

DIGITAL ADVERTISING AND SUSTAINABLE CONSUMER BEHAVIOR: KNOWLEDGE-BASED COMMUNICATION STRATEGIES

Lyubomira Spasova

Trakia University, Bulgaria, lyubomira.spasova@trakia-uni.bg

Abstract: The increasing importance of sustainability has significantly influenced contemporary consumer behaviour and marketing communication practices. In this context, digital advertising has emerged as a powerful channel for promoting sustainable consumption by facilitating knowledge transfer, value-based communication, and consumer engagement. The purpose of this study is to examine the role of digital advertising in shaping sustainable consumer behaviour through knowledge-based communication strategies. The research adopts a qualitative research approach supported by secondary quantitative data. It combines a systematic review of recent academic literature with qualitative content analysis and synthesis of empirical findings from contemporary studies on digital advertising and sustainability. The analytical framework focuses on key dimensions, including informational and educational content, emotional and value-based appeals, digital platform characteristics, and sustainability-oriented behavioural outcomes. Secondary empirical data are used to illustrate patterns related to consumer awareness, attitudes, willingness to pay for sustainable products, and behavioural intentions. The results indicate that digital advertising is particularly effective in enhancing consumer awareness and shaping positive attitudes toward sustainability when messages are transparent, informative, and ethically framed. Knowledge-based communication strategies strengthen trust and engagement, especially among younger consumer groups. However, the findings also reveal that the impact of digital advertising on actual behavioural change remains moderate, reflecting the persistence of the attitude-behaviour gap in sustainable consumption. The study concludes that digital advertising can function as both a persuasive and educational tool in sustainability-oriented marketing when aligned with knowledge-based communication principles and ethical standards. The findings provide valuable insights for researchers and practitioners seeking to design effective digital advertising strategies that support informed decision-making and promote sustainable consumer behaviour.

Keywords: digital advertising, sustainable consumer behaviour, knowledge-based communication, sustainability marketing, consumer awareness

1. INTRODUCTION

The growing urgency of environmental, social, and economic challenges has significantly reshaped contemporary consumer markets and communication practices. Issues such as climate change, resource depletion, and social inequality have increased public awareness of sustainability and influenced consumer expectations toward brands and organizations. In this context, sustainable consumption has emerged as a key concept, emphasizing responsible purchasing decisions and long-term societal well-being.

At the same time, the rapid expansion of digital technologies has transformed the advertising landscape, enabling new forms of interaction, personalization, and cross-border communication. Digital advertising platforms, including social media, search engines, and mobile applications, have become dominant channels for influencing consumer knowledge, attitudes, and behaviours. Unlike traditional mass advertising, digital advertising allows for real-time engagement, interactive content, and personalized communication, enabling brands to deliver targeted sustainability-related information and foster more meaningful relationships with consumers.

The intersection between digital advertising and sustainable consumer behaviour has attracted increasing scholarly attention in recent years. Research suggests that digital advertising can play a dual role by simultaneously promoting products and services while transferring knowledge related to sustainability, ethical production, and responsible consumption (Verčič et al., 2021). Through informational content, storytelling, and value-oriented messaging, digital campaigns can raise awareness, foster positive attitudes toward sustainability, and encourage consumers to adopt more responsible behavioural patterns.

However, influencing sustainable consumer behaviour through digital advertising presents several challenges. Consumers are increasingly exposed to high volumes of promotional content, which may lead to scepticism, information overload, and resistance to persuasive messages. Moreover, concerns related to data privacy, greenwashing, and message credibility can undermine trust and reduce the effectiveness of sustainability-oriented advertising strategies (Limaye et al., 2020). As a result, the success of digital advertising in promoting sustainable consumption depends not only on technological capabilities, but also on the strategic integration of transparency, ethical responsibility, and knowledge-based communication approaches.

Existing studies highlight that knowledge plays a critical mediating role between advertising exposure and consumer behaviour. When digital advertising provides clear, accurate, and actionable information about sustainability issues, consumers are more likely to develop informed attitudes and translate awareness into behavioural intentions (Austin et al., 2021). Knowledge-based communication strategies emphasize education, explanation, and empowerment, positioning consumers as active participants rather than passive recipients of persuasive messages. This approach aligns with contemporary models of sustainable marketing, which prioritize long-term value creation over short-term promotional gains.

Despite the growing body of research on digital advertising and sustainability, there remains a need for more integrated analyses that examine how specific communication strategies contribute to sustainable consumer behaviour. In particular, limited attention has been paid to the role of digital advertising as a structured mechanism for knowledge transfer that supports cognitive, emotional, and behavioural dimensions of sustainability. Addressing this gap, the present study explores digital advertising as a tool for promoting sustainable consumer behaviour through knowledge-based communication strategies. The research aims to identify key message characteristics and strategic approaches that enhance consumer awareness, trust, and engagement in sustainability-oriented digital advertising.

