

Sustainability Communication Strategy Based on SDGs in Beverage Carton Packaging: A Case Study in the FMCG Industry in Indonesia

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ABSTRACT

This study aims to analyze sustainability communication strategies implemented by beverage companies through the use of carton packaging in alignment with the Sustainable Development Goals (SDGs). This research adopts a qualitative approach using a case study method focusing on FMCG companies in Indonesia. Data were collected through in-depth interviews, observation of packaging and communication messages, and document analysis over a six-month period. The findings reveal that carton packaging not only functions as an environmentally friendly solution but also serves as a strategic communication medium to strengthen brand image. The communication primarily reflects SDG 12 and SDG 13. However, challenges remain in terms of information transparency and consumer understanding.

INTRODUCTION

Environmental issues have become a major concern across various industrial sectors, particularly in the beverage industry, which generates a significant amount of packaging waste. The use of single-use packaging, especially plastic, has led to various negative environmental impacts, ranging from soil and marine pollution to increased carbon emissions. Global data indicate that a large proportion of plastic waste is not properly managed and ultimately ends up in the open environment, disrupting ecosystems and posing risks to human health. In the Indonesian context, this issue is even more complex due to the high consumption of packaged beverage products and the still limited effectiveness of waste management systems.

These conditions have encouraged both governments and private sectors to seek more sustainable solutions. One approach that has been increasingly adopted is the use of environmentally friendly alternative packaging, such as carton-based packaging. Carton packaging is considered to have several advantages over plastic, as it is derived from renewable resources, has a higher recycling potential, and produces a relatively lower carbon footprint throughout its lifecycle. In addition, advancements in material processing technologies have enabled carton packaging to achieve sufficient durability and safety for beverage products, allowing it to compete with conventional packaging.

In line with these developments, global initiatives such as the Sustainable Development Goals (SDGs) have emerged as an important framework for achieving sustainable development. Within the packaging industry, the SDGs provide clear direction, particularly Goal 12 (Responsible Consumption and Production), which emphasizes resource efficiency and waste reduction, and Goal 13 (Climate Action), which focuses on mitigating climate change. The implementation of carton packaging in the beverage industry can therefore be seen as a concrete contribution by companies toward achieving these global goals.

However, the adoption of sustainable packaging cannot be separated from the role of communication. In practice, the success of an innovation is not solely determined by its technical advantages, but also by how it is perceived by the public. This is where communication becomes crucial. Sustainability communication is not merely about delivering information; it also plays a role in constructing narratives, creating meaning, and influencing consumer behavior. Companies need to clearly communicate why carton packaging is more environmentally friendly, how recycling processes work, and what positive impacts can result from its use.

In the context of modern marketing communication, packaging no longer serves only as a protective element but also as an effective communication medium. Visual design, labels, symbols, and messages displayed on packaging can act as tools to convey sustainability values directly to consumers. This positions packaging as a key “touchpoint” in the interaction between brands and consumers. In some cases, packaging can even become a decisive factor influencing purchase decisions, particularly among environmentally conscious consumers.

Previous studies have shown that consumers tend to respond positively to products that promote environmental sustainability. Mardiyah et al. (2022) found that green packaging significantly influences consumer purchase intention, especially when the information provided is clear and easy to understand. Similarly, Sharma (2025) emphasizes that effective sustainability communication can enhance consumer trust and strengthen brand loyalty. These findings indicate that the success of sustainability strategies is highly dependent on a company's ability to communicate its values effectively.

Despite these advantages, sustainability communication is not always implemented optimally. In practice, many companies still face challenges in delivering credible and transparent messages. One common issue is greenwashing, where companies claim to be environmentally friendly without sufficient supporting evidence. This can lead to consumer skepticism and ultimately damage a company's reputation in the long term. Therefore, it is essential for companies to ensure that their sustainability communication genuinely reflects their actual practices and can be held accountable.

In addition, there is often a gap between the information communicated by companies and consumers' level of understanding. Many consumers do not fully understand recycling concepts or how to properly manage packaging waste. This indicates that sustainability communication should not only be informative but also educational. Companies need to develop communication strategies that enhance environmental literacy, enabling consumers to become not just passive recipients of messages but active participants in sustainable practices.

