DIGITAL MARKETING INNOVATION IN THE APPAREL INDUSTRY: THE ROLE OF AI AND SOCIAL MEDIA IN SHAPING BRAND RELATIONSHIP AND ONLINE BUYING BEHAVIOUR

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Abstract
The rapid advancement of digital technologies has transformed marketing practices in the apparel industry, particularly in online retail environments. This study examines the impact of AI-driven marketing and social media marketing on brand relationship and online buying behaviour. The research is based on primary data collected from 94 online apparel consumers in Chennai using a structured questionnaire measured on a five-point Likert scale. A descriptive and analytical research design was adopted, and the data were analysed using SPSS software. Statistical tools such as reliability analysis, correlation, and regression were employed to test the relationships among the variables.The findings reveal that both AI-driven marketing and social media marketing significantly influence brand relationship. Social media marketing was found to have a comparatively stronger impact on strengthening emotional connections with consumers. Furthermore, brand relationship significantly affects online buying behaviour, indicating that trust, attachment, and commitment toward apparel brands play a crucial role in shaping purchase decisions. The study highlights the importance of integrating AI-based personalization strategies with effective social media engagement to enhance brand relationships and improve online sales performance. The findings offer valuable implications for digital marketers and apparel retailers operating in competitive online markets.
Keywords: AI-driven marketing, Social media marketing, Brand relationship, Online buying behaviour, Apparel industry.

1. Introduction

The rapid advancement of digital technologies has significantly transformed the apparel industry, particularly in the area of online retailing. The growing use of Artificial Intelligence (AI) and social media marketing has reshaped how brands communicate with consumers and influence their purchasing decisions. In an increasingly competitive digital marketplace, apparel brands are leveraging innovative technologies to enhance customer engagement and strengthen brand relationships.AI-driven marketing enables firms to analyse consumer data, predict preferences, and deliver personalized recommendations. Features such as recommendation engines, chatbots, and predictive analytics help improve customer experience and increase satisfaction. At the same time, social media platforms such as Instagram and TikTok have become powerful tools for brand promotion, influencer collaborations, and interactive engagement. These platforms allow brands to build emotional connections and foster trust among consumers.In the apparel industry, where buying decisions are often influenced by trends, social influence, and brand image, the relationship between consumers and brands plays a crucial role. A strong brand relationship can positively influence online buying behaviour by increasing trust, loyalty, and purchase intention.

Although previous studies have examined AI marketing and social media marketing separately, limited research has explored their combined effect on brand relationship and online buying behaviour in the apparel sector. Therefore, this study aims to analyse the impact of AI-driven and social media marketing on brand relationship and online buying behaviour, providing valuable insights for both researchers and marketing practitioners.

2. Review of Literature

2.1 AI-Driven Marketing and Consumer Behaviour

Artificial Intelligence (AI) has become a transformative force in digital marketing, particularly in online retail environments. AI-driven marketing uses machine learning, predictive analytics, and data mining techniques to analyse consumer behaviour and deliver personalized experiences. According to Huang and Rust (2021), AI enhances marketing efficiency by improving targeting accuracy and customer engagement. Personalized recommendation systems increase perceived relevance and reduce information overload, thereby positively influencing purchase intention (Bleier et al., 2019).

In the apparel industry, AI technologies such as chatbots, virtual assistants, and predictive algorithms improve customer interaction and streamline decision-making processes. Studies indicate that AI-based personalization strengthens customer satisfaction and trust, which are essential determinants of online buying behaviour (Chaffey & Ellis-Chadwick, 2019). Thus, AI-driven marketing plays both a functional and psychological role in shaping consumer responses.

2.2 Social Media Marketing and Brand Engagement

Social media marketing has emerged as a powerful tool for building brand awareness and fostering consumer relationships. Platforms such as Instagram and TikTok allow brands to create interactive content, collaborate with influencers, and encourage user-generated content. Kaplan and Haenlein (2010) describe social media as a group of internet-based applications that enable the creation and exchange of user-generated content.

Research shows that social media marketing activities significantly influence brand image, brand trust, and consumer engagement (Godey et al., 2016). When consumers actively engage with fashion brands through likes, shares, comments, and reviews, they develop stronger emotional connections. This engagement positively affects their buying decisions and brand loyalty.

2.3 Brand Relationship

Brand relationship refers to the emotional and psychological bond between a consumer and a brand. Fournier (1998) conceptualized brand relationships as long-term associations that involve trust, commitment, and attachment. Strong brand relationships enhance consumer loyalty and reduce switching behaviour.

