

AI's transformation of digital consumer behaviour in marketing: A PRISMA-guided systematic review and thematic synthesis (2016-2025)

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Abstract---This study examines how artificial intelligence affects digital consumer behaviour in a marketing environment, summarising the existing literature to address gaps in the existing body of knowledge. Based on PRISMA 2020 guidelines, a systematic review of 119 articles indexed in Scopus and published by peer-reviewed journals between the years 2016 and 2025 was conducted. The data were analysed using bibliometric visualisation and thematic synthesis. Findings demonstrate that the level of scholarly output has significantly increased since 2020, which is also reflected by the growing use of chatbots, recommender systems, and generative AI in business interfaces. Determinants identified to be important are trust, perceived risk, privacy, transparency, perceived control and anthropomorphism; and behavioural intention is a mediating factor in adoption and continued use. The review also identifies methodological limitations, including excessive reliance on cross-sectional designs, as well as a lack of cross-cultural and longitudinal views, and poor integration of ethical governance into consumer-behaviour paradigms. This research contributes to existing knowledge on the topic of AI-influenced decision-making and adds value to understanding the necessity of explicable and human-focused AI in marketing.

Keywords---Artificial Intelligence, AI in Marketing, Digital Consumer Behaviour, Chatbots, Recommendation Systems, Trust, PRISMA Review.

How to Cite:

Pallavi, T. S., & Chithambar, G. V. (2026). AI's transformation of digital consumer behaviour in marketing: A PRISMA-guided systematic review and thematic synthesis (2016-2025). *The International Tax Journal*, 53(2), 774–795. Retrieved from <https://internationaltaxjournal.online/index.php/itj/article/view/579>

The International tax journal ISSN: 0097-7314 E-ISSN: 3066-2370 © 2026

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Submitted: 27 January 2026 | Revised: 18 February 2026 | Accepted: 06 March 2026

1. Introduction

The use of artificial intelligence is redefining digital marketing as companies continue to do business in environments where consumers interact with brands across multiple digital touchpoints. Companies are using AI based systems to process large amounts of customer data in order to automate marketing activities and assist in the decision-making process (Davenport et al., 2020; Huang & Rust, 2021). Unlike previous generations of technology, most contemporary AI tools can perform analytical tasks, learn from data, and adjust to new challenges over time. Such technology enables firms to create unique customer experiences, provide proactive service and seamless interaction in order to facilitate real time conversations (Libai et al., 2020). Thus, AI has started to influence the processes consumers use to search for and evaluate information and ultimately to make decisions to complete transactions.

Studies on AI's impact on online consumer behaviour have surged alongside tech advancements. Previous studies primarily underscored efficiency and results of automation, but recent studies highlight consumer focused dimensions such as trust, perceived risk, privacy concerns, transparency, emotional responses, and purchase intentions (Puntoni et al., 2021; Cronic et al., 2022). Technologies including machine learning, natural language processing, recommender systems, chatbots, service robots, and generative AI now hold a prominent position in marketing practice (Dwivedi et al., 2023). This shift reflects the AI's evolution from operational support to primary influencer of customer interactions.

Artificial intelligence and consumer behaviour have become popular, but the current body of knowledge is still disjointed in the fields of marketing, information systems, psychology, and service research, which hinders the integration of a unified body of knowledge (Pitardi & Marriott, 2021). Many studies are focused on particular AI tools or a single industry scenario, which limits the production of larger and more generalizable perspectives. At the same time, the boundary between traditional automation and truly intelligent AI systems often is not clear, which leads to inconsistencies in conceptualisation and measurement (Kopalle et al., 2022). In addition to these conceptual uncertainties, the issues regarding responsible utilisation (data privacy, algorithmic fairness, and consumer level of control, etc.) are discussed heterogeneously in academic literature (Quach et al., 2022).

Systematic literature reviews offer a methodological rigor of introducing scattered results and creating unified bodies of knowledge. Such reviews can be performed in compliance with the PRISMA guidelines and with the help of clear mapping tools, thus, establishing the trends in publication, prevailing themes, theoretical basis, and research gaps with minimized bias (Tranfield et al., 2003; Xiao & Watson, 2019). The current literature on AI and consumer behaviour has significant difference in focus time and analysis, which suggests that a more recent synthesis in the specific focus of online consumer behaviour driven by AI in marketing is necessary. In that regard, this paper will undertake a systematic review and bibliographic mapping on the research on AI and online consumer behaviour in marketing. Using PRISMA 2020 instructions (Page et al., 2021), 119 peer-reviewed journal articles of Scopus were chosen, and a systematic screening procedure was conducted. The review will focus on summarising existing knowledge, the trends in publications, the most important AI technologies, the behavioural constructs, theoretical perspectives, and methods, and the perspectives of future research. The research aims to add to a coherent body of evidence on AI-facilitated consumer behaviour by incorporating fragmented evidence, as well as to guide responsible marketing practice.

1.1 Research Questions

RQ1: What patterns show up in studies on artificial intelligence and online customer actions in marketing?

RQ2: Which artificial intelligence tools and applications are examined in research on online customer behaviour?

RQ3: What main factors come up in past studies on AI-led online customer actions?

RQ4: What ways of study appear in work on artificial intelligence and online customer actions?

RQ5: What paths ahead do past studies suggest for AI and online customer actions?

RQ6: How does artificial intelligence change online customer actions in marketing settings?