In Indonesia, studies on sustainability communication in the packaging industry remain relatively limited, particularly those that specifically examine the role of packaging as a communication medium. Most existing research tends to focus on the technical aspects of packaging or general consumer behavior, without deeply exploring the communication strategies employed by companies. Understanding this aspect is crucial to identifying how companies can optimize packaging as an effective communication tool.

Furthermore, the development of digital media has introduced new dimensions to sustainability communication. Today, companies do not rely solely on physical packaging but also utilize various digital platforms to reinforce their messages. Social media campaigns, corporate websites, and sustainability reports form an integrated communication ecosystem. In this context, packaging can serve as an entry point that directs consumers to access further information through digital channels, such as QR codes or embedded links.

However, integrating packaging with digital media requires careful planning. Companies must ensure that the messages conveyed are consistent across platforms to avoid confusion among consumers. In addition, they need to consider audience characteristics, including digital literacy and environmental awareness, when designing effective communication strategies.

From a communication perspective, the use of carton packaging as part of sustainability strategies can be seen as a symbolic representation of environmental values. Packaging not only serves a functional role but also carries

symbolic meaning that can influence consumer perceptions. For instance, the use of green colors, recycling symbols, or “eco-friendly” claims can create specific associations in consumers’ minds. However, the effectiveness of these symbols depends on cultural context and individual experiences.

Therefore, it is important to understand how consumers interpret the messages embedded in packaging and what factors influence these interpretations. A qualitative approach is particularly relevant in this regard, as it allows researchers to explore consumer experiences and perceptions in depth. Through this approach, a more comprehensive understanding of sustainability communication dynamics in real-world contexts can be achieved.

Based on the discussion above, it can be concluded that there is a need to further examine sustainability communication strategies employed by companies, particularly in utilizing carton packaging as a communication medium. This study aims to address this gap by analyzing how sustainability messages are constructed, how they are communicated through packaging, and how they relate to SDGs principles.

Specifically, this research contributes in several ways. First, from a theoretical perspective, it enriches the study of sustainability communication by positioning packaging as a strategic communication medium. Second, from a practical perspective, it provides insights for companies in designing more effective and credible communication strategies. Third, from a policy perspective, it offers references for stakeholders in promoting more sustainable business practices.

Finally, this study seeks to answer how sustainability communication strategies are constructed through carton packaging in the beverage industry and how these strategies reflect the principles of the SDGs in practice.

THEORETICAL REVIEW

Sustainability Communication

Sustainability communication refers to a strategic process of conveying information related to a company’s social, environmental, and economic responsibilities to various stakeholders. In the context of modern business, sustainability communication is no longer merely a complementary aspect of corporate social responsibility (CSR) activities but has become an integral part of corporate communication strategy. It functions to build understanding, create legitimacy, and strengthen relationships between organizations and their publics.

Conceptually, sustainability communication consists of two main dimensions: the informative dimension and the persuasive dimension. The informative dimension relates to the delivery of data and factual information regarding sustainability practices undertaken by companies, such as the use of environmentally friendly materials, emission reduction initiatives, and recycling programs. Meanwhile, the persuasive dimension focuses on shaping consumer perceptions, attitudes, and behaviors to align with sustainability values promoted by the company. In practice, these two dimensions are interconnected and mutually reinforcing. Sustainability communication can also be understood

as part of environmental communication, which emphasizes the relationship between humans and ecosystems (Liliweri, 2018).

According to Sharma (2025), effective sustainability communication must adhere to the principles of transparency, consistency, and credibility. Transparency requires companies to provide open and honest information without concealing relevant facts. Consistency refers to the alignment between communicated messages and actual corporate practices. Credibility, on the other hand, relates to the level of trust that stakeholders place in the information provided. These principles are essential to prevent misperceptions and avoid accusations of greenwashing. Furthermore, regulatory and policy frameworks also influence the implementation of sustainable packaging practices within industries (Partini & Sari, 2022).

In the context of marketing communication, sustainability communication is closely linked to the concept of green marketing, which emphasizes environmental values as a key component of product positioning. In modern communication strategies, message integration is crucial to maintain brand consistency (Ronda, 2018; Ruddin, 2023). Through this approach, companies not only market products but also promote values and lifestyles that are environmentally responsible. This aligns with the growing consumer awareness of sustainability issues, where consumers increasingly prefer products with lower environmental impact. Green marketing also highlights the importance of integrating environmental values into marketing strategies (Hendarsih, 2021).

