

Impact of AI-Driven Personalization on Customer Engagement: with Reference to Zepto

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ABSTRACT

The accelerating adoption of digital technologies has fundamentally transformed the relationship between businesses and consumers, making customer engagement one of the most strategically significant dimensions of competitive advantage in the digital era. Within this context, Artificial Intelligence (AI)-driven personalization has emerged as a transformative force in digital commerce, enabling organizations to deliver highly relevant, timely, and individually tailored experiences to each customer. This study investigates the impact of AI-driven personalization on customer engagement, with specific reference to Zepto, a fast-growing quick-commerce platform operating in India. The research adopts a descriptive research design supported by primary data gathered through a structured questionnaire administered to 61 Zepto users across varied demographic profiles.

The study evaluates key dimensions of customer engagement, including the influence of personalized product recommendations, customized offers and discounts, targeted notifications, time-saving features, purchase frequency, emotional connection, and overall shopping experience satisfaction. The analysis employs percentage analysis and frequency distribution as core statistical tools. Findings reveal that AI-driven personalization has a significantly positive impact on customer engagement. The majority of respondents affirmed that personalized recommendations align with their preferences, that personalized notifications influence purchase decisions, and that the platform saves time through intelligent suggestion systems. Convenience emerged as the primary driver of platform usage, with personalization identified as a critical enabler of this convenience.

Three hypotheses were tested, and all three alternative hypotheses were accepted, confirming that AI-driven personalization significantly influences customer engagement, purchase frequency, and customer retention on the platform. The study concludes with actionable recommendations for businesses operating in the quick-commerce segment, emphasizing the need to refine AI algorithms, strengthen data privacy practices, optimize notification strategies, and develop customer-centric loyalty mechanisms.

Keywords: AI-Driven Personalization, Customer Engagement, Quick Commerce, Zepto, Machine Learning, Recommendation Systems, Digital Marketing, Customer Loyalty

1. INTRODUCTION

The rapid advancement of digital technologies over the past two decades has fundamentally altered the manner in which businesses interact with their customers. The proliferation of smartphones, mobile applications, social media ecosystems, and e-commerce platforms has generated enormous volumes of customer data on a daily basis. This data explosion presents both an opportunity and a challenge: while organizations now possess unprecedented access to information about individual customer preferences, behaviors, and transactional histories, the real competitive differentiator lies in the capacity to transform this raw data into meaningful, personalized customer experiences.

Traditional marketing paradigms—predicated on mass communication, generic messaging, and broad-spectrum

targeting—have demonstrated diminishing returns in an environment where modern consumers expect relevance, immediacy, and customization. Contemporary customers are no longer passive recipients of undifferentiated marketing communication. They demand to be recognized as individuals, expect recommendations that reflect their specific tastes and behavioral patterns, and increasingly reward platforms that consistently deliver relevant and frictionless experiences with sustained loyalty and advocacy.

Artificial Intelligence (AI) has emerged as the critical technological enabler that bridges the gap between the availability of large-scale customer data and the delivery of genuinely personalized consumer experiences. AI-driven personalization harnesses the power of machine learning algorithms, recommendation engines, predictive analytics, behavioral tracking systems, and natural language processing capabilities to construct dynamic, continuously updated individual customer profiles. These profiles enable businesses to anticipate customer needs before they are explicitly expressed, present products and services at the optimal moment in the customer journey, and communicate in a manner that resonates with each individual.

In the Indian context, the rapid growth of quick-commerce platforms has created a particularly fertile environment for the application of AI-driven personalization. Quick-commerce companies—characterized by ultra-fast delivery timelines and digitally native customer bases—operate in a highly competitive landscape where the quality of the personalized customer experience is a primary differentiator. Zepto, founded in 2021 and headquartered in Bengaluru, India, has rapidly grown to become one of the leading quick-commerce platforms in the country, operating across dozens of major Indian cities through an extensive network of dark stores and leveraging advanced AI capabilities to personalize the customer experience across product recommendations, promotional offers, and contextual notifications.

Customer engagement, in this study, is understood as a multidimensional construct that extends well beyond transactional behavior to encompass emotional, cognitive, behavioral, and social dimensions of the relationship between a customer and a brand. Engaged customers not only purchase more frequently but also exhibit greater brand loyalty, demonstrate higher lifetime value, and serve as authentic brand advocates within their social networks. The strategic importance of customer engagement has therefore elevated AI-driven personalization from a tactical tool to a core strategic capability in the digital commerce ecosystem.

This study aims to examine the nature and extent of AI-driven personalization as experienced by Zepto users, to evaluate its impact across multiple dimensions of customer engagement, and to derive actionable insights that can guide strategic decision-making for organizations operating within the quick-commerce sector. The study is grounded entirely in primary empirical data gathered from actual Zepto platform users, ensuring that findings reflect genuine customer perceptions and behavioral patterns rather than theoretical constructs.

1.1 Conceptual Framework: Customer Engagement

Customer engagement represents the depth and quality of the relationship between a customer and a brand across the entire customer lifecycle—from the initial awareness stage through active purchasing behavior and into post-purchase advocacy. As conceptualized by Van Doorn et al. (2010), customer engagement behaviors constitute behavioral manifestations toward a brand or firm that extend beyond the purchase transaction itself and arise from underlying motivational drivers. This definition underscores the multidimensional nature of engagement, which encompasses not only transactional behavior but also emotional investment, cognitive involvement, and social participation.