2. Theoretical Underpinnings

2.1 Artificial Intelligence

Artificial intelligence refers to computational frameworks that have the ability to perform jobs that require cognitive capabilities, including learning, problem solving, prediction, and independent decision making (Davenport et al., 2020). In contrast to the automation based on antecedent rules, modern AI is developed on the basis of experience with large quantities of data, and thus it is constantly improving its work with the help of the adaptive (Huang & Rust, 2021). Under the marketing research category, AI encompasses a wide range of technologies, such as machine learning, natural language processing, recommendation systems, service robots, and generative AI applications (Belanche et al., 2020).

The empirical investigations consistently demonstrate that AI is not a uniform technology. Autonomy, complexity, and transparency differences directly control the user perceptions and interactions (Wirtz et al., 2018). There are the AI applications that run their tasks in the background by using analytics and predictive modelling and those that interact with the consumers via conversational agents and automated assistants. Such differences gain theoretical prominence as the reaction of consumers to AI depends on the position occupied by the technology in the process of purchase (Gansser & Reich, 2021).

2.2 Digital Consumer Behavior

Digital consumer behaviour represents cognitive, affective, and behavioral activities that people are subjected to when interacting with brands via online platforms, including the information search, evaluation, purchase, and post-purchase engagement (Balakrishnan & Dwivedi, 2021). The digital environment is highly interactive, experiences non-stop streams of data, and uses algorithms to mediate the decisions that consumers make, and all this shape consumer decision-making (Pitardi & Marriott, 2021). The studies on the technology-mediated consumption show that rational evaluation and psychological effects control the process of online decision-making. When individuals engage with intelligent systems that customize the content and direct decisions, trust, perceived risk, privacy concerns, and perceived control become particularly relevant (Balakrishnan & Dwivedi, 2021; Gansser & Reich, 2021).

2.3 Artificial Intelligence and Digital Consumer Behaviour

The introduction of artificial intelligence into digital marketplaces is an indication of an ultimate change in the overall process of how consumer behaviour is shaped and managed. AI has an impact based on personalised suggestions, predictive suggestions, automated experiences, and adaptive learning processes (Puntoni et al., 2021). These abilities influence the main results, such as the creation of trust, satisfaction, engagement, purchase intention, and long-term loyalty (Pillai et al., 2020). It is empirically proven that consumers respond to AI by transparency, explainability, anthropomorphic design, and perceived level of autonomy (Crolic et al., 2022; Pizzi et al., 2021). Although AI can make life more convenient and efficient in decision-making, a high degree of automation or the lack of transparency in the algorithms can undermine trust and provoke resistance (Puntoni et al., 2021). The study draws on the technology-adoption, trust-formation, and service-experience theories to understand consumer criteria of AI-mediated marketing communication (Gansser & Reich, 2021).

2.4 Artificial Intelligence in Marketing.

Artificial intelligence is applied by organizations on a wide range of marketing activities, such as customer targeting, customer personalisation, dynamic pricing, customer services, and customer relationship management (Kumar et al., 2024). Recommendation engines can be used to help people discover new products, chatbots and virtual assistants serve as the means of effective real-time interaction, and predictive analytics can help companies understand the needs of consumers (Bag et al., 2021). In recent times, AI generative content creation, virtual influencers, and AI-driven brand communication became feasible (Belanche et al., 2020).

Nonetheless, the application of AI in marketing also provokes tremendous ethical and governance issues. The questions of data privacy, algorithmic bias, transparency, and accountability have a significant effect on consumer trust and the use of AI-powered services (Quach et al., 2022; Hermann, 2022). Responsible and human-centred deployment of AI has become a necessity in both academic research and management as the concept of algorithmic decision-making has become more popular (Darmody & Zwick, 2020).

3. Methods

This research used an integrating methodology, synthesizing systematic literature review (SLR) and bibliometric analysis, Followed Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines (Page et al., 2021). To ensure transparent and replicable reporting throughout all the stages of the review process from the source identification, screening, eligibility evaluation, data extraction, and synthesis. Furthermore, bibliometric analysis application was used to facilitate the representation of keyword co-occurrence and co-authorship networks using the VOS viewer software (van Eck & Waltman, 2010). The Combination of systematic review methods with bibliometric analysis techniques enabled a structured and rigorous examination of research on cognitive tools in digital consumer behaviour.

3.1. Search Strategy

The search was performed using the Scopus database, which was employed due to its wide-ranging interdisciplinary scope of high-quality peer-reviewed journals in business, management, marketing and information systems, it also features structured bibliography and citation indexing, allowing for systematic and bibliometric analysis (Harzing & Alakangas, 2016).

When conducting systematic literature review, a keyword search strategy is paramount, it supports rigorous analysis and synthesis. (Xiao & Watson, 2019). Search terms used in this article comprised "Artificial Intelligence" OR "AI" AND "Digital Consumer Behaviour" OR "Online Consumer Behaviour". The search strategy was conducted on 28th January 2026.

3.2 Journal Selection and Screening Procedure

Following established methodological standards of SLR (Tranfield et al., 2003; Xiao & Watson, 2019), we used a step-by-step screening process to limit bias and include only high-quality, relevant studies. The process as a whole followed PRISMA 2020 principles, prioritizing on clear methods and careful documentation (Page et al., 2021). Literature search was conducted using Scopus database, opted for its wide coverage across fields, strict journal standards, and solid reputation in marketing and management research (Harzing & Alakangas, 2016).