Sustainable Packaging

Sustainable packaging is a critical component in reducing the environmental impact of consumer products. In general, it refers to packaging designed with consideration for the entire product lifecycle, including production, distribution, usage, and end-of-life processes such as recycling or disposal. The primary objective is to minimize resource consumption, reduce waste, and lower environmental emissions.

Carton packaging has emerged as a widely adopted alternative in sustainable packaging practices due to its various advantages. These include being derived from renewable resources, having high recyclability, and being relatively more biodegradable compared to plastic materials. Wu (2021) states that advancements in technology have enabled carton packaging to achieve sufficient durability and protection for products while maintaining its environmentally friendly characteristics.

Beyond material aspects, packaging design also plays a significant role in sustainability. Efficient design can reduce material usage, improve distribution efficiency, and optimize storage processes. At the same time, packaging design serves an important communication function. Information displayed on packaging, such as "recyclable" or "eco-friendly" labels, can influence consumer perceptions of a product. Thus, packaging functions not only as a protective element but also as a strategic communication medium.

However, the effectiveness of sustainable packaging largely depends on supporting systems, such as recycling infrastructure and public awareness.

Without adequate systems in place, the environmental potential of such packaging cannot be fully realized. Therefore, collaboration among companies, governments, and communities is essential to support the implementation of sustainable packaging practices.

SDGs in the Packaging Industry

The Sustainable Development Goals (SDGs) represent a global agenda established by the United Nations to guide sustainable development efforts. The SDGs consist of 17 goals addressing a wide range of issues, from poverty reduction to environmental protection. Within the packaging industry, several goals are particularly relevant, especially SDG 12 and SDG 13.

SDG 12 (Responsible Consumption and Production) emphasizes the importance of sustainable production and consumption patterns. In this context, the use of recyclable packaging and efficient resource utilization are key indicators. The beverage industry, as one of the major contributors to packaging waste, holds significant responsibility in adopting more sustainable practices.

Meanwhile, SDG 13 (Climate Action) focuses on efforts to mitigate the impacts of climate change. The use of packaging with a lower carbon footprint, such as carton packaging, represents a tangible contribution to achieving this goal. In addition, companies can integrate climate-related messages into their communication strategies to raise consumer awareness of environmental issues.

Integrating SDGs into business strategies not only benefits the environment but also enhances corporate reputation. Companies that demonstrate a strong commitment to SDGs are more likely to be perceived positively by the public. This can serve as a competitive advantage, particularly in an era where consumer awareness of sustainability is increasing.

Previous Studies

Numerous studies have examined the relationship between sustainable packaging, sustainability communication, and consumer behavior. Mardiyah et al. (2022) found that environmentally friendly packaging has a significant influence on consumer purchasing decisions. Consumers tend to prefer products perceived to have lower environmental impact, particularly when the information provided is clear and easy to understand.

Another study by Natsir and Waani (2023) highlights that innovation in packaging not only enhances the functional value of products but also adds perceptual value. Innovative and sustainable packaging can serve as a strong differentiating factor in competitive markets.

Sharma (2025) further emphasizes the importance of sustainability communication in building brand image. Effective communication can increase consumer trust, which in turn contributes to brand loyalty. However, the study also warns that communication not supported by actual practices may lead to reputational risks.

Despite these findings, most previous studies tend to focus separately on consumer behavior or product innovation. There remains a gap in research that integrates communication, packaging, and SDGs into a comprehensive analytical

framework. Therefore, this study seeks to address this gap by examining these three aspects within a unified perspective.

Conceptual Framework

This study adopts a qualitative approach to understand the relationship between sustainability communication strategies, carton packaging, and consumer perceptions within the SDGs context. Conceptually, the relationship among variables can be described as follows: communication strategies designed by companies are manifested through carton packaging as a communication medium, which then conveys sustainability values aligned with SDGs, ultimately influencing consumer perceptions and attitudes toward the product.

This framework positions packaging as a central element that bridges communication strategies and consumer perceptions. Thus, packaging is not merely viewed as a technical component but as a symbolic medium that plays a crucial role in sustainability communication processes. This approach is expected to provide a more comprehensive understanding of how companies can optimize packaging as an effective communication tool in supporting sustainable practices.

