

The Role of Marketing Analytics in Promoting Sustainable Consumer Behavior: A Descriptive Study

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Abstract

Marketing analytics enables companies to design personalized advertisements, product recommendations, and targeted promotions using consumer data. These strategies are increasingly used to promote eco-friendly products. However, it remains unclear how consumers perceive such analytics-driven promotions and whether they translate into actual sustainable buying behavior. This descriptive study examines consumer awareness, motivations, trust, and purchasing patterns toward eco-friendly products using primary data collected from 41 respondents through a structured questionnaire. Percentage analysis was conducted using Microsoft Excel and visualized through pie charts. The findings reveal high awareness of eco-friendly products but relatively low regular purchasing behavior, indicating an awareness–behavior gap. Consumer decisions appear to be influenced more by convenience, affordability, health benefits, and trust than by sustainability concerns alone. The study suggests that marketing analytics can more

effectively promote sustainable consumption when aligned with perceived consumer value and transparent communication.

I. INTRODUCTION

Marketing analytics refers to the use of consumer data to design targeted marketing strategies such as personalized advertisements, algorithm-based product recommendations, and promotional offers. With growing environmental concerns, companies increasingly rely on analytics-driven marketing to promote eco-friendly products.

While digital platforms successfully increase product visibility, sustainable consumer behavior depends on how consumers interpret and respond to these promotional efforts. Understanding consumer perception is therefore essential for evaluating the real role of marketing analytics in sustainability promotion.

Problem Statement

Eco-friendly products are increasingly promoted using marketing analytics-driven strategies. However, there is limited understanding of how consumers perceive these promotions in terms of awareness, trust, and actual buying behavior. This study addresses this gap by examining consumer perceptions rather than organizational marketing strategies.

Objectives of the Study

The study aims to examine the perceived role of marketing analytics-driven promotions in shaping consumer awareness and buying behavior toward eco-friendly products. Specifically, the study seeks to:

- assess consumer awareness of eco-friendly products,
- examine purchasing behavior and motivations,
- analyses the influence of analytics-driven promotions,
- identify barriers affecting sustainable purchasing,
- understand consumer trust toward eco-friendly claims, and
- Suggest managerial implications for improving analytics-based sustainability promotion.

Research Methodology

- Aspect- Description
- Research Design- Descriptive Study
- Data Source - Primary Data
- Data Collection Tool - Structured Google Form Questionnaire

- Sample Size- 41 Respondents
- Sampling Method- Convenience Sampling
- Data Collection Period- January 2026
- Analysis Tool- Microsoft Excel
- Analysis Technique -Percentage Analysis & Pie Charts

The questionnaire included multiple-choice questions and “select all that apply” questions to capture behavioral motivations and perceived barriers.

The objective was to identify patterns in perceptions and behavior, not cause-and-effect relationships.

Theoretical Framework

The study is interpreted using the Theory of Planned Behavior (Ajzen, 1991), which explains behavior through:

Attitude toward behavior,

Perceived behavioral control,

Behavioral intention.

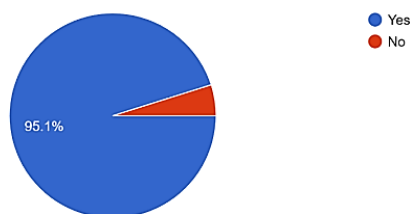
High awareness represents positive attitudes, while barriers such as price and availability reflect limited perceived behavioral control affecting purchasing behavior.

Analysis and Discussion

Consumer Profile

The sample consisted primarily of young consumers, with 80.8% aged between 18–25 years and 65.9% residing in urban areas. This demographic represents digitally active consumers frequently exposed to analytics-driven marketing.

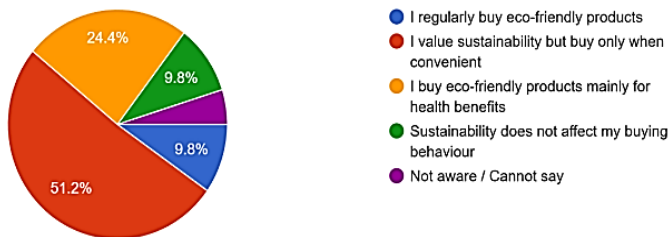
Market Awareness and Cognitive Penetration



A significant 95.1% of respondents reported awareness of eco-friendly products. This indicates that sustainability concepts have achieved strong market penetration and awareness is no longer the primary marketing challenge.