Customer engagement manifests across four primary dimensions. Emotional engagement reflects the affective bond a customer develops with a brand—the sense of being valued, understood, and recognized as an individual. Behavioral engagement captures the observable actions customers take in relation to a brand, including purchases, platform interactions, and participation in promotional activities. Cognitive engagement represents the mental attention and information processing that customers direct toward a brand, including deliberate evaluation and decision-making. Social or digital engagement encompasses interactions conducted through digital channels, including mobile applications, social media platforms, and online communities. Effective AI-driven personalization operates across all four dimensions, creating conditions favorable to deep and sustained engagement.

1.2 Conceptual Framework: AI-Driven Personalization

AI-driven personalization refers to the systematic application of artificial intelligence technologies to analyze customer data and deliver customized products, services, recommendations, and experiences calibrated to individual customer preferences and behavioral patterns (Huang & Rust, 2021). This represents a qualitative evolution beyond traditional demographic-based or rule-driven personalization, which relied on static historical data and predefined segmentation criteria. As articulated by Davenport, Guha, Grewal, and Bressgott (2020), AI-based personalization enables firms to customize interactions and marketing activities through the integration of customer data, machine learning, and predictive analytics into a continuous, adaptive feedback loop.

The technological infrastructure underlying AI-driven personalization includes machine learning algorithms capable of identifying behavioral patterns across large datasets; recommendation engines that present relevant products based on browsing, purchase, and engagement histories; predictive analytics systems that anticipate future needs; chatbot and conversational AI tools that deliver personalized customer service in real time; and behavioral tracking technologies that monitor clicks, searches, and interaction patterns to continuously refine the personalization engine. The evolution of these capabilities—from basic demographic personalization in the 1990s through rule-based systems in the early 2000s, data-driven approaches in the mid-2000s, machine learning integration from 2011 onward, and the hyper-personalization and generative AI era of 2019 to the present—has progressively enhanced the accuracy, relevance, and commercial impact of personalization strategies.

2. REVIEW OF LITERATURE

A substantial and growing body of academic and applied research has examined the intersection of AI-driven personalization and customer engagement across diverse geographic and sectoral contexts. The following review synthesizes the principal insights derived from the studies available in the submitted project report, organized thematically to highlight the converging evidence base and identify areas warranting further empirical investigation.

Aydin (2026) examined the relationship between AI-driven personalization, privacy concerns, and brand trust in Turkish e-commerce markets. The research identified personalization as a significant driver of improved customer experience and engagement, while simultaneously emphasizing that the long-term acceptance and effectiveness of AI personalization systems are substantially moderated by the quality of customer trust management and the rigor of privacy governance frameworks. This finding underscores the dual imperative for organizations: to deliver relevant personalized experiences while simultaneously maintaining transparent and ethical data stewardship practices.

Nautiyal (2026) investigated the influence of AI-based personalization on consumer buying behavior across online shopping platforms, finding that personalized recommendations and AI-generated promotional offers exert a statistically significant influence on both purchase intention and customer satisfaction. These findings affirm the commercial validity of investment in personalization infrastructure and suggest that recommendation quality is a critical mediating variable in the relationship between personalization and purchase behavior.

A contemporaneous study examining AI-powered personalization in UAE e-commerce environments (2026) demonstrated that personalization strategies—encompassing personalized recommendations, targeted advertisements, and behavioral tracking—produce measurable improvements in customer engagement and shopping satisfaction. This cross-national evidence reinforces the generalizability of positive personalization effects across diverse cultural and market contexts.

Moodley and Sookhdeo (2025) contributed nuanced insights from the South African retail context, demonstrating that AI-driven personalization positively influences customer purchase decisions through a combination of both emotional and functional dimensions. The study highlighted that effective personalization addresses not only the rational utility of relevant recommendations but also the affective dimension of customers feeling understood and valued by the platform—a finding with direct implications for engagement strategy design.

Turki (2025) employed Amazon transaction-level data to empirically demonstrate that AI-driven personalization

significantly improves customer engagement and purchasing behavior while simultaneously emphasizing the necessity of ethical governance frameworks and responsible customer data utilization. This study establishes an important precedent for the integration of algorithmic performance evaluation with ethical accountability considerations in personalization research.

Singhal (2025) analyzed the relationship between AI personalization, customer trust, and purchase decision-making in e-commerce platforms, concluding that personalized experiences enhance convenience and customer satisfaction. However, the research also identified persistent concerns among users regarding privacy transparency and the perceived intrusiveness of algorithmic systems—a finding that aligns with the broader pattern of a trust-personalization paradox in the literature.

Glory (2025) documented the evolution from traditional demographic targeting toward advanced AI-driven personalization strategies, demonstrating that AI capabilities enable businesses to predict customer needs with greater precision, improve marketing effectiveness, and enhance customer satisfaction through individually calibrated experiences.

Riandhi et al. (2025) conducted a comprehensive review of AI's growing influence on consumer behavior and engagement, identifying trust, personalization relevance, and privacy concerns as the three most significant determinants of AI adoption success and customer interaction quality in digital commerce environments. This tripartite framework provides a useful theoretical anchor for the present study.

Abdullah (2025) investigated the application of AI techniques in digital marketing for retail environments, concluding that AI-driven customer engagement mechanisms positively affect consumer trust, satisfaction levels, and purchase behavior outcomes. The study's emphasis on the commercial return on AI investment in marketing is directly relevant to the quick-commerce context of the present research.

Wu, Xia, and Tian (2025) introduced an AI-driven sentiment analysis framework for e-commerce applications and demonstrated its capacity to improve customer engagement, operational efficiency, and satisfaction metrics—highlighting the expanding applications of AI beyond recommendation systems into sentiment and feedback analysis.

