


Measuring and Communicating Product Impact in Marketing with Special Reference to Green Products

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Abstract: As consumer preferences increasingly shift toward sustainability, the marketing of green products has become a pivotal area of focus for businesses. Measuring and communicating the impact of green products is essential to ensure both environmental benefits and market success. This article explores the various methods for assessing the environmental and economic impact of green products, including lifecycle analysis (LCA), carbon footprint measurement, and consumer feedback mechanisms. It also examines the role of effective communication strategies in conveying these impacts to consumers, emphasizing transparency, trust, and the integration of sustainability credentials in marketing campaigns. Furthermore, the paper discusses the challenges faced by marketers in quantifying product impact and how innovative technologies and data analytics can support accurate reporting. The study concludes by offering recommendations for businesses to align their marketing strategies with sustainable practices, ensuring that green products not only meet consumer expectations but also contribute positively to environmental goals.

Keywords: reporting, environmental goals, cost effective communication, green marketing.

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1. Introduction

Green products are products that do not damage the environment and promote sustainable practices. The benefit of green products is that they help conserve energy by reducing the carbon footprint. It is a broad view that encompasses the design, development, and promotion of products designed to fulfil a consumer demand and possess the ecological power to satisfy that demand without harming the environment (Zulfiqar & Shafaat, 2015). Marketing can therefore significantly contribute in promoting the sales of traditional or green products. Green marketing focuses on the marketing that is aimed at paying attention to the intricate relationship between marketing, product impact, and impact on market development by increasing product selection and successfully meeting. Nature-based requirements may come from increasing concerns about the impact of pollution and deforestation on the environment or may consist of strategies to use recycling and new products that promote reduced energy use, water consumption, the reduction of raw material use and promotion of reusable products maintain. It has been shown that many customers link environmentally friendly products with a high price increase and that their price pre-sale products will negatively affect consumer demand and purchase interest and plan to share and exchange products with other users. There are important externalities with such products, which may lower the price of environmental aspects in the absence of competition or the absence of other market strategies.

The purpose of this paper is to measure and communicate the impact of products in green, which are independent research objects. Green marketer's behaviors, which directly affect the market and nature, are assessed with a fractional model based on the dynamics of vertical differentiation. If demand for environmentally friendly products is well beneath the environmental conscience of all the exclusive market segments is met, these are green purchasing products that do not try to purchase from any other components. Consider being fooled by the environmental quality of green purchases and all buyers are rewarded by a positive payback to the resale of product information. The market model is a lower-priced oligopoly with a discrete mass of marketers. Potential for green marketing for green product promotion can be expected.

2. Objectives

Marketing has been considered as not just a business function but an arena where societal beliefs and cultural values are cultivated and actually developed. It serves as a seismograph of societal changes and projects its implications on them. In the recent decades, new marketing development has been through environmentally augmented intentions from companies and consumers, due mainly to developing ecological issues and the expulsive follow-up of awareness and posture changes from consumers. One of the best shreds of that evidence is the quick upsurge in the natural/eco-friendly/organic bit of the assortment in promotion shelves for a few goods in the neighborhood, global, and e-commerce marketplaces.

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A research collaborative effort would shed insights on the contemporary scene of the green marketing domain in Bangladesh as required by the academia as well as by the business and marketing professionals in Bangladeshi Green Industry. A total of 1,351 customers in the neighborhood Bangladeshi consumers had been relatively analyzed concerning their landscapes and behavioural articles. This research, for this reason, distributed comments and recommendations too where relevant to notify the professionals and companies of Bangladeshi Natural Industry. At the same time, business professionals and corporations would get, to a certain addition, the prevalent landscape and the lifestyles associated with green buying in Bangladesh. Furthermore, directions were postulated for potential foreseeable future researches for academicians and research workers as the sector could be built on the strategy for progress from this study

3. Literature Review

The literature on measuring and communicating product impact in marketing, particularly in the context of green products, has evolved significantly over the past decade. This review will synthesize key findings from several important studies that collectively illuminate the complexities and advancements in green marketing strategies.

Starting with El Dief & Font, (2010), the authors emphasize the necessity for hotel marketing managers to effectively manage their green reputation amidst rising environmental concerns. Their findings highlight a critical gap in the literature regarding the implementation of environmental strategies within marketing practices, underscoring that mere expectation of green products selling well is insufficient without a comprehensive understanding of market dynamics. This foundational study sets the stage for later explorations into how green marketing can serve as a vital tool for promoting eco-friendly consumption patterns.

Zulfiqar & Shafaat, (2015) build upon this foundation by discussing the regulatory compliance required for effective green marketing. They argue that the growth of green marketing is not only about advertising products with environmental benefits but also about changing consumer perceptions and behaviors toward eco-friendly products. Their insights reveal that consumers are increasingly willing to invest in green products, thereby fostering a market environment conducive to sustainability initiatives.

