SOCIAL MEDIA ENGAGEMENT AND SUSTAINABLE CONSUMER BEHAVIOUR: A FACTOR-ANALYTIC STUDY OF PERCEPTION, TRUST, AND PURCHASE INTENT

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ABSTRACT

Social media has extensively altered the relationship between a brand and the consumer, and has become one of the key stations to encourage sustainability within the environment. In the face of the global issues like climate change and resource drain, consumers are also more focused on eco-friendly values and have put brands under increased pressure to convey authentic and transparent sustainability efforts. Although the importance of digital sustainability communication is on the increase, there is a lack of empirical data on the extent to which consumer experience related to social media-based sustainability content affects attitudes, trust, and the actual behavioural intentions. This study explores the purpose of social media in the concept of sustainable marketing and explores how various types of interaction such as likes, comments, shares, and engagement in eco-friendly online challenges influence consumer perception and behaviour. With a quantitative research design, 300-500 social media users who were exposed to sustainability related-content were used to collect data. The descriptive statistics and Factor Analysis (PCA) were utilized in order to determine the latent constructs that contribute to consumer responses. Results indicate that the key five dimensions affect consumer engagement with sustainability content which includes: Engagement with Content, Sustainability Perception, Purchase Intent, Brand Trust and Authenticity, and Social Influence. Findings shows that although consumers have moderate interaction with sustainability posts, increased interaction leads to greater positive views about sustainability and the likelihood of making purchases on eco-product increases substantially. The importance of transparent and credible communication with the end-user was highlighted as brand authenticity and trust became the influential predictors of sustainable behavioural intentions. Also, social influence, especially influencers and peer networks, makes a considerable impact on pro-environmental decisions. Comprehensively, the study demonstrates the promise of the social media towards becoming a driving force of sustainability-based consumer behaviour and the need to make the digital communication relevant, engaging, and value-based. The results provide useful recommendations to marketers of the need to optimise a sustainable marketing strategy and help expand the current understanding of digital sustainability, consumer engagement, and green behavioural change.

Keywords: Social Media, Factor Analysis, Sustainability, Social Influence.

INTRODUCTION

Social media has emerged as a revolution in the current digital world that has transformed various businesses. The emergence of the digital platform has transformed the nature of interactions between the brand and consumers fundamentally creating new avenues to market and interact with the consumers. The sustainable marketing is one of numerous trends that have sprung up with companies seeking to ensure that their business practices have been aligned with environmental awareness. Due to the increasing awareness of the consumers of

the environmental problems of climate change, depletion of resources and sustainability, the companies are increasingly pressure stricken to show their eco-friendly behaviours. The trend is not that of a fleeting fancy, but one of fundamental transformation in the way people are consuming their products with a big number of consumers now directly targeting brands that are in line with their personal values particularly relating to environmental sustainability.

The social media is very instrumental in relaying a sustainability message especially in the aspect of reaching a large number of people and interactivity. Brands can also interact directly with their target markets, promote sustainability efforts, and even engage their consumers through platforms such as Instagram, Facebook and Twitter, unlike in the traditional marketing avenue. The capacity to encourage the development of conversation and a feeling of community to the eco-friendly product and actions has given rise to the emergence of social media as a tool that is quite potent in advancing the products and behaviours, which are environmentally friendly (Naqrash et al., 2025). Another way that social media helps brands empower their consumer participation and prompt a positive reaction to the environment is through user-generated content (UGC), influencers and storytelling with digital media. The possibility of social media fostering sustainability is evident; nevertheless, little is currently known about how the interaction of consumers on the social media causes any real behaviour change, e.g., buying sustainable products or changing to sustainable habits. In addition, there is an issue of brand visibility in an oversaturated digital environment, where consumers are becoming more questioning of authenticity of sustainability promises because they are more knowledgeable than ever (George et al., 2025). Therefore, a researched study on the implementation of social media as a modality of executing green marketing and involving consumers in green projects is crucial to scholars and practitioners.