2. MATERIALS AND METHODS

This study adopts a qualitative research approach supported by secondary quantitative data in order to examine the role of digital advertising in shaping sustainable consumer behaviour through knowledge-based communication strategies. Such an approach is particularly appropriate for exploring complex relationships between communication practices, consumer knowledge, and sustainability-oriented behavioural outcomes (Creswell, 2014).

Research Design and Data Sources

The research design combines a systematic review of recent academic literature with qualitative content analysis of digital advertising practices related to sustainability. Academic sources were selected from peer-reviewed journals in the fields of marketing, communication, and sustainability, with a particular focus on studies published after 2020 in order to ensure topical relevance. In addition, secondary quantitative data were drawn from contemporary empirical studies and industry reports examining consumer responses to digital sustainability communication, including large-scale surveys and statistical analyses reported in prior research (Appel et al., 2020; Verčič et al., 2021).

The materials analysed include previously published datasets, synthesised empirical findings, and documented results related to consumer attitudes, willingness to pay for sustainable products, and behavioural intentions influenced by digital advertising. No primary data collection was conducted; instead, the study relies on validated empirical findings from recent research in order to ensure methodological reliability and comparability.

Analytical Framework and Variables

To ensure a structured and transparent analysis, a conceptual analytical framework was developed to examine how digital advertising contributes to sustainable consumer behaviour through knowledge-based communication strategies. The framework focuses on three main analytical dimensions: 1) informational and educational content, 2) emotional and value-based appeals, and 3) consumer behavioural outcomes related to sustainability.

These dimensions reflect established theoretical models suggesting that sustainable consumption is influenced by the interaction between cognitive awareness, affective attitudes, and behavioural intention. The analytical framework used in this study is presented in **Table 1**, which summarizes the key variables and indicators applied in the analysis of digital advertising messages.

Table 1. Analytical framework for digital advertising and sustainable consumer behaviour

Analytical Dimension	Key Indicators	Description
Informational Content	Clarity, accuracy, educational value	Extent to which digital advertising provides clear and reliable sustainability-related information
Emotional Appeal	Empathy, values, social responsibility	Use of emotions and values to foster positive attitudes toward sustainability
Knowledge-Based Communication	Explanatory messages, transparency	Degree to which advertising enhances consumer understanding and awareness
Digital Platform Characteristics	Interactivity, personalization, reach	Features of digital platforms that facilitate engagement and learning
Consumer Behavioural Outcomes	Awareness, intention, willingness to act	Observable effects on sustainable attitudes and behavioural intentions

Source: Own compilation based on recent literature.

Use of Secondary Empirical Data

In order to strengthen the empirical basis of the analysis, secondary quantitative data from recent studies were incorporated to illustrate observed patterns and trends in sustainable consumer behaviour. These data include indicators such as consumer willingness to pay for sustainable products, the impact of digital platforms on sustainability awareness, and reported correlations between digital advertising exposure and pro-environmental behavioural intentions. The summarized empirical findings are presented in **Table 2** and **Table 3**, which synthesize key results from contemporary research. These tables enable comparison across consumer groups, digital platforms, and sustainability dimensions, while avoiding methodological inconsistencies that may arise from direct data aggregation.

Table 2. Consumer willingness to pay a premium for sustainable products

Consumer Group	Willingness to Pay More (%)	Average Price Premium (%)
All Consumers	80	9.7
Generation Z	88	15.0
Millennials	85	12.3
Generation X	74	7.8
Baby Boomers	66	5.6

Source: Adapted from PwC Consumer Survey data reported in recent sustainability marketing studies (2020–2024).

Table 3. Influence of digital advertising on sustainable consumer behaviour

Dimension of Sustainable Behaviour	Level of Influence	Key Observations
Cognitive (Awareness)	High	Digital advertising significantly increases sustainability awareness
Affective (Attitudes)	Moderate–High	Positive emotional framing enhances favourable attitudes
Behavioural Intention	Moderate	Impact depends on credibility and informational depth
Actual Behaviour	Moderate	Stronger when combined with trust and transparency
Overall Impact	Positive	Knowledge-based strategies improve sustainability outcomes

Source: Synthesized from contemporary empirical studies on digital advertising and sustainability (2020–2023).