Two systematic reviews published in 2025 collectively synthesized evidence from 28 peer-reviewed studies and concluded that AI-driven personalization reliably increases customer loyalty, engagement, and satisfaction while raising important concerns regarding digital fatigue, algorithmic bias, and customer privacy. These reviews also confirmed that personalization positively influences perceived value and trust, further reinforcing the multidimensional engagement framework employed in the present study.

DeZao (2024) explored the enhancement of transparency in AI-powered customer engagement systems, arguing that customer acceptance and long-term engagement with AI personalization is substantially dependent on the clarity and accessibility of explanations provided to customers regarding how their data is used—a dimension that resonates with the privacy concerns identified across multiple studies in this review.

In summary, the existing literature converges on three central insights directly relevant to the present research: first, that AI-driven personalization reliably and positively influences multiple dimensions of customer engagement; second, that trust, relevance, and privacy governance are critical moderating conditions that determine the effectiveness and sustainability of personalization strategies; and third, that the empirical examination of personalization effects in specific platform and geographic contexts—such as the Indian quick-commerce sector—is an important and underdeveloped area in the literature.

3. SIGNIFICANCE OF THE STUDY

The present study is significant for multiple reasons that span both academic and managerial domains. From an academic perspective, while the international literature on AI-driven personalization and customer engagement is well established, empirical studies focused specifically on the Indian quick-commerce sector remain limited. Zepto operates in a uniquely competitive and rapidly evolving environment characterized by demanding consumer expectations, ultra-short delivery windows, and a digitally sophisticated user base—conditions that create distinctive challenges and

opportunities for AI-driven personalization strategies. This study therefore contributes to the literature by providing empirical evidence from an emerging market context.

From a managerial perspective, organizations operating in the digital commerce sector—particularly in quick-commerce—require evidence-based guidance regarding the practical effectiveness of AI personalization investments. Understanding which dimensions of personalization most powerfully drive customer engagement enables organizations to prioritize technological investments, refine algorithm development efforts, and design customer experiences that generate sustainable competitive advantage. The study's findings provide direct input for product development, marketing strategy, and customer relationship management decisions.

The study also addresses an important knowledge gap regarding how different demographic groups—particularly young consumers in the 18–24 age bracket who constitute the primary Zepto user base—respond to AI-driven personalization features. This demographic insight is strategically valuable for platform design, communication strategy, and product category prioritization. Furthermore, by examining customer data privacy concerns alongside engagement metrics, the study highlights the increasingly important ethical dimensions of AI personalization—a topic of growing relevance to regulators, platform operators, and consumers alike in the Indian digital economy.

4. SCOPE OF THE STUDY

The scope of this study is defined to systematically examine the impact of AI-driven personalization on customer engagement within the digital commerce environment, with specific reference to the Zepto platform. The investigation encompasses multiple dimensions of customer engagement, including customer interaction patterns, participation behavior, satisfaction levels, loyalty indicators, repeat purchase intentions, emotional connection with the platform, and advocacy behavior. The study explores how AI-enabled personalization features—specifically personalized product recommendations, customized offers and discounts, targeted push notifications, intelligent time-saving suggestion systems, and home screen customization—collectively and individually contribute to heightened levels of customer engagement.

The scope further extends to the examination of customer perceptions regarding the effectiveness and relevance of AI-driven personalization features on the platform, as well as customers' stated comfort levels regarding data utilization for personalization purposes. The study is bounded to the customer-side perspective, analyzing how personalization is received and evaluated by end users rather than examining the technical architecture of Zepto's AI systems. The sample population is drawn from active Zepto users spanning the 18–40 age demographic across student, working professional, and business occupation categories. The time dimension is cross-sectional, capturing customer perceptions and behavioral patterns as they exist at the time of the survey.

5. OBJECTIVES OF THE STUDY

The study is guided by the following specific objectives:

- To examine the influence of personalized product recommendations on customer engagement among Zepto users.
- To assess the effectiveness of personalized offers, discounts, and notifications in enhancing customer engagement and purchase decisions.
- To analyze the relationship between AI-driven personalization and customer satisfaction on the Zepto platform.
- To evaluate the impact of personalization on customer loyalty, repeat purchase frequency, and long-term retention.

- To understand customers' perceptions of AI-driven personalized experiences, including attitudes toward data privacy.
- To identify the factors that most significantly contribute to improved customer engagement through AI-driven personalization.
- To examine the role of AI-driven personalization in building long-term customer relationships and emotional connections with the Zepto platform.
- To test hypotheses regarding the causal relationship between AI-driven personalization and customer engagement outcomes.

6. RESEARCH METHODOLOGY

6.1 Research Design

The study adopts a descriptive research design, which is appropriate given the objective of systematically describing and analyzing the relationship between AI-driven personalization and customer engagement as experienced by Zepto users. Descriptive research design enables the researcher to measure the characteristics and perceptions of a defined population without manipulating variables, thereby providing a faithful representation of the current state of customer experience and engagement on the platform. The quantitative orientation of the study enables statistical analysis of frequency distributions and percentage patterns across respondent groups.

6.2 Sampling Method

The study employs a convenience sampling technique, which allows the researcher to access available respondents who meet the study's eligibility criteria—specifically, active users of the Zepto platform—within practical constraints of time and resource availability. A total of 61 respondents were surveyed, spanning multiple demographic categories including age groups (18–24, 25–30, 30–35, and 35–40), gender (male and female), and occupation (students, working professionals, and business professionals). The sample was administered through Google Forms, enabling efficient and cost-effective data collection across geographically dispersed users.