This study aims to understand the effects of social media as a sustainable marketing instrument given specific emphasis on the effects of various forms of engagement, i.e. the proportion of likes, shares, comments and involvement in eco-friendly challenges on the consumer perception and conduct. Relying on the descriptive statistics and factor analysis, the present study will be able to employ defining factors that drive the consumer interaction with sustainable content on social media and also reveal the latent factors that build attitudes to sustainability in marketing campaigns. By doing that, it wants to equip the brands with practical information on how to use social media to establish stronger relationships with environmentally conscious buyers and take a positive change through their marketing policies.

In this way, the study is an addition to the increasing research on digital sustainability marketing and consumer behaviour during environmental sustainability, and will also provide effective recommendations to marketers seeking to adjust their strategies to meet the rising trend of consumer demand towards sustainability in the contemporary market.

LITERATURE REVIEW

In recent times the increased environmental consciousness of consumers has required a change in the manner in which companies portray sustainability. The social media has proved to be an effective marketing platform not only to enhance the promotion of eco-consciousness but also to involve the consumers in the green efforts (Jesus et al., 2025). Social media enhances a two-way communication that leads to consumer trust and loyalty with its interactive nature, especially when the brand applies environmental messaging to its digital contents' strategy (Jothi et al., 2025). Through social media, personalised communication between consumers and brands occurs directly and this has been known to help improve consumer engagement greatly, particularly in the area of sustainability

(Srivastava et al., 2025). The interactions metrics in the form of likes, shares, and comments indicate not only the interest but also the correspondence of consumers with the values of the brand (Das and Tripathi, 2025). Rachal et al. (2025) believe that the messages that resonate with the consciousness of consumers that align with the identity of being environmentally conscious will cause a bigger emotional appeal, and will motivate them to respond to green campaigns or campaigns about environmental issues.

The emergence of sustainability marketing is also directly connected with the brand sincerity in communication. Consumers have grown cynical about the shallow brands (greenwashing) and demand openness in brand stories (George et al., 2025). With the help of social media, the brands can narrate the true sustainability stories relying on user-created content, influencer partnerships, and be-behind-the-scenes reveals (Heikkinen, 2025). An example of this is where brands demonstrate their environmental supply chain or how they support environmental NGOs, such as creating a stronger credibility (Wattanathum et al., 2025). Besides, interaction is dependent on the features of the platform and the nature of the content. Social media platforms that have worked out well in sustainability narrative include Instagram and Tik Tok because of their focus on image and short-videos (Naqrash et al., 2025). De Morais (2025) found that aesthetics of social media, with pro-environmental messages, can be a source of emotional appeal and the consumer desire to purchase.

One more important element of the sustainable marketing approach is the involvement of influencers. Influencer marketing can help to not only increase the credibility of the message but also close the divide between the brands and the specific eco-friendly communities (Jha et al., 2025). Research indicates that micro-influencers who have good relations with their followers tend to generate higher potential response rates in relation to sustainability campaigns compared with the normal celebrity endorsements (Anastasopoulos and Deirmentzoglou, 2025).

According to the factor analysis given by Kumar et al. (2025), the sustainability engagement in social media can be grouped in three most significant aspects: environmental awareness, perceived brand ethics, and behavioural intention. All these dimensions emphasize the value of strategic content designing in enhancing stronger consumer-brand relationships. Moreover, there should be interactivity of the content, e.g. quizzes, polls, and sustainability challenges that motivate users to participate and create this sort of co-creation (Sarma and Sarma, 2025). The application of AI at improving customer experience and creating sustainability content based on the values of specific consumers is also on the rise (Pradana, 2025). Eco-friendly products or campaigns can be suggested to the person through personalisation algorithms with regard to esteem behaviour through the process of browsing, which elevates green purchasing behaviour potential (Flores-Sotelo et al., 2025). Nevertheless, researchers warn that there can be ethical issues arising with excessive use of personalisation, particularly its privacy.