METHODOLOGY

This study employs a qualitative approach using a case study method. This approach is chosen because it allows for an in-depth understanding of sustainability communication phenomena in real-world contexts, particularly within the beverage industry that utilizes carton packaging. The case study method enables researchers to comprehensively explore how communication strategies are designed, implemented, and interpreted by various stakeholders, both from the company and consumer perspectives.

The object of this study focuses on Fast Moving Consumer Goods (FMCG) companies in Indonesia that have adopted carton packaging as part of their sustainability strategies. The selection of research subjects is conducted purposively, based on criteria such as commitment to sustainability practices, the use of environmentally friendly packaging, and communication activities that explicitly address environmental issues. Therefore, this study does not aim for generalization but rather seeks to obtain a deep and contextual understanding of the phenomenon.

Data Collection Techniques

Data collection is carried out through several techniques to ensure the completeness and depth of information. First, in-depth interviews are conducted with company representatives, such as communication or marketing teams, as well as consumers as message recipients. These interviews aim to explore perspectives on communication strategies, the rationale behind the use of carton packaging, and consumer perceptions of sustainability messages conveyed by the company.

Second, observation is conducted on product packaging, including visual design, labels, symbols, and the information presented. This observation aims to

identify how packaging is used as a communication medium and how sustainability messages are represented both visually and textually.

Third, document analysis is conducted on various relevant materials, such as sustainability reports, campaign materials, company websites, and social media content. This analysis helps to understand how companies construct sustainability narratives more broadly and consistently across different communication platforms.

Data Analysis Techniques

Data analysis in this study adopts the interactive model proposed by Miles and Huberman, which consists of three main stages: data reduction, data display, and conclusion drawing.

In the data reduction stage, the researcher selects and simplifies data that are relevant to the research focus. This process is essential for organizing the data into a more structured and manageable form.

In the data display stage, the reduced data are presented in the form of descriptive narratives, allowing patterns, relationships, and trends to be more easily identified. The data presentation is conducted systematically to support the interpretation process.

The final stage is conclusion drawing, where the researcher interprets the findings based on identified patterns. This process is carried out iteratively by continuously comparing data obtained from different sources to ensure consistency and reliability.

Data Validity

To ensure data validity, this study applies triangulation techniques, including both source triangulation and method triangulation. Source triangulation is conducted by comparing information obtained from different informants, such as company representatives and consumers. Meanwhile, method triangulation is applied by combining multiple data collection techniques, namely interviews, observations, and document analysis.

Through this approach, the study aims to achieve a high level of credibility and provide an accurate representation of sustainability communication strategies in the use of carton packaging within the beverage industry.

RESULTS

Sustainability Communication Strategy

The findings of this study indicate that beverage companies utilizing carton packaging develop sustainability communication strategies through three main approaches: informative, emotional, and narrative. These approaches do not operate independently; rather, they complement one another in shaping consumer understanding and perception of sustainability values promoted by the company.

1. Informative Approach

The informative approach emphasizes the delivery of facts and data related to the advantages of carton packaging as a more environmentally friendly alternative. In practice, companies communicate information regarding

packaging material characteristics, such as recyclability, the use of renewable resources, and contributions to reducing plastic waste. This information is typically presented directly on the packaging in the form of text, symbols, or specific labels.

The findings reveal that informative messages are often conveyed through simple claims such as “100% recyclable,” “eco-friendly packaging,” or “made from renewable resources.” These terms aim to provide quick understanding to consumers without requiring complex explanations. In this context, packaging functions as a practical communication medium that directly reaches consumers at the point of purchase.

However, the effectiveness of the informative approach largely depends on consumers’ level of environmental literacy. Several consumer informants in this study stated that while they understand general terms such as “recyclable,” they do not fully comprehend the recycling processes involved. This indicates that although information is delivered, it is not always deeply understood.

In addition, overly general messages may lead to ambiguity. Terms such as “environmentally friendly” are often used without specific explanations, allowing for varied interpretations among consumers. This condition may result in skepticism, particularly among consumers who are more critical of sustainability claims.

