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Artificial intelligence in marketing: exploring current and future trends

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ABSTRACT

Artificial Intelligence (AI) has revolutionized marketing domain, driving rapid digital transformation by enhancing processes, accelerating growth, and transforming the business landscape. Despite the growing attention towards artificial intelligence review studies, there remains a dearth of comprehensive reviews within the marketing domain. Thus, the current study aims to explore the use of artificial intelligence in marketing as an emerging research topic using a systematic literature review (SLR) method. A corpus of 522 studies between 2015 and July 2023 was gathered and finalised from the Web of Science (WoS) database. Furthermore, the current study expanded the SLR using a bibliometric analysis. Observably, a growing trend of artificial intelligence exists in the marketing domain. The bibliometric analysis findings depicted six emerging clusters of artificial intelligence in marketing research, namely psychosocial dynamic, artificial intelligence-enhanced market dynamic strategies, artificial intelligence for consumer services, artificial intelligence for decision-making, artificial intelligence for value transformation, and artificial intelligence for ethical marketing. The findings highlighted future research avenues in terms of context, methods, and theory. The study also discussed the outcomes for academics and practitioners and proposed a future research agenda to examine the ongoing shift driven by rapid artificial intelligence implementation in marketing.

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Introduction

The convergence of modern technologies in this digitalisation era has triggered a transformative wave of digitalisation across industries. Črešnar and Nedelko (2020) defined Industry 4.0 or I4.0 as a technology revolution for firms to advance firm technology and change other aspects. The I4.0 is a comprehensive term that categorises numerous technologies, such as big data, artificial intelligence (AI), and the Internet of Things (IoT) (Ali & Johl, 2023). The I4.0 concept involves reshaping the traditional business and management landscape. The Fortune Business Insights (2023) report stated that the global market size of I4.0 was $114.55 billion in 2021 with a projected growth of $377.30 billion by 2029. From a literature perspective, Anshari et al. (2019) argued that Industry 4.0 technologies empower firms to enrich customer engagement, acquisition, and retention strategies. This underscores the enduring impact of I4.0 technologies on marketing evolution, suggesting a potent synergy between marketing and artificial intelligence to drive substantial outcomes (Chintalapati & Pandey, 2022).

Customer interaction with I4.0 technologies, especially AI has developed massively in the last decade. This situation altered how companies make decisions and engage with customers. The AI offers essential consumer input on goods and services essential for retaining and attracting new customers. Siau (2017) described AI as intelligence exhibited by machines. De Bruyn et al. (2020) argued that the importance of clearly defining AI as machine intelligence and establishing boundaries to mitigate uncertainty. In the rapidly evolving landscape of consumer behaviour and market dynamics, leveraging AI in marketing

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research becomes imperative (Ali et al., 2023). The ability of AI to rapidly analyze extensive datasets empower businesses to extract invaluable insights, facilitating the development of targeted strategies that profoundly resonate with customers (Fu et al., 2023; Li et al., 2023). Theoretically, Xu (2020) argued that global AI spending is anticipated to surge to US$98 billion by 2023, marking an unprecedented 28.4% annual growth. Likewise, Paschen et al. (2019) claimed that Ai has transformed the human-centric sales process in the business-to-business (B2B) market. Practically, Balakrishnan et al. (2020) from McKinsey analytics, half of the firms have integrated AI into at least one of their business functions. Among these AI adopters, 75% have seen a 10% improvement in customer experience. Past reports indicated that AI exhibits substantial growth at the firm level with an anticipated 99% return on investment in five years and an impressive 187% in 10 years (Davenport et al., 2020).

Despite the number of advantages of the integration of AI in various domains like marketing, there is a growing recognition of significant concerns regarding its potential to lead to dehumanization and compromise privacy (Lobschat et al., 2021). Lobschat et al. (2021) argued that researchers should focus on organizational privacy failures like data leaks, profiling, micro-targeting, surveillance, and hacking. Furthermore, services literature should address the role of AI in decision making process (Lobschat et al., 2021; Anayat & Rasool, 2024). Prior studies highlighted a disparity between firm interest in AI and its actual adoption (Han et al., 2021; McElheran et al., 2024; Polisetty et al., 2023; Alwadain et al., 2024). Although AI research has expanded significantly, a substantial gap remains in comprehensively investigating the current and future potential of AI techniques in marketing strategies (Haenlein & Kaplan, 2019). Despite the prominence of AI in marketing, limited research has outlined the subject. This gap is concerning as it limits insights and practical recommendations for firms seeking to utilise AI for marketing growth (Han et al., 2021). A thorough synthesis of available studies is required due to the emphasis on AI marketing research (Peyravi et al., 2020). Although past research has summarised AI and marketing research using SLR and interpretive analysis, these approaches may lack objectivity and can be affected by author bias (Talwar et al., 2020; Vlacic et al., 2021; Wisetsri et al., 2021). Furthermore, the insufficient application of the bibliometric method with other techniques in AI marketing research outlines the need for an in-depth and fair investigation of this critical topic (Ismagiloiva et al., 2020). Hence, the current study attempted to examine and analyse the existing literature on AI in marketing by employing bibliometric analysis with other approaches. Given the ever-evolving nature of this topic, the current study comprehensively outlined current trends and emerging research avenues. The primary research objectives are listed below:

RO1: To identify the development of publications within AI in marketing.