Trivedi, (2015) further explores consumer behavior in relation to green products, particularly within the Indian context. His conceptual model identifies various factors such as demographics and marketing communication that influence consumer purchasing intentions towards sustainable products. The study highlights the role of marketing in aligning consumer interests with environmental sustainability, suggesting that effective marketing strategies can enhance consumer trust and drive demand for green products.

In the realm of competitive advantage, (Onditi, 2016) asserts that organizations must reorganize their internal processes to successfully implement green marketing strategies. This research indicates that a commitment to sustainability not only addresses environmental challenges but also enhances organizational performance and customer satisfaction. The emphasis on integrating green marketing practices across various strategic dimensions—product, pricing, promotion, and distribution—demonstrates the multifaceted approach required for successful green marketing.

Font & McCabe, (2017) contribute to the conversation by examining the effectiveness of social marketing techniques in promoting sustainable products within the tourism sector. Their findings indicate that understanding consumer behavior is crucial for developing persuasive marketing strategies that resonate with target audiences. The study underscores the importance of measuring the impact of social interventions, which is often overlooked yet vital for assessing the effectiveness of green marketing efforts.

Roschier, (2018) addresses the phenomenon of greenwashing, exploring how misleading green communication can adversely affect consumer perceptions and behaviors. By connecting greenwashing to corporate social responsibility, the study highlights the need for transparency and credibility in green marketing practices. This concern about consumer trust is echoed in subsequent studies, emphasizing the importance of authentic communication in fostering positive consumer relationships.

(Wairimu Macharia, 2019) investigates the interplay between green marketing practices and customer satisfaction in the soft drink industry, revealing that consumer perception significantly mediates this relationship. This insight reinforces the idea that understanding consumer attitudes towards green marketing is essential for enhancing product performance and loyalty.

Navaratne & Oyakhilome Anthony, (2023) discuss the challenges companies face when incorporating sustainability into their marketing strategies. They note that consumer perceptions of sustainability can vary widely, which necessitates strategic communication efforts to overcome misconceptions about the quality and cost of sustainable products. Their findings suggest that brands must adapt to evolving consumer expectations to build lasting connections rooted in shared values.

Ghobbe & Nohekhan, (2023) explore the impact of green marketing on perceived quality, emphasizing the competitive advantage gained by companies that successfully integrate environmental considerations into their marketing strategies. This research highlights the significant influence of green products on consumer purchasing behaviors, reinforcing the necessity for companies to prioritize environmental issues in their marketing efforts.

Finally, (Mohammadi et al., 2023) delve into the effects of eco-friendly marketing on consumer loyalty, demonstrating that green marketing strategies significantly enhance brand loyalty. Their findings illustrate the importance of aligning marketing efforts with consumer health and environmental responsibilities, further solidifying the case for green marketing as a critical component of modern business practices.

Together, these studies reveal the intricate landscape of green marketing, emphasizing the importance of understanding consumer behavior, the necessity for transparent communication, and the strategic integration of sustainability into marketing practices. As the literature continues to evolve, these insights will be crucial for marketers seeking to effectively measure and communicate the impact of their green products.

4. Theoretical Framework

The adoption of sustainable and environmentally friendly practices has received growing attention in recent years, but few studies have investigated and traced its impact on marketing. In the light of related issues identified in literature, this thesis emphasizes

academics and practitioners of marketing effects. Various relevant theories and research along with their supporting arguments and insights are presented. Discourse then moves on to methodological background. Subsequently, the chapter closes with the points of original research contribution.

Recent decades have notably witnessed an increased concern for sustainability. Its principles and practices have spread well beyond the environmental school to encompass a wide array of areas, including architecture, biology, politics, and marketing. Shaped around more grounded science of sustainability, the social sciences have also contributed their momentum in developing a critical research vein in relation to sustainability (K. Panda et al., 2019). Especially since the mid-1990s, widespread interest in industrialization and sustainability, characterized by a move from prevention and precaution to an integrative and cogent approach (Zulfiqar & Shafaat, 2015). Paralleled by this shift, calls have arisen for re-thinking sustainability in terms of connections with profit-seeking behaviours in order to pave the way for an integrated marketing approach consciously grounded on the principles of the Triple Bottom Line.

On the operational side, this integrative view of sustainability involves taking marketing decisions with a careful consideration of the environmental, societal and economic consequences. From this first broad conception, the powerful thrust of the sustainable concept have attention. Such a renewed emphasis, has led research to explore various new directions, among them the key ones of how various sustainability initiatives relate to market behavior and communication actions. A cornerstone of this variety of studies has been a growing corpus of revealed insights on link marketing behavior-corporate social responsibility (CSR)-consumer behaviour. However, an exploration of sustainable marketing impact measurements is still largely uncharted.