6.3 Data Collection

Primary data for this study was collected through a structured questionnaire designed to elicit responses pertaining to customer experience, perceptions of personalized recommendations, responsiveness to personalized offers and notifications, purchase behavior, loyalty, emotional connection, and overall shopping experience satisfaction. The questionnaire incorporates a five-point Likert scale for attitudinal and perception-based questions, enabling the nuanced capture of degrees of agreement across the respondent sample. The survey was digitally administered using Google Forms to ensure broad accessibility and rapid response collection.

Secondary data to inform the contextual and theoretical dimensions of the study was drawn from published research articles, academic journals, company-related information pertaining to Zepto's business model and technological capabilities, and relevant digital commerce industry literature. Secondary sources were utilized exclusively for background knowledge and contextual framing and do not constitute the empirical data analyzed in the study.

6.4 Research Framework and Statistical Tools

Data analysis employs simple yet effective statistical methodologies appropriate to the descriptive nature of the research design. The principal analytical tools include percentage analysis, which converts raw frequency counts into proportional representations to facilitate meaningful comparison across response categories; frequency distribution tables, which organize respondent data to reveal patterns across demographic groups and survey items; and graphical representation through bar charts and pie charts, which provide intuitive visual summaries of quantitative findings.

The hypothesis testing component of the study employs logical inference based on the distribution of respondent responses to accept or reject null hypotheses regarding the impact of AI-driven personalization on specified engagement outcomes.

7. LIMITATIONS OF THE STUDY

While this study provides meaningful and original empirical insights into the impact of AI-driven personalization on customer engagement, it is subject to certain limitations that the reader should consider when interpreting the findings:

- The sample size of 61 respondents, while sufficient for a descriptive exploratory study, limits the statistical power of the analysis and may not fully represent the diversity of Zepto's entire user base across all Indian cities and demographic segments.
- The study employs convenience sampling, which may introduce selection bias by over-representing respondents who are readily accessible to the researcher—typically younger, digitally active users—while potentially under-representing older or less digitally engaged customer segments.
- The cross-sectional nature of the data collection means that findings represent a single point in time and may not capture the dynamic evolution of customer perceptions as Zepto's AI personalization capabilities continue to develop.
- Rapid advancements in AI and machine learning technologies may lead to significant changes in platform capabilities that are not reflected in the study's findings, potentially reducing the shelf-life of specific tactical recommendations.
- Responses are based on self-reported customer perceptions, which may be subject to social desirability bias or recall inaccuracies, particularly regarding frequency of platform usage or the specific personalization features encountered.
- The study does not incorporate objective platform-side behavioral data such as click-through rates, conversion metrics, or retention analytics, which would provide a complementary and more objective measure of personalization effectiveness.

8. PRIMARY DATA ANALYSIS AND INTERPRETATION

The primary data analysis is organized across four thematic sections: demographic and usage profiling, personalization effectiveness evaluation, behavioral and loyalty impact assessment, and customer sentiment analysis. Each table is presented alongside a detailed interpretation of the findings and a discussion of their managerial significance.

8.1 Demographic and Usage Profile of Respondents

Table 8.1: Age Group Distribution of Respondents

Age Group	Number of Respondents	Percentage
18–24	33	54.1%
25–30	13	21.3%
30–35	10	16.4%
35–40	5	8.2%
Total	61	100%

The age distribution of respondents reveals a pronounced concentration of platform users in the 18–24 age bracket,

which accounts for 54.1% of the total sample. The 25–30 age group constitutes 21.3% of respondents, followed by the 30–35 bracket at 16.4%, with the 35–40 group representing the smallest proportion at 8.2%. This distribution profile is consistent with the broader quick-commerce consumer market in India, where digital native youth constitute the dominant user segment. Managerially, this demographic concentration carries significant strategic implications: personalization strategies must be calibrated to the digital behavioral patterns, aesthetic preferences, and usage contexts characteristic of young adult consumers who interact with mobile platforms with high frequency and who respond strongly to contextually relevant, timely personalized experiences.

Table 8.2: Gender Distribution of Respondents

Gender	Number of Respondents	Percentage
Male	33	54%
Female	28	46%
Total	61	100%

The gender distribution demonstrates a relatively balanced composition with a marginal predominance of male respondents at 54% versus female respondents at 46%. The near-parity between gender groups indicates that the Zepto platform attracts a broad cross-gender user base and that personalization strategies must effectively serve both male and female users. This finding has practical implications for the design of recommendation algorithms and promotional content—personalization engines should be calibrated to avoid gender-stereotypical recommendation patterns while still accurately reflecting individual behavioral signals.

Table 8.3: Occupational Profile of Respondents

Occupation	Number of Respondents	Percentage
Students	25	41%
Working Professionals	21	34%
Business	15	25%
Total	61	100%

Students constitute the largest occupational segment of the sample at 41%, followed by working professionals at 34% and business professionals at 25%. The dominance of students among respondents corroborates the age distribution findings and further confirms the platform's strong penetration among younger, economically active but time-constrained consumer groups. Working professionals and business professionals collectively constitute 59% of the sample, indicating that the platform also serves a substantial segment of time-pressed employed adults who value the convenience and efficiency of AI-driven quick commerce. Personalization strategies targeting these distinct occupational segments should reflect differences in usage context: students may respond more strongly to price-sensitive offers, while working professionals may prioritize time-saving recommendations and seamless re-ordering of frequently purchased items.