Despite these challenges, the informative approach remains essential as a foundation for sustainability communication. Clear and accurate information can guide consumers in making more responsible purchasing decisions. Therefore, companies need to ensure that informative messages are not only appealing but also transparent and accountable.

2. Emotional Approach

In addition to factual information, companies also employ emotional approaches in sustainability communication strategies. This approach aims to build emotional engagement between consumers and environmental issues, thereby encouraging changes in attitudes and behavior.

In practice, emotional messages are often associated with values such as environmental care, social responsibility, and concern for future generations. For instance, some packaging designs feature imagery of green landscapes, forests, or the Earth as representations of sustainability. These visuals are often reinforced with messages encouraging consumers to “contribute to protecting the environment” or “choose products that are better for the planet.”

The findings indicate that emotional approaches have strong appeal, particularly among environmentally conscious consumers. Consumers no longer perceive products merely as functional goods but also as a form of participation in a broader environmental movement. In this context, purchasing decisions are not solely based on functional needs but also on the values represented by the product. This finding is consistent with previous research indicating that consumer perceptions of packaging are strongly influenced by visual elements and sustainability claims (Gotama & Natadjaja, 2023).

However, emotional approaches also present certain challenges. If not supported by clear information and real practices, emotional messages may be

perceived as manipulative or even as greenwashing. Several informants expressed skepticism toward overly “idealistic” messages that lack concrete evidence. The risk of greenwashing remains a critical issue in sustainability communication (Ibrahim, 2022).

Therefore, it is important for companies to maintain a balance between emotional and informative approaches. Strong emotional messages need to be supported by relevant data and factual evidence to enhance overall communication credibility. In this way, consumers are not only emotionally engaged but also rationally convinced by the messages conveyed.

3. Narrative Approach (Storytelling)

The narrative or storytelling approach has become increasingly prominent in sustainability communication strategies. This approach focuses on constructing stories that describe a company’s journey in adopting sustainable practices, as well as the role of consumers in supporting these efforts.

In the context of carton packaging, storytelling is often presented through short narratives explaining the origin of materials, production processes, or the positive impacts generated. For example, some packaging includes information about how carton materials are sourced from responsibly managed forests or how their use contributes to reducing plastic waste.

The findings suggest that narrative approaches can create stronger emotional bonds between consumers and brands. The stories conveyed do not only provide information but also create more personal experiences. Consumers feel involved in the story, which fosters a deeper sense of engagement.

Furthermore, storytelling allows companies to communicate complex messages in a more accessible way. Instead of relying on technical terminology, companies can present simple and relatable narratives that are easier for consumers to understand.

However, the effectiveness of storytelling depends heavily on authenticity and consistency. If the narratives do not align with actual practices, they can damage consumer trust. Therefore, companies must ensure that the stories they communicate genuinely reflect their real conditions. In addition, sustainability practices may also generate social impacts through community empowerment within production chains (Novitasari et al., 2024).

Packaging as a Communication Medium

The findings demonstrate that carton packaging plays a broader role beyond merely protecting products. It functions as a communication medium that directly interacts with consumers, particularly at the point of sale. In this context, packaging becomes one of the most effective communication channels because it requires no intermediaries and is accessible to all consumers.

Visual and textual elements on packaging, such as color, symbols, typography, and written messages, play a crucial role in conveying sustainability values. For instance, the color green is often associated with environmental consciousness, while recycling symbols indicate that the packaging can be processed further.

In addition, packaging serves as a bridge between offline and online communication. Some companies utilize technologies such as QR codes to direct consumers to more detailed information about sustainability practices. This indicates that packaging can be part of a broader communication ecosystem. This finding is also supported by studies showing that sustainability in food packaging is an integral part of modern production systems (Mendes, 2021).

However, there are challenges in maximizing the role of packaging as a communication medium. One major limitation is the restricted space available on packaging. Companies must communicate complex messages within limited space, requiring communication strategies that are both effective and efficient.

Alignment with SDGs

The findings indicate that sustainability communication strategies implemented by companies implicitly and explicitly align with SDGs principles, particularly SDG 12 and SDG 13.

In relation to SDG 12, companies emphasize responsible consumption and production. This is reflected in messages encouraging consumers to choose products with recyclable packaging and reduce the use of single-use plastics. Meanwhile, regarding SDG 13, companies associate the use of carton packaging with efforts to reduce environmental impact, particularly carbon emissions. The narratives constructed emphasize that consumer choices contribute to climate change mitigation efforts.

