

Consumer Engagement in Digital Retail: A Systematic Literature Review of Digital Marketing, Technological Innovation, and Social Media Influencers

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Abstract: Consumer engagement has emerged as a critical determinant of competitive advantage in digital retail, driven by the rapid evolution of digital marketing strategies, technological innovations, and social media ecosystems. This systematic literature review synthesises existing research on the antecedents and mechanisms of consumer engagement in digital retail by examining the combined influence of digital marketing, technological innovation, and social media influencers. The review follows the PRISMA 2020 guidelines to ensure methodological transparency and rigor. A comprehensive search of major academic databases identified relevant studies published between 2015 and 2025, resulting in a final sample of 142 peer-reviewed articles after applying predefined inclusion and exclusion criteria.

The findings reveal that digital marketing practices—including personalized advertising, content marketing, omnichannel communication, and customer relationship management—significantly enhance cognitive, emotional, and behavioural dimensions of consumer engagement. Furthermore, technological innovations such as artificial intelligence (AI), machine learning, augmented reality (AR), virtual reality (VR), chatbots, and predictive analytics improve customer experiences by increasing personalisation, interactivity, convenience, and perceived usefulness. The review also demonstrates that social media influencers strengthen consumer trust, perceptions of authenticity, brand credibility, and parasocial relationships, thereby positively influencing purchase intentions, electronic word-of-mouth (eWOM), and long-term brand loyalty. The analysis identifies trust, perceived value, customer experience, and personalisation as key mediating mechanisms that connect digital strategies to engagement outcomes.

Based on the synthesis, an integrative conceptual framework is proposed by combining the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), Theory of Planned Behaviour (TPB), and the Stimulus–Organism–Response (S-O-R) framework to explain consumer engagement in digital retail. The review contributes to theory by consolidating fragmented literature and offers practical insights for retailers seeking a sustainable competitive advantage through digital transformation. Finally, it highlights emerging research opportunities in ethical AI, virtual influencers, data privacy, immersive commerce, and cross-cultural consumer behaviour.

Keywords: consumer engagement; digital retail; e-commerce; digital marketing; technological innovation; artificial intelligence; social media influencers; PRISMA 2020; systematic literature review



1. Introduction

Consumer engagement has emerged as one of the most influential constructs in contemporary marketing and digital retail research, representing a strategic asset that enables firms to develop long-term customer relationships, enhance brand loyalty, and achieve sustainable competitive advantage. The rapid digitalisation of retail has fundamentally transformed how consumers discover products, interact with brands, make purchasing decisions, and share post-purchase experiences. Unlike traditional retail, where interactions were largely transactional and confined to physical stores, digital retail facilitates continuous, personalised, and interactive engagement across multiple touchpoints, including websites, mobile applications, social media platforms, online communities, and artificial intelligence (AI)-enabled customer service systems (Hollebeek et al., 2019; Verhoef et al., 2021). Consequently, consumer engagement has become a central performance indicator for retailers seeking to differentiate themselves in increasingly competitive digital marketplaces.

Consumer engagement extends beyond purchase behaviour and encompasses consumers' cognitive, emotional, and behavioural investment in interactions with brands (Brodie et al., 2011). Cognitive engagement reflects the level of attention and mental involvement consumers dedicate to brand-related activities; emotional engagement captures affective responses such as enthusiasm, attachment, and trust, while behavioural engagement includes actions such as content sharing, online reviews, participation in brand communities, repeat purchases, and electronic word-of-mouth (eWOM) (Hollebeek, Glynn, & Brodie, 2014; Vivek et al., 2012). This multidimensional perspective has shifted marketing research from focusing solely on customer satisfaction and loyalty to understanding how continuous interactions generate long-term value for both consumers and organisations.

The evolution of Industry 4.0 technologies and digital transformation has further accelerated the importance of consumer engagement in retail. Retailers increasingly employ sophisticated technologies such as artificial intelligence (AI), machine learning (ML), big data analytics, augmented reality (AR), virtual reality (VR), Internet of Things (IoT), blockchain, and conversational chatbots to create immersive, personalised, and seamless shopping experiences (Pantano et al., 2020; Grewal et al., 2021). These technologies enable firms to analyse consumer preferences in real time, deliver customised recommendations, automate customer support, optimise inventory management, and enhance omnichannel integration. Such technological innovations not only improve operational efficiency but also strengthen customer trust, satisfaction, and engagement by reducing perceived effort while increasing perceived usefulness and enjoyment.

The unprecedented growth of e-commerce during the COVID-19 pandemic significantly reshaped global consumer behaviour and accelerated the adoption of digital retail channels. Restrictions on physical shopping encouraged consumers to rely heavily on online platforms, prompting retailers to invest aggressively in digital technologies, omnichannel capabilities, and customer engagement strategies (Sheth, 2020; Verhoef et al., 2021). Even after the pandemic, many consumers retained their digital shopping habits, making online engagement a critical determinant of business performance. This transition has intensified competition among retailers, compelling organisations to prioritise innovative engagement strategies that deliver superior customer experiences while fostering long-term loyalty.

