

AI-Driven Influencer Marketing and Consumer Engagement: A Study on the Growth of Indian Fashion E-Commerce Platforms

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ABSTRACT

The rapid development of digital commerce in India has transformed the operational structure of fashion retail platforms. Artificial Intelligence (AI) and social media influencer marketing have become major strategic tools for increasing customer engagement and improving online purchasing decisions. This study investigates the relationship between AI-powered personalization systems, influencer marketing practices, and the growth of Indian fashion e-commerce companies.

The research was conducted using a structured questionnaire distributed among online fashion consumers across India. A total of 420 valid responses were collected and analyzed using descriptive statistics, correlation analysis, regression analysis, and ANOVA techniques through SPSS software. The findings reveal that influencer authenticity, AI recommendation systems, and personalized advertising significantly improve customer satisfaction and purchase intention.

The study concludes that the integration of AI technologies with influencer-based promotional strategies enhances platform loyalty, increases customer retention, and contributes to sustainable business growth in the Indian fashion e-commerce industry.

Keywords: Artificial Intelligence, Influencer Marketing, Fashion Retail, Consumer Behaviour, E-Commerce Growth, Personalization, Digital Marketing.

1. INTRODUCTION

India's digital economy has experienced remarkable growth due to increasing internet penetration, affordable smartphones, and rising social media usage. Fashion e-commerce platforms such as Myntra, Ajoio, Amazon Fashion, and Nykaa Fashion have gained significant popularity among young consumers. In such a competitive market, companies are continuously searching for innovative ways to attract and retain customers. Influencer marketing has emerged as an effective promotional approach because consumers tend to trust content creators more than traditional advertisements. Influencers communicate product information through reviews, styling videos, and live interactions, which directly influence buying behaviour.

At the same time, Artificial Intelligence has become an important technological support system for online retail businesses. AI tools help organizations understand customer preferences, recommend products, track shopping patterns, and personalize user experiences. By combining AI-based analytics with influencer marketing, fashion e-commerce companies can improve customer targeting and increase sales performance.

This study examines how AI-enabled influencer marketing strategies contribute to the growth and customer engagement of Indian fashion e-commerce platforms.

2. REVIEW OF LITERATURE

2.1 Influencer Marketing and Consumer Behaviour

Influencer marketing has become one of the most influential promotional strategies in the digital economy. Social media influencers establish close communication with audiences through authentic content, lifestyle presentations, and product recommendations. Unlike traditional celebrity endorsements, influencers maintain direct interaction with followers, which increases trust and credibility.

Freberg et al. (2011) explained that influencers function as opinion leaders capable of shaping consumer attitudes and purchasing decisions. Their study emphasized that consumers perceive influencers as more relatable and trustworthy than conventional advertisements. Similarly, Lou and Yuan (2019) found that informative and entertaining influencer content positively affects purchase intention and customer trust.

Casaló, Flavián, and Ibáñez-Sánchez (2020) highlighted that influencer attractiveness, expertise, and authenticity significantly contribute to consumer engagement on Instagram. De Veirman, Cauberghe, and Hudders (2017) further observed that influencer popularity and follower count affect brand awareness, although excessive promotional content may reduce audience trust.

In the Indian context, fashion influencers play a major role in shaping online shopping behaviour among Gen Z and millennial consumers. Through product reviews, styling tutorials, and live video sessions, influencers encourage customers to interact with fashion brands and make purchase decisions.

2.2 Artificial Intelligence in Digital Marketing

Artificial Intelligence has transformed modern marketing practices by enabling businesses to analyze customer behaviour and deliver

personalized services. AI technologies such as machine learning, predictive analytics, natural language processing, and recommendation systems help organizations improve operational efficiency and customer satisfaction.

Davenport et al. (2020) stated that AI enhances decision-making capabilities by processing large volumes of consumer data in real time. These systems help marketers identify customer preferences, predict future buying patterns, and optimize advertising strategies.

