging recyclability, residue disposal).
- Visual and interactive features (e.g., images, , AR tools).
- Record all observations in the standardized coding sheet and repeat for all eligible products.
- Note any ambiguities or discrepancies in a shared log for later resolution.

This procedure ensured that every product was evaluated in the same way, simulating the perspective of a typical consumer browsing online.

D2. Researcher Training

To promote inter-rater consistency, researchers underwent a structured training process:

- Instruction: Researchers received detailed orientation on the coding framework, including definitions, coding rules, and illustrative examples.
- Practice Coding: Each researcher independently coded a small pilot sample of products (10–15 items).
- Calibration: Results were compared, and discrepancies were discussed in group sessions until consensus was achieved.
- Refinement: Based on the pilot, minor adjustments were made to coding instructions to ensure clarity.

This process ensured that all coders shared a consistent understanding of the categories and criteria prior to full data collection.