Initially, a total of 2,133 bibliographic records were located. Non-journal publications were not included such as conference papers, book chapters, editorial, because the focus was on peer-reviewed empirical research and this excluded 1,283 records (Tranfield et al., 2003; Xiao & Watson, 2019). Further screening was only limited to articles that were fully published, which left only 418 studies. The filtering based on subject area was limited to marketing-oriented literature, which has produced 172 articles. The language filtering further reduced the corpus to English-language publications, which guaranteed accuracy in interpretation and consistency in analysis, and generated 161 studies. Conceptual relevance, topical relevance, and empirical focus on artificial intelligence (AI) and digital consumer behaviour were assessed through abstract screening, which is in line with PRISMA recommendations of the relevance evaluation (Page et al., 2021). This filtered the sample to 142 articles. At the eligibility stage, the full-text availability was considered with the focus on open-access publications to improve the level of transparency, reproducibility, and access to evidence (Xiao and Watson, 2019). After this analysis, 119 articles were found to meet all the inclusion criteria and were included in the final analysis. The whole screening and selection procedure is also recorded in the form of PRISMA flow diagram, giving transparent visual overview of inclusion/exclusion decisions that are made at every stage of the review. This is a criterion-based and systematic selection process that ensures methodological rigour, credibility, and reliability of

the synthesized results, which, in turn, boosts the contribution of the study to the body of knowledge on AI and digital consumer behaviour. Besides research studies that investigated AI and digital consumer behaviour directly in the marketing field, research studies that addressed the same or a related area of study, such as manufacturing, teaching, and social services, were kept when they provided transferable information on consumer-facing digital adoption, trust, resistance, or usage behaviour within a marketing context.

While all eligible studies were included in the bibliometric analysis to map the intellectual structure of the field, only studies with direct relevance to AI-driven digital consumer behaviour in marketing were emphasised in the thematic synthesis and discussion

4. Results and Discussion

The PRISMA flow diagram illustrates the systematic screening and selection process adopted in this review.

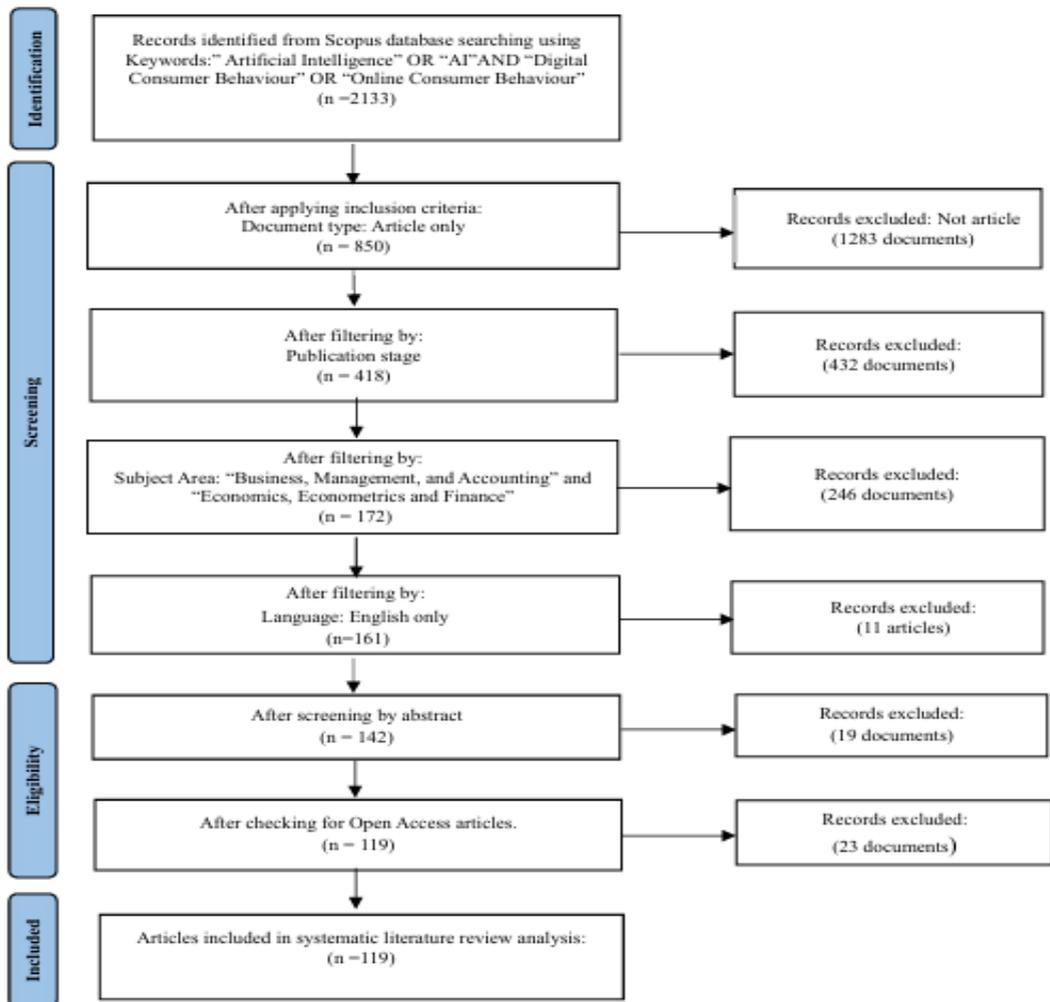


Figure 1: PRISMA Flow Diagram

4.1 Overview of the Final Dataset

Guided by PRISMA 2020 procedures, the review identified 119 Scopus-indexed journal articles that satisfied all eligibility criteria. A structured extraction protocol was designed to capture bibliographic attributes, research design, AI application domain, behavioural variables, and principal findings. Verification was carried out in two rounds to ensure consistency in coding. The review integrated descriptive bibliometrics, VOS viewer network mapping, and thematic examination, consistent with established systematic review approaches (Tranfield et al., 2003; Xiao & Watson, 2019).

