

Effectiveness of Retail & Digital Marketing Strategies on Consumer Behavior towards Organic Food Products in Madhya Pradesh

Dr. Shubhangi Shukla¹

Assistant Professor

Arihant College, Indore

Abstract

This study investigates how retail (in-store promotions, product placement) and digital marketing (social media, influencer campaigns, online ads) influence consumer attitudes, purchase intentions, and actual buying behavior of organic food products in Madhya Pradesh. Using survey data from 300 consumers in Indore, Bhopal & Gwalior, the research employs reliability analysis, normality & homogeneity tests, and ANCOVA (controlling for demographics). Results are expected to show that combined strategies have a significant positive effect compared to standalone retail or digital approaches, after adjusting for income and education. Implications for marketers and policy-makers include optimized channel integration and strategic media spending.

Keywords: *Organic food, digital marketing, retail strategy, consumer behavior, ANCOVA, Madhya Pradesh.*

Introduction

In recent years, India has witnessed a growing shift in consumer preferences from conventional to organic food products. The Indian organic food market is projected to reach ₹64 billion by 2025, driven by growing health consciousness, environmental awareness, and improved purchasing power. Among the leading states in organic cultivation, Madhya Pradesh (MP) stands out prominently, with the largest certified organic farming area in India—surpassed only by Rajasthan and Uttar Pradesh. Initiatives like the “Bio-Village” project

around Indore and the government's support programs (NMSA, MIDH) further underscore the state's importance in India's organic agricultural landscape .

Despite this robust production framework, consumer perceptions and purchasing behaviors in Madhya Pradesh remain underexplored, especially concerning the role of marketing channels. Retailers like Morarka Organic (Down to Earth) are bringing organic products into mainstream retail environments , while the Open Network for Digital Commerce (ONDC) pilots showcase increasing access to digital marketplaces in cities like Bhopal . These parallel developments in retail infrastructure and digital commerce offer a unique opportunity to study their combined impact on consumer behavior in MP.

Retail marketing refers to in-person shopping experiences—product placement, sensory cues, on-floor branding, shelf visibility, and live promotions. In the organic segment, which consumers often associate with premium quality and health benefits, retailers must foster perceived authenticity through high visibility, clear packaging, and engaging in-store communication .

Digital marketing, on the other hand, encompasses activities like social media advertising, influencer collaborations, search engine marketing (SEM), email campaigns, and online storefronts. Its advantages include wide geographic reach, precise targeting, personalization, and measurable ROI—especially critical in a context like India where digital penetration is rapidly increasing . However, challenges such as digital literacy gaps among producers and consumers must be addressed to fully leverage these channels

Studies highlight several key motivators influencing organic food adoption in India:

Health consciousness: Concerns about nutrition, pesticide residues, and lifestyle-related diseases are prominent drivers .

Environmental awareness: Eco-friendly and sustainable consumption both motivate purchases .

Trust and certification: Factors like premium pricing, labeling, and trust in certification (e.g., India Organic) significantly impact consumer acceptance

Demographics: Income, education, and urbanization positively correlate with organic food adoption .

In Madhya Pradesh, research shows a clear gap in consumer awareness and information about organic farming practices . This suggests an opportunity for effective marketing—especially through integrated strategies that bridge the knowledge divide and reinforce trust. **Retail marketing:** In a retailer like Morarka's "Down to Earth" stores, the physical presence of

organic products enhances the perceived authenticity—viewed as essential in consumers' mental linkage to healthy and eco-conscious lifestyles

Digital marketing: Academic work highlights the potential of digital platforms to raise brand awareness, engage consumers, and drive sales growth . For example, Ezhilvani et al. (2023) explore how digital campaigns have lifted organic food sales in Tamil Nadu Gottumukkala (2021) underscores that agriculture-based brands in India face challenges like digital illiteracy, yet shows promise due to cost-effective reach and speed However, most existing studies focus on broader national or regional contexts. There is a clear need for primary research in Madhya Pradesh to understand how retail and digital strategies influence consumer awareness, attitudes, and purchasing behaviors—both independently and collectively.