Digital marketing has emerged as one of the most powerful mechanisms for enhancing consumer engagement in digital retail. Contemporary digital marketing extends beyond traditional online advertising to include content marketing, search engine optimization (SEO), search engine marketing (SEM), social media marketing, email marketing, influencer marketing, personalized promotions, and data-driven customer relationship management (CRM) (Chaffey & Ellis-Chadwick, 2022). Through interactive and personalized communication, digital marketing enables firms to establish meaningful relationships with consumers by delivering relevant information at appropriate stages of the customer journey. Personalised recommendations, targeted advertisements, interactive content, and gamified promotional campaigns significantly increase consumer participation, satisfaction, and purchase intentions while strengthening brand attachment and advocacy (Lemon & Verhoef, 2016).

Simultaneously, technological innovation has transformed the customer experience by introducing immersive and intelligent shopping environments. AI-powered recommendation systems personalise product suggestions based on browsing history and purchasing behaviour, while AR and VR technologies allow consumers to virtually try products before making purchase decisions. Similarly, conversational AI and chatbots provide instant customer support, reducing service delays and improving customer satisfaction (Davenport et al., 2020; Huang & Rust, 2021).

These innovations contribute to higher levels of perceived usefulness, ease of use, trust, and enjoyment, thereby increasing consumers' willingness to engage with digital retail platforms.

Another transformative force shaping consumer engagement is the rapid rise of social media influencers. Influencer marketing has evolved into one of the most effective digital communication strategies due to its ability to establish authenticity, credibility, and emotional connections with audiences. Unlike traditional celebrity endorsements, influencers cultivate close relationships with followers through continuous interactions, creating parasocial relationships that significantly affect attitudes, purchase intentions, and brand trust (Lou & Yuan, 2019; Sokolova & Kefi, 2020). Consumers increasingly rely on influencer-generated content, reviews, tutorials, and product demonstrations when making purchasing decisions because such content is perceived as more authentic and trustworthy than conventional advertising. Consequently, influencer marketing has become a strategic component of integrated digital marketing campaigns designed to maximize consumer engagement.

Despite substantial scholarly attention, existing literature on consumer engagement remains fragmented across multiple disciplines, including marketing, information systems, retail management, psychology, and communication studies. Previous studies have primarily examined digital marketing, technological innovation, and influencer marketing independently, with limited efforts to understand their combined influence on consumer engagement within digital retail ecosystems. Furthermore, theoretical perspectives remain dispersed across frameworks such as the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), Theory of Planned Behavior (TPB), Stimulus–Organism–Response (S-O-R) model, Relationship Marketing Theory, and Customer Engagement Theory. This fragmentation limits the development of an integrated understanding of how these factors collectively influence consumer behavior and engagement outcomes.

Moreover, rapid technological advancements—including generative AI, virtual influencers, metaverse commerce, blockchain-enabled retail, and immersive shopping experiences—have introduced new research opportunities that remain underexplored in existing systematic reviews. Similarly, emerging concerns regarding consumer privacy, algorithmic transparency, ethical AI, digital trust, and data governance have become increasingly relevant as retailers collect and utilize large volumes of consumer data for personalization. Understanding these evolving dynamics is essential for both researchers and practitioners seeking to design effective and ethically responsible engagement strategies.

Against this backdrop, the present systematic literature review seeks to synthesize and critically evaluate empirical evidence on the determinants of consumer engagement in digital retail. Following the PRISMA 2020 guidelines, the review examines peer-reviewed studies published between 2015 and 2025 to identify dominant research themes, theoretical foundations, methodological approaches, and emerging trends. Specifically, the review investigates the individual and combined effects of digital marketing strategies, technological innovations, and social media influencers on consumer engagement. Furthermore, it proposes an integrative conceptual framework by combining TAM, UTAUT, TPB, and the Stimulus–Organism–Response (S-O-R) model to provide a comprehensive theoretical explanation of engagement mechanisms in digital retail.

The findings contribute to marketing theory by consolidating fragmented streams of research into a unified framework and identifying key mediating variables such as trust, perceived value, customer experience, and personalisation. From a managerial perspective, the review offers evidence-based recommendations for retailers seeking to leverage digital transformation, AI-driven personalisation, influencer partnerships, and omnichannel marketing to build stronger consumer relationships and achieve sustainable competitive advantage. Finally, the review identifies promising directions for future research, including ethical AI adoption, virtual influencers, cross-cultural consumer behaviour, sustainability-oriented digital engagement, and the integration of immersive technologies within digital retail ecosystems.

2. Literature Review

The rapid evolution of digital technologies has transformed the retail landscape, making consumer engagement a central focus of marketing research. As retailers increasingly rely on digital platforms to build long-term relationships with consumers, scholars have examined the influence of digital marketing strategies, technological innovations, and social media influencers on customer engagement, purchase behavior, and brand loyalty. Although these streams have developed independently, recent studies suggest that their integration creates synergistic effects that significantly enhance consumer experiences in digital retail environments (Verhoef et al., 2021; Grewal et al., 2021). This section critically reviews the literature across these three domains while identifying theoretical perspectives and research gaps.