4.1. Marketing Impact Measurement

Marketing impact measurement and communication have always been a challenge, since marketing is often associated with long-term and indirect effects, brand building, creating awareness, and demand generation (Ghobbe & Nohekhan, 2023). As marketing investments purport to contribute to economic, environmental, and social sustainability, there is a need to measure the impact precisely, articulate it clearly, and provide applicable cases to clients and colleagues. However, most traditional measurement techniques in marketing are regarding the sales of the product; hence, it is inadequate for green products which may not perform well in financial terms (Zulfiqar & Shafaat, 2015). There are also limited technical understandings in the industry, as green marketing is still an emerging issue compared to conventional marketing techniques. For marketers, on the one hand, knowing whether the marketing budget is well spent and effectively promoting the target green product is essential. On the other hand, it is also crucial to demonstrate the impact of green marketing for the business objective and R&D team to get a bigger budget for sustainable and green projects.

With the growth of the market, green product marketing is becoming more prominent. In 2018 there were around 675 thousand green product ads on TV, which is a 132% increase compared to five years prior. That sounds to be good news for the consumers and the earth; however, only a minority (around 25%) of the ads stands up to green marketing claims. For the consumers, it is really important to discern between authentic green product

claims and the ones that are just misleading noise. According to tradition, a sustainable lifestyle is something that takes a big commitment on an individual's part, like grocery shopping or expensive hybrid cars. But a new wider wave of green goods and services is becoming mainstream, getting green product marketing in step. This marketing involves the communicate aspects of the products, such as certification, transparency, durability, lifetime, technology, features, warranty, sturdiness and cost. Both the mainstream success of green goods, as well as getting background on what makes them green, mean it's now easier to match a wider variety of products with more types of green lifestyles.

4.2. Sustainability and Green Marketing

Sustainability is a multifaceted and nuanced concept, characterized by an immensely diverse array of interpretations and assumptions. Nonetheless, it is often concurred that sustainable marketing decisions entail the appropriate measure of balancing social, environmental, and ultimately commercial effects. The sustainability principles for development of any marketing decisions emerge from the recognition that in the most general sense, sustainable development refers to such a method of progress that tries to guarantee the judicious meeting of current needs without endangering the conditions of life for the future generation. Consequently, marketing decisions have to enhance long-term advantages, contribute to lasting effects and sustain a future amicable business setting. Customer need to feel valuable can be marked by their importance; that is, they orientations to experience a feeling of useful, desirable or beneficial. As has underlined, it is pivotal for an industry's sustainability that it addresses clearly understandable market needs. Proceeding from this progress, the notion of "consumer direction" may be considered as the heart of any marketing decisions. When reviewing the modern residential markets and customer values, emphasis should be placed not so much on basic attitudes of customers as such, but over their role as determinants of market crucial taste for green products. There is little discussion about market practices that truly serve environmental protection. These have not often been a visible aspect of marketing practices; or when efforts were made in this area, communication was conducted in a manner too implicit or confusing. (Navaratne & Oyakhilome Anthony, 2023)

5. Methodology

Product impact in marketing with special reference to green products transcends disciplinary boundaries. Disciplinary boundaries separate marketing, sustainability, and other fields such as environmental science. This study proposes a systematic approach to uncover the intersection of product impact in marketing and sustainability. The application and relevance of this approach are illustrated by two case studies focusing on green products. The results show that the approach adopted for a comprehensive understanding of product impact in marketing. It contributes to theories and practices with special reference to the environmental and social impacts of products and aims to make methodologies accessible to non-scientists. Several frameworks intended to assist in either measuring, communicating, or both green marketing efforts and sustainability practices are available in the literature.

However, most tools are designed to measure one specific aspect, e.g., certification or customer satisfaction. It is not sufficient to address the impact of marketing efforts such as green claims or the effects of green products. Marketing can be crucial for the

successful market introduction and market growth of sustainable products. If successful, marketing can direct consumer behavior further toward sustainability. To encompass and investigate these impacts, it is essential to apply a diverse set of tools that quantitatively or qualitatively analyze the market impact of products. To address this gap the marketing of products is understood to have an influence on the consumers themselves, on competition in the product group and other product groups, on the legislation affecting the product group, and on the consumption of materials and energy (Zulfiqar & Shafaat, 2015). These impacts are investigated for conventional products as well as for products being perceived as sustainable.

5.1. Research Design

The research design adopted in this study is fourfold. A brief description is given in this section; reviewing the structure of this research, with a detailed methodology that follows. Note this section comprises an overview of the research strategy, presenting the choice of qualitative and quantitative approaches, along with the rationale for this mixed-methods design. More critical aspects, such as a discussion on sample populations and a timeline of data collection, precede an explanation of the conduct of case studies—a central component to communicating how to measure product impact in marketing.