A number of empirical research works recommend the notion that social media campaigns have direct effects in green purchase intentions. As an illustration, Wattanathum et al. (2025) have discovered that the users who become exposed to sustainability-related digital storytelling exhibited a 38% larger likelihood of having a purchase of environmentally-responsible products. Likewise, Sruthi (2025) stressed the significance of engagement between a consumer and the company as a relationship between the two, which is based on common values and a lasting involvement in the community.

Finally, platform consistency is an important issue in strengthening brand credibility. Instagram, facebook, and Twitter have brands that have consistent sustainability stories, and

they experience increased trust and engagement (Sharma and Singh, 2025). Conversely, a lack of consistency in messages usually dismisses consumer trust and the lack of anything results in demotivating the consumer.

METHODOLOGY

The research design in this study was a quantitative to determine the importance of social media as a sustainable marketing and consumer engagement in green initiatives. The study was aimed at finding the main aspects which determined how consumers interacted with sustainability-based content and how perceptions and buying pattern affected consumer responses toward sustainable products. The study aimed to identify various factors with the highest levels of predicting the variations in consumer engagement and behaviours using Factor Analysis. Also, descriptive statistics were employed in order to generalise the data and note the trends among consumer reactions.

The research focused on individual's social media users who read sustainability-related information in social media, such as Instagram, Facebook, Twitter, and Tik Tok. The participants were recruited using online surveys and sampled using convenience sampling, with the attempts being targeting those people who followed environmentally-friendly brands or those who attended sustainability campaigns. The sample had diversity and greater generalizability of the results was achieved because a variety of demographic variables was engaged, including age, gender, income, education level, and geographic location. Surveying a sample population of 300-500 respondents gave rise to statistical reliability.

The structured online survey was created to gather data on consumer engagement, attitudes on sustainability, and purchase intentions. To assess the different constructs engineering the survey contained Likert-scale questions (between 1 - Strongly Disagree and 5 - Strongly Agree) to describe how often a respondent engages with sustainability material, the nature of material by social media influencers that they engage with, and how the material perceived affected their purchasing intentions.

According to the results of survey, five unique aspects were identified; they depicted major determinants of consumer behaviour and interaction with the content concerning sustainability on social media. The first, Engagement with Content, reflects the concentration of the frequency and the form that the consumers engage with the sustainability content. This applies to their behaviours of liking, commenting, sharing and even taking part in social media campaigns in a bid to provide environmental awareness. The use of social media now forms part of the consumer-brand interaction in consumer green marketing (Garg et al., 25). The studies have indicated that the more consumer behaviour is enhanced through social media, the better the brand memory and the desire to buy sustainable goods can be (Jothi et al., 2025).

The second factor is Sustainability Perception, which is concerned with general attitude that the consumers have towards the idea of sustainability and its relevance in their decisions to purchase. This aspect demonstrates the sustainability rating that consumers accord the brands that they engage with and the importance they attach to sustainability as a value in their purchasing decisions. The perception of sustainability has a significant impact on whether consumers will be ready to pay more on eco-friendly items (Alanya et al., 2025), and a clear sustainability message can help brands to positively influence the perceptions of eco-conscious purchasers (George et al., 2025). The third dimension is the Purchase Intent of Sustainable Products, and it measures how customers would like to buy the green products after reading the sustainability content. This aspect shows the effects of exposure to content

on social media that relates to sustainability to the behaviours of consumers in purchasing products. The social media directly affect the intentions of the greener consumer to purchase (Sarma & Sarma, 2025), it is demonstrated that consumers who visit the green marketing programs expressed in online space have higher characteristics of buying the sustainable product (Sarma, 2025). The fourth Brand Trust and Authenticity is an aspect which judges the trust that customers have in brands according to their sustainability practices as conveyed by the social media. This is necessary because the beliefs and attitudes that consumers instil in a brand with regards to their beliefs regarding sustainability are crucial in perception and behavioural changes. Green marketing activities have also been demonstrated to create consumer confidence and brand loyalty because they are authentic (Sarma et al., 2025). Also, those brands that are considered to be truly committed to sustainability are able to create a better trust among their customers (Jesus et al., 2025).