The dataset covers publication from 2016-2025 and frontline consumer settings including e-commerce, retailing, financial services, hospitality, and social media. Approximately a significant study employed quantitative designs, while the rest employed experiments, qualitative designs, or conceptual development. This diversity indicates a field in transition where methodological consensus has not yet stabilized.

4.2 Descriptive Bibliometric Findings

4.2.1 Temporal Evolution of Publications

The number of publications was low between the years 2016-2018, The first signs of an increase in output were noticed in 2019, and a sharp boost in output then began; this is consistent with the growing commercial application of conversational agents, recommender systems, and generative artificial-intelligence technology in marketing interfaces. The relatively fewer number of publications in 2025 can be explained by the fact that the database was still indexed, and this is not the case of the lack of scholarly interest. In combination, this trend demonstrates a shift of initial theoretical discussions on possible applications of artificial intelligence, including the work of (Wirtz et al., 2018), towards more serious empirical studies of consumer psychology, including its responses in the form of trust, perceived risk, and privacy concerns, explored by (Pitardi & Marriott, 2021).

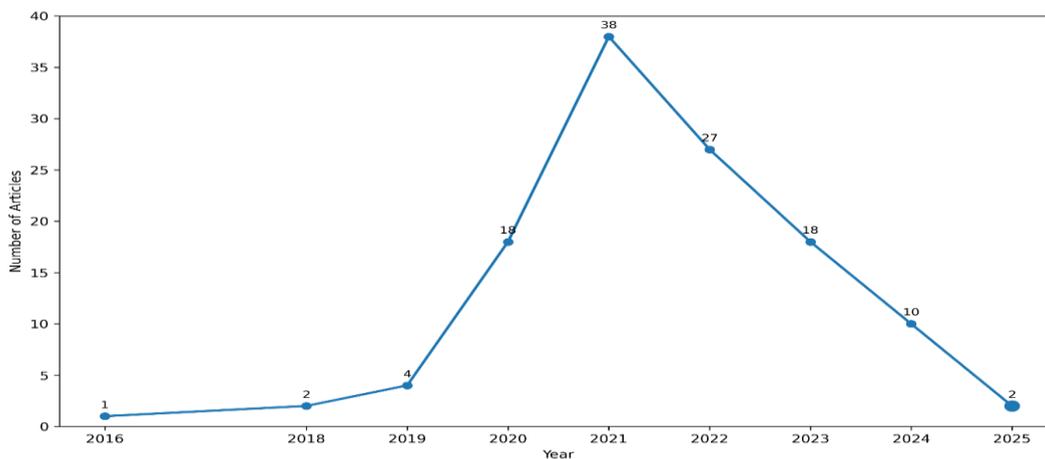


Figure 2: Temporal Evolution of Publications (2016–2025)

4.2.2 Journal Distribution

There were many journals that were leading in publication. Technological Forecasting and Social Change (13 articles), Journal of Retailing and Consumer Services (12 articles) and International Journal of Information Management (10 articles) were the most prolific. Other publications were found in Sustainability, Technology in Society, as well as the Journal of the Academy of Marketing Science. This is spread in marketing, information systems and service journals which highlight interdisciplinary aspect of AI consumer behaviour studies and lack of one dominating discipline (Dwivedi et al., 2021).



Figure 3: Journal Distribution

4.2.3 Influential papers and their citation networks

The normalized citation analysis emphasizes the significant influence of conceptual input in the field of artificial intelligence in the marketing sphere. The most attention has been paid to papers that take a framework-oriented approach to the strategic role of AI (Davenport et al., 2020), to service robotics (Wirtz et al., 2018) and to generative AI (Dwivedi et al., 2023) based on its citation metrics. Empirical studies on chatbots and consumer experience (Adam et al., 2021; Puntoni et al., 2021) have received a medium but consistently growing number of citations, which indicates that theory consolidation currently outpaces the empirical replication.

Table 1: Influential Papers and Citation Analysis

Document Title	Author(s)	Year	Citations per Year
So, what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy	Dwivedi et al.	2023	750.50
Setting the future of digital and social media marketing research: Perspectives and research propositions	Dwivedi et al.	2021	250.33

Document Title	Author(s)	Year	Citations per Year
How artificial intelligence will change the future of marketing	Davenport et al.	2020	238.43
Brave new world: Service robots in the frontline	Wirtz et al.	2018	194.56
A strategic framework for artificial intelligence in marketing	Huang & Rust	2021	176.17
AI-based chatbots in customer service and their effects on user compliance	Adam et al.	2021	131.67
Consumers and artificial intelligence: An experiential perspective	Puntoni et al.	2021	124.00
Impact of COVID-19 pandemic on information management research	Dwivedi et al.	2020	119.86
Linking circular economy and digitalisation technologies	Chauhan et al.	2022	107.40
Service robot implementation: A theoretical framework	Belanche et al.	2020	77.71

4.2.4 Leading authors and research contribution

Indicates the number of papers each author had written in the data set. A limited number of researchers such as Dwivedi, Flavian, Rana and Wirtz published multiple papers, and the rest fewer. This informs us that the field is not only filled with a number of authors, but there are numerous leaders. The fact that there are still a few authors that continue to publish and the majority of them only write one, signifies a new and emerging field, that is AI and digital consumer behaviour. This diffusion is characteristic of interdisciplinary mixed fields that are brought together by marketing, information systems, psychology, and service studies scholars. Since there is no set of close authors, there are numerous approaches to thinking and work in the field, which provides scholars with many opportunities to shape future directions.