Digital Marketing and Consumer Engagement

Digital marketing has evolved beyond traditional online advertising to encompass personalized communication, content marketing, social media campaigns, email marketing, search engine optimization (SEO), influencer collaborations, mobile marketing, and omnichannel customer engagement. Contemporary digital marketing strategies emphasize creating meaningful, interactive, and value-driven experiences that encourage consumers to actively participate in brand-related activities rather than passively receive promotional messages (Chaffey & Ellis-Chadwick, 2022).

Consumer engagement is strengthened when digital marketing delivers personalized and relevant content. Personalized recommendations, behavioral targeting, and AI-powered marketing automation enable firms to tailor communications according to consumers' preferences, browsing history, and purchasing behavior. Such personalization increases perceived relevance, trust, customer satisfaction, and purchase intentions while strengthening long-term brand relationships (Lemon & Verhoef, 2016; Davenport et al., 2020). Similarly, content marketing enhances engagement by providing informative, entertaining, and educational content that encourages consumers to interact with brands through comments, shares, reviews, and electronic word-of-mouth (eWOM) (Herle, 2024).

The rise of omnichannel retailing has further expanded opportunities for engagement by integrating online and offline customer experiences. Consumers increasingly expect seamless transitions between websites, mobile applications, physical stores, and social commerce platforms. Omnichannel strategies improve convenience, reduce shopping effort, and enhance customer experience, thereby fostering stronger cognitive, emotional, and behavioral engagement (Verhoef et al., 2021). Furthermore, social media platforms have become essential channels for two-way communication, enabling firms to build online communities where consumers actively participate in discussions, provide feedback, and co-create brand value.

Despite these advancements, researchers continue to debate the effectiveness of different digital marketing strategies across industries and demographic segments. Issues such as information overload, digital fatigue, advertising avoidance, and privacy concerns may reduce engagement when personalization becomes overly intrusive (Martin & Murphy, 2017). Consequently, future digital marketing strategies must balance personalization with ethical data management and consumer trust.

Technological Innovation in Digital Retail

Technological innovation has become one of the primary drivers of digital retail transformation. Emerging technologies—including artificial intelligence (AI), machine learning (ML), augmented reality (AR), virtual reality (VR), big data analytics, Internet of Things (IoT), blockchain, and conversational chatbots—have significantly improved customer experiences by increasing personalization, efficiency, and convenience (Pantano et al., 2020; Huang & Rust, 2021).

Artificial intelligence enables retailers to analyze large volumes of customer data and generate personalized product recommendations, dynamic pricing strategies, and predictive customer service solutions. AI-powered recommendation systems improve perceived usefulness and customer satisfaction by helping consumers identify products aligned with their preferences, thereby increasing purchase likelihood and engagement (Davenport et al., 2020). Likewise, chatbots and virtual assistants provide immediate customer support, reducing waiting times and improving service quality.

Immersive technologies such as AR and VR have further transformed online shopping experiences by allowing consumers to virtually try products before purchase. These technologies reduce perceived risk, increase confidence in purchase decisions, and create enjoyable shopping experiences that strengthen emotional engagement (Hilken et al., 2017). The emergence of metaverse commerce and virtual retail environments represents another significant development, enabling consumers to interact with brands through immersive digital experiences.

The adoption of technological innovations has been widely explained using behavioral theories. The Technology Acceptance Model (TAM) (Davis, 1989) proposes that perceived usefulness and perceived ease of use determine users' willingness to adopt digital technologies. Similarly, the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) expands this perspective by incorporating performance expectancy, effort expectancy, social influence, and facilitating conditions. More recent studies integrate these models with customer experience and trust constructs to explain consumer engagement in AI-enabled retail environments (Venkatesh et al., 2016; Huang & Rust, 2021).

Although technological innovation improves customer experiences, scholars have identified several challenges related to algorithmic transparency, ethical AI, cybersecurity, and consumer privacy. Growing concerns regarding the collection and utilization of personal data necessitate responsible implementation of digital technologies to sustain long-term consumer trust.

Social Media Influencers and Consumer Engagement

Social media influencers have become influential intermediaries between brands and consumers, fundamentally changing digital marketing communication. Unlike traditional celebrity endorsements, influencers cultivate authentic relationships with followers through continuous interactions, content creation, and community engagement. This perceived authenticity significantly influences consumer attitudes, purchase intentions, and brand trust (Lou & Yuan, 2019).

The effectiveness of influencer marketing is primarily explained through Source Credibility Theory, which emphasizes expertise, trustworthiness, and attractiveness as determinants of persuasive communication. Consumers are more likely to engage with influencers who are perceived as knowledgeable, authentic, and relatable (Ohanian, 1990). Additionally, Parasocial Interaction Theory suggests that repeated exposure to influencer-generated content creates one-sided emotional relationships that increase consumers' trust and identification with influencers (Sokolova & Kefi, 2020).

Recent studies demonstrate that influencer-generated content significantly affects electronic word-of-mouth (eWOM), brand awareness, customer engagement, and purchase decisions, particularly among younger consumers (Vrontis et al., 2021). Micro-influencers often generate higher engagement rates than celebrities due to stronger perceived authenticity and closer relationships with niche audiences. Furthermore, AI-generated virtual influencers have emerged as a new phenomenon, raising important questions regarding authenticity, ethics, and consumer trust in digital marketing ecosystems.