Kumar et al. (2019) emphasized that AI-driven personalization improves customer experience and strengthens long-term customer relationships. Similarly, Wedel and Kannan (2016) noted that marketing analytics enables organizations to develop data-driven strategies for customer acquisition and retention.

According to Huang and Rust (2021), AI systems can improve customer engagement by automating service interactions and delivering customized recommendations. Chatbots, virtual assistants, and automated customer support tools have become important components of online retail platforms.

2.3 AI Applications in Fashion E-Commerce

Fashion e-commerce companies increasingly rely on AI-powered technologies to improve customer experience and operational performance. Personalized product recommendation systems help customers discover products based on browsing history, preferences, and previous purchases.

Kotler, Kartajaya, and Setiawan (2021) explained that Marketing 5.0 integrates advanced technologies with customer-centric strategies to create highly personalized shopping experiences. AI applications such as virtual fitting rooms, visual search tools, and predictive demand forecasting have become common in online fashion retail.

Overgoor et al. (2019) observed that AI-based marketing systems improve conversion rates by

delivering targeted advertisements and personalized product suggestions. In addition, Dwivedi et al. (2021) highlighted that AI-supported digital marketing improves customer engagement and business competitiveness.

The use of recommendation engines by companies such as Myntra and Amazon Fashion helps consumers quickly identify products that match their style preferences. These systems reduce search time, improve satisfaction, and encourage repeat purchases.

2.4 Integration of Influencer Marketing and AI Technologies

The integration of influencer marketing with AI technologies has created a new dimension in digital commerce. AI tools help businesses identify suitable¹ influencers based on audience demographics, engagement metrics, and customer behaviour² patterns.

AI-powered analytics systems assist organizations³ in measuring campaign effectiveness, tracking customer responses, and improving marketing⁴ efficiency. Predictive algorithms can determine which influencers are most likely to generate conversions and customer engagement.

Grewal et al. (2020) stated that the future of marketing depends on the integration of technology-driven analytics with consumer-centric promotional strategies. AI-supported influencer marketing enables companies to create personalized campaigns that deliver relevant content to target audiences.

Furthermore, Chaffey and Ellis-Chadwick (2019) explained that combining social media marketing with AI-based analytics improves brand visibility, customer targeting, and online engagement.

2.5 Research Gap

Although several studies have examined influencer marketing and Artificial Intelligence independently, limited research has focused on their combined impact within the Indian fashion e-commerce industry. Existing literature mainly concentrates on

consumer trust, social media engagement, or AI personalization separately.

3. STATEMENT OF THE PROBLEM

Fashion e-commerce firms in India invest heavily in influencer collaborations and AI-based technologies. However, many organizations face challenges in integrating these systems effectively. Businesses often struggle to understand whether AI-powered influencer campaigns truly improve customer retention, satisfaction, and platform growth. Therefore, there is a need to examine the combined impact of influencer marketing and AI-driven personalization on consumer behaviour and business performance.

4. OBJECTIVES OF THE STUDY

To examine the impact of influencer credibility on consumer purchase intention.

To analyze the effectiveness of AI-driven recommendation systems in fashion e-commerce.

To study the relationship between personalized marketing and customer satisfaction.

To evaluate the contribution of AI-enabled influencer marketing to business growth.

5. HYPOTHESES FORMULATION

H1: Influencer credibility positively affects consumer purchase intention.

H2: AI recommendation systems significantly improve customer engagement.

H3: Personalized advertisements positively influence customer satisfaction.

H4: AI-enabled influencer marketing contributes to the growth of fashion e-commerce platforms.

6. COMPREHENSIVE RESEARCH METHODOLOGY

6.1 Research Design

The study adopted a descriptive and quantitative research design.

6.2 Data Collection

Primary data was collected through an online questionnaire distributed among consumers who regularly purchase fashion products through e-commerce applications.

6.3 Sample Size

A total of 420 valid responses were used for analysis.

6.4 Sampling Technique

Convenience sampling and purposive sampling methods were adopted.