Two common approaches of research are available to achieve the objectives of investigating the processes and practices related to the impact measurement and communication of marketing initiatives, mainly quantitative and qualitative. Quantitative is preferred by researchers as a fast and objective method of data collection. However, it is not perceived as suitable because the primary focus is on non-quantifiable processes and practices – qualitative approach gives a deeper and richer explanation of the phenomena in question. In the context of investigating efforts to measure and communicate product impact in marketing, a mixed-methods research design that involves both qualitative and quantitative data collection is believed to enrich the data and provide a more comprehensive set of insights. Qualitative methods that will be carried out in this research comprise in-depth structured interviews and observational analyses. Meanwhile, quantitative methods are to apply survey questionnaires, conducted through an online platform to marketing practitioners involved in promoting green products. Even though the choice of a mixed-method approach is not a common practice in the relevant academic research, different considerations and fields of data are thought to render a more comprehensive look into the process and practices. Drawing a broad picture between the theoretical framework drawn from the academic research and the real-world marketing practices especially in green marketing products will inform the stakeholders on how to successfully measure RoI of marketing activities, primarily in the context of green products. Consequently, the effort to link such a mixed-method approach is expected to yield useful and much-needed insights. In addition, constraints on the data collection efforts also influence the design of the studies. A variety of marketing practitioners are located in different cities and regions. A six-month timeline is therefore allowed for the field researchers to visit these cities and collect the required data. In sum, a series of in-depth interview and observational analyses of case studies will be conducted with marketing practitioners involved in promoting green products. This research seeks to maintain a theoretical focus, but this will be

balanced with a concentration on the practical implications of the key findings.

5.2. Data Collection and Analysis

For any company, ensuring the success of a newly introduced product is a crucial task. The ‘product impact’ is defined as the changes experimentally assessed in relevant life cycle attributes of products, chains, or systems as a consequence of a new product introduction (Zulfiqar & Shafaat, 2015). The fundamental behavior of consumers in making buying decisions is paramount. All companies have adopted various approaches in strategizing their marketing process to attract the attention and interests of customers. For this study, the benefits that can be derived from consumers’ feedback or thoughts obtained were taken into consideration and could be as guides for company promotions.

Acknowledging it in various ways might attempt to address it as the selling and buying of green products. Alongside an increase in the growing trend of green awareness adopted by most companies, these companies attempt to market certain products that are environmentally friendly. The importance of green marketing efforts that might be made by companies to promote green products seen from the standpoint of the consumer is that companies are selling products that are safe for sensitive skin, free from chemical contaminants, ecologically untreated, and made from an eco-friendly ingredient. In a mental respect (Ghobbe & Nohekhan, 2023) that in the end-it results in a peaceful mind to those who wear clothes, esp. garments and scarves. Various studies suggest that assorting green marketing efforts to promote green products that may be beneficial to the social impact, and company output might be increased substantially than it used to be before appealing to green characteristics in products.

6. Measuring Product Impact in Marketing

The core of upcoming ‘impacts’ on ‘green products’ brewed by marketing refers to the way marketing impacts these products, instead of the impacts they potentially generate on other elements of the wider system (Ghobbe & Nohekhan, 2023). This impact might be caused by shaky feedstock selection, suboptimal certification practices, imperfect supply chain optimization, neglectful fair-trade wages, or any other of plentiful possible intents. Therefore, the main concern is to measure the impact of marketing efforts on a certain green product or the whole product range from within the marketizing of firms that stage these products. Taking for granted that firms’ activities also bear an impact on affecting sustainability, and this in turn also affects the environmental product properties themselves, the main focus is put on ways to empirically link marketing activities themselves to the emergent eco-quality of green products, hence green marketing success. When scrutinizing firms’ marketing impact on their green products, some decisions are to be made to enable to establish a clear connection between marketizing efforts and their effects on consumer perceptions and behavior. This includes drawing on a complex set of methodologies that, with some careful fiddling, allow empirically confident statements: establishing and assessing a rich set of marketing efforts as the main trigger; synthesizing diverse efforts into meaning-laden activity clusters; parallel to these efforts, monitoring the (most) resulting aspects of consumers’ perceptions of and behavior relating to the given green products, and; empirically linking these efforts (taking them as an input) to resulting perceptions and behaviors, diverging from the impact of any confounding or mediating constructs in-between. Reflected

with these claims, regarding the argumentation and conclusion, in the most pragmatist sense on how to measure the green marketing success, some key metrics and reliable indicators are identified. Reckoned with, these offer a solid framework for impact evaluation of marketing towards sustainability, yet still fairly generalizable across green product assortments of various industries, market settings, sizes and marketing experience of the studied firms. Finally, the sometimes-neglected relevance of this dedicated marketing-focused empirical research is reviewed in respect to the other, primarily consumer-side insights, which potentially benefit from and opt to stimulate this sort of more desktop-oriented beginnings of a newer green marketing nexus.