In online contexts, brand relationships are influenced by both cognitive factors (such as perceived usefulness and quality) and emotional factors (such as attachment and identification). Studies suggest that digital engagement and personalized communication significantly strengthen brand relationship quality (Morgan & Hunt, 1994). Therefore, effective digital marketing strategies contribute to the development of durable consumer-brand connections.

2.4 Online Buying Behaviour in the Apparel Industry

Online buying behaviour refers to the decision-making process that leads consumers to purchase products through digital platforms. In the apparel industry, buying decisions are influenced by visual appeal, peer opinions, brand reputation, and perceived risk. According to Pavlou (2003), trust is a critical determinant of online purchasing behaviour.

Digital marketing strategies, including AI personalization and social media engagement, reduce uncertainty and enhance consumer confidence in online transactions. Research indicates that positive brand perception and strong brand relationships significantly increase online purchase intention (Godey et al., 2016). However, limited studies have integrated AI-driven marketing and social media marketing within a unified framework to examine their combined effect on brand relationship and buying behaviour.

3. Objectives of the Study

1. To examine the impact of AI-driven marketing on brand relationship in the apparel industry.
2. To analyse the influence of social media marketing on online buying behaviour of apparel consumers.
3. To study the role of brand relationship in shaping online buying behaviour in the apparel sector.

4. Research Methodology

This study adopts a descriptive and analytical research design to examine the impact of AI-driven marketing and social media marketing on brand relationship and online buying behaviour in the apparel industry. The research focuses on understanding how digital marketing practices influence consumer perceptions and purchasing decisions in an online retail environment.

The study is based on primary data collected through a structured questionnaire administered to respondents in Chennai. A total of 94 respondents participated in the survey. The respondents were individuals who actively purchase apparel products through online platforms and are familiar with digital marketing influences such as personalized recommendations and social media promotions. A convenience sampling technique was adopted due to accessibility and time limitations.

The questionnaire consisted of closed-ended statements measured using a five-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). The instrument was designed to measure four key constructs: AI-driven marketing, social media marketing, brand relationship, and online buying behaviour. The collected data were coded and analysed using SPSS software. Statistical tools such as descriptive analysis, reliability testing using Cronbach's Alpha, correlation analysis, and regression analysis were employed to examine the relationships among the variables.

The scope of the study is limited to online apparel consumers in Chennai, and the findings are based on responses from 94 participants. Therefore, the results may not be generalized to other geographical regions or industries.

5. Data Analysis and Interpretation

The data collected from 94 respondents in Chennai were coded and analysed using SPSS software to examine the relationships among AI-driven marketing, social media marketing, brand relationship, and online buying behaviour. Appropriate statistical tools were applied to ensure accuracy and reliability of the findings.

Descriptive statistics were used to understand the general response pattern of the participants. Reliability analysis was conducted to test the internal consistency of the measurement scales. Further, correlation and regression analyses were performed to examine the strength and direction of relationships among the study variables.

The results obtained from the statistical analysis are presented and interpreted in the following sections.

5.1 Reliability Analysis

Table 1: Reliability Statistics

Variable	No. of Items	Cronbach's Alpha
AI-Driven Marketing	5	0.842
Social Media Marketing	5	0.865
Brand Relationship	4	0.881
Online Buying Behaviour	4	0.854

Cronbach's Alpha values for all constructs are above 0.70, indicating good internal consistency reliability (N = 94). The highest reliability is observed for Brand Relationship ($\alpha = 0.881$), followed by Social Media Marketing ($\alpha = 0.865$). Therefore, the measurement instrument is considered reliable for further statistical analysis.

5.2 Correlation Analysis

Table 2: Correlation Matrix

Variables	AI Marketing	Social Media	Brand Relationship	Buying Behaviour
AI-Driven Marketing	1	0.612**	0.658**	0.621**
Social Media Marketing	0.612**	1	0.702**	0.689**
Brand Relationship	0.658**	0.702**	1	0.741**
Online Buying Behaviour	0.621**	0.689**	0.741**	1

Note: p < 0.01

The correlation results indicate a strong and positive relationship among all variables. AI-driven marketing shows a significant positive correlation with brand relationship (r = 0.658, p < 0.01) and online buying behaviour (r = 0.621, p < 0.01). Social media marketing also demonstrates a strong positive correlation with brand relationship (r = 0.702, p < 0.01) and online buying behaviour (r = 0.689, p < 0.01). Brand relationship has the highest correlation with online buying behaviour (r = 0.741, p < 0.01), suggesting that emotional attachment and trust significantly influence purchase decisions.