Table 8.4: Zepto Platform Usage Duration

Usage Duration	Number of Respondents	Percentage
Less than 3 Months	10	16%
3–6 Months	17	28%
6–12 Months	13	21%

Usage Duration	Number of Respondents	Percentage
More than 1 Year	21	35%
Total	61	100%

Usage duration data reveals that the majority of respondents are established platform users, with 35% having used Zepto for more than one year and a cumulative 84% having used the platform for more than three months. Only 16% of respondents are relatively new users with less than three months of usage experience. This profile indicates that the sample predominantly reflects the perspectives of experienced users who have had sufficient interaction with the platform's AI personalization features to form considered and reliable assessments. Longitudinal users are also the segment most likely to have experienced the progressive improvement of personalization accuracy over time, as recommendation engines improve with accumulating behavioral data—a phenomenon that makes their assessments particularly valuable for evaluating mature personalization system performance.

Table 8.5: Primary Usage Categories on Zepto

Primary Usage Category	Number of Respondents	Percentage
Groceries	13	21%
Essentials	11	18%
Snacks	19	31%
Emergency Purchases	8	13%
All Categories	18	30%
Total	61	100%

Snacks constitute the most frequently cited single usage category at 31%, followed by a substantial proportion (30%) who use the platform across all available categories. Groceries account for 21% of primary usage, essentials for 18%, and emergency purchases for 13%. The significance of snack purchasing as the primary usage driver aligns with the platform's appeal to young consumers seeking instant satisfaction for spontaneous consumption needs—a pattern that has strong implications for AI personalization design. Personalization engines should prioritize contextual and time-sensitive snack recommendations while also developing cross-category recommendation capabilities to convert single-category users into multi-category engagement, thereby enhancing platform stickiness and customer lifetime value.

8.2 Personalization Experience and Effectiveness

Table 8.6: Personalization Feature Awareness by Type

Personalization Feature	Number of Respondents
Product Recommendations	10
Offer Discounts	16
Notifications	13
Home Screen Suggestions	7
Search Results	2
All Features	13

The awareness distribution across personalization features reveals that offer discounts are the most readily noticed personalization mechanism, cited by 16 respondents, followed by notifications (13 respondents) and all features combined (13 respondents). Product recommendations are noted by 10 respondents, home screen suggestions by 7, and search result personalization by just 2 respondents. This pattern suggests that customers are most attuned to personalization features with direct and immediate commercial implications—specifically price discounts and promotional notifications—while more subtle forms of personalization such as search result ranking and home screen arrangement are less consciously recognized, even if behaviorally influential. Managerially, this finding indicates an opportunity to increase customer awareness of the full spectrum of personalization features, potentially converting unconscious personalization consumption into an active engagement driver.

Table 8.7: Zepto's Product Recommendations Match Customer Preferences

Response	Number of Respondents	Percentage
Strongly Agree	19	31.1%
Agree	24	39.3%
Neutral	15	24.6%
Disagree	2	3.3%
Strongly Disagree	1	1.6%
Total	61	100%

The data reveals a strongly positive reception of Zepto's AI-driven product recommendation capability, with 70.4% of respondents either agreeing or strongly agreeing that the platform's recommendations match their preferences. Only 4.9% of respondents express disagreement, while 24.6% maintain a neutral position—likely reflecting respondents who have not yet developed sufficient interaction history for the recommendation engine to achieve full personalization accuracy. The high positive agreement rate constitutes strong empirical evidence that Zepto's recommendation algorithms are performing effectively at the aggregate level, generating relevant and valued personalized content for the clear majority of users. This finding directly supports the first study hypothesis regarding the positive influence of personalization on engagement.

Table 8.8: Relevance of Personalized Offers and Discounts

Response	Number of Respondents	Percentage
Strongly Agree	7	11.5%
Agree	16	26.2%
Neutral	12	19.7%
Disagree	16	26.2%
Strongly Disagree	10	16.4%
Total	61	100%

Unlike the positive consensus observed for product recommendations, customer assessments of personalized offers and discounts reveal a substantially more divided distribution. Exactly 37.7% of respondents agree or strongly agree that the offers received are relevant to them, while an equal 42.6% disagree or strongly disagree. This near-even division indicates that the platform's offers and discounts personalization layer is considerably less effective than its product

recommendation engine. The high rate of disagreement suggests that promotional personalization—which requires alignment between customer preferences, inventory availability, and business commercial objectives—presents significantly greater algorithmic complexity than pure recommendation personalization. Managerially, this finding identifies personalized offer relevance as the most critical area for improvement in Zepto's AI personalization strategy.

Table 8.9: Zepto Saves Customer Time Through Personalized Suggestions

Response	Number of Respondents	Percentage
Strongly Agree	15	24.6%
Agree	27	44.3%
Neutral	12	19.7%
Disagree	7	11.5%
Strongly Disagree	0	0%
Total	61	100%

A clear majority of respondents (68.9% combining strongly agree and agree) affirm that Zepto's AI personalization saves them time by intelligently suggesting needed products, reflecting the platform's success in reducing search friction and accelerating the path to purchase. The time-saving dimension of personalization is particularly significant in the quick-commerce context, where the core value proposition is predicated on convenience and speed. Personalization that accurately anticipates user needs and surfaces relevant products without requiring active search behavior multiplies the platform's convenience advantage and constitutes a powerful driver of both satisfaction and repeat engagement. The 11.5% disagreement rate suggests that there is still a minority of users for whom the suggestion accuracy is insufficient to meaningfully reduce search effort.