Despite the rapid growth of influencer marketing, challenges remain regarding disclosure of sponsored content, fake followers, influencer credibility, and regulatory compliance. These issues highlight the need for transparent partnerships that preserve consumer trust while maximizing engagement.

Theoretical Perspectives

Several theoretical frameworks underpin research on consumer engagement in digital retail. Customer Engagement Theory conceptualizes engagement as a multidimensional construct involving cognitive, emotional, and behavioral dimensions (Brodie et al., 2011). The Technology Acceptance Model (TAM) (Davis, 1989) and UTAUT (Venkatesh et al., 2003) explain technology adoption behavior through perceived usefulness, ease of use, social influence, and facilitating conditions. The Theory of Planned Behavior (TPB) (Ajzen, 1991) links consumer attitudes, subjective norms, and perceived behavioral control with behavioral intentions. Meanwhile, the Stimulus–Organism–Response (S-O-R) framework (Mehrabian & Russell, 1974) explains how external digital stimuli—including personalized marketing, AI technologies, and influencer content—shape consumers' internal cognitive and emotional states, ultimately influencing engagement and purchase behavior.

Recent studies increasingly integrate these theories to provide a more comprehensive explanation of consumer engagement in digital retail environments, recognizing that technological, psychological, and social factors operate simultaneously rather than independently.

Research Gap

Although considerable research exists on digital marketing, technological innovation, and influencer marketing, these domains have largely been investigated in isolation. Few studies provide an integrated understanding of how these three factors collectively influence consumer engagement within digital retail ecosystems. Moreover, emerging technologies such as generative AI, virtual influencers, metaverse commerce, and immersive retail experiences remain underexplored in systematic reviews. Existing literature also pays limited attention to ethical AI, algorithmic transparency, data privacy, and cross-cultural differences in digital engagement. Addressing these gaps is essential for developing a holistic theoretical framework capable of explaining consumer engagement in rapidly evolving digital retail environments.

3. Methodology

Research Design

This study employed a Systematic Literature Review (SLR) methodology to synthesize existing empirical evidence on consumer engagement in digital retail. The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines to ensure methodological rigor, transparency, and replicability (Page et al., 2021). Unlike traditional narrative reviews, an SLR minimizes researcher bias by adopting a structured protocol for identifying, screening, evaluating, and synthesizing relevant studies.

The primary objective of this review was to investigate how digital marketing strategies, technological innovations, and social media influencers individually and collectively influence consumer engagement in digital retail environments. Additionally, the review sought to identify prevailing theoretical frameworks, methodological trends, mediating variables, and future research opportunities.

Research Questions

The systematic review addressed the following research questions:

RQ1: How do digital marketing strategies influence consumer engagement in digital retail?

RQ2: What role do technological innovations play in enhancing consumer engagement?

RQ3: How do social media influencers affect consumer trust, purchase intention, and engagement?

RQ4: What theoretical models have been applied to explain consumer engagement in digital retail?

RQ5: What research gaps and future directions emerge from the existing literature?

Search Strategy

A comprehensive literature search was conducted across five major academic databases:

- Scopus
- Web of Science
- ScienceDirect
- Emerald Insight
- Google Scholar

The search covered studies published between January 2015 and March 2025, reflecting the rapid evolution of digital retail technologies during the Industry 4.0 era.

The search strings combined keywords using Boolean operators:

("consumer engagement" OR "customer engagement") AND ("digital retail" OR "online retail" OR "e-commerce") AND ("digital marketing" OR "content marketing" OR "social media marketing" OR personalization) AND ("technological innovation" OR "artificial intelligence" OR AI OR chatbot OR augmented reality OR virtual reality OR recommendation systems) AND ("social media influencers" OR influencer marketing OR influencer credibility).

Backward and forward citation tracking was also performed to identify additional relevant studies.

Inclusion and Exclusion Criteria

To ensure consistency, predefined inclusion and exclusion criteria were established.

Inclusion Criteria

- Peer-reviewed journal articles
- Published between 2015 and 2025
- Written in English
- Focused on digital retail or e-commerce
- Examined at least one of the following:

- o *Digital marketing*

- o *Technological innovation*
- o *Social media influencers*
- o *Consumer engagement*
- Quantitative, qualitative, mixed-method, conceptual studies, and systematic reviews

Exclusion Criteria

- Conference proceedings
- Book chapters
- Editorials
- Dissertations
- Non-English publications
- Studies unrelated to retail
- Studies without accessible full text

Study Selection Process

The study selection followed the four PRISMA stages.

Identification

Database searches initially identified 1,246 records.

Screening

After removing 312 duplicate articles, 934 studies remained.

Titles and abstracts were screened independently by two reviewers.

Eligibility

Following full-text assessment, 340 articles met the eligibility requirements.

Articles were excluded because they:

- did not examine consumer engagement,
- focused on unrelated industries,
- lacked empirical evidence,
- or were inaccessible.