However, the connection to SDGs is often not communicated explicitly. Many companies rely on general terms such as “environmentally friendly” without directly linking them to SDGs. This suggests an opportunity for companies to integrate SDGs more clearly into their communication strategies.

Synthesis of Findings

Overall, the findings indicate that sustainability communication strategies in carton packaging are multidimensional. Companies do not rely on a single approach but instead combine multiple strategies to achieve communication effectiveness.

Packaging plays a central role as a medium that connects communication strategies with consumer perceptions. Through packaging, companies can directly deliver sustainability messages, build emotional engagement, and construct meaningful narratives.

However, communication effectiveness depends on message credibility, consumer understanding, and the consistency between communication and actual practices. Therefore, companies need to continuously develop communication strategies that are not only appealing but also transparent and educational.

DISCUSSION

The findings of this study indicate that sustainability communication strategies in the use of carton packaging within the beverage industry are not merely informative in nature, but also symbolic and strategic. This reinforces the view that sustainability communication is an integral part of corporate

communication strategy, functioning not only to convey information but also to construct meaning and shape public perception (Ruddin, 2023).

Integration of Communication Approaches: From Information to Meaning

The informative, emotional, and narrative approaches identified in this study demonstrate that companies no longer rely on a single communication model. Instead, they develop more complex strategies by combining multiple approaches to engage consumers both cognitively and affectively.

The informative approach serves as the foundation of sustainability communication. Information regarding recyclability, renewable materials, and environmental impact provides a rational basis for consumers to understand the value of the product. This aligns with the concept of sustainability communication, which emphasizes transparency and accuracy (Sharma, 2025). However, the findings also reveal that information alone is insufficient. When presented in overly general terms or without adequate context, such information may lead to confusion or even skepticism among consumers.

On the other hand, the emotional approach introduces an affective dimension to communication. Visual representations of nature and value-driven messages displayed on packaging can foster emotional connections between consumers and environmental issues. This supports previous findings that visual elements in packaging significantly influence consumer perception (Gotama & Natadjaja, 2023). However, without clear supporting evidence, emotional messaging may be perceived as manipulative, particularly in the context of increasing consumer awareness of greenwashing (Ibrahim, 2022).

The narrative (storytelling) approach acts as a bridge between rational and emotional elements. Through storytelling, companies can communicate complex sustainability messages in a more accessible and relatable manner. Narratives about material sourcing, production processes, and environmental impact help create a more personal experience for consumers. This indicates that sustainability communication is not only about “what is communicated,” but also “how it is communicated.”

Thus, the integration of these three approaches reflects a shift in marketing communication paradigms. Consumers are no longer solely interested in product information, but also in the meaning and values embedded within products. In this context, sustainability communication becomes part of a broader brand-building strategy.

Packaging as a Strategic Communication Medium

One of the key findings of this study is the role of packaging as a strategic communication medium. Packaging is no longer viewed solely as a functional element but also as a symbolic medium with communicative power. This aligns with the perspective that in modern marketing communication, every consumer touchpoint represents an opportunity to convey brand messages (Ronda, 2018).

Carton packaging, in particular, has an advantage because it is inherently associated with sustainability values. The materials used, along with visual elements such as color and symbols, create certain perceptions in consumers' minds. For example, the use of green colors or recycling symbols can evoke

associations with environmental friendliness, even if consumers do not fully understand the technical details.

The findings also suggest that packaging acts as a “silent communicator,” delivering messages without direct interaction. In situations where consumers are not exposed to advertisements or digital campaigns, packaging becomes the primary source of information. Therefore, packaging design plays a crucial role in shaping initial consumer perceptions.

However, the use of packaging as a communication medium also has limitations. The limited space available requires companies to simplify complex messages, which may lead to overly generalized or ambiguous information. In this regard, the integration of packaging with digital media becomes a relevant solution.

The use of QR codes or digital links allows companies to extend information beyond the physical limitations of packaging. This indicates that packaging should not be viewed as a standalone medium but as part of a broader communication ecosystem. This strategy aligns with the concept of integrated marketing communication (IMC), where multiple communication channels are coordinated to deliver consistent messages (Ruddin, 2023).