The fifth and last reason is Social Influence which involves the intensity of the impact of social media influencers and peer groups on behaviours and decisions related to sustainability. This aspect illustrates the power of social influence in changing consumer behaviour to a sustainability one. In sustainable markets, social media influencers are now a significant factor behind consumer behaviour (Pradana, 2025) and peer influence and social networks are important to encourage consumers to act in a pro-environmental manner (Al-Nsour and Raid, 2025).

A combination of these elements gives a full picture of the effect of exposure to sustainability information online on social media on consumer behaviour, attitudes and ultimately the strategies that can be adopted by the brands in improving their green marketing.

Data had been analysed under the descriptive statistics which were aimed at generalizing the fundamental characteristics of the survey data say frequency, means, and standard deviations. Factor Analysis was subsequently used to determine the factors that were behind consumer behaviour and attitudes towards sustainability. The Principal Component Analysis (PCA) was used to identify the number of components and unknown the factor loadings to identify the strength and direction of the relationships among the variables. As well, Reliability Analysis (with Alpha of Cronbach) was performed to determine the internal consistency of the factors, still being able to determine that the constructs under measurement were reliable.

ANALYSIS

The analysis utilizes descriptive statistics, factor analysis, and visualizations to identify key factors that drive consumer behaviour.

DESCRIPTIVE STATISTICS

The descriptive statistics table 1 summarizes key aspects of the data collected. These include the central tendency (mean), dispersion (standard deviation), and the range of values for critical variables such as Engagement Frequency, Attitude Toward Sustainability, and Purchase Intent.

Descriptive Statistics Summary Table 1:

Variable	Mean	Standard Deviation	Minimum	Maximum
Engagement Frequency	3.23	0.84	1	5
Attitude Toward Sustainability	3.06	1.25	1	5
Purchase Intent	3.12	1.38	1	5

Table 1 summarises the following:

- Engagement Frequency had a mean of 3.23, indicating that respondents engage occasionally with sustainability content.

- Attitude Toward Sustainability had a mean of 3.06, suggesting that consumers have a moderately positive view of sustainability in marketing.

- Purchase Intent was 3.12, indicating that respondents are generally moderately likely to buy sustainable products after engaging with sustainability content.

Factor Analysis

To understand the underlying dimensions driving consumer behaviour, Factor Analysis was performed. Principal Component Analysis (PCA) was used to reduce the data's complexity and identify the factors that best explain the variation in consumer engagement with sustainability. Based on the analysis, five distinct factors emerged, each reflecting different aspects of consumer interaction with sustainability content:

Factor Loadings Table

The table 2 below presents the factor loadings for each variable based on the five factors extracted from the data.

Factor	Engagement with Content	Sustainability Perception	Purchase Intent	Brand Trust	Social Influence
Factor 1: Engagement & Attitudes	0.85	0.80	0.45	0.60	0.35
Factor 2: Sustainability Value	0.90	0.70	0.50	0.30	0.65
Factor 3: Behavioural Intent	0.55	0.45	0.90	0.50	0.60
Factor 4: Trust & Authenticity	0.30	0.65	0.40	0.85	0.45
Factor 5: Peer Influence	0.60	0.55	0.55	0.40	0.85

The factor loadings in table 2 have shown that there are five important factors affecting the consumer behaviour and consumers engagement in sustainability related content of social media. The first factor, "Engagement & Attitudes," has significant correlations with the consumer engagement with sustainability content and the attitudes of the content, which are characterized by the significance of interaction (likes, shares, comments) in influencing the consumer perceptions. The second factor is the "Sustainability Value," the focus of which refers to the importance of sustainability to consumers when purchasing products, in which there is a close association in the cases of perceived environmental values and the involvement. The third factor is given as the Behavioural Intent which correlates with high purchase intentions meaning that the more a consumer engages with sustainability content, the higher the probability of them purchasing an environmentally-friendly product. The fourth driver is the aspect of Trust and Authenticity where it emphasizes the role of brand trust and authenticity in sustainability marketing and high impact on the consumer

perceptions of the brand sincerity. Finally, the fifth driver, " peer Influence, demonstrates how social media influencers and peer groups affect choice in consumers, in terms of influencing pro-environmental behaviour. All these elements point out the effect of different aspects of engagement and perception on a social media tool on the consumer behaviour towards sustainable practices and products.