Inclusion

Ultimately,

142 peer-reviewed studies

were included in the final synthesis.

Data Extraction

A structured data extraction protocol was developed.

For each article, the following information was recorded:

- Author(s)
- Publication year

- Country
- Journal
- Research objectives
- Sample characteristics
- Research methodology
- Industry context
- Theoretical framework
- Digital technology examined
- Consumer engagement dimensions
- Key findings
- Future research recommendations

The extracted information was independently verified by two researchers to ensure consistency and reduce extraction bias.

Quality Assessment

Methodological quality was assessed using the Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018).

The assessment considered:

- ☐ **research design,**
- ☐ **sampling procedures,**
- ☐ **validity and reliability,**
- ☐ **data collection,**
- ☐ **analytical techniques,**
- ☐ **transparency of reporting.**

Only studies demonstrating acceptable methodological rigor were retained.

The overall quality assessment indicated that the majority of studies exhibited moderate to high methodological quality, enhancing the credibility of the review findings.

Results and Thematic Analysis

Thematic synthesis was conducted following Braun and Clarke's (2006) thematic analysis approach. Three dominant themes consistently emerged across the selected literature.

Theme 1: Digital Marketing Strategies as Drivers of Consumer Engagement

Digital marketing emerged as the most extensively investigated determinant of consumer engagement.

More than two-thirds of the reviewed studies reported that interactive, personalized, and omnichannel marketing strategies significantly improve cognitive, emotional, and behavioral engagement.

Interactive content—including videos, livestream shopping, quizzes, polls, gamification, and user-generated content—encourages consumers to actively participate rather than passively consume information (Herle, 2024; Dwivedi et al., 2021).

Personalization powered by customer analytics and artificial intelligence enhances consumers' perceptions of relevance.

Consumers receiving personalized product recommendations exhibit higher:

- satisfaction,
- trust,
- purchase intention,
- repeat purchase behavior,
- and brand loyalty (Lemon & Verhoef, 2016; Davenport et al., 2020).

Content marketing was also found to strengthen engagement by providing educational and entertaining experiences rather than purely promotional messages.

Furthermore, omnichannel integration allows consumers to move seamlessly between websites, mobile applications, social media platforms, and physical stores, creating a consistent customer journey (Verhoef et al., 2021).

Overall, the literature demonstrates that digital marketing influences engagement through four major mechanisms:

- personalization,
- interactivity,
- customer experience,
- relationship building.

Theme 2: Technological Innovations as Catalysts of Engagement

Technological innovation represents the second major theme.

Recent digital retail ecosystems increasingly rely on AI, machine learning, big data analytics, AR, VR, IoT, and conversational chatbots.

Among these technologies, artificial intelligence received the greatest scholarly attention.

AI-powered recommendation systems improve perceived usefulness by analyzing customer preferences and providing personalized product suggestions (Huang & Rust, 2021).

Several studies found that recommendation algorithms significantly increase:

- customer satisfaction,
- browsing time,
- shopping convenience,
- purchase intention,
- and long-term engagement (Davenport et al., 2020).

Augmented Reality (AR) and Virtual Reality (VR) further enhance online shopping by allowing consumers to virtually experience products before purchasing.

Virtual try-on systems reduce perceived risk and improve shopping confidence (Hilken et al., 2017).

Similarly, AI-enabled chatbots improve customer service by offering real-time assistance and personalized recommendations.

The reviewed literature consistently supports TAM and UTAUT, indicating that perceived usefulness, ease of use, trust, and enjoyment are primary antecedents of technology adoption (Davis, 1989; Venkatesh et al., 2003).

Nevertheless, researchers also highlighted concerns regarding:

- algorithm transparency,
- consumer privacy,
- ethical AI,
- cybersecurity,
- and excessive personalization.

Theme 3: Social Media Influencers as Relationship Builders

The third theme highlights the growing importance of influencer marketing.

Consumers increasingly depend on influencer-generated content during product evaluation.

Influencers build credibility through authenticity, expertise, trustworthiness, and continuous interaction with followers.

According to Source Credibility Theory, these characteristics significantly influence consumer attitudes and purchase intentions (Ohanian, 1990).

Recent studies further demonstrate that parasocial relationships mediate the relationship between influencer credibility and consumer engagement.

Consumers who develop emotional attachment toward influencers are more likely to:

- trust product recommendations,
- share content,
- generate electronic word-of-mouth,
- and become loyal customers (Sokolova & Kefi, 2020).

Ao et al. (2023) reported that influencer authenticity significantly increases consumer trust, which subsequently mediates purchase intention.

Similarly, Vrontis et al. (2021) concluded that influencer marketing is particularly effective when integrated with personalized digital marketing campaigns.

Another emerging finding concerns micro-influencers, who often generate higher engagement than celebrities because they are perceived as more authentic and relatable.

More recently, studies have begun examining AI-generated virtual influencers, although research in this area remains limited.