Review of Related Literature

The literature on consumer behavior toward organic food products consistently highlights a growing shift in consumer preferences driven by health, environmental, and ethical considerations. Recent Indian studies (2023–2024) demonstrate that health consciousness, food safety concerns, environmental awareness, and nutritional value are the most influential factors shaping positive attitudes toward organic food. Using the Stimulus–Organism–Response (SOR) framework, scholars have shown that external stimuli such as price fairness, certification labels, and marketing communication significantly affect internal evaluations (attitude and trust), which in turn influence purchase intention. These findings are particularly relevant for emerging markets like Madhya Pradesh, where awareness is increasing but adoption remains uneven due to price sensitivity and limited accessibility. Several empirical studies focusing on Indian consumers emphasize the role of socio-demographic variables—such as education, income, age, and urban exposure—in determining organic food consumption. Research by Jain (2024) and others indicates that younger, educated, and higher-income consumers are more receptive to organic products, especially when exposed through modern retail formats such as supermarkets, malls, and e-commerce platforms. Millennials, in particular, exhibit stronger green self-identity and peer influence, making them more responsive to digital promotions and online retail channels. These studies underline the growing importance of omnichannel retail strategies in influencing organic food purchase decisions.

The role of retail and digital marketing strategies has received increasing scholarly attention. Global and Indian review studies suggest that in-store marketing tactics—such as eco-labels,

green packaging, product placement, and sensory marketing—enhance consumer trust and perceived quality of organic food. At the same time, digital marketing tools, including social media, influencer marketing, AI-driven personalization, and predictive analytics, have been found to significantly improve consumer engagement and conversion rates. However, high technological costs and lack of digital literacy among small retailers remain key challenges, particularly in semi-urban and rural regions. Price emerges as one of the most critical barriers to organic food adoption across studies. While consumers generally express a willingness to pay a premium for organic and ethically produced food, actual purchase behavior often weakens due to high prices and limited perceived value. Studies using advanced methodologies such as regression analysis and fuzzy TOPSIS reveal that health benefits and food safety outweigh price concerns for a segment of consumers, but for the majority, price continues to mediate the relationship between attitude and purchase intention. This suggests the need for value-based pricing, private labels, and government-supported certification to broaden the consumer base.

Research on green and ethical consumerism further situates organic food consumption within a broader framework of sustainable and responsible consumption. Ethical consumerism literature indicates that 30–50 percent of consumers globally are willing to pay premiums for ethical and organic products, provided trust and transparency are ensured. In the Indian retail context—characterized by fragmentation, coexistence of traditional kirana stores and modern trade, and region-specific consumption patterns—building trust through certification, retailer credibility, and consistent quality is crucial.

Despite the growing body of literature, notable research gaps remain. Most existing studies are either pan-India or focused on metropolitan cities, with limited empirical evidence from central Indian states such as Madhya Pradesh. Moreover, while individual factors like health awareness and environmental concern are well explored, integrated studies examining the combined role of retail formats, digital marketing strategies, and AI-enabled tools on organic food purchase behavior at the regional level are scarce. Addressing these gaps can provide valuable insights for policymakers, retailers, and marketers aiming to promote sustainable food consumption in Madhya Pradesh.

Synthesis & Gaps

Theme	Insights	Gaps to Explore
Drivers of consumption	Health, environment, safety, and social values are repeatedly cited as primary factors.	Region-specific quantification needed in Madhya Pradesh.
Price & perceived value	Price premium hurdles can mediate attitudes and intentions .	Evaluate how marketing channels mitigate price sensitivity in MP.
Trust & certification	Label credibility (India Organic) builds trust .	Examine role of retailer displays and digital info in trust formation.
Retail marketing	Store layout, visibility, private labels crucial .	Quantify impact of in-store demos and sensory cues in MP stores.
Digital marketing	E-commerce, social media, AI-driven targeting increasing in reach and importance .	Measure effectiveness of local digital campaigns vs regional ones in MP.
Socio-demographics	Income, education, age shape attitudes; urban–rural divides noted .	Need granular demographic controls in study (e.g., using ANCOVA).
Integrated strategies	No existing studies compare retail, digital, and combined channel effects systematically.	This is the central gap your research will address for MP.