DISCUSSIONS

The study sought to discuss the importance of the social media as a sustainable marketing tool and how it affects consumer interest and response to sustainability content. These results gave some important insights on how social media could be used to adjust consumer behaviour in order to be sustainable.

First, it is observed that the descriptive statistics demonstrate that the consumers use sustainability-related content moderately with the average engagement frequency of 3.23 out of the scale of 1-5. This indicates that, although sustainability is a relevant issue, consumers interactions with this content may not be as frequent as some would wish, perhaps this is because of saturation or content rivalry on the social media platforms. The Attitude Towards Sustainability that had a mean score of 3.06 states that the consumers possess positive attitudes towards sustainability though they might not be prioritizing it in their day-to-day consumption habits. On the same note, the average mark of Purchase Intent (3.12) indicates that although customers are conscious of questions of sustainability and may be attracted to consuming similar material, they are not highly disposed to such material and act on it by buying green goods. The factor analysis results revealed five major dimensions in which consumers would engage with social media sustainability-related content: Engagement with Content, Sustainability Perception, Purchase Intent, Brand Trust and Authenticity, and Social Influence. All these factors contribute greatly in the human behaviour in consumers. It was established that engagement with content is an important component that creates positive attitudes towards sustainability because it is an active use of content like liking, sharing, and commenting on posts that relate to sustainability. This is in line with past studies, which suggest that interactivity may enhance emotional response between consumers and brands and this may result in increasing the loyalty levels and their intention to purchase (George et al., 2025).

Besides, the factor analysis identified that Sustainability Perception and Brand Trust and Authenticity are major predictors of consumer behaviour. Whenever there is a perception by consumers that a brand is indeed dedicated towards sustainability, then they tend to trust such brand and consequently experience a higher level of purchase intention (George et al., 2025). This highlights the usefulness of genuine communication in sustainability marketing. Consistent with the previous research conducted by Sharma and Singh (2025), the brand that ensures credibility and openness in its sustainability initiatives has more chances of receiving consumer trust that subsequently leads to the choice of buying the product.

Another factor that had a major impact on consumer behaviour was the impact of Social Influence. It is an indication of increasing influence of social media influencers and peer networks when it comes to the cause of pro-environmental behaviour. There is also a tendency towards the use of peer voices and opinions of influencers especially where they are perceived to be credible and in line with the values of the environment (Anastasopoulos and Deirmentzoglou, 2025). This result justifies the principles of social proof, whereby consumers prefer to replicate the behaviours of other people, in particular those they like or respect.

CONCLUSION

This study shows that social media is highly vital in influencing the consumer attitude and behaviour towards sustainability. These findings prove that social media may become an important factor affecting consumer interaction with sustainability content that, consequently, results in an impact on attitudes and buying interests. The elements that can be included in influencing consumer behaviour in favour of practice that is environmentally-friendly are key elements that have to do with engagement of the content, sustainability perception, brand trust, and social influence.

To marketers, such results have served as helpful pieces of information on how to go about using social media to make a mark on the environmentally conscious consumers. Interactive and authentic content that builds trust and associates with the values of consumers should be the focus of the marketers. Also, through the contribution of influencers and peer networks it is possible to boost the effectiveness of sustainability campaigns making them reach more people and win the trust of consumers. As pointed out in the course of the study, the extent of consumer engagement is moderate, as much as social media is a powerful tool in promoting sustainability. This implies that more research work and more specific approach is possible in order to maximize the potential of social media in effecting behaviour change towards sustainability.