5. Integrative Conceptual Framework

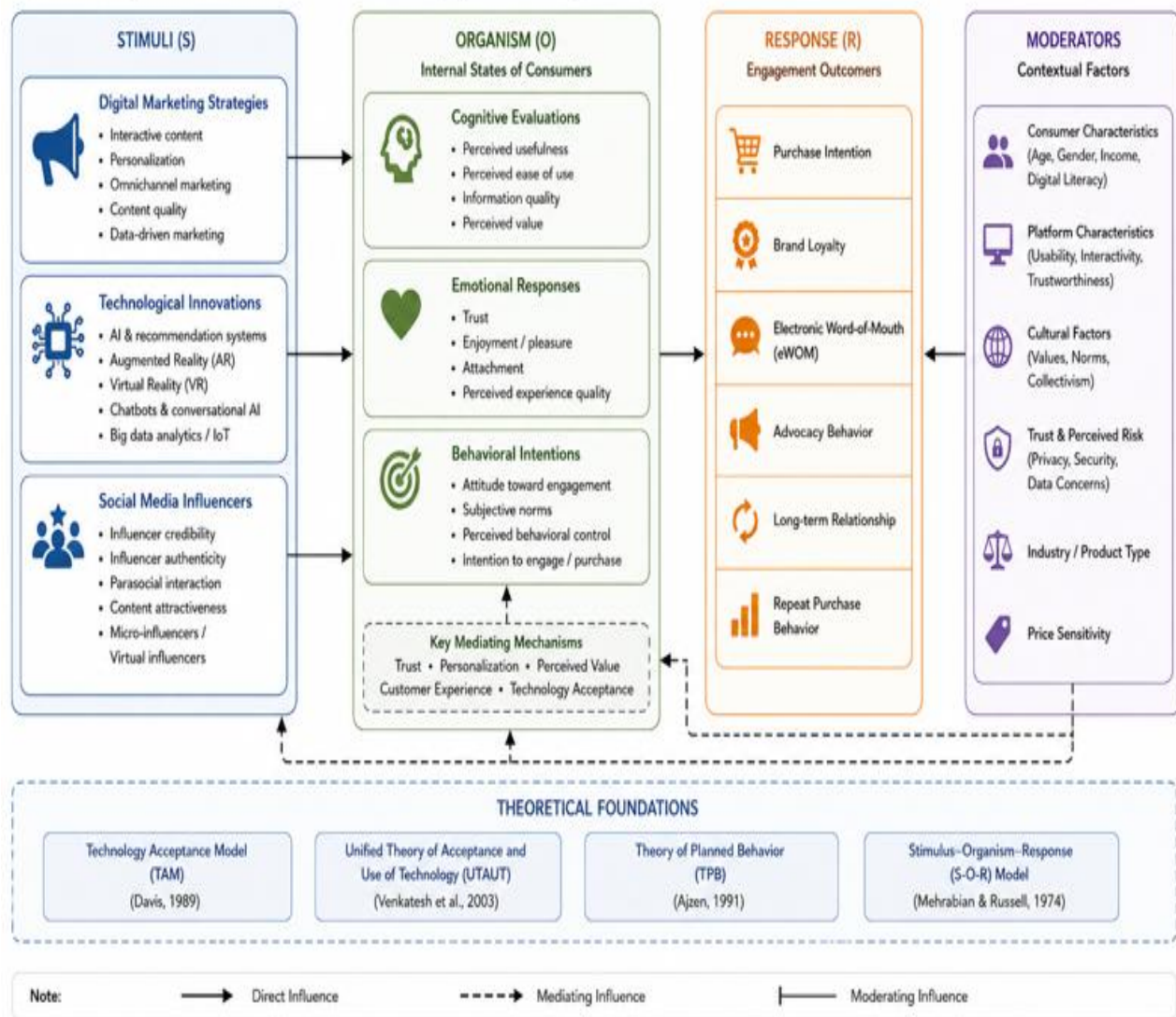
Based on the synthesis of the reviewed literature, an Integrative Conceptual Framework of Consumer Engagement in Digital Retail is proposed (see Figure 1). The framework combines four complementary theoretical perspectives: the Technology Acceptance Model (TAM) (Davis, 1989), the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), the Theory of Planned Behavior (TPB) (Ajzen, 1991), and the Stimulus–Organism–Response (S-O-R) model (Mehrabian & Russell, 1974).

Within the S-O-R perspective, digital marketing strategies, technological innovations, and social media influencers function as external stimuli. These stimuli influence consumers' internal organism states by shaping cognitive evaluations (e.g., perceived usefulness and ease of use), emotional responses (e.g., trust, enjoyment, and attachment), and behavioral intentions. The resulting responses include higher consumer engagement, purchase intention, electronic word-of-mouth (eWOM), brand advocacy, customer loyalty, and repeat purchasing behavior.

The framework further identifies trust, personalization, perceived value, customer experience, and technology acceptance as key mediating mechanisms that explain how digital strategies translate into engagement outcomes. It also recognizes consumer characteristics, digital literacy, cultural context, privacy concerns, and platform features as moderating variables that can strengthen or weaken these relationships.

Overall, the proposed framework offers a holistic explanation of consumer engagement in digital retail by integrating technological, psychological, and social perspectives. It provides a foundation for future empirical research and offers practical guidance for retailers seeking to design data-driven, customer-centric engagement strategies.

