

A STUDY ON AI MECHANISM AS MARKETING TOOL FOR FMCG PRODUCTS IN KANNIYAKUMARI DISTRICT

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Abstract

In the fast-paced world of Fast-Moving Consumer Goods (FMCG), marketing plays a crucial role in capturing consumers' attention and driving sales. With the rapid advancements in technology, Artificial Intelligence (AI) has emerged as a game-changer, revolutionizing the way FMCG companies approach marketing strategies. This study explores the impact of AI mechanisms as marketing tools for FMCG products in India, focusing on consumer engagement, personalization, and sales growth. Using a descriptive research methodology, data was collected from 75 managers and executive-level employees in Kanniyakumari District through structured questionnaires. The findings revealed that AI significantly enhances consumer engagement, personalization, and customer satisfaction, improving marketing efficiency. However, its effects on brand loyalty and market penetration were less significant. Based on these results, it is suggested that FMCG companies strategically integrate AI to optimize marketing strategies, continuously innovate, and adapt to maintain a competitive edge and meet evolving consumer expectations. This study examines through a comprehensive literature review, key findings and insights from relevant studies are synthesized. The findings reveal that AI-driven strategies, such as word-of-mouth communication and personalized recommendations, significantly impact consumer behavior and decision-making. AI enables advanced retail analytics, customer segmentation, and multichannel customer management, leading to enhanced FMCG marketing strategies. Additionally, the study highlights the importance of ethical considerations, data privacy, and the integration of AI with traditional marketing channels. The research underscores the potential of AI in transforming the FMCG marketing landscape, while emphasizing the need for ongoing research on consumer acceptance, performance evaluation, and long-term sustainability. AI-powered voice assistants enable seamless interactions and voice-activated purchases. FMCG companies can leverage voice-activated platforms for direct consumer engagement. Voice assistants provide convenience and improve customer experiences. Additionally, the study also highlights the importance of ethical considerations, data privacy, and the integration of AI with traditional marketing channels. The research underscores the potential of AI in transforming the FMCG marketing landscape, while emphasizing the need for ongoing research on consumer acceptance, performance evaluation, and long-term sustainability.

Keywords: *Artificial Intelligence, AI, Marketing, Fast-Moving Consumer Goods, FMCG, Word-of-Mouth Communication, Personalized Recommendations, Retail Analytics, Customer Segmentation, Multi-Channel Marketing, Ethics.*

Introduction

In today's fast-paced digital age, integrating Artificial Intelligence (AI) into marketing strategies has revolutionized the Fast-Moving Consumer Goods (FMCG) sector. The proliferation of AI technologies has enabled FMCG companies in India to streamline operations, predict consumer behaviour, and tailor marketing efforts with unprecedented precision. This empirical study delves into the efficacy of AI mechanisms as a marketing tool, exploring their impact on consumer engagement, sales optimization, and market penetration. As the FMCG market in India is vast and highly competitive, leveraging AI offers a competitive edge by enhancing decision-making processes, personalizing customer experiences, and automating routine tasks. The relevance of this research lies in its potential to uncover actionable insights that can drive growth and innovation in the FMCG sector, amidst an era of digital transformation. The transformative influence of digital marketing and artificial intelligence (AI) is reshaping the Fast Moving Consumer

Goods (FMCG) e-commerce landscape. This study delves into the intricate dynamics of digital marketing and AI on FMCG e-commerce consumer behaviour, emphasizing the interplay between advertising strategies and the adept utilization of customer data. Within the dynamic spectrum of the Indian FMCG industry—comprising food and beverages (19%), household and personal care (50%), and healthcare (31%)—AI technologies such as chat bots and machine learning provide unprecedented insights. E-commerce contributed 1.1%, particularly notable in metrocities but faced challenges due to the strict lockdown, impacting delivery schedules and order cancellations. This study explores the impact of AI mechanisms as marketing tools for FMCG products in India, focusing on consumer engagement, personalization, and sales growth. Using a descriptive research methodology, data was collected from 75 managers and executive-level employees in Kanniyakumari district through structured questionnaires. The findings revealed that AI significantly enhances consumer engagement, personalization, and customer satisfaction, improving marketing efficiency. However, its effects on brand loyalty and market penetration were less significant. Based on these results, it is suggested that FMCG companies strategically integrate AI to optimize marketing strategies, continuously innovate, and adapt to maintain a competitive edge and meet evolving consumer expectations.

Use of AI in FMCG

Artificial intelligence in the Consumer Industry is revolutionizing the FMCG domain by methods given below:

- **Sales Forecasting:** By predicting customer purchases, the business gets an idea about the sales going to take place in the near future so that production can be planned

accordingly. Accurate sales forecasts from the application of AI enables you to make informed business decisions and predict short-term and long-term performance. In case of a negative prediction, the necessary preventive measures can be taken.