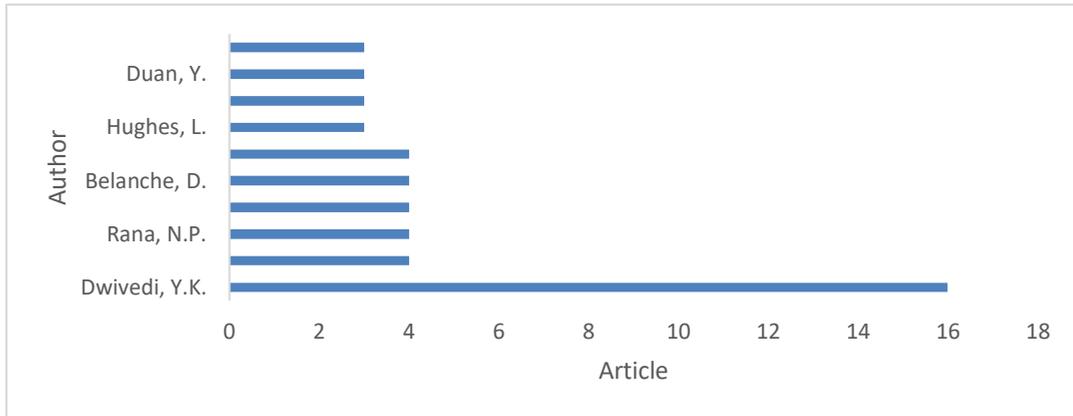


Figure 4: Influential Authors

4.3 Bibliometric Network Analysis

4.3.1 Keyword co-occurrence mapping

The analysis of the key words co-occurrence created with the help of VOSviewer software. A few thematic clusters are indicated in the map that illustrate the key research areas in the field. The biggest cluster is artificial intelligence, consumer behaviour, and digital marketing, which suggests that these spheres are the fundamental focus of the existing studies. The following keywords like trust, customer experience, purchase intention, and privacy represent the outcome of psychological and relational influence on consumer communication with AI. (Puntoni et al., 2021; Pitardi & Marriott, 2021).

The second cluster involves technology adoption and decision making, which can be explained by the frequent application of TAM and UTAUT models to the consumer response towards AI systems (Gansser & Reich, 2021; Balakrishnan & Dwivedi, 2021). Keywords such as ChatGPT, service robots, and anthropomorphism are located at the periphery of the network, which means that they are emerging issues receiving an increasing number of research studies.