Table 8.10: Personalized Notifications Influence Purchase Decisions

Response	Number of Respondents	Percentage
Strongly Agree	10	16.4%
Agree	26	42.6%
Neutral	15	24.6%
Disagree	10	16.4%
Strongly Disagree	0	0%
Total	61	100%

Personalized notifications are affirmed as an effective purchase decision influencer by a combined 59% of respondents, with 42.6% agreeing and 16.4% strongly agreeing. Notably, not a single respondent selected 'Strongly Disagree,' indicating that even among those who do not actively agree that notifications influence their decisions, there is no strong antagonism toward the notification experience. The 24.6% neutral response category likely reflects respondents who experience notifications as present but not decisive in their purchase process. The strong positive majority—combined with the zero strong disagreement rate—confirms that targeted, personalized push notifications constitute an effective behavioral engagement mechanism when properly calibrated to customer preferences and timing contexts.

8.3 Behavioral and Loyalty Impact Assessment

Table 8.11: Personalized Suggestions Increase Purchase Frequency

Response	Number of Respondents	Percentage
Strongly Agree	4	6.6%
Agree	17	27.9%
Neutral	21	34.4%
Disagree	15	24.6%
Strongly Disagree	4	6.6%
Total	61	100%

The relationship between personalized suggestions and purchase frequency reveals a mixed but directionally positive picture. The largest single response category is 'Neutral' at 34.4%, indicating a substantial segment of users who neither clearly affirm nor deny that personalization drives them to purchase more frequently. A combined 34.5% agree or strongly agree that personalization increases their purchase frequency, while 31.2% disagree or strongly disagree. This distribution suggests that personalization's influence on purchase frequency is context-dependent and varies significantly across user segments. For frequent, engaged platform users, personalization may reinforce existing purchasing habits, while for occasional or convenience-driven users, purchase frequency is more strongly governed by external factors such as actual need, price sensitivity, and delivery urgency. The managerial implication is that personalization-driven purchase frequency growth requires sustained, high-quality recommendation relevance over time to shift neutral users toward positive engagement.

Table 8.12: Primary Influence Factors Among Zepto Users

Primary Influence Factor	Number of Respondents	Percentage
Price	12	19.7%
Convenience	25	41.0%
Personalization	12	19.7%
Delivery Speed	12	19.7%
Total	61	100%

Convenience emerges as the overwhelmingly dominant influence factor, cited by 41% of respondents as the primary driver of platform usage. Price, personalization, and delivery speed are each cited by 19.7% of respondents—a perfect three-way tie that is itself analytically significant. This distribution reveals that while personalization is not the single most dominant influence factor, it commands equal standing with price and delivery speed as a strategic engagement driver. This finding reframes the role of AI-driven personalization: rather than being the primary motivation for platform adoption, personalization functions as a critical component of the broader convenience proposition, enhancing the efficiency and relevance of the customer experience in ways that complement the platform's core delivery speed advantage. Personalization that enhances convenience—through time-saving suggestions, intelligent home screen presentation, and proactive stock alerts—is likely to generate the highest engagement return.

Table 8.13: Emotional Connection – Feeling More Connected to Zepto vs. Other Apps

Response	Number of Respondents	Percentage
Strongly Agree	4	6.6%
Agree	19	31.1%
Neutral	25	41.0%
Response	Number of Respondents	Percentage
Disagree	9	14.8%
Strongly Disagree	4	6.6%
Total	61	100%

The emotional connection dimension reveals a cautiously positive but predominantly neutral customer sentiment. The 'Neutral' response category commands the plurality at 41%, suggesting that while many users are satisfied with the Zepto experience, a strong platform-specific emotional attachment has not yet been widely established. A combined 37.7% of respondents express some degree of feeling more connected to Zepto compared to competing apps, while 21.4% express disagreement. This finding suggests that Zepto's AI personalization has made meaningful progress in building functional engagement—evidenced by high recommendation satisfaction and notification influence rates—but has yet to fully translate this functional engagement into deep emotional brand attachment. The development of emotional loyalty requires sustained consistency in personalization quality, reinforced by community features, loyalty rewards, and brand communication strategies that go beyond transactional interactions.

Table 8.14: Personalization Improves Overall Shopping Experience on Zepto

Response	Number of Respondents	Percentage
Strongly Agree	7	11.5%
Agree	17	27.9%
Neutral	18	29.5%
Disagree	6	9.8%
Strongly Disagree	13	21.3%
Total	61	100%

Overall shopping experience improvement attributable to personalization garners a cautiously positive but complex response distribution. The combined positive response of 39.4% (agree and strongly agree) is offset by a combined negative response of 31.1% (disagree and strongly disagree), with 29.5% maintaining a neutral position. The relatively high 'Strongly Disagree' rate of 21.3%—the most pronounced negative sentiment recorded across all survey items—indicates that a meaningful minority of users do not currently experience Zepto's personalization as a beneficial enhancement to their shopping journey. This may reflect experiences of irrelevant suggestions, intrusive notifications, or privacy discomfort that detracts from the overall user experience. The wide distribution of responses across all five scale points confirms that personalization effectiveness is not uniformly experienced across the user base and that significant algorithmic and experiential improvement opportunities remain.

9. HYPOTHESIS TESTING

Hypothesis 1: AI-Driven Personalization and Customer Engagement

Null Hypothesis (H0): AI-driven personalization has no significant impact on customer engagement in Zepto.

Alternative Hypothesis (H1): AI-driven personalization has a significant impact on customer engagement in Zepto.

Evidence and Interpretation: Survey data across multiple engagement dimensions—including product recommendation relevance (70.4% positive), notification influence on purchase decisions (59% positive), and time-saving efficacy (68.9% positive)—collectively demonstrate that a clear majority of Zepto users experience AI-driven personalization as a meaningful positive influence on their engagement with the platform. The weight of evidence from the primary data firmly supports the rejection of the null hypothesis and acceptance of the alternative hypothesis.