- **Customer Behavior Analysis:** This is the observation of customer buying patterns, preferred choices, least liked products, preferred locations, purchasing habits, tastes, and trends in the market. AI helps in making the required modifications to attract new customers, keep the existing ones satisfied and stand out in the market.
- **Tracking Market Trends:** The AI-enabled system will inform you about the new trends or products that come into the market and instruct you on what trends are worth your company investing in. Machine Learning correlates price and sales and dynamically optimizes the price based on that insight. By scraping from the various websites and social networking sites on the internet, and consolidating this data, we can provide comprehensive and detailed information for improved marketing techniques.
- **Automated Targeted Marketing:** Instead of marketing to every nook and corner, why not market to people who would actually buy your product? Make your marketing system more intelligent with AI. The system will guide you as to which location to market in and use which medium or social networking site so that you have the exact target audience and avoid unnecessary marketing costs. When the right audience is reached, your clients will definitely increase.
- **Logistics Management:** Allow your retailers and customers to easily place orders directly from the company and then track their packages, thereby eliminating the need for a middle man in these times of Covid-19. Allow raw material orders to be placed with your vendors automatically when scarcity is sensed, thereby preventing the need to keep a tab on every raw material that would need replenishing. Predict demand, reroute in-transit goods, and modify orders using AI. This will even lower your transportation costs.
- **Video-Analytics Integrated with CCTV:** Motion tracking and detection of equipment and employees using Video Analytics integrated with existing CCTV cameras will eliminate the need for full-time supervision. Identifies unsafe measures, detects unauthorized access, and keeps track of working of machines and equipment. Product counting, product identification, vehicle tracking, and monitoring, number plate recognition, and vehicle type identification can also be included.
- **Churn Prediction:** Data and feedback provided by the customer can be used to predict the likelihood of the customer discontinuing their subscription with you. Churn prediction thus helps your industry gain a superior understanding of expected revenue. Furthermore, being able to forecast the potential churn rate of a particular customer allows you to target that individual more wisely.

- **Chat Bot:** Chatbots for the FMCG industry can be used to eliminate manual tasks by integrating a Bot for your Website or App to coordinate with stakeholders, suppliers, retailers, and/or clients. It can also track packages, provide customer reviews, solve customer queries and FAQs. Chatbots can be multilingual, i.e. they can interact in all languages desired. Another point to be noted is that our Chatbots are as kind and polite as your human customer care, if not much more. On top of that, we have developed an advanced conversational AI for the FMCG sector.



Fig: Use of AI in FMCG

Objectives

- To Explore the Adoption and Implementation Challenges of AI in FMCG Marketing
- To Understand Consumer Acceptance and Behavior towards AI-Driven Marketing in FMCG

Statement of Problem

Exploring the challenges faced by FMCG companies in adopting and implementing AI technologies in their marketing strategies. This could involve investigating barriers to entry, resource constraints, and organizational resistance. Understanding how consumers perceive and respond to AI-powered marketing initiatives in the FMCG sector. This could involve studying consumer attitudes, trust levels, and preferences regarding personalized experiences and AI-driven recommendations

Review on Literature

Some of the literature reviewed by the researcher are,

Li & Wang in the year 2022 proposed that Chat bot's informal language style of communication generally reinforces PSI and reinforces customer intent and brand sentiment to stay with the chat bot. However, adopting an informal language style may not be a universal approach to communicating with all customers. Marketer should consider the current state of your relationship and choose an appropriate language strategy. An informal language style in chat bot communication leads to stronger PSI, which enhances customers' intention to continue using chat bots and brand attitude. AI technology can provide round-the-clock online support, reducing labor costs and improving operational efficiency.

Olan, Suklan, Arakpogun and Robson in year 2021 stated that AI is revolutionizing the marketing of products and services, increasing machines' ability to demonstrate certain types of human intelligence. Knowledge is the most important strategic resource driving AI technologies, and the demand for knowledge has become a primary source of technological advancement. Consumer decision-making is more likely to be influenced by online reviews, pricing, and social media, so firms rely on big data analysis from big data generated during online consumer interactions. AI technologies are advancing CB on quality and pricing, and managers need to ensure that the level of confidence in their products and services is maintained through consumer loyalty.

Nguyen, Quach, Thaichon in year 2021 proposed that the influence of Artificial Intelligence (AI) on the customer experience of flow, customer-brand identification and customer advocacy. It is suggested that employee responsiveness moderates the effect of AI quality on flow, while AI system reliability is more significant. Flow is a state of customer experience that encompasses a feeling of enjoyment and a sense of captivation, and the quality of AI represents a firm's innovativeness. AI can be used to support employees to handle busy periods, by providing prompt service to enhance the customer experience. This research addresses the current gap in the extant literature which predominantly focuses on the technological acceptance of AI.

Hypothesis Framed

- **Null Hypothesis (H₀):** The use of advance digital marketing tools, including AI tools, does not significantly impact FMCG consumer purchasing behaviour throughout the customer journey.
- **Alternative Hypothesis (H₁):** The use of seamless integration of advanced digital marketing technologies, including AI tools, subtly impact FMCG consumer purchasing behaviour throughout the customer journey, enhancing both website functionality and advertising effectiveness.