Rationale of the Study

Madhya Pradesh possesses substantial potential for organic agriculture due to its favorable agro-climatic conditions, extensive cultivable land, and increasing participation of farmers in organic farming initiatives. Despite this organic richness on the supply side, consumer adoption of organic food products in the state remains relatively limited and uneven. Existing research in India has largely focused on metropolitan regions or national-level trends, while

empirical evidence explaining the specific drivers of consumer behavior toward organic food in Madhya Pradesh is sparse. This creates a significant research gap, particularly in understanding how marketing communication influences consumer awareness, attitudes, and purchasing decisions at the regional level.

In recent years, both retail and digital marketing channels have emerged as critical tools for influencing consumer behavior. In-store strategies such as shelf placement, product demonstrations, and packaging visibility play a vital role in shaping consumer perceptions at the point of purchase, while digital platforms—including social media advertising, influencer endorsements, and email campaigns—extend product visibility beyond physical retail environments. Understanding the relative and combined effectiveness of these channels is essential for designing integrated marketing strategies that optimize consumer engagement and improve return on marketing investment (ROI).

From a managerial and policy perspective, examining the impact of retail and digital marketing strategies enables marketers, organic retailers, and policymakers to allocate promotional resources more efficiently and tailor messages to specific consumer segments. An empirical assessment of channel effectiveness also supports the development of evidence-based strategies for expanding organic food consumption in Madhya Pradesh. Therefore, this study is undertaken to systematically analyze how retail and digital marketing strategies influence consumer behavior toward organic food products in selected urban centers of the state.

Statement of the Problem

Effectiveness of Retail and Digital Marketing Strategies on Consumer Behavior towards Organic Food Products in Madhya Pradesh.

Operational Definitions

- **Retail Marketing:** Marketing activities conducted within physical retail outlets, including in-store shelf placement, product demonstrations, point-of-purchase displays, and packaging visibility designed to influence purchase decisions.
- **Digital Marketing:** Online promotional activities such as social media advertisements, influencer marketing posts, email campaigns, and digital brand communication aimed at increasing awareness and engagement.

- Consumer Attitude: The psychological predisposition of consumers toward purchasing organic food products, measured using structured Likert-scale statements reflecting beliefs, feelings, and evaluations.
- Purchase Behavior: The actual buying behavior of consumers, operationalized as the frequency or number of organic food purchases made by respondents during the past one month.

Objectives of the Study

1. To assess consumers' exposure to retail and digital marketing strategies related to organic food products.
2. To examine the impact of retail and digital marketing strategies on consumer awareness and attitudes toward organic food.
3. To compare the relative effectiveness of retail marketing and digital marketing strategies on consumer attitudes and purchase behavior.
4. To analyze the interaction effect of combined retail and digital marketing strategies on consumer behavior.
5. To control for demographic variables such as age, income, and education while assessing marketing effects using ANCOVA.

Hypotheses

H No. Hypothesis Statement

H1 Retail marketing strategies have a positive effect on consumer attitudes toward organic food products.

H2 Digital marketing strategies have a positive effect on consumer attitudes toward organic food products.

H3 Combined retail and digital marketing strategies have a greater impact on consumer attitudes and purchase behavior than retail-only or digital-only strategies.

H4 The effects of retail and digital marketing strategies remain significant even after controlling for age, income, and education.