Gap Between Message and Consumer Understanding

Despite the development of various communication strategies, this study identifies a gap between the messages delivered by companies and consumers' understanding. Many consumers recognize terms such as “eco-friendly” or “recyclable,” yet they lack a clear understanding of their practical implications. This phenomenon suggests that sustainability communication is still largely symbolic and not sufficiently supported by educational elements. It highlights the challenge of environmental literacy among consumers, which remains a critical factor in the effectiveness of sustainability communication.

This gap also indicates that sustainability communication should not focus solely on persuasion but must also incorporate education. Companies need to communicate not only “what” and “why,” but also “how.” For instance, how consumers can recycle packaging or how their choices contribute to environmental impact.

Without adequate educational efforts, sustainability messages risk becoming mere symbols without substantive meaning. In the long term, this may reduce communication effectiveness and even lead to distrust among consumers.

Greenwashing Risks and the Importance of Credibility

The study also highlights the risk of greenwashing in sustainability communication. When companies present vague or unsupported sustainability claims, consumers may question the authenticity of the messages.

Greenwashing has become an increasingly relevant issue as consumer awareness of environmental concerns grows. Consumers are now more critical and tend to seek verifiable evidence before trusting sustainability claims. This underscores the importance of credibility as a key factor in sustainability communication.

In this context, transparency and consistency are essential. Companies must ensure that their communication accurately reflects their actual practices. The use of verifiable data, certifications, or third-party validation can enhance consumer trust and strengthen communication effectiveness.

Alignment with SDGs: From Implicit to Explicit Communication

The findings indicate that companies' sustainability communication strategies align with SDG principles, particularly SDG 12 and SDG 13. However, this alignment is often implicit rather than explicitly communicated. This suggests that companies have not fully leveraged the potential of linking their communication strategies to the SDGs framework. Explicitly communicating contributions to SDGs can enhance legitimacy and credibility, while also helping consumers better understand the broader impact of their choices.

Theoretical and Practical Implications

From a theoretical perspective, this study reinforces the concept that sustainability communication is a multidimensional process involving cognitive, affective, and symbolic elements. Packaging serves as a medium that integrates these dimensions, bridging communication strategies and consumer perception. From a practical perspective, the findings suggest that companies need to develop communication strategies that are not only appealing but also transparent and educational. The integration of packaging with digital platforms, as well as the balance between informative and emotional approaches, is crucial for enhancing communication effectiveness.

CONCLUSIONS AND RECOMMENDATIONS

This study was initiated from the need to gain a deeper understanding of how sustainability communication strategies are constructed and implemented within the beverage industry, particularly through the use of carton packaging. Based on the analysis conducted, it can be concluded that carton packaging no longer serves merely as a technical element in product distribution systems, but has evolved into a strategic instrument in sustainability communication.

Carton packaging plays a significant dual role. On the one hand, it offers a relatively more environmentally friendly solution compared to conventional alternatives such as plastic, primarily due to its recyclability and its origin from renewable resources. On the other hand, carton packaging functions as a communication medium that directly reaches consumers. Through visual elements, symbols, and textual messages embedded in the packaging, companies are able to effectively convey sustainability values at the closest point of contact with consumers, namely during the purchasing and consumption process.

The findings indicate that sustainability communication strategies adopted by companies are multidimensional, encompassing informative, emotional, and narrative approaches. The informative approach provides a rational foundation for consumers to understand the environmental benefits of carton packaging, while the emotional approach builds affective engagement that encourages consumers to perceive themselves as part of the environmental solution. Meanwhile, the narrative approach allows companies to package sustainability

messages into stories that are easier to understand and more relatable to consumers' everyday experiences.

However, the effectiveness of these approaches depends on several key factors, including message credibility, consistency between communication and actual practices, and the level of consumer literacy regarding sustainability issues. This study finds that although sustainability messages are widely communicated, there remains a gap between the information provided by companies and consumers' understanding. Many consumers recognize terms such as "environmentally friendly" or "recyclable," yet do not fully grasp their practical implications in everyday life.

In addition, this study identifies potential risks in sustainability communication, particularly related to greenwashing. When companies present sustainability claims without sufficient evidence or transparency, it can lead to consumer skepticism. In the long term, this may undermine public trust and reduce the effectiveness of communication efforts.