Research Methodology

The study is made in the Kanniyakumari district to study about AI mechanism as a marketing tool for FMCG products. The samples from 75 managers and executive level employees are chosen from the various FMCG sectors were selected and data collected through well-structured questionnaire. The convenience sampling method is adopted for collecting the questionnaires.

Research Analysis

Table 1 Segregation of Research Sample based on Gender

Gender/ Age	Male	Female	Total
15-24	8	2	10
25-34	13	10	23

35-44	21	17	38
45 & above	1	3	4
Total	43	32	75

Source: Primary data

An extensive analysis of the gender distribution within our study's various age groups reveals a greater proportion of males than females in the 35–44 age range. In general, the data illustrates the heterogeneous demographic makeup of our research sample by showing a varying gender distribution across age groups.

Table 2 Analysis on Frequency of Exposure and Relevance to Browsing History

Analysis Aspect	Regression Coefficient	Correlation
Frequency of Exposure vs. Relevance to Browsing History	0.75	0.68

Source: Primary data

The strong positive correlation (0.68) and notable regression coefficient (0.75) support the Alternative Hypothesis, highlighting the impact of digital marketing on browsing relevance.

Table 3 Analysis on Frequency of Advertisements and Interaction with Advertisements

Analysis Aspect	Regression Coefficient	Correlation
Frequency of Advertisements vs. Interaction	0.43	0.38

Source: Primary data

The moderate positive correlation (0.38) and regression coefficient (0.43) support the Alternative Hypothesis, indicating a partial impact of ad frequency on user interaction in e-commerce settings.

Table 4 Analysis on Influence of Reviews and Purchasing Decisions

Analysis Aspect	Regression Coefficient	Correlation
Influence of Reviews Vs Purchasing Decisions	0.83	0.78

The high positive correlation (0.78) and substantial regression coefficient (0.83) align with the Alternative Hypothesis, indicating significant influence of reviews on purchasing decisions.

Table 5 Analysis on Chat bot Usefulness and Inquiry Frequency

Analysis Aspect	Regression Coefficient	Correlation
Chat bot Usefulness vs. Inquiry Frequency	0.58	0.62

Source: Primary data

The Alternative Hypothesis is supported by the strong positive correlation (0.62) and substantial regression coefficient (0.58), which indicate that the frequency of questions is significantly influenced by the usefulness of chat bots, demonstrating their influence on customer interaction.

Several components in our thorough research showed correlations and regression coefficients that supported the Alternative Hypothesis, demonstrating noteworthy effects. The Alternative Hypothesis is substantially supported by the great influence of reviews on purchasing decisions, the strong positive correlations in digital marketing relevance, and the influence of ad clicks on website visits. These consistent results across a range of consumer behaviour dimensions highlight the impact of digital marketing tactics, reviews, and engagement channels, confirming their significant role in influencing customer decisions.

Implications of the Study

Predictive Analytics: Accurate forecasting is critical for FMCG companies to optimize production, inventory management, and meet consumer demand. AI-powered predictive analytics utilizes historical data, market trends, and external factors to generate accurate sales forecasts. By leveraging machine learning algorithms, companies can make data-driven decisions, minimize wastage, optimize supply chains, and ensure products are available when and where customers need them.

Social Media Monitoring: social media has become a powerful platform for FMCG marketing. AI powered social media monitoring tools can analyze vast amounts of user-generated content, sentiment analysis, and trends to gain actionable insights. Marketers can understand consumer perceptions, track brand mentions, identify influencers, and respond to customer feedback in real-time. This helps FMCG companies to optimize their social media strategies and build stronger connections with their target audience.

Targeted Advertising: AI enhances FMCG marketing campaigns by enabling precise audience targeting. By analyzing consumer data and behavior patterns, AI algorithms identify specific demographic segments and create targeted advertising campaigns across various digital channels. This enables FMCG companies to reach the right audience with personalized messages, increasing the effectiveness of their marketing efforts and maximizing return on investment (ROI).

Voice Assistants and Smart Devices: The rise of voice assistants and smart devices has opened up new avenues for FMCG marketing. AI-powered voice assistants like Amazon's Alexa and Google Assistant enable consumers to make voice-activated purchases, receive

personalized recommendations, and interact with brands seamlessly. FMCG companies can leverage these voice-activated platforms to reach consumers directly and create frictionless shopping experiences.

Conclusion

The application of AI in marketing FMCG is transforming the industry by enhancing customer experiences, optimizing operations, and driving sales. By leveraging AI-powered technologies such as personalized customer experiences, predictive analytics, targeted advertising, social media monitoring, and voice assistants, FMCG companies can gain a competitive edge in a crowded marketplace. As AI continues to advance, it will undoubtedly revolutionize the way FMCG companies connect with consumers, foster brand loyalty, and shape the future of marketing in the industry.

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