Figure 1. Integrative Framework of Consumer Engagement in Digital Retail



6. Discussion

This systematic literature review synthesized empirical evidence from 142 peer-reviewed studies published between 2015 and 2025 to examine the influence of digital marketing strategies, technological innovations, and social media influencers on consumer engagement in digital retail. Guided by the PRISMA 2020 framework, the review demonstrates that consumer engagement is a multidimensional construct shaped by cognitive, emotional, and behavioral processes. The findings indicate that the integration of digital marketing, advanced technologies, and influencer marketing creates synergistic effects that significantly enhance customer experiences, purchase intentions, brand loyalty, and long-term business performance.

The review confirms that digital marketing has evolved from a promotional communication tool to a strategic mechanism for relationship building. Personalized advertising, content marketing, omnichannel communication, gamification, and interactive social media campaigns consistently improve consumer engagement by increasing perceived relevance, trust, and customer satisfaction (Lemon & Verhoef, 2016; Chaffey & Ellis-Chadwick, 2022). The findings align with relationship marketing theory, emphasizing that meaningful interactions rather than one-way communication are essential for sustaining customer relationships in digital environments (Brodie et al., 2011). Furthermore, personalized digital marketing powered by AI-driven analytics enables retailers to deliver highly relevant customer experiences, thereby fostering stronger emotional attachment and repeat purchasing behavior.

Technological innovation emerged as another major driver of consumer engagement. The review highlights the increasing importance of artificial intelligence (AI), machine learning, augmented reality (AR), virtual reality (VR), chatbots, recommendation systems, and big data analytics in transforming digital retail experiences. These technologies enhance consumers' perceived usefulness, ease of use, convenience, and enjoyment, which ultimately strengthen engagement outcomes (Huang & Rust, 2021; Davenport et al., 2020). AI-powered recommendation systems reduce information overload by providing personalized product suggestions, while AR and VR technologies create immersive shopping experiences that reduce purchase uncertainty and increase customer confidence. The findings strongly support the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), demonstrating that perceived usefulness and perceived ease of use remain fundamental determinants of technology adoption in digital retail.

The review also demonstrates the growing significance of social media influencers in shaping consumer attitudes and behaviors. Influencer marketing has become one of the most influential components of digital retail because consumers increasingly rely on authentic recommendations rather than conventional advertising. Influencer credibility, expertise, trustworthiness, and authenticity positively influence purchase intentions through the development of parasocial relationships between influencers and their followers (Lou & Yuan, 2019; Vrontis et al., 2021). Micro-influencers were found to generate higher engagement than celebrity influencers because of their perceived authenticity and closer relationships with niche audiences. Moreover, recent studies indicate that virtual influencers and AI-generated content are emerging trends that may redefine influencer marketing in the coming years.

An important finding of this review is that consumer trust consistently emerged as the strongest mediating variable linking digital marketing, technological innovation, and influencer marketing with consumer engagement outcomes. Trust enhances consumers' willingness to adopt digital technologies, share personal information, interact with brands, and make online purchases. Similarly, personalization, customer experience, and perceived value function as significant mediators that explain how digital strategies influence behavioral engagement. These findings suggest that technological sophistication alone is insufficient; digital retailers must simultaneously cultivate transparency, authenticity, and customer confidence to maximize engagement.

Despite these contributions, the review identifies several persistent challenges. Increasing dependence on AI-based personalization raises concerns regarding data privacy, algorithmic transparency, cybersecurity, and ethical use of consumer information. Similarly, influencer marketing faces challenges associated with fake followers, undisclosed sponsorships, and declining consumer trust in sponsored content. These issues highlight the importance of responsible digital marketing practices that prioritize consumer welfare alongside commercial objectives.

Another notable observation is the growing convergence of digital marketing, technology, and social commerce. Rather than functioning independently, these three elements increasingly complement one another to create seamless omnichannel experiences. Consumers now expect integrated digital ecosystems where personalized recommendations, immersive technologies, and influencer-generated content collectively shape the customer journey. Consequently, future digital retail strategies should adopt holistic approaches that combine these capabilities rather than implementing isolated technological solutions.

Theoretical Implications

This systematic review contributes to the literature in several important ways.

First, it integrates fragmented streams of research on digital marketing, technological innovation, and social media influencers into a unified conceptual framework explaining consumer engagement in digital retail. Previous studies have typically examined these constructs independently, whereas the present review demonstrates their interdependent and complementary effects.

Second, the study advances the theoretical understanding of consumer engagement by integrating four established behavioral theories: the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), the Theory of Planned Behavior (TPB), and the Stimulus–Organism–Response (S-O-R) framework. The proposed framework provides a comprehensive explanation of how external digital stimuli influence consumers' cognitive evaluations, emotional responses, and behavioral outcomes.

Third, the review extends Customer Engagement Theory by identifying trust, personalization, customer experience, technology acceptance, and perceived value as key mediating mechanisms connecting digital strategies with engagement outcomes. These mediators help explain why similar digital marketing strategies produce varying levels of engagement across different retail contexts.