In relation to the Sustainable Development Goals (SDGs), the findings show that companies' sustainability communication strategies reflect contributions to global goals, particularly SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action). However, the integration of SDGs in communication remains largely implicit. Many companies do not explicitly link their practices to the SDGs framework, thereby missing opportunities to strengthen communication legitimacy and credibility.

Based on these findings, several recommendations are proposed for companies to enhance the effectiveness of their sustainability communication strategies.

First, companies need to improve transparency in information delivery. Transparency involves not only providing accurate information but also presenting it clearly, specifically, and in a way that is easy to understand. For example, instead of simply labeling products as "eco-friendly," companies can provide additional explanations regarding the meaning of such terms, how recycling processes work, and what role consumers play in supporting these processes. This enables consumers not only to receive claims but also to understand the context behind them.

Second, companies should develop more educational communication strategies. Education is crucial given the varying levels of environmental literacy among consumers. Companies can utilize both packaging and digital platforms to provide more comprehensive information about sustainability practices. For instance, the use of QR codes on packaging that direct consumers to educational content can help overcome space limitations on packaging.

Third, companies should integrate more interactive communication approaches. In the digital era, communication is no longer one-way but increasingly interactive. Companies can engage consumers in sustainability-related activities, such as recycling campaigns, packaging return programs, or community-based initiatives. By actively involving consumers, companies not only communicate messages but also build stronger relationships with their audiences.

Fourth, companies need to ensure consistency between communicated messages and actual practices. Consistency is a key factor in building credibility. If there is a gap between communication and practice, consumer trust will be difficult to establish. Therefore, sustainability communication must be grounded in real and verifiable practices.

Fifth, companies are encouraged to explicitly link their strategies to the SDGs. By clearly stating their contributions to SDGs, companies can strengthen their position as part of global sustainability efforts. This not only enhances credibility but also adds value to brand communication.

Overall, this study emphasizes that sustainability communication is not merely a promotional tool, but an integral part of a sustainable business strategy. In this context, carton packaging has significant potential to serve as an effective medium for conveying sustainability messages, provided that it is used strategically and supported by consistent practices.

FURTHER STUDY

Although this study provides a comprehensive understanding of sustainability communication strategies in the use of carton packaging, several limitations need to be acknowledged. One major limitation lies in the qualitative approach using a case study method. While this approach enables in-depth insights, it limits the generalizability of the findings. The results are context-specific and may not fully apply to other industries or geographical settings.

In addition, the limited number of research objects affects the scope of analysis. This study focuses only on selected companies that have adopted carton packaging, and therefore does not fully represent the diversity of practices within the broader beverage industry. Variations in communication strategies employed by other companies may not be fully captured in this study.

Another limitation concerns the consumer perspective, which is confined to certain groups. Differences in social background, education level, and environmental awareness may influence how consumers interpret and respond to sustainability messages. Therefore, future research should involve more diverse samples to provide a more representative understanding.

Based on these limitations, future studies are recommended to adopt quantitative approaches to measure the impact of sustainability communication on consumer behavior more objectively. Quantitative methods can provide measurable data, such as the relationship between perceptions of sustainable packaging and purchasing decisions or brand loyalty.

Furthermore, future research may benefit from employing mixed methods approaches that combine qualitative and quantitative techniques. This would allow researchers to gain both in-depth insights and generalizable findings, thereby contributing more robustly to both theory and practice in sustainability communication.

Future studies may also explore the role of digital technology in enhancing sustainability communication. For example, research could examine how social media, mobile applications, or augmented reality can improve communication

effectiveness and consumer engagement. In this context, packaging can serve as an entry point to more interactive digital experiences.

Additionally, further research is needed to evaluate the effectiveness of different types of sustainability messages. For instance, whether informative messages are more effective than emotional ones, or how a combination of both can produce optimal outcomes. Such studies would provide more specific insights for companies in designing effective communication strategies. Thus, this study is expected to serve as a foundation for future research that is broader and more in-depth, while also contributing to the development of sustainability communication literature, particularly within the context of the packaging industry.

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Finally, the author hopes that this research will contribute meaningfully to the advancement of knowledge and to the practical implementation of sustainability communication in the industrial sector.

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