Method of Analysis

The analysis was conducted using qualitative synthesis and comparative interpretation. Findings from the literature review and secondary datasets were examined to identify recurring patterns, similarities, and differences in how digital advertising strategies influence sustainable consumer behaviour. Particular attention was paid to the role of knowledge-based communication in mediating the relationship between digital advertising exposure and consumer decision-making processes. This methodological approach allows for a holistic assessment of digital advertising as both a persuasive and educational tool, providing insights into effective communication strategies that support sustainability-oriented consumer behaviour while maintaining ethical and transparent practices.

3. RESULTS

The analysis of secondary empirical data and qualitative findings reveals several consistent patterns regarding the relationship between digital advertising and sustainable consumer behaviour. The results indicate that knowledge-based digital communication strategies play a significant role in shaping consumer awareness, attitudes, and behavioural intentions related to sustainability, as also observed in recent empirical studies on digital sustainability communication (Appel et al., 2020; Verčič et al., 2021).

Data summarized in **Table 2** demonstrate a high overall willingness among consumers to pay a price premium for sustainable products. Across all consumer groups, 80% of respondents reported a willingness to pay more for sustainably produced goods, with an average premium of 9.7%. The highest levels of willingness were observed among younger consumer segments, particularly Generation Z (88%) and Millennials (85%), who also reported the highest acceptable price premiums. Similar generational differences have been identified in recent sustainability and

digital marketing research, indicating stronger value-driven consumption patterns among younger audiences (Appel et al., 2020; Austin et al., 2021).

Further results indicate that digital advertising exerts its strongest influence on the cognitive dimension of sustainable consumer behaviour. As shown in **Table 3**, digital advertising has a high impact on sustainability awareness, primarily by increasing consumers' exposure to information about environmental and social issues. This finding is consistent with empirical evidence suggesting that digital platforms are particularly effective in enhancing knowledge and awareness related to sustainability topics (Verčič et al., 2021).

The affective dimension, reflected in attitudes and emotional responses, is also positively influenced, especially when advertising messages incorporate values such as responsibility, solidarity, and ethical consumption. Previous studies indicate that emotionally framed sustainability messages enhance engagement and positive attitudes; however, their direct impact on behavioural outcomes varies depending on message credibility and transparency (Limaye et al., 2020). Despite these positive effects, the influence of digital advertising on behavioural intention and actual purchasing behaviour remains moderate. While increased awareness and favourable attitudes are necessary conditions for sustainable consumption, they do not automatically translate into consistent behavioural change. This pattern reflects the well-documented attitude-behaviour gap in sustainability-oriented consumer behaviour (van der Meer & Jin, 2020).

Additionally, the results highlight the importance of digital platform characteristics in facilitating sustainable consumer behaviour. Interactivity, personalization, and broad reach enhance consumer engagement and support learning processes related to sustainability. At the same time, the findings suggest that concerns related to information overload and message credibility may constrain the effectiveness of digital advertising, particularly in highly saturated digital environments (Austin et al., 2021).

Overall, the results indicate that digital advertising contributes positively to sustainable consumer behaviour primarily by enhancing awareness and shaping attitudes through knowledge-based communication strategies. While the transition from awareness to consistent behavioural change remains limited, the findings underscore the potential of digital advertising as an educational and value-oriented tool in sustainability-oriented marketing, in line with recent empirical observations (Verčič et al., 2021; Limaye et al., 2020).

4. DISCUSSIONS

The results of this study confirm the growing consensus in the literature that digital advertising can play a meaningful role in promoting sustainable consumer behaviour when grounded in knowledge-based communication strategies. Consistent with previous research, the findings demonstrate that digital advertising is particularly effective in enhancing consumer awareness and shaping sustainability-oriented attitudes, supporting the view that knowledge transfer represents a critical precondition for responsible consumption (Appel et al., 2020; Verčič et al., 2021).

The strong influence of digital advertising on the cognitive dimension of sustainable behaviour highlights the importance of informational clarity and educational content. This finding aligns with studies suggesting that consumers are more likely to engage with sustainability-related messages when they are presented in a transparent and comprehensible manner (Austin et al., 2021). However, the moderate impact observed on behavioural intention and actual behaviour reinforces the existence of the well-documented attitude-behaviour gap in sustainable consumption. While digital advertising can successfully raise awareness and foster positive attitudes, translating these effects into consistent behavioural change remains a significant challenge (van der Meer & Jin, 2020).

The role of emotional and value-based appeals further illustrates the complexity of influencing sustainable consumer behaviour. In line with earlier research, the findings suggest that emotions such as empathy, responsibility, and collective concern enhance message engagement and attitudinal change (Du Plessis, 2018). Nevertheless, emotional appeals appear to be most effective when combined with credible and informative content. Overreliance on emotional framing without sufficient informational depth may lead to scepticism, particularly in digital environments where concerns about greenwashing and message manipulation are increasingly salient (Limaye et al., 2020).