However, awareness alone does not guarantee behavioral adoption.

Buying Behavior and the Awareness–Action Gap



Despite high awareness:

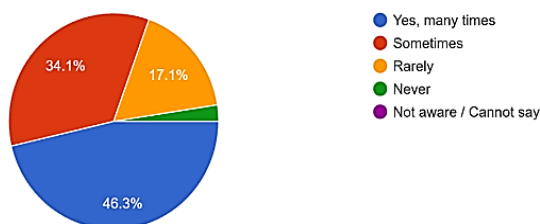
Only 9.8% regularly purchase eco-friendly products.

51.2% buy only when convenient.

24.4% purchase mainly for health benefits.

This disparity highlights a critical friction point between awareness and consistent buying behavior, suggesting that sustainable purchasing is influenced more by practical considerations than environmental concern alone.

Influence of Marketing Analytics-Driven Promotions



Exposure to analytics-driven advertisements is high:

46.3% reported seeing such ads often

34.1% sometimes

17.1% rarely

However, influence on purchase decisions remains moderate:

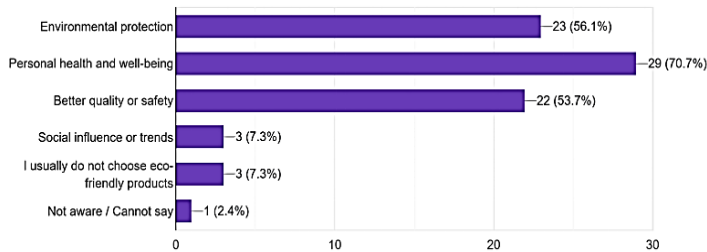
19.5% reported strong influence

43.9% reported only slight influence

26.8% reported minimal influence

This indicates that marketing analytics is effective in increasing visibility and product discovery but less effective in converting awareness into purchasing behavior.

Consumer Motivation Hierarchy (Select-All Question Analysis)



Motivations for choosing eco-friendly products include:

Personal health and well-being – 70.7%

Environmental protection – 56.1%

Better quality or safety – 53.7%

Social influence – 7.3%

These findings suggest a value hierarchy where personal benefits outweigh environmental motivations, indicating that consumers are primarily benefit-driven rather than purely sustainability-driven.

Barriers to Sustainable Purchasing (Select-All Analysis)

Key barriers identified include:

Limited availability – 51.2%

Higher price – 43.9%

Lack of clear communication – 36.6%

Habit and convenience – 17.1%

No perceived difference – 17.1%

These barriers can be categorized as:

Economic barriers (price),

Logistical barriers (availability),

Informational barriers (communication and trust).

Trust and Credibility

Consumer trust in eco-friendly claims remains moderate:

Very confident – 14.6%

Somewhat confident – 41.5%

Neutral – 36.6%

Moderate trust levels suggest that transparency and credible communication are essential for analytics-driven promotions to influence behaviour.

Integrated Interpretation

Collectively, the findings describe a high-awareness but low-conversion market. Marketing analytics successfully drives exposure and discovery; however, behavioural adoption remains constrained by perceived value, accessibility, and trust.

Managerial Implications

The findings suggest several strategic directions:

- Benefit-led messaging: Emphasise health and quality benefits rather than sustainability alone.
- Value-oriented promotions: Address price sensitivity through targeted offers.
- Dynamic retargeting: Use analytics to notify consumers about availability and discounts.
- Transparency strategies: Promote certifications, reviews, and clear product information to build trust.

Limitations of the Study

- Convenience sampling limits generalizability.
- Small sample size (n=41).
- Data represents consumer perceptions rather than causal relationships.
- Responses may reflect digitally active demographics more strongly.

II. CONCLUSION

The study demonstrates that marketing analytics plays an important role in increasing awareness and discovery of eco-friendly products. However, awareness does not consistently translate into regular purchasing behaviour. Sustainable buying appears to be shaped primarily by convenience, affordability, health benefits, and trust rather than sustainability concern alone.

Therefore, marketing analytics can more effectively promote sustainable consumer behaviour when promotional strategies align with perceived consumer value, transparent communication, and ease of purchase rather than visibility alone.

III. REFERENCES

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