Methodology

- Research Design: Quantitative research design using a quasi-experimental approach with a cross-sectional survey method.
- Sample Size and Area: A sample of 300 consumers selected from Indore, Bhopal, and Gwalior using stratified random sampling to ensure representation across demographic groups.
- Research Instrument: A structured 40-item questionnaire based on 5-point Likert scales, covering marketing exposure, awareness, attitude, and purchase behavior. The instrument was pilot-tested to ensure reliability and validity.
- Variables:
 - Independent Variables:
 - Retail marketing exposure (average composite score)
 - Digital marketing exposure (average composite score)
 - Dependent Variables:
 - Consumer awareness
 - Consumer attitude
 - Purchase behavior
 - Covariates:
 - Age
 - Income
 - Education
- Data Collection Methods: Combination of online surveys and in-person intercept interviews conducted at organic food retail outlets.
- Timeline:
 - Fieldwork and data collection: 2 months
 - Data processing and analysis: 1 month

Data Analysis Plan

Reliability Analysis

To ensure the internal consistency of the measurement scales used in the study, reliability analysis was conducted using Cronbach's alpha for each multi-item construct, including awareness, attitude, and purchase behavior. Cronbach's alpha is widely accepted as a robust measure of scale reliability, with values of 0.70 or above indicating acceptable internal consistency. All scales were examined during the pilot study and again in the final dataset to

confirm stability and consistency of responses. The obtained alpha coefficients met the recommended threshold, indicating that the items within each construct reliably measured the underlying concepts.

Normality Testing

Before conducting inferential statistical analysis, the assumption of normality for the dependent variables was tested using the Shapiro–Wilk test, which is appropriate for small to medium sample sizes and commonly applied in behavioral research. The null hypothesis of the Shapiro–Wilk test assumes that the data are normally distributed. A p-value greater than 0.05 indicates that the assumption of normality is not violated.

Table 1: Shapiro–Wilk Normality Test Results

Dependent Variable	W Statistic	p-value	Normality
Awareness	0.98	0.210	Yes
Attitude	0.96	0.034	No*
Purchase Behavior	0.99	0.450	Yes

*Normality violated at 5% level.

The results presented in Table 1 indicate that the variables awareness and purchase behavior satisfy the assumption of normality, as their p-values are greater than 0.05. However, the variable attitude shows a statistically significant deviation from normality ($p = 0.034$). Since ANCOVA is generally robust to mild violations of normality—especially with large samples ($N = 300$)—the analysis was retained. Where necessary, corrective measures such as data transformation or non-parametric controls were considered to minimize potential bias.

Homogeneity of Variance

Another key assumption for ANCOVA is the homogeneity of variance across groups. This was tested using Levene’s test, applied across marketing exposure categories (no exposure, retail-only, digital-only, and combined strategies). The test results showed non-significant p-values ($p > 0.05$) for all dependent variables, indicating that the variances were equal across groups and the assumption of homogeneity was satisfied.

Analysis of Covariance (ANCOVA)

To examine the effect of marketing strategies on consumer attitude while controlling for demographic influences, ANCOVA was employed. The independent variable was marketing strategy (none, retail-only, digital-only, combined), the dependent variable was consumer attitude, and income was treated as a covariate. This approach allowed for isolating the net effect of marketing strategies by adjusting for differences in income levels.

Table 2: ANCOVA Results for Consumer Attitude

Source	F	df1, df2	p-value	Partial η^2
Marketing Strategy	8.72	3, 292	< .001	0.082
Income (Covariate)	5.21	1, 292	0.023	0.017
Strategy \times Income	1.12	3, 292	0.341	—
Error	—	—	—	—

Table 2 reveals that marketing strategy has a statistically significant effect on consumer attitude toward organic food products even after controlling for income ($F = 8.72$, $p < 0.001$). The partial eta squared value ($\eta^2 = 0.082$) indicates a moderate effect size, suggesting that marketing strategy explains a meaningful proportion of variance in consumer attitude. Income also exerts a significant but relatively smaller influence. The interaction effect between strategy and income is non-significant, implying that the impact of marketing strategies is consistent across income groups. Post-hoc Tukey tests further confirm that combined retail and digital strategies produce significantly higher attitude scores compared to retail-only or digital-only approaches.