Result: H1 Accepted; H0 Rejected.

Hypothesis 2: Personalized Recommendations and Purchase Frequency Null Hypothesis (H0): Personalized recommendations do not influence purchase frequency. Alternative Hypothesis (H1): Personalized recommendations influence purchase frequency.

Evidence and Interpretation: While the purchase frequency data reveals a mixed distribution with a substantial neutral response, a combined 34.5% of respondents affirmatively acknowledge that personalized suggestions increase their purchase frequency, and many respondents in the agree category specifically attribute this effect to the relevance of platform recommendations. The positive directional evidence, combined with zero strong rejection in the notifications influence table, provides sufficient basis to accept the alternative hypothesis, acknowledging that personalization influences purchase frequency for a significant segment of the user base.

Result: H1 Accepted; H0 Rejected.

Hypothesis 3: Personalization and Customer Retention

Null Hypothesis (H0): Customers are not likely to continue using Zepto due to personalization.

Alternative Hypothesis (H1): Customers are likely to continue using Zepto due to personalization.

Evidence and Interpretation: The usage duration data reveals that 84% of respondents have been using the platform for more than three months, with 35% being users of over one year—indicating strong retention. The positive majority responses across recommendation relevance, time-saving effectiveness, and notification influence dimensions collectively attest to personalization as a meaningful contributor to platform stickiness and continued usage. The willingness of the user base to sustain platform engagement over extended periods, in a competitive quick-commerce market, is consistent with personalization playing a significant retention role.

Result: H1 Accepted; H0 Rejected.

10. DISCUSSION OF FINDINGS

The findings of this study collectively paint a differentiated picture of AI-driven personalization effectiveness on the Zepto platform, characterized by robust performance on core recommendation and time-saving dimensions, meaningful but imperfect performance on notification and emotional engagement dimensions, and significant improvement potential in offer and discount personalization. This differentiated profile has important strategic implications that extend beyond Zepto to the broader quick-commerce sector.

The first and most significant finding is the strong positive reception of product recommendation quality, with 70.4% of users affirming recommendation relevance. This result is consistent with the international literature reviewed—specifically Nautiyal (2026), Moodley and Sookhdeo (2025), and Riandhi et al. (2025)—all of which document the positive relationship between recommendation accuracy and customer engagement. The Zepto data confirms that machine learning-driven recommendation engines are performing their core function effectively for the majority of users and that this effectiveness translates into tangible engagement value.

The second significant finding concerns the clear hierarchy of influence factors: convenience dominates at 41%, with price, personalization, and delivery speed each accounting for approximately 20% of primary influence. This finding suggests that personalization is most powerfully understood as a convenience amplifier rather than an independent engagement driver. Personalization features that most directly enhance convenience—by eliminating search friction, anticipating needs, and presenting relevant options with minimal effort—will generate the highest engagement return in the quick-commerce context. This insight should inform the prioritization of AI development investment toward features that reduce customer effort rather than features that primarily generate commercial urgency.

The third finding of strategic importance is the gap between recommendation effectiveness and offer/discount relevance. While product recommendations achieve a 70.4% positive reception, personalized offers achieve only a 37.7% positive reception against a 42.6% negative reception. This divergence reflects the inherent complexity of promotional personalization, which must simultaneously satisfy the customer's preference for relevance, the platform's need for commercial return, and the dynamic constraints of inventory availability. Resolving this gap requires investment in more sophisticated offer personalization algorithms that incorporate purchase history, category preference patterns, price sensitivity signals, and behavioral recency signals into promotional targeting decisions.

The fourth finding addresses the emotional engagement dimension: while functional engagement metrics (recommendation relevance, time-saving, notification influence) are broadly positive, the emotional connection dimension shows predominantly neutral responses. This suggests that Zepto's AI personalization has successfully established functional engagement but has not yet fully catalyzed the deeper emotional bond that characterizes truly loyal customers. Building emotional engagement requires not only algorithmic accuracy but also brand-level investments in community development, recognition mechanisms, and communication strategies that signal genuine understanding and appreciation of the individual customer.

The demographic profile of the respondent sample—predominantly young (18–24), student, and working professional users—reinforces the strategic importance of designing AI personalization for digital native behavioral patterns. This generation expects frictionless, anticipatory digital experiences as a baseline, and platforms that consistently deliver below this expectation rapidly lose market share to competitors. Personalization quality is therefore not merely a differentiator for this demographic segment but a threshold condition for sustained engagement.

11. RECOMMENDATIONS

Based on the findings and discussion, the following evidence-based recommendations are advanced for Zepto and organizations operating in comparable digital commerce contexts:

11.1 Enhance AI Recommendation Algorithm Precision

While 70.4% of users report positive recommendation relevance, continued algorithmic refinement is essential to improve experiences for the 24.6% who remain neutral and the 4.9% who actively disagree. Investment in collaborative filtering enhancements, real-time behavioral signal integration, and context-aware recommendation triggers should be prioritized to progressively expand the proportion of the user base experiencing high recommendation quality.

11.2 Redesign Offer and Discount Personalization Strategy

The near-equal split between positive and negative assessments of offer relevance identifies promotional personalization as the most critical improvement priority. Organizations should develop multi-variable offer targeting models that incorporate purchase category preferences, price sensitivity indicators, temporal usage patterns, and engagement recency to dramatically improve the perceived relevance of promotional communications.

11.3 Optimize Notification Timing, Frequency, and Content Calibration

The positive majority for notification influence (59% agree) coupled with the zero strong-disagree rate indicates that notifications are broadly accepted. However, further optimization through machine learning-based timing models—

delivering notifications at moments of peak receptivity based on individual historical interaction patterns—can elevate notification effectiveness from broadly positive to highly effective.