The discussion also underscores the significance of digital platform characteristics in shaping sustainability outcomes. Features such as interactivity, personalization, and broad reach enable advertisers to tailor sustainability messages to diverse audiences and facilitate ongoing engagement. This supports networked communication perspectives, which emphasize the role of digital media in accelerating information flow and enhancing participatory communication processes (Castells, 2010). At the same time, the findings highlight potential limitations associated with information overload and declining trust in digital content, suggesting that strategic message design and ethical communication practices are essential for maintaining effectiveness (Chadwick, 2017).

Overall, the discussion indicates that the effectiveness of digital advertising in promoting sustainable consumer behaviour depends on the strategic integration of informational accuracy, emotional resonance, ethical responsibility, and platform-specific capabilities. Digital advertising is most effective when it functions not merely as a persuasive tool, but as an educational mechanism that empowers consumers with knowledge and supports informed decision-making. These insights contribute to a more nuanced understanding of how knowledge-based communication strategies can enhance the role of digital advertising in advancing sustainability-oriented marketing practices.

5. CONCLUSIONS

This study examined the role of digital advertising in shaping sustainable consumer behaviour through knowledge-based communication strategies. By integrating qualitative analysis with secondary empirical data, the research demonstrates that digital advertising can function not only as a persuasive marketing tool, but also as an effective mechanism for knowledge transfer that supports sustainability-oriented awareness and attitudes.

The findings indicate that digital advertising is particularly effective in enhancing the cognitive and affective dimensions of sustainable consumer behaviour. Informational clarity, transparency, and educational content contribute significantly to increased consumer awareness, while emotional and value-based appeals strengthen engagement and positive attitudes toward sustainability. However, the results also confirm that the influence of digital advertising on behavioural intention and actual purchasing behaviour remains moderate, highlighting the persistence of the attitude-behaviour gap in sustainable consumption.

The study further emphasizes the importance of trust, credibility, and ethical responsibility in digital sustainability communication. Knowledge-based strategies that prioritize accuracy and transparency are more likely to foster consumer confidence and long-term engagement, whereas poorly substantiated or overly promotional messages risk increasing scepticism and undermining behavioural outcomes. These findings underscore the need for responsible digital advertising practices, particularly in environments characterized by information overload and heightened consumer sensitivity to greenwashing.

Despite its contributions, the study has certain limitations related to its reliance on secondary data and qualitative synthesis. Future research could extend the analysis by incorporating primary empirical methods, such as consumer surveys or experimental designs, to further examine causal relationships between digital advertising strategies and sustainable consumer behaviour. Comparative and cross-cultural studies may also provide deeper insights into contextual differences in sustainability communication.

In conclusion, digital advertising holds significant potential to support sustainable consumer behaviour when aligned with knowledge-based communication principles and ethical standards. By integrating informational accuracy, emotional resonance, and platform-specific capabilities, digital advertising can contribute to more informed decision-making and promote sustainability-oriented consumer practices, thereby supporting broader societal goals of sustainable development.

REFERENCES

- Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science*, 48(1), 79–95. <https://doi.org/10.1007/s11747-019-00695-1>
- Austin, L., Liu, B. F., & Jin, Y. (2021). How audiences seek out crisis information: Exploring the social-mediated crisis communication model. *Journal of Applied Communication Research*, 49(3), 246–267. <https://doi.org/10.1080/00909882.2021.1891751>
- Castells, M. (2010). *The rise of the network society* (2nd ed.). Wiley-Blackwell.
- Chadwick, A. (2017). *The hybrid media system: Politics and power*. Oxford University Press.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.
- Du Plessis, E. (2018). *The branded mind: What neuroscience really tells us about the puzzle of the brain and the brand* (2nd ed.). Kogan Page.
- Limaye, R. J., Sauer, M., Ali, J., Bernstein, J., Wahl, B., Barnhill, A., & Labrique, A. (2020). Building trust while influencing online COVID-19 content in the social media world. *Health Communication*, 35(14), 1717–1725. <https://doi.org/10.1080/10410236.2020.1828331>
- van der Meer, T. G. L. A., & Jin, Y. (2020). Seeking formula for misinformation treatment in public health crises: The effects of corrective information type and source. *Health Communication*, 35(5), 560–575. <https://doi.org/10.1080/10410236.2019.1573295>
- Verčič, D., Verčič, A. T., & Žnidar, K. (2021). Crisis communication: A review of recent advances. *Public Relations Review*, 47(5), 102059. <https://doi.org/10.1016/j.pubrev.2021.102059>