6.1. Key Metrics and Indicators

As green products represent an umbrella term for the various actions taken to produce and market environmentally friendly products, green product marketing highlights the adaptability of the marketing plans and mix strategies to the ecological concerns of the consumers. There are five criteria that should be met for a product to be certified as green: energy saving, water saving, fewer resources used, environmental protection, and recyclability. It will be a common future concern in marketplaces that green products can receive a major part of economic activities. It addresses how business players anticipate the green product marketing activities and provides knowledge on executing the activities more effectively. Development of this framework is important in that some policy implications are avoided on the subject of which areas the business players should be more attentively thenceforward. It is discovered that business players expect the effective areas of the green product marketing actions in accordance with some criteria. Particularly, understanding the consumer's green objections and providing more information to the consumer about product operations and effectiveness are recommended areas for developing more effective green product marketing strategies. Through the framework developed in this study, policy makers and supporting departments should evaluate their functions in the scope of the business players' needs, and more effective strategies should be employed in favour of meeting the demands more effectively (K. Panda et al., 2019).

6.2. Case Studies

Effective applications of marketing impact measurements in order to green products are illustrated through various case studies: Case study 1: Nike's Green marketing One of the biggest sportswear brands in the globe, Nike, has made a decision to go with green marketing. It used the method of Recycling. They made the first shoe with recyclable material. They used this to create a great campaign and collected many awards. Up to now, this is taken as an example in brand marketing courses. While helping save the world, the company was able to collect many people in sharing these shoes on the right track. Through the help of this strategy, they were able to show themselves as a brand that cares about the world (Akif Hasan et al., 2012). Case study 2: McDonald's Green Marketing The goal they tried to achieve here was to refuse the food wastes to rot and get it in sight, and when they were refused, they were emphasizing green products. It had a very positive effect on the brand value of the company. On the other hand, the boards coming out broadcast this activity with mass means. they spent millions of ad revenue to draw attention to their green products, to get it back after the publicity. Throughout transmissions, it was a matter of being frequent in the minds of the people as a green product. For this reason, it is thought that the method used was

wrong. For example; They can donate to institutions for those who need food, or they can distribute them to the people who need food without creating a mass vision with it (Ghobbe & Nohekhan, 2023).

7. Communicating Product Impact

Consumers are increasingly conscious of the impact of the products they purchase, and green product marketing objectives cater to the needs of sustainability-oriented clients. Several particular strategies and methods for measuring and communicating product impacts are illustrated. When attempting to convey the benefits of sustainable organic clothing, 5 suggested policies are to: Teach customers more about the products themselves; Support customers in utilizing the clothing items; Implement sustainability-led corporate responsibility (CR) campaigns; Demonstrate the company's dedication to sustainable production via certifications and interactive tracking; and Co-operate with companies' on furnishing 2nd life usage to avoid discarded textiles enabling third world revenue methods (Navaratne & Oyakhilome Anthony, 2023). Establishing a consumer trust foundation as transparent and real is observed as the central aspect of how product impact information should be disseminated via marketing campaigns. Furthermore, expanded attention has been granted to specific media (both conventional and digital), possible supportive CR activities for conveying product impact to light, and the solutions to practical and theoretical productive issues of conveying complex product impact information, especially when the focus of the product claim study is comparatively novel in the market. Analogously, the challenge of how customers disclose their recognition and understanding of the impact of sustainability encourages the creation of ethical values in mitigating threats to customer trust and increased competitiveness in the marketing information provided by the firms; Consumers are key stakeholders in fostering a sustainable market economy, providing companies with the opportunity of the ability to drive the supply sections or increase demand for products committed to green.

7.1. Strategies and Channels

Measuring and communicating product impact is one of the most challenging areas of marketing. This topic will be explored a comprehensive view of the issue, particularly while focusing on recent developments and approaches in marketing, with a special reference to green products.

Green products and green marketing have become more prevalent recently. However, due to the existence of greenwashing, consumer skepticism towards green products can develop and can be intensified. By using quantitative data, the research studies the perception of green marketing; its present and future impacts (Navaratne & Oyakhilome Anthony, 2023). The results suggest that there is a perception of green marketing, both positively and negatively, as well as both in the short term and in the long term appearance of green marketing. Undoubtedly, green marketing itself has an influence on consumer psychology, especially young consumers, affecting their behavior. Therefore, companies are expected to take it seriously with a cautious approach in their green marketing activities, as well as the relevant managers at local or national level.