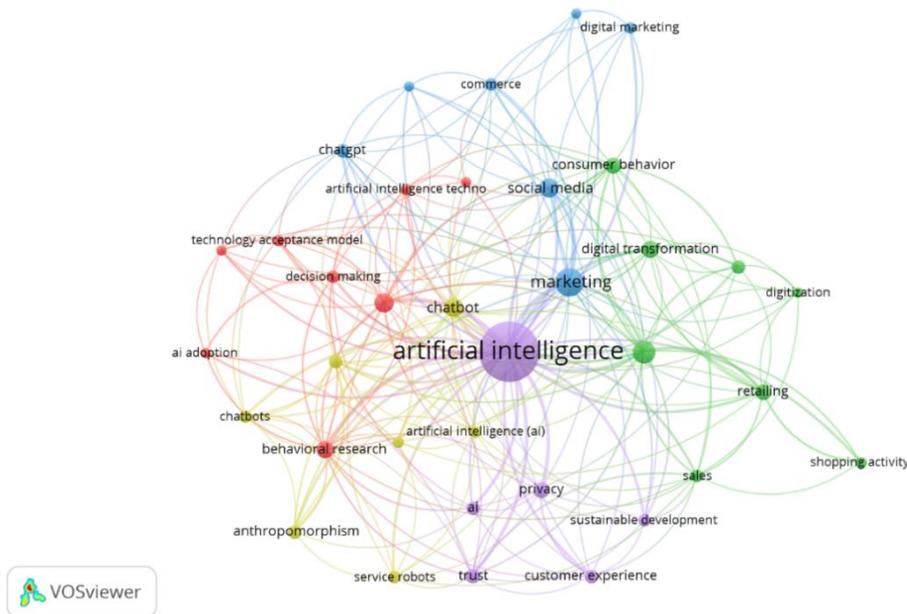


Figure 5: Keyword Co-occurrence Network

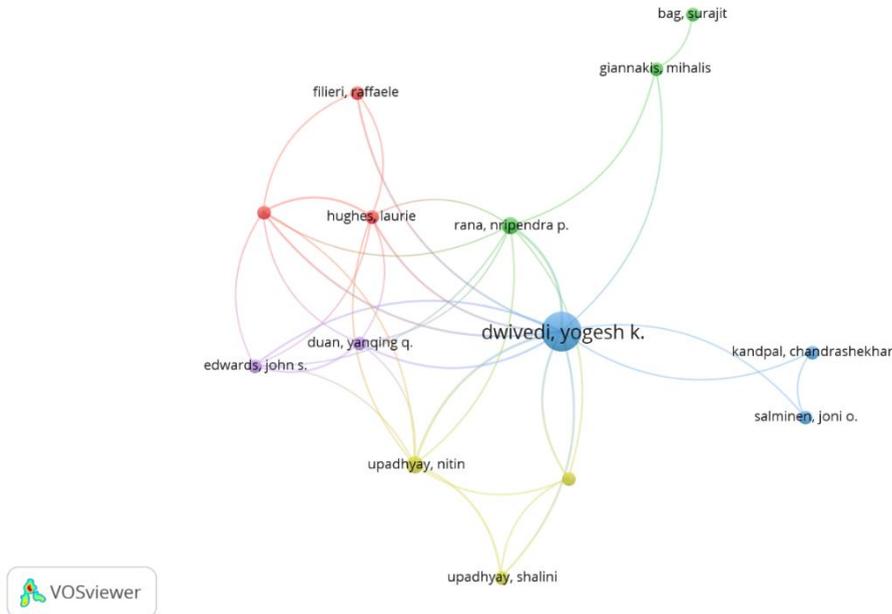


Figure 7: Co-citation Network

5. Thematic Literature Review

5.1 Purpose and Scope of the Literature Review

The goal of this literature review is to systematically synthesize previous studies of artificial intelligence and digital consumer behaviour to identify dominant themes, theoretical backbone, key variables, and research gaps. Following the PRISMA 2020 guidelines (Page et al., 2021), this review uses a thematic synthesis approach in which the findings of the different studies are integrated and interpreted, instead of a paper-by-paper summary of the studies. Given the speed at which AI is permeating consumer-facing digital environments such as e-commerce, social media, service platforms, and conversational interfaces, existing research still falls across disciplines such as marketing, information systems, psychology, hospitality, and public services. Accordingly, this review brings together the insights gained from marketing-centred studies as well as from immediate domains in which findings are transferable to consumer-facing digital behaviour, hence bringing itself in line with best practices in systematic review.

Table 2. Thematic Classification of Literature

Theme Name	Synthesis Focus	Representative Studies (from the 119 articles only)
AI Adoption, Acceptance, and Usage Intentions	Examines determinants influencing consumers' and users' willingness to adopt, accept, and continue using AI-enabled technologies, primarily using TAM, UTAUT, and extended adoption frameworks.	Gansser & Reich (2021); Chatterjee et al. (2021); Nguyen et al. (2021); Li et al. (2020)
Trust, Risk, and Algorithm Aversion	Focuses on trust formation, perceived risk, privacy concerns, and resistance toward AI-driven and algorithmic decisions in consumer contexts.	Pitardi & Marriott (2021); Mahmud et al. (2022); Quach et al. (2022); Bawack et al. (2021)

Theme Name	Synthesis Focus	Representative Studies (from the 119 articles only)
Human-AI Interaction and Anthropomorphism	Explores how anthropomorphism, social presence, agency, and emotional cues in AI systems shape consumer perceptions, emotions, and behavioural responses.	Crolic et al. (2022); Pantano & Scarpi (2022); Alabed et al. (2022); Pizzi et al. (2023)
AI in Customer Experience and Engagement	Investigates the role of AI in shaping customer experience, engagement, satisfaction, and relationship outcomes across digital and service settings.	Prentice et al. (2020); Perez-Vega et al. (2021); Bag et al. (2022); Balakrishnan & Dwivedi (2021)
Chatbots, Service Robots, and Automated Services	Covers AI-powered frontline technologies such as chatbots and service robots, examining service quality, satisfaction, responsibility attribution, and continuance intentions.	Wirtz et al. (2018); Adam et al. (2021); Belanche et al. (2020); Ruan & Mezei (2022)
AI-Driven Personalisation, Targeting, and Analytics	Addresses AI-enabled personalisation, behavioural targeting, predictive analytics, and recommender systems influencing consumer decision-making and marketing performance.	Huang & Rust (2021); Wang et al. (2022); Gupta et al. (2020); Kumar et al. (2024)
Ethical, Social, and Privacy Implications of AI	Examines ethical challenges, corporate digital responsibility, data privacy, transparency, manipulation, and societal concerns arising from AI adoption.	Hermann (2022); Wirtz et al. (2023); Darmody & Zwick (2020); Saura et al. (2022)
AI, Sustainability, and Societal Impact	Explores the contribution of AI to sustainability, environmental outcomes, social good, and long-term societal transformation	Frank (2021); Yigitcanlar & Cugurullo (2020); De Giovanni (2023); Chauhan et al. (2022)
Emerging AI Applications in Digital Marketing	Focuses on generative AI, virtual influencers, AI-generated content, and immersive digital environments shaping new forms of digital consumer behaviour.	Dwivedi et al. (2023); Yu et al. (2024); Brüns & Meißner (2024); Monaco & Sacchi (2023)

5.2 Thematic Organization of the Literature

Through iterative coding, clustering and synthesis of the final corpus of studies, the literature was organised as follows into nine predominant thematic streams (Refer Thematic Classification of Literature table). These themes represent themes of conceptual convergence rather than methodological similarity and thus have ensured alignment with expectations of PRISMA for interpretive synthesis. The themes are discussed in turn below.

5.3 AI Adoption, Acceptance and Availability Intentions

Substantial body of literature looks at consumer and user adoption of technologies enabling AI, taking into consideration solid theories such as Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), extensions which take into consideration. Early marketing research focused primarily on perceived usefulness and ease of use set out AI adoption in terms of the AI as an efficiency tool for decision-making, and service delivery. Subsequent research extended these models to include autonomy, intelligence and adaptability (i.e. the focus on AI evolving beyond traditional automation) metrics (Davenport et al, 2020; Gansser and Reich, 2021). Recent evidence shows that the

decision to use AI is not only about its capabilities in terms of functionality but also on mediating factors such as trust, fairness, and emotional comfort, especially when it comes to high-involvement settings such as financial services, fashion retail, and healthcare (Jan et al., 2023; Chatterjee et al., 2021). Adoption differs for various forms of AI (e.g., chatbots vs. recommendation engines vs. voice assistants) and underlines that AI should not be considered an even term. Despite these developments, there are still few longitudinal studies that look at post-adoption behaviour and which do therefore establish a gap between initial acceptance and engagement. Despite these advances, there is still a lack of longitudinal studies that would bring an understanding of post-adoption behaviour, thus a discord between the period of initial acceptance and consequent participation.

