



International Journal of Innovative Research in Science Engineering and Technology (IJIRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)



Impact Factor: 8.699

Volume 14, Issue 6, June 2025

A Correlational Study Between Data-Driven Decision Making and Consumer Engagement: A Case Study of Myntra

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ABSTRACT: Objective: This study explores the influence of Data-Driven Decision Making (DDDM) on consumer engagement in the Indian e-commerce space, focusing on Myntra. It analyzes how personalization and data usage affect consumer loyalty, satisfaction, and trust. Methodology: The research is based on a quantitative survey of 68 online consumers who have used Myntra in the past year. Additionally, relevant literature and industry reports are reviewed. Findings: A significant proportion of consumers notice and appreciate personalized recommendations, which positively impact engagement and loyalty. However, privacy concerns remain prominent, highlighting the balance platforms must maintain. Conclusion: DDDM is a key driver of engagement but must be aligned with transparent data policies to build sustainable consumer relationships.

KEYWORDS: Data analytics, e-commerce, personalization, consumer engagement, Myntra, privacy concerns

I. INTRODUCTION

In the contemporary digital economy, data has become a powerful driver of innovation, efficiency, and competitive advantage. The emergence of data-driven decision making (DDDM) has enabled businesses to tailor their offerings, optimize operations, and enhance user experience through the intelligent use of consumer information. E-commerce platforms in India are increasingly relying on consumer data to refine their strategies and achieve market leadership. Myntra, one of India's leading fashion and lifestyle marketplaces, has pioneered the use of DDDM to influence buyer behavior and retention. It utilizes technologies like AI-based recommendation engines, real-time analytics, and behavioral segmentation to deliver hyper-personalized shopping experiences. This paper investigates how such approaches impact consumer engagement and evaluates the broader implications for privacy, trust, and loyalty.

Objectives

To understand how Myntra applies DDDM across its operations. To assess consumer awareness and perception of data-driven personalization. To measure the relationship between personalization and consumer loyalty. To examine user concerns regarding data privacy in the personalization process. To propose actionable strategies for ethical and effective DDDM in e-commerce.

Scope

This study focuses on Indian consumers who have interacted with Myntra in the past 12 months. It is limited to analyzing DDDM's effects on user engagement, personalization effectiveness, and privacy concerns. The scope does not cover operational aspects like logistics or inventory systems.

III. METHODOLOGY

This research adopts a descriptive and exploratory design using a quantitative survey approach. A structured questionnaire was administered via Google Forms, targeting individuals with recent shopping experience on Myntra. Sample Size: 68 valid responses

Sampling Method: Non-probability purposive sampling

Tool: Google Form questionnaire with multiple-choice and Likert scale items

Data Analysis: Descriptive statistics using Microsoft Excel

Ethical Compliance: Responses were anonymous and complied with India's Digital Personal Data Protection Act, 2023

IV. LITERATURE REVIEW

DDDM enables organizations to shift from reactive to predictive models of consumer engagement. Scholars such as Provost & Fawcett (2013) emphasize that decisions anchored in data lead to better alignment between user expectations and service delivery. In e-commerce, platforms like Myntra personalize consumer journeys using behavioral data such as browsing history, click patterns, and past purchases (Kumar & Gupta, 2020). However, the benefits of personalization come with ethical concerns. The "privacy paradox," described by Acquisti et al. (2015), reveals that consumers simultaneously seek convenience and express apprehension about data surveillance. In India, growing digital literacy has resulted in more discerning users who value transparency and consent (Singh & Jain, 2021). Myntra's model exemplifies the potential of DDDM but also exposes the tension between personalization and privacy. This study contextualizes these themes through primary research among actual users.

V. FINDINGS

1. Shopping Frequency: 59% of respondents shop monthly or more on Myntra, indicating strong recurring engagement levels.
2. Purchase Drivers: 81% are influenced by discounts; 70% prioritize product variety; 51% consider personalized recommendations important.
3. Awareness of Personalization: 82% have noticed personalized product suggestions; 76% believe these are based on their browsing or purchase behavior.
4. User Experience: 36% report significant improvement in their shopping experience due to personalization; 55% say it somewhat improves their experience; only 9% found it unhelpful.
5. Impact on Loyalty: 63% would prefer shopping with brands offering personalized experiences; 25% were neutral but open to influence; 12% did not associate personalization with increased loyalty.
6. Data Privacy Concerns: 47% expressed strong concern; 33% were occasionally concerned; 20% were unconcerned.

VI. DISCUSSION

The survey reveals a positive correlation between DDDM-based personalization and consumer satisfaction. Most participants recognize and appreciate Myntra's personalized features, suggesting that the platform's data strategies are both visible and effective. However, the study also confirms a persistent undercurrent of distrust regarding data use. Despite favorable engagement metrics, a combined 80% of users report some level of concern regarding privacy, aligning with global findings on data apprehension. These results indicate that while DDDM is critical for differentiation in e-commerce, its long-term success relies on transparent, ethical practices that reinforce user trust. Companies must treat consumer data not only as a tool for optimization but also as a responsibility.

VII. RECOMMENDATIONS

For Myntra:

- Transparency Enhancements: Add visible explanations for personalized suggestions
 - User Control: Offer adjustable personalization levels
 - Clear Consent Policies: Implement granular opt-in options
 - Balanced Strategy: Combine personalization with traditional offers like discounts
- For E-Commerce Platforms:
- Start personalization with clear value demonstration
 - Use widely accepted analytics tools for pilot testing
 - Monitor evolving data protection norms and ensure early compliance

VII. CONCLUSION

This study underscores that data-driven personalization is a vital asset for e-commerce platforms. Consumers appreciate its utility when it is relevant, timely, and respectful of boundaries. In the case of Myntra, DDDM significantly enhances user engagement and loyalty, validating its effectiveness. However, personalization cannot exist in a vacuum. Privacy concerns remain deeply rooted, and ignoring them could undo gains achieved through engagement. The path forward lies in building data ecosystems that prioritize ethics, transparency, and user agency.

IX. FUTURE RESEARCH DIRECTIONS

Comparative studies across multiple Indian e-commerce platforms. Analysis of personalization effectiveness by age or income segment. ROI assessment of DDDM campaigns. Development of ethical AI models tailored for e-commerce personalization.

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