Fourth, the review expands existing literature by incorporating emerging digital retail phenomena such as AI-powered recommendation systems, virtual influencers, immersive commerce, metaverse retailing, and generative AI, which remain relatively underexplored in previous systematic reviews.

Finally, the review highlights the multidimensional nature of consumer engagement by demonstrating that cognitive, emotional, and behavioral engagement are mutually reinforcing rather than independent constructs. This integrated perspective provides a stronger theoretical foundation for future empirical investigations.

Practical Implications

The findings offer several practical implications for retailers, marketers, technology developers, and policymakers.

Retail organizations should invest in AI-driven personalization systems capable of delivering customized recommendations, personalized promotions, and adaptive customer experiences. Personalization enhances customer satisfaction while increasing conversion rates and long-term loyalty.

Digital retailers should adopt omnichannel marketing strategies that integrate websites, mobile applications, social commerce platforms, and physical stores into seamless customer journeys. Consistent experiences across multiple channels strengthen customer trust and improve engagement.

Investment in immersive technologies such as augmented reality (AR), virtual reality (VR), conversational AI, and intelligent chatbots can substantially improve customer experience by reducing purchase uncertainty and increasing shopping convenience.

Organizations should carefully select influencers whose values align with their brand identity. Rather than relying solely on celebrity endorsements, firms should increasingly collaborate with micro-influencers, who often generate stronger consumer engagement through authenticity and closer relationships with followers.

Given increasing concerns regarding digital privacy, organizations should prioritize ethical AI practices, transparent data governance, and responsible personalization. Clear communication regarding data collection and algorithmic decision-making can strengthen consumer trust and reduce privacy concerns.

Retail managers should also employ predictive analytics and customer data platforms to continuously monitor engagement metrics such as click-through rates, browsing behavior, repeat purchases, customer lifetime value, and electronic word-of-mouth. Such insights enable proactive refinement of digital marketing strategies.

For policymakers, the review underscores the importance of strengthening regulations concerning influencer disclosure, AI transparency, consumer data protection, and digital advertising ethics to foster sustainable digital retail ecosystems.

Future Research Agenda

Although consumer engagement has attracted considerable scholarly attention, several research opportunities remain.

First, future studies should employ longitudinal research designs to investigate how consumer engagement evolves over time as digital technologies mature and consumer expectations change. Most existing studies rely on cross-sectional data, limiting causal interpretation.

Second, cross-cultural comparative studies are needed to understand how cultural values, digital literacy, technological infrastructure, and regulatory environments influence consumer engagement across developed and emerging economies.

Third, future research should examine the implications of Generative Artificial Intelligence (GenAI), conversational AI agents, autonomous shopping assistants, and AI-generated content on consumer trust, perceived authenticity, and purchase behavior.

Fourth, emerging retail innovations such as the metaverse, Web3 technologies, blockchain-enabled commerce, digital twins, mixed reality shopping, and virtual influencers require greater empirical investigation to understand their long-term impact on customer engagement.

Fifth, researchers should investigate the ethical dimensions of digital retail by exploring algorithmic bias, AI explainability, fairness, privacy, cybersecurity, and consumer resistance to excessive personalization.

Sixth, future studies should integrate Environmental, Social, and Governance (ESG) considerations into consumer engagement research by examining how sustainable digital marketing practices influence consumer trust and long-term loyalty.

Finally, greater methodological diversity is needed. Mixed-methods approaches, experimental studies, eye-tracking research, neuromarketing techniques, machine learning analytics, and real-time behavioral data can provide deeper insights into engagement mechanisms than traditional survey methods alone.

Conclusion

This systematic literature review provides a comprehensive synthesis of research examining the influence of digital marketing strategies, technological innovations, and social media influencers on consumer engagement in digital retail. Following the PRISMA 2020 guidelines, the review analyzed 142 peer-reviewed studies published between 2015 and 2025, offering an integrated understanding of the evolving digital retail ecosystem.

The findings demonstrate that consumer engagement is shaped by the synergistic interaction of personalized digital marketing, advanced technologies, and authentic influencer communication. Digital marketing enhances engagement through personalization, interactivity, content quality, and omnichannel integration, while technological innovations—including AI, recommendation systems, AR, VR, and chatbots—improve customer experience by increasing convenience, immersion, and perceived usefulness. Social media influencers further strengthen engagement by fostering trust, authenticity, and parasocial relationships that positively influence purchase intentions, electronic word-of-mouth, and long-term brand loyalty.

A key contribution of this review is the development of an integrative conceptual framework that combines the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), Theory of Planned Behavior (TPB), and Stimulus–Organism–Response (S-O-R) model to explain consumer engagement in digital retail. The framework identifies trust, personalization, perceived value, customer experience, and technology acceptance as central mechanisms linking digital strategies with engagement outcomes.

Overall, this review advances theoretical knowledge by consolidating fragmented research into a unified perspective while offering practical guidance for retailers seeking sustainable competitive advantage through digital transformation. As digital commerce continues to evolve with advances in artificial intelligence, immersive technologies, and social commerce, future research should prioritize ethical innovation, cross-cultural validation, and longitudinal investigation to ensure that consumer engagement strategies remain effective, inclusive, and sustainable in an increasingly digital marketplace.

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