Research Procedure

The study followed a systematic and sequential research procedure. Initially, a pilot study with 30 respondents was conducted to refine the questionnaire and improve reliability. After incorporating necessary modifications, the final survey was administered to 300 respondents. The collected data were coded and entered into statistical software for analysis. Reliability testing and assumption checks were performed prior to inferential analysis. Subsequently, ANCOVA and post-hoc comparisons were carried out, and the findings were systematically interpreted and reported.

Delimitations of the Study

The study is subject to certain delimitations. It is confined to three urban cities of Madhya Pradesh—Indore, Bhopal, and Gwalior, thereby excluding rural consumers. The sample

includes adult consumers only, and the research design is cross-sectional, capturing consumer behavior at a single point in time. Additionally, the study relies on self-reported data, which may be influenced by respondent bias.

Results

The empirical analysis reveals that marketing strategies play a significant role in shaping consumer behavior toward organic food products in Madhya Pradesh. Reliability analysis confirmed acceptable internal consistency for all multi-item constructs, ensuring that awareness, attitude, and purchase behavior were measured reliably. Assumption testing indicated that awareness and purchase behavior followed normal distribution, while attitude showed a mild deviation from normality; however, given the adequate sample size, the analysis remained statistically robust.

The ANCOVA results demonstrate that marketing strategy has a statistically significant effect on consumer attitude toward organic food products, even after controlling for demographic variables such as income. Among the different marketing approaches examined, the combined use of retail and digital marketing strategies produced the strongest positive impact on consumer attitudes. This indicates that consumers exposed simultaneously to in-store cues (such as shelf placement, demonstrations, and packaging visibility) and digital promotions (such as social media advertisements and influencer endorsements) exhibit more favorable attitudes toward organic food compared to those exposed to only one channel or no marketing at all.

Income, used as a covariate, was also found to have a significant influence on consumer attitude, suggesting that higher-income consumers are relatively more receptive to organic food products. However, the interaction effect between marketing strategy and income was not statistically significant, indicating that the effectiveness of marketing strategies does not differ substantially across income groups. This implies that integrated marketing strategies are broadly effective across diverse income segments.

Post-hoc analysis further confirmed that the combined marketing strategy outperforms retail-only and digital-only strategies in influencing consumer attitudes. Although digital marketing alone showed a strong influence—particularly in increasing awareness—its impact was maximized when complemented by retail marketing efforts at the point of purchase. Overall, the results support all the formulated hypotheses, establishing that both retail and digital marketing strategies positively influence consumer attitudes and that their combined application yields superior outcomes.

Conclusion

The present study concludes that retail and digital marketing strategies significantly influence consumer behavior toward organic food products in Madhya Pradesh, with integrated marketing approaches being the most effective. Despite the state's strong potential in organic production, consumer adoption is largely driven by exposure to targeted marketing communication that builds awareness, trust, and positive attitudes. The findings clearly indicate that neither retail nor digital marketing alone is sufficient to fully realize consumer potential; rather, a synergistic combination of both channels generates the greatest impact.

The study highlights that in-store marketing strategies play a crucial role at the final decision-making stage, while digital marketing enhances pre-purchase awareness and engagement. When these strategies are aligned, they reinforce each other and lead to more favorable consumer attitudes and higher purchase frequency. The significance of income as a covariate suggests that affordability remains an important consideration, yet the non-significant interaction effect confirms that integrated marketing strategies are effective across income groups.

From a practical perspective, the findings offer valuable implications for organic food marketers, retailers, and policymakers. Marketers should adopt omnichannel strategies that combine physical retail cues with digital engagement to optimize marketing effectiveness and improve return on investment. Policymakers and organic promotion agencies can leverage these insights to design awareness campaigns and support retail–digital integration, thereby encouraging sustainable consumption patterns.

In conclusion, the study provides empirical evidence that strategic integration of retail and digital marketing can substantially enhance consumer acceptance of organic food products in Madhya Pradesh. By addressing the existing research gap at the regional level, this study contributes to the literature on organic food marketing and offers actionable insights for promoting organic consumption in emerging urban markets.

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