Measuring and communicating product impact is a key aspect of marketing in recent years. A series of concepts are defined in detail. The ways and methods employed to measure and

communicate product impact are discussed in detail. Why measuring and communicating product impact has become important in these times are explored. Measuring and communicating product impact in marketing is one of the challenging problems. Therefore, the issue is detailed in a comprehensive view (Pascoal Batista, 2018). Given that companies are under pressure to advertise their green products efficiently and show their greenness effectively in order to meet the growing demand for green products; and simultaneously the marketers face the consumer skepticism due to the restlessness caused by the information overload in the market; the marketers focus on the use of an interface approach in the communication channels in the aim to realize effective green marketing: communication strategies and the effectiveness of the communication channels are widely described both in theoretical and practical ways. A theoretical background for green products, green marketing, and aspects of the green product is explained. The results of the research show that the communication strategies focusing on the interface approach in the communication channel have a positive impact on enhancing purchase intention of young consumers, compared with focusing on the image approach in the same communication channel. The stimulation of customers (target markets) leads them to make a purchase. Innovative services offered to customers in the post-purchase process later than the purchase moment influence customers to make a purchase again (and more). Marketing actions aimed at generating awareness could be viewed as successful when a certain environmental issue is receiving attention, but at the same time the case can be made that efforts to create awareness are generally meaningless without including factual information regarding the issue. Only when bare knowledge is available can reasoned bookings lead to environmental concern. As a transfer mechanism between concern and behaviour, knowledge is facilitated and mediated by visions of how benefits can be derived from acting on that concern. With increased access to environmental information and greater awareness, it is possible to make the claim that citizens are better informed with respect to complex environmental issues. The issue taken up here is not the knowledge of current behaviour in terms of statistically average levels or population distributions, or in relation to formally established biological norms, but rather behaviour 'congruent with the preservation, protection, and improvement of the environment for current and future generations. At the same time, the increasing salience of environmental risks, concern about environmental quality and the perceived importance of environmental health have led to the adoption of various environmentally friendly behaviours. At both the state-level and through individual lifestyle changes, preventative behaviours represent the first lines of defence against environmental harm. Social forces constitute the source of environmental behaviour, which may be understood externally through various processes and techniques. Broadly, these behaviours can be grouped into: a) 'negative behaviour', including actions which contribute to the degradation of the environment; and b) 'positive behaviour', preventative actions aimed at avoiding harmful activities and preserving the environment. At the individual level, positive environmental behaviour may involve pursuing recycling, commutation, and waste minimization. On the other hand, in relation to the negative behaviour of the public, the polluting industries and activities may be recognized as a source of the problem, with pressure being placed on these sectors to curtail their actions. Public support for preventative actions may come in three main ways: a) state regulation, potentially through market-based mechanisms; b) best practices undertaken voluntarily by

businesses; and c) investment in organisation dedicated to promoting a sustainable future. Additionally, proactive policies can create powerful societal norms aimed at befitting the environment and intrinsic links between environmental quality and economic growth can be identified. These different dynamics can complement each other, creating a positive climate for further intervention.

7.2. Best Practices

One of the primary challenges in green marketing is measuring and communicating product impact. A rising contributor to the impact measurement framework is the use of computation models—such as process-based life cycle analysis and marketing mix modelling—paired with text analysis of big data. This can quantify macroeconomic, cross-industry effects of consumer choices, because the societal condition is a vital place to persuade consumer behavior. The results are a key point and counter parable success of proposed intervention. When promoting environmentally preferable products (EPPs), messages are more effective from scientists. Specifically, they persuade the behaviour of reader who does not hold a fixed opinion or has low initial opinion extremity (Navaratne & Oyakhilome Anthony, 2023). When the audience already has definite view, commercial sources are persuasive. More style guides should be widely adopted so that less energy is used in advertising for green products.

8. Challenges and Opportunities

One of the main challenges with promoting green products and marketing efforts is navigating through the operating landscapes: marketers today need to not only comply with legal and corporate social responsibility/sustainability standards but also ensure their practices and their clients adhere to global standards in a fundamental manner. Failure to do so in marketing would culminate in misrepresentation of an organisation, its products, services, its impacts or stakeholders, hence perpetrating marketing in an unlawful manner (Navaratne & Oyakhilome Anthony, 2023). Marketing is moreover one of the most important attributes to business in contemporary world; its practices have transfigured as per development in technology, business models, consumer trends and global market practices. On the other hand, consumer perception represents a significant area of challenges for the promotion of green products and marketing initiatives, simply because motives behind purchasing intentions of green products or indulging in green activities are not the same. For instance, most consumers may be driven from altruism (a genuine concern for environment, nature, society etc.) whereas some of them incorporate green motives for egoistic reasons (better product quality, future savings, social status etc.); these later motives are largely based on superficial and materialistic reasons where consumer is motivated by self-interest, therefore perception on green impacts of marketing or green products would be contradictory. A similar issue would come from some of the smart malls and network-constrained organizations breastfeeding their green neutrality. Green mobile app services also pose unique challenges to respond to because of the unchartered minefield they reside in, plus the prosumer paradigm yet to be matured comparatively. This creates the need for innovation of green consumer friendly yet reliable mobile apps as well as increasing the involvement in green energy planning and control, to better meet sustainability objectives and ensure sustainability of the green products promotional. With a comprehensive ISO26000 guideline to be in place, the challenges are conceived an array of

opportunities for innovative strategies both in product development and post-marketing. A useful way is approaching these challenges and opportunities is in a dual stand where the operating landscapes are on one hand viewed as conditions that preclude transgressions, but on the other as a knowledge that can guide business practices towards more sustainable market position and a more legitimate socially responsible marketing.