5.4 Trust, Risk and Algorithm Aversion

Trust has been found to be an important mediating construct in studies of artificial intelligence and consumer interactions. Unlike traditional digital systems, artificial intelligence is defined by opacity, autonomy and the ability for learning, changing consumer perceptions of control, and accountability. Empirical studies show that algorithmic opacity and the perceived loss of agency are key factors that drive algorithm aversion especially when AI systems make mistakes or make recommendations that are perceived as being biased or insensitive (Mahmud et al., 2022). Analysis shows that the measure of trust is highly dependent upon the degree of transparency, explainability, and robust error-handling mechanisms (Pitardi & Marriott, 2021; Crolic et al., 2022). Privacy issues further intensify trust relations. Research based on Privacy Calculus Theory shows that the benefits of personalization are constantly contrasted by consumers with the perceived risks of data misuse, which is made more extreme by AI-driven targeting and predictive analytics (Quach et al., 2022; Cheng et al., 2022). Collectively, these findings show a tension: Although AI is increasing convenience and relevance, oversimplification and exploitation of advantages of data without explanation undermines established trust, with the potential to limit confidence needed for successful implementation of AI in broader applications.

5.5 Human- AI Interaction and Anthropomorphism

A rapidly growing theme examines the psychological relationships between consumers and AI systems; more specifically the ability of AI systems that manifest human-like cues, such as voice, emotion, empathy or social presence. Anthropomorphism has been seen to create more engagement, felt warmth, and social presence, particularly in service encounters (Crolic et al., 2022). Nevertheless, too great human-likeness may cause discomfort, undesirable expectations or distribution of blame during service failures, in accord with the uncanny valley perspective and expectation-violation perspective. New studies related to the artificiality of empathy suggest that this type of emotion responsiveness improves relationship results only when people feel that it seems genuine and aligned with their interests and needs (Liu-Thompkins et al., 2022; Huang & Rust, 2024). These findings suggest that design decisions that deal with AI personality are strategic, rather than cosmetic.

This stream highlights a shift from the functional approach to AI evaluation towards a new emphasis on experiential and relation-based assessment, which places AI in the position of a quasi-social actor in the digital consumption.

5.6 Artificial Intelligence in Customer Experience and Engagement

Research within this theme conceptualises AI as being a driver of customer experience (CX) transformation and can impact through engagement, customer satisfaction, as well as continuity of relationships across the customer journey. AI-enabled personalisation capabilities, responsiveness in real time and predictions of service have been shown to positively improve perceived relevance and lessen cognitive effort to influence engagement metrics (Bag et al., 2022). Nevertheless, there is variability in consumer readiness as the acquisition of engagement benefits is mediated in orientation to artificial intelligence preferences (Prentice et al., 2020). Conceptual frameworks are becoming mainstream in the roles of artificial intelligence in customer engagement ecosystems, recognising the value co-creation potential alongside the potential for co-destruction of systems if artificial intelligence does not meet consumer expectations (Castillo et al., 2021). Despite much empirical scrutiny of the issue, the vast

majority of studies on engagement measure short-term effects of engagement, and the long-term consequences on relationships remain mostly unexplored.

5.7 Chatbots, Service Robots and Automated Services

Frontline AI technologies like chatbots and service robots are the most visible face that AI has to consumers. Research in this area examines service quality, satisfaction, responsibility attribution and continuance intention. Findings suggest that consumers judge AI agents based on an assortment of criteria, including measures of technology performance as well as social and moral considerations that are applied traditionally to human employees (Wirtz et al., 2018; Belanche et al., 2020). Responsibility attribution in the context of service failure is of particular interest as consumers often exhibit different attributes of blame towards AI vs. human agents. Cultural context also moderates the acceptance, with trust in the AI services being significantly different across regions and kinds of AI services (Chi et al., 2023). This stream highlights the need for hybrid human-AI service models instead of full automation.

5.8 AI-Driven Personalisation, Targeting, and Analytics

AI Enabled Analytics and recommendation systems is the computational backbone of the digital marketing. Research has shown consistent positive results on decision effectiveness, buying inclination and perceived relevancy. However, there are strong ethical and psychological concerns raised by hyper-personalization. Empirical research shows that too much personalization can elicit reactance, a feeling of manipulation, or fatigue to privacy, especially if the underlying recommendation reason is hidden (Darmody & Zwick, 2020). Recent research on generative AI is the latest extension of this line of inquiry by making real-time content creation possible, but it also raises new risks related to both the veracity of brand identity and consumer deception (Bruns & Meissner, 2024).

5.9 Ethical, Social and Privacy Implications of AI

Ethical considerations are a cross-cutting theme, rather than being a separate domain. Research pegs data governance, bias, explainability and corporate digital responsibility as a critical determinant of sustainable adoption of AI. Scholars believe that ethical AI is more than simply a matter of compliance and is necessary for maintaining the trust and legitimacy of consumers (Hermann, 2022; Wirtz et al., 2023). Generative AI also makes ethics increasingly difficult to assess because of the challenge of discerning the line between human agency and machine agency. Despite increased attention, ethical variables are often embraced as a modifier rather than as fundamental explanatory factors thus leading to a structural void in contemporary models.