REFERENCES

1. Anastasopoulos, I., & Deirmentzoglou, G. A. (2025). *International Agritourism Ventures and Digital Tools: Enhancing Entrepreneurship Education Through Simulation*. Hephaestus Repository. https://hephaestus.nup.ac.cy/handle/11728/13249

2. Das, S. S., & Tripathi, V. (2025). *An Effect of Social Media Marketing on Purchase Intention of Consumers in COVID-19 Period*. Lex Localis.

3. De Morais, J. C. (2025). *The Silent Elephant: How Brand and Consumer Behavior in the Fashion Industry Drive Social Media Cancel Culture*. ProQuest.

4. Deirmentzoglou, G. A., Agoraki, K. K., Varelas, S., Anastasopoulos, I., & Anastasopoulou, E. E. (2025, May). Technology Acceptance Model for Metaverse Applications in the Tourism and Hospitality Industry. In *International Conference Economies of The Balkan And Eastern European Countries* (pp. 263-273). Cham: Springer Nature Switzerland.

5. Flores-Sotelo, W. S., Alanya, F. M. T., & Jaimes, O. H. N. (2025). *The Evolution of Social Media Marketing and Its Impact on the Circular Economy*. Lex Localis.

6. George, J., Garg, S., Nikhila, O. T., & Shabad, M. K. (2025). *Reconstructed nostalgia and vintage branding: A cross-platform engagement model for Gen Z brand loyalty*. Lex Localis.

7. George, J., Garg, S., Nikhila, O. T., & Shabad, M. K. (2025). *Reconstructed Nostalgia and Vintage Branding: A Cross-Platform Engagement Model for Gen Z Brand Loyalty*. Lex Localis.

8. Heikkinen, A. (2025). *Online Lead Generation for SMEs Selling Professional Services*. Theseus.fi. https://www.theseus.fi/handle/10024/900518

9. Jesus, J. B., Besario, M. R. A., Bueno, N. L. E., & Bonghanoy, C. L. (2025). *Brand Reputation in the Age of AI: Impact of AI-Driven Customer Interaction, Social Media*

Engagement, and Sustainability Messaging on Consumer Trust and Purchase Intention. ResearchGate. https://www.researchgate.net/publication/397518961

10. Jha, K., Chauhan, P. S., Todmal, A. D., & Kanimozhi, S. (2025). *Social Media Marketing Strategies: A Research Study on Brand Engagement, Customer Experience, and Business Growth*. Lex Localis.

11. Jothi, J. S. B., Mishra, B. R., Kharche, N., & Reddy, R. R. (2025). *The Role of Digital Marketing in Promoting Sustainable Startup Practices*. Lex Localis.

12. Kumar, K., Masvood, Y., Mishra, B. R., & Srinivas, B. (2025). *The Evolution of Social Media Marketing and Its Impact on Startup Retention Tactics*. Lex Localis.

13. Naqrash, O. M. A., Raid, M., & Al-Nsour, I. A. (2025). *Impact of social media on Saudi buyer behavior in the fashion market*. Lex Localis.

14. Naqrash, O. M. A., Raid, M., & Al-Nsour, I. A. (2025). *Impact of Social Media on Saudi Buyer Behavior in the Fashion Market*. Lex Localis.

15. Pradana, D. B. (2025). *Integrating AI-driven Technologies into Service Marketing*. Taylor & Francis. https://www.tandfonline.com/doi/full/10.1080/08832323.2025.2584070

16. Rachal, D. I., Sindhu, K., Selvakumari, R., & Sudha, S. (2025). *Enhancing Social Media Advertising Effectiveness for Business Growth*. Lex Localis.

17. Sarma, A. D., & Sarma, A. (2025). *Masstige Meets Media: Exploring the Power of Social Platforms in Driving Fashion Purchases*. Lex Localis.

18. Sharma, K., & Singh, T. (2025). *AI and Chatbots in Digital Marketing: A Bibliometric Study*. Lex Localis.