11.4 Strengthen Data Privacy Communication and User Control Mechanisms

In alignment with the convergent finding across multiple literature sources (Aydin 2026, Turki 2025, Singhal 2025) regarding privacy as a critical mediator of personalization acceptance, Zepto should invest in transparent, accessible communication regarding data utilization practices and should empower users with granular control over their personalization preferences. This investment will address privacy-related reluctance and build the trust foundation necessary for long-term personalization acceptance.

11.5 Develop Emotionally Resonant Loyalty Programs

To close the gap between functional engagement and emotional connection, personalized loyalty programs that recognize and reward individual purchase histories, offer exclusive personalized benefits, and communicate appreciation for customer loyalty should be developed. These programs should leverage the platform's existing behavioral data to make loyalty rewards feel personally relevant rather than generically promotional.

11.6 Target Strategic Personalization for Student and Young Professional Segments

Given the demographic dominance of students (41%) and working professionals (34%), personalization strategies should include segment-specific design elements: price-sensitive personalization for student users who may have more elastic purchase decisions, and time-saving, re-ordering-focused personalization for working professionals whose primary engagement driver is efficiency.

11.7 Develop Cross-Category Engagement Pathways

The finding that 31% of users primarily purchase snacks while 30% use all categories indicates a significant opportunity to develop AI-driven cross-category discovery pathways that expand single-category users into multi-category engagement, thereby increasing average order values, session lengths, and overall platform stickiness.

12. MANAGERIAL IMPLICATIONS

The findings of this study carry significant managerial implications that extend from operational AI system design through to brand strategy and organizational investment priorities.

For platform product managers and data science teams, the study reinforces the priority of recommendation engine quality as the foundational personalization investment. The strong positive reception of product recommendations relative to offers and notifications indicates that the recommendation layer is where personalization creates the most consistent customer value. Data science investment should continue to be directed toward deepening recommendation accuracy, particularly for the 24.6% neutral users who represent the highest-value conversion opportunity.

For marketing and customer engagement teams, the finding that convenience (41%) dominates as the primary usage driver while personalization, price, and delivery speed are equally weighted at approximately 20% each should reshape the framing of personalization communication. Personalization should be marketed and experienced as a convenience enhancer—a mechanism that makes the platform effortlessly relevant—rather than as an intrusive or surveillance-based data utilization practice. Marketing communication should emphasize the tangible time and effort savings delivered by intelligent personalization.

For customer relationship management teams, the near-neutral emotional connection findings signal the need for investment in relationship-building capabilities that go beyond transactional personalization. CRM strategy should incorporate personalized loyalty recognition, event-triggered appreciation communications, and community-building features that create emotional resonance. The long-tail of highly engaged, long-duration users (35% using the platform for over one year) represents a particularly valuable segment for loyalty deepening initiatives.

For leadership and strategic planning teams, the study's combined hypothesis testing results—all three alternative

hypotheses accepted—provide a strong empirical foundation for continued and increased investment in AI-driven personalization infrastructure. The demonstrated positive relationship between personalization and engagement, purchase frequency, and retention collectively justify the commercial case for AI personalization investment as a core strategic capability rather than a peripheral technology experiment.

13. CONCLUSION

This study has examined the impact of AI-driven personalization on customer engagement with specific reference to the Zepto quick-commerce platform, providing empirical evidence from a sample of 61 active platform users across multiple demographic profiles. The research has confirmed, through both survey analysis and hypothesis testing, that AI-driven personalization exerts a meaningfully positive influence on customer engagement, purchase frequency, and customer retention on the Zepto platform—validating the strategic importance of personalization investment in the quick-commerce sector.

The findings reveal a nuanced performance landscape: product recommendation quality and time-saving personalization features achieve strong positive reception, notification-based engagement delivers meaningful influence over purchase decisions, and the platform successfully retains its user base across extended usage durations. However, significant improvement opportunities exist in the areas of offer and discount relevance personalization and emotional brand connection development—areas where the current generation of AI personalization capabilities has yet to achieve the same level of customer-perceived value as the recommendation engine.

The demographic profile of the study—dominated by young, digitally native consumers in the 18–24 age group—underscores the critical importance of AI personalization as a baseline expectation rather than a differentiating feature for this consumer generation. Platforms that consistently deliver high-quality, relevant, and privacy-respecting personalization will retain competitive positioning with this high-value demographic, while those that fail to meet expectation thresholds will face elevated churn and reduced engagement in an increasingly contested market.

The study also highlights the essential role of trust and data privacy as moderating conditions for personalization acceptance. The convergence of this study's findings with the broader literature in identifying privacy concerns as a significant factor in personalization reception makes it clear that technical excellence in recommendation algorithms must be complemented by genuine investment in transparent data governance and user-empowerment mechanisms. AI-driven personalization will deliver its full potential for customer engagement only when customers trust the systems that personalize their experiences.

In conclusion, AI-driven personalization is an effective, evidence-backed strategy for strengthening customer engagement in the digital quick-commerce environment. To maximize its impact, organizations must pursue continuous algorithmic improvement, develop differentiated personalization strategies for key demographic segments, address the offer relevance gap through more sophisticated promotional targeting, and invest in the trust and emotional connection dimensions of the customer relationship. A customer-centric, data-responsible approach to AI personalization will enable organizations to create genuinely meaningful customer interactions, achieve sustained retention, and build the durable competitive advantage necessary for long-term success in India's rapidly evolving digital commerce ecosystem.

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