5.10 Application of Artificial Intelligence (AI)

Sustainability and Societal Impact A growing, but small body of literature correlates AI with sustainability, green marketing, and societal welfare. Empirical evidence suggests that AI can better resources efficiency, environmental communication as well as sustainable consumption nudge. Nevertheless, frictions remain between AI's energy intensity and its sustainability claims, and thereby highlight a paradox that must be inherent in the green digital transformation process (Yigitcanlar & Cugurullo, 2020). This research stream is under-theorized in consumer behaviour research, hence pointing to wide scope for future research.

6. Conclusion

This review examines the fragmentation of the literature relating to artificial intelligence and digital consumer behaviour by using a PRISMA-guided synthesis of 119 studies. The analysis shows that artificial intelligence has evolved from an analytical support tool to an active agent that influences the decision processes of consumers, their experiences, and brand relationships. The contribution of this review is threefold: (1) weaving together the adoption, trust, and ethics streams in a coherent way; (2) defining the effects of analytics-based AI as an engineering technology, versus generative artificial intelligence; and (3)

identifying structural gaps in methodological approaches and cross-cultural evidence. By grounding the results on six research questions, this study lays the foundation of knowledge to inform theoretical development and ethical marketing facilitated by artificial intelligence.

6.1 Research Trends in AI and Digital Consumer Behaviour (RQ1)

Since 2020, the study of artificial intelligence and digital behaviour of consumers has grown significantly, both due to the technological maturity of artificial intelligence systems and the accelerated digitisation of consumer environments. Early inquiries had focused on adoption and feasibility, whereas modern studies have focused on experiences, relationships, and ethics of consumer-AI interaction. The literature that exists ranges from journals on marketing, information systems, and service, thus highlighting the interdisciplinary nature of the topic and showing a shift towards more theory-based research, with a focus on the context.

6.2 AI Technologies Covered in Past Research (RQ2)

Previous research has explored a wide range of AI technologies, including machine learning, recommender systems, conversational agents, service robots, predictive analytics, and generative artificial intelligence. The evolution of research has gone from analytics-centric personalisation systems to interactive and generative systems that interact with consumers directly. This heterogeneity is a reflection of the non-methodical nature of AI, as different modalities evoke different perceptions, trust dynamics, and behavioural ends.

6.3 Important Variables Which Influence the Behaviour of Consumers (RQ3)

Trust, perceived risk, privacy concerns, transparency, and perceived control are key determinants for how consumers respond to marketing enabled with artificial intelligence. These variables mediate engagement, purchase intention, and sustained use. Contemporary research has further added constructs that are emotional and relational in nature, such as anthropomorphism and social presence, which signal a move away from viewing AI as a utilitarian tool toward viewing it as something to be regarded as quasi-social acting agents.

6.4 Methodological Approaches in Existing Studies (RQ4)

Available literature is full of quantitative survey and experimental research based on the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). Although these efforts have been able to explain the initial acceptance, they give less insight into the behaviour once users adopt the technology, and the long-lasting relationship entailing both the consumer and the artificial intelligence. The lack of longitudinal, qualitative, and cross-cultural studies prevents an in-depth understanding and general theoretical formation.

6.5 Future Research Directions (RQ5)

The assessment of consumers relative to generative AI, especially in the context of authenticity, persuasion, and trust in AI-generated content, should be regarded as one of the priorities of future research. Explainability and ethics should be inseparable parts of a comprehensive structure of behaviours that regulates long-term behaviour, as opposed to being add-ons. The anthropomorphism-related boundary conditions need clarification, and methodological progress based on the use of longitudinal, mixed-method, and cross-cultural designs is invaluable. The intersection point between artificial intelligence and sustainability is also a component that requires orderly investigation.

6.6 Transformative Impact of AI on the Digital Consumer Behaviour (RQ6)

AI fundamentally changes digital consumer behaviour patterns through altering choices, involvement and brand relationships. Although AI provides an aspect of personalization and ease, there are concerns about autonomy, transparency and fairness. Consumer responses are therefore a differential between perceived value formation and perceived risk.

6.7 Managerial Implications

The results are translated into a number of priorities for operational aspects. First, firms should embed explainable AI mechanisms within recommender systems and chatbots to reduce the problem of algorithmic aversion and communicate the presence of built-in control within the system. Second, in terms of deploying generative AI in the creation of messages, it is imperative that the output created has its technological origins revealed, that it is subject to brand safety protocols, and that there are verification layers to ensure that there is an element of security in terms of ensuring authenticity. Third, organizations are recommended to implement hybrid service models where there is a combination of human and AI agents, a model in which the AI will handle the most routine employee interactions and the humans will handle the most emotional tasks; there is evidence to show that a combination of these will help to reduce that resistance and improve satisfaction. Fourth, privacy by design architectures together with transparent data collection dashboards are critical for a quadrature of personalization with the autonomy of consumers. Finally, marketing managers need to moderate the anthropomorphic design cues from culture to culture, in order to avoid being overly human-like, which can create distrust.

6.8 Limitations

There are some limitations to this review, First, the focus on Scopus-indexed publications, which are mainly in the English language, and potentially publications of regional significance might not be evidenced (especially from the Global South). Second, the predominance of survey and experimental research from the corpus confounds the knowledge about longitudinal and affective dynamics. Third, delivering bibliographic synthesis favors structural formulas and may not consider contextual variations of the individual studies. Fourth, ethical solutions mentioned in the literature tend to be conceptual and have limited empirical validity. Finally, the pace of generative AI means that some emerging practices may already go beyond the scope of the review, hereafter referred to as temporal scope.

6.9 Acknowledgement

The authors would like to express their sincere gratitude to Presidency University for providing the academic environment and institutional support necessary for the completion of this research. The authors also extend their appreciation to the faculty members and research mentors whose guidance and insights contributed significantly to the development of this study.

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