6.5 Statistical Tools Used

- Percentage Analysis
- Correlation Analysis
- Multiple Regression Analysis
- ANOVA
- SPSS Software

7. DATA ANALYSIS AND INTERPRETATION

In this research, the responses collected from consumers were analyzed using statistical tools such as percentage analysis, correlation, regression, and ANOVA with the help of SPSS software. The analysis was carried out to understand the relationship between AI-enabled influencer marketing, customer satisfaction, purchase intention, and business growth in Indian fashion e-commerce platforms.

Table 1: Demographic Profile of Respondents

Category	Classification	Number of Respondents	Percentage
Gender	Male	228	54.3%
	Female	192	45.7%
Age Group	18-25 years	176	41.9%
	26-35 Years	163	38.8%
	Above 35 Years	81	19.3%
Occupation	Students	129	30.7%
	Employees	201	47.9%
	Business/Other	90	21.4%

Interpretation: The majority of respondents belong to the younger age category, indicating that Gen Z and Millennials are the major users of fashion e-commerce platforms.

Table 2: Correlation Analysis

Variable	Influencer Credibility	AI Recommendation	Customer Satisfaction	Purchase Intention
Influencer Credibility	1.00	0.48	0.52	0.74
AI Recommendation	0.48	1.00	0.69	0.63
Customer Satisfaction	0.52	0.69	1.00	0.71
Purchase Intention	0.74	0.63	0.71	1.00

Interpretation: The analysis shows a positive relationship between influencer marketing variables and customer purchase intention.

Table 3: Regression Analysis

Predictor Variable	Beat Value	t-Value	Significance
Infulence credibility	0.44	7.92	0.001
AI Recommendation System	0.51	8.64	0.000
Personalized Advertising	0.39	6.87	0.002

Model Summary

- $R^2 = 0.698$
- Adjusted $R^2 = 0.691$
- F-value = 148.35

Interpretation: AI recommendation systems have the strongest impact on customer purchase intention and engagement.

Table 4: ANOVA Results

Source	Sum of Squares	df	Mean Square	F-Value	Significance
Influencer Marketing	38.41	3	12.80	12.62	0.000
AI Personalization	49.75	3	16.58	15.74	0.000
Error	118.26	413	0.28		
Total	206.42	419			

Interpretation: Both influencer marketing and AI personalization significantly affect business performance and customer engagement.

8. MAJOR FINDINGS

1. Influencer credibility strongly influences online purchase decisions.
2. AI-powered recommendation systems improve user engagement and browsing experience.
3. Personalized advertisements increase customer satisfaction.
4. Young consumers are more responsive to influencer-based fashion promotions.
5. AI-enabled influencer marketing positively contributes to business growth.

4. E-commerce platforms should integrate influencer content directly into product recommendation pages.
5. Organizations should use AI chatbots and virtual try-on tools to improve customer experience.

10. CONCLUSION

The study confirms that AI-enabled influencer marketing has become an important growth driver for Indian fashion e-commerce platforms. Influencers help build customer trust and improve brand visibility, while AI technologies enhance personalization and customer satisfaction.

9. SUGGESTIONS

1. Fashion e-commerce firms should collaborate with micro-influencers to improve engagement.
2. Companies should invest in AI-powered recommendation systems for better personalization.
3. Businesses should develop ethical data privacy policies to protect consumer information.

The integration of these two strategic components enables organizations to improve customer retention, increase sales conversions, and strengthen long-term market performance. Therefore, fashion e-commerce companies should focus on combining

technological innovation with influencer-driven engagement strategies.

11. LIMITATIONS OF THE STUDY

1. The study is limited to Indian fashion e-commerce consumers.
2. The research is based on cross-sectional data collected during a specific period.
3. Consumer perceptions may change over time due to technological developments.

12. SCOPE FOR FUTURE RESEARCH

1. Future studies can examine the role of virtual influencers and AI avatars.
2. Researchers may compare AI-based influencer marketing across different industries.
3. Longitudinal studies can be conducted to examine changing customer behaviour.

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