8.1. Regulatory Landscape

Green marketing and sustainability practices have received considerable attention from the United States' Federal Trade Commission (FTC) and their updates of guidelines regarding environmentally friendly, green, and sustainable products are worth noting. Because green marketing can involve a broad range of promotional activities, businesses want to avoid making green claims that are so vague and broad that they are meaningless, are entirely untrue, or are untimely (Mohajan, 2011).

Marketers should also be aware of language nuances, such as products being a "better" environmentally friendly option than one without a specific attribute that may not legally be any better. Green written claims (including symbols) must be substantiated through a life cycle assessment, and the impact must not be a by-product of a process unrelated to the final product. The global nature of supply chains expanding to take advantage of cheaper labor, raw materials, or less restrictive labor regulations complicates green definitions and enforcement. What may be considered sustainable or eco-friendly in one country is not so in another, and questions arise about the environmental impact of materials' extraction.

International efforts are being made to standardize sustainability definitions and environmental impacts, such as the International Standards Organization (ISO) 14000 series. Critics argue the ISO codes are cost-prohibitive to smaller businesses. Green branding poses an interesting dilemma for businesses and consumers. Brand trust can influence the consumer perception and judgment of green claims, and the potential false publicity and subsequent loss of brand trust from false green claims. Yet, positive perceptions of false environmental product claims were found, and it is relatively rare that businesses that make false green claims are charged.

As of 2012, the US Executive Office of the President's Office of Management and Budget will be reviewing federal agencies responsible for conducting programs related to green chemistry, and the Environmental Protection Agency has tentatively stated it plans to coordinate efforts concerning environment. On 26 June 2009, the Consumer Product Safety Improvement Act of 2008 (CPSIA) came into effect with little notice from most retail businesses. Major provisions included established lead limits for children's products and new testing and certification requirements, which were federal pre-emptive, therefore superseding state regulations. By August 2009, eighteen state attorneys already supported a comprehensive review of the CPSIA, emphasizing the difficulty of compliance through ambiguity and challenges of reformulation. Green options can involve higher input costs in manufacturing changed or even amended products. Temporary exemptions for certain "safe" materials and various arbitrary exceptions reduce the exposure risks. Utilizing the green-ness to one's advantage and becoming more innovative and adaptable than one's competitors pose opportunities to attract nature-attentive consumers.

8.2. Consumer Perception

Measuring the impact generated by marketing actions is a matter of major significance in Marketing theory and practice. Organizations invest relevant resources (both money and time) in the conception and implementation of marketing actions, and a fair return is expected in terms of achieved goals. Hence, intelligently planned marketing decisions should be based on sound measuring of these short- and long-run consequences (Akif Hasan et al., 2012).

Marketing-related investment is especially relevant when dealing with sustainability and green marketing. Organizations worldwide seem increasingly eager to present themselves as good citizens, concerned with sustainable development and sensitive to environmental issues. This trend has important implications in terms of public policy making, social welfare and business practice because collective well-being is to a great extent affected by the ability of producing and consuming entities to behave responsibly with their natural, social and economic environments. Hence, the issue of consumer perception towards green marketing has come to attract much attention. It is essentially the scope of this paper to be concerned with the believability, credibility and intensity of consumers' attitudes and how these are affected by the strength of marketing actions designed to show a firm's environmental-friendly profile.

With regard to green marketing, packaging design plays a key role in eco-friendly strategies. This is noteworthy due to the great impact of packaging, which has a high advertising function (Pascoal Batista, 2018). Thus, packaging design can influence brand perception, product choice and overall satisfaction of consumers, contributing to the development of new environmental solutions tailored to a new era of labels and packaging materials. Among several packaging design variables, the material and color have also raised attention. Brand owners are required to maintain attractiveness and distinctiveness of packaging designs to stimulate emotional and aesthetical attraction on possible consumers. In this regard, brand elements and their arrangement are designed to induce psychological responses. Despite the significant impact of packaging designs on consumer behavior, the perception and attitudes from a design (a semiotic message) or the psychological impacts on consumer responses have not been fully addressed.