5.3 Regression Analysis

Model 1: Impact of AI-Driven Marketing and Social Media Marketing on Brand Relationship

Table 3: Model Summary

R	R Square	Adjusted R Square	Std. Error
0.756	0.572	0.563	0.421

Table 4: Coefficients

Variable	Beta	t-value	Sig.
AI-Driven Marketing	0.342	4.215	0.000
Social Media Marketing	0.489	6.012	0.000

The model explains 57.2% of the variance in Brand Relationship ($R^2 = 0.572$). Both AI-driven marketing ($\beta = 0.342$, p < 0.001) and social media marketing ($\beta = 0.489$, p < 0.001) significantly influence brand relationship. Social media marketing has a stronger impact compared to AI-driven marketing.

Model 2: Impact of Brand Relationship on Online Buying Behaviour

Table 5: Model Summary

R	R Square	Adjusted R Square
0.741	0.549	0.544

Table 6: Coefficients

Variable	Beta	t-value	Sig.
Brand Relationship	0.741	10.542	0.000

Brand relationship significantly influences online buying behaviour ($\beta = 0.741$, $p < 0.001$). The model explains 54.9% of the variance in online buying behaviour. This indicates that consumers who develop strong emotional and trust-based relationships with apparel brands are more likely to make online purchases.

The statistical analysis confirms that both AI-driven marketing and social media marketing positively influence brand relationship. Furthermore, brand relationship significantly affects online buying behaviour. Among all predictors, brand relationship emerges as the strongest determinant of online purchase decisions in the apparel industry among respondents from Chennai ($N = 94$).

6. Findings

Based on the statistical analysis conducted using SPSS, the following key findings were derived from the study:

The reliability analysis confirmed that all constructs—AI-driven marketing, social media marketing, brand relationship, and online buying behaviour—demonstrated good internal consistency, indicating that the measurement scale was reliable for analysis.

The correlation analysis revealed a significant positive relationship among all variables. AI-driven marketing and social media marketing were both positively associated with brand relationship and online buying behaviour. Among these, brand relationship showed the strongest correlation with online buying behaviour, indicating that emotional attachment and trust play a crucial role in influencing purchase decisions in the apparel industry.

Regression analysis further confirmed that both AI-driven marketing and social media marketing significantly influence brand relationship. However, social media marketing exhibited a comparatively stronger impact on brand relationship than AI-driven marketing among the respondents.

The second regression model indicated that brand relationship significantly influences online buying behaviour. A higher level of trust, attachment, and commitment toward a brand increases the likelihood of consumers purchasing apparel products online.

Overall, the findings suggest that while AI-driven personalization enhances customer experience, social media engagement plays a more dominant role in strengthening emotional brand connections, which ultimately drive online buying behaviour.

7. Recommendations

Based on the findings of the study, the following recommendations are suggested for apparel brands:

Apparel companies should invest in AI-driven personalization tools such as recommendation engines, predictive analytics, and intelligent chatbots to enhance customer experience and improve engagement levels.

Brands should strengthen their social media marketing strategies by creating interactive content, collaborating with influencers, and encouraging user-generated content. Since social media marketing showed a stronger impact on brand relationship, it should be prioritized in digital strategy planning.

Companies should focus on building long-term brand relationships by enhancing trust, transparency, and consistent communication. Emotional branding strategies should be integrated with AI-driven functional benefits to create a balanced marketing approach.

Fashion retailers should regularly analyse consumer data to understand behavioural patterns and customize marketing campaigns accordingly. Continuous monitoring of consumer engagement metrics will help in improving online conversion rates.

Finally, apparel brands operating in Chennai and similar urban markets should adopt an integrated digital marketing strategy that combines AI technologies with strong social media engagement to achieve sustainable competitive advantage.

8. Conclusion

This study examined the impact of AI-driven marketing and social media marketing on brand relationship and online buying behaviour in the apparel industry, based on data collected from 94 respondents in Chennai. The findings indicate that both AI-driven marketing and social media marketing significantly contribute to strengthening brand relationships. Among the two, social media marketing demonstrated a comparatively stronger influence on building emotional connections with consumers.

The results further confirm that brand relationship plays a crucial role in shaping online buying behaviour. Consumers who develop higher levels of trust, attachment, and commitment toward apparel brands are more likely to engage in online purchases. While AI-driven marketing enhances personalization and improves customer experience, social media marketing strengthens emotional engagement, and together they influence purchase decisions.

Overall, the study highlights the importance of integrating AI technologies with effective social media strategies to build strong brand relationships and drive online buying behaviour. The findings provide valuable insights for apparel marketers seeking to enhance digital engagement and improve online sales performance in competitive markets.

9. References

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