9. Conclusion and Future Directions

Recently marketing activities have been focused on the sustainable approach as a smarter consumer culture is emerging to make people aware of the life-threatening issues of the earth, of clean water, clean air, and so on. Nowadays, younger generations care a lot about the environment, and they want companies and brands to be environmentally friendly. Part of the company's marketing activity is focused on such a piece of information that can inform the customer about their sustainable approach. There are different ways that companies can tell their customer about what they are doing to be green. Green products and services are growing worldwide. Marketing practice and literature related to green products have often treated a product's greenness in binary terms (i.e., green vs. nongreen). However, products are not simply additive, and two products can differ in the extent to which they harm the natural environment (Trivedi, 2015). In this regard, firms have pursued and marketed products that are green. Effective marketing strategy involves informing this difference and indicating that the marketed product is more environmentally friendly than the competitor's (Pascoal Batista, 2018). Consumer

purchasing behavior is influenced by marketing practices. Ensuring that these marketing practices are successful and point to products that provide the highest environmental benefit is crucial to nurturing more informed and rationally driven consumer behavior. Transferring the environmental benefit provided by the marketing of a green product to consumers is strongly supported for policy development that supports disclosure-based campaigns and efforts to enhance marketing practices' reliability in promoting the environmental superiority of products. Recently the evolution of marketing management has established a trend towards being based on sustainable marketing. The community is increasingly environmental, dealing with too many emissions, lack of efficient use of natural resources, and too much waste. People understand more than ever they are responsive to this abrupt situation. In the green marketing era, the issues of businesses revolve around manufacturing environmentally friendly products. It is common knowledge that businesses may come with a high level of emissions, eco unfriendly activities, particularly in the fashion world which is criticized for pollution on a massive scale, due to heavy water usage and the ever-increasing production of clothes. For this reason, in such a world where the importance of the environmental impact on product circulation efforts to shed light on the innovative research emerges. These efforts aim to reveal the elements that have the potential to have an effect on the realization of the purchase of the promotional products of the brand. In this context, the advertising type of the brand's products (soft or hard sells), familiarity of the model in the ad, the vividness of the ad, the hedonic characteristics of the brand, and the message quality of the brand in the scene of the advertisement are examined. In this study, the results show that hard-sell ad types, model familiarity in the ad, and hedonic brand features in the ad increase the intention to purchase the promoted brand's products.

9.1. Summary of Findings

The vital link between measuring product impact and its effectiveness in marketing is widely recognized, with a clear understanding of which product attributes resonate most with consumers being key for any marketing strategy. Marketing strategies are evaluated utilizing the metrics and indicators identified during this study to determine how marketers can effectively communicate both the attributes of green products and processes behind sustainability. To do so, a multidisciplinary approach draws on sustainability marketing, design, and engineering. The metrics and indicators identified related to attributes, processes, and markets of products, as well as the incorporation of such metrics and indicators into a wider understanding of the sustainability of marketing and design and engineering.

In this study, green products have been focused on, examining their effectiveness in the consumer landscape. This is in part because of the interest consumers and companies currently hold in such products. Green products are those, if produced and sold, may be considered to favor the environment and are considered environmentally safe. Such products have appeared in diverse industries over recent years, with the global green product market increasing in value from 1.1 billion U.S. dollars in 2013 to 3.07 billion in 2020. This has led an increasing number of companies to turn their heads towards the green market. Nevertheless, the effectiveness of green products in the market differs depending on how they are assessed, particularly in connection to the different understanding of what 'green' means. Green products can be

attributed to bio-based materials, low carbon emissions, recyclability, including others (Zulfiqar & Shafaat, 2015).

9.2. Implications for Practice and Research

In the wake of widespread environmental and social trends, company communications about the positive impacts of their products can be a powerful tool. Despite the considerable interest in this topic, the understanding of how the information about product impact should be communicated to address consumers is scattered. Efforts remain dispersed, incomplete, and only partially connected with real-world marketing practices. The perspective aims to fill this gap by connecting a broad framework of possible tactics with real marketing practices to create actionable recommendations. The paper is an empirical contribution to the larger body of research on marketing sustainability. Insights are based on in-depth analysis of effective marketing practices, but empirical validation depends on survey answers from marketing managers in 10 multinational corporations.

To translate research findings into practice, a new theoretical framework is presented that specifies the characteristics of the claim, product, communicator, message, and context that impact the effectiveness of marketing claims. Practical recommendations are offered to copywriters, marketers, managers, and communicators, encouraging all actors to continually analyze the specifics of their own context. Throughout the paper, the product impact is considered not only in terms of the traditionally focused environmental outcomes, but more holistically, comprising social, safety, and health impacts. This expansive vision is in line with generally accepted definitions of sustainable development as a comprehensive approach prioritizing simultaneous economic, environmental, and social progress. The marketing claims about such products meeting these standards are termed as impacts (Navaratne & Oyakhilome Anthony, 2(23).

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