RO2: To identify the research focus, methodological stances, and analytical strategies within AI in marketing.

RO3: To identify the key themes in the use of AI in marketing.

RO4: To identify the future research avenues in AI in marketing.

The remainder of the study comprises three sections. The subsequent section highlights the research methodology adopted for the SLR. An analysis of the collected documents is presented descriptively and the future research agenda is proposed. The final section extensively discusses the results and concludes the study.

Overview of AI in marketing

Chui et al. (2018) stated that the revolutionary potential of AI resonates highly in marketing and sales. The prowess of AI is evident in personalised service supply (Davenport et al., 2019) and predicted customer behaviour analysis (Verma et al., 2021), which introduces a novel phase of marketing effectiveness. The advancement of AI in marketing presents an opportunity to revamp outdated techniques and enhance client interaction (Forrest & Hoanca, 2015). The dynamic spectrum of AI applications in marketing has included comprehensive studies of consumer purchase habits (Chatterjee et al., 2020) and a developing customer demands via data analysis (Wirth, 2018). According to Bughin et al. (2017), using AI capabilities for data-driven advertising strategies helps firms to navigate the vast amount of internet data. Additionally, Davenport et al. (2019) claimed that AI system has the ability to assess customer data

and offer tailored recommendations that go beyond buying choices. Finally, Nanayakkara (2020) contented that AI offers marketing personnel by automating repetitive work, which allows them to focus on significant interactions that generate favourable client connections.

Incorporating AI-powered tools, such as emotion detection technologies and intelligent robots improves marketers' ability to provide exceptional consumer experiences, which supports customer retention gradually (Vlacic et al., 2021). The numerous possible uses of AI have developed the notion of contextualised marketing, where firms strategically deliver information that connects with the specific circumstances of their customers. The effect of AI differs among industries, where sectors involving tangible products, travelling, and finance witness a broader range of AI marketing applications following their regular connection with different consumers and big data collection (Davenport et al., 2019, Zhang et al., 2022; Kanwal et al., 2024).

Research methodology

Study design

An SLR is a form of research that manages existing publications and follows a systematic methodology for synthesising published data (Tranfield et al., 2003). Based on Kraus et al. (2020), an SLR is a review of an existing body of literature based on a transparent and reproducible methodology in searching, assessing its quality, and synthesising it with high objectivity. Snyder (2019) recommendations outline four phases of the literature review process: designing, conducting, analysing, and writing the review. The current study followed this four-step process to complete the literature review.

Scope of the study

The study scope includes the initial step of SLR based on the research objectives and questions. According to Denyer and Tranfield (2009), the scope should follow the CIMO logic, which involves context, intervention, mechanism, and outcomes. In this context, the focus area is AI in marketing from 2015 to 2023.

Search strategy and data sources

The second step of SLR involved selecting the appropriate search string and database. Based on past literature, a combination of keywords with Boolean operators was utilised to identify the relevant documents. Additionally, a two-word combination approach was adopted to search the relevant documents. The first keyword is related to AI and the second concerns marketing and related terms. The current study used WoS to gather articles for analysis as it is a reputable source for identifying high-quality journals globally (Elaish et al., 2023). The articles in this database are also well-organised in terms of research quality (Elaish et al., 2023). Conducted in July 2023, this research extracted over 1000 documents. A total of 522 articles were selected for final analysis by limiting the search to journal articles.

Selection criteria and quality assessment

The current study examined AI within the marketing domain and excluded research published in unrelated domains. The included articles focused on management, business, and operational management domains. Moreover, review articles were excluded from the final review. The review was also confined to English language articles published between 2015 and July 2023, which ensured a contemporary and credible understanding of this niche domain. Table 1 lists the complete inclusion and exclusion criteria.

Apart from the inclusion and exclusion criteria, the selected articles were evaluated using a quality assessment comprising nine criteria based on Kitchenham and Charters (2007), which was not intended to criticise the work of any scholars. Each criterion was rated on a three-point scale where 'Yes' received 1 point, 'No' received 0 points, and 'Partially' received 0.5 points. The resulting score ranged from 0 to 9 with higher scores indicating that the study was more effective in addressing the research questions. Furthermore, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram was used to present the SLR (see Figure 1).

Table 1. Study inclusion and exclusion criteria.

Inclusion	Exclusion
Should involve AI and related keywords in marketing, business, management, and operational management domains	AI used as another context
Should involve organisational context	The paper was published in languages other than English
Should be written in the English language	
Should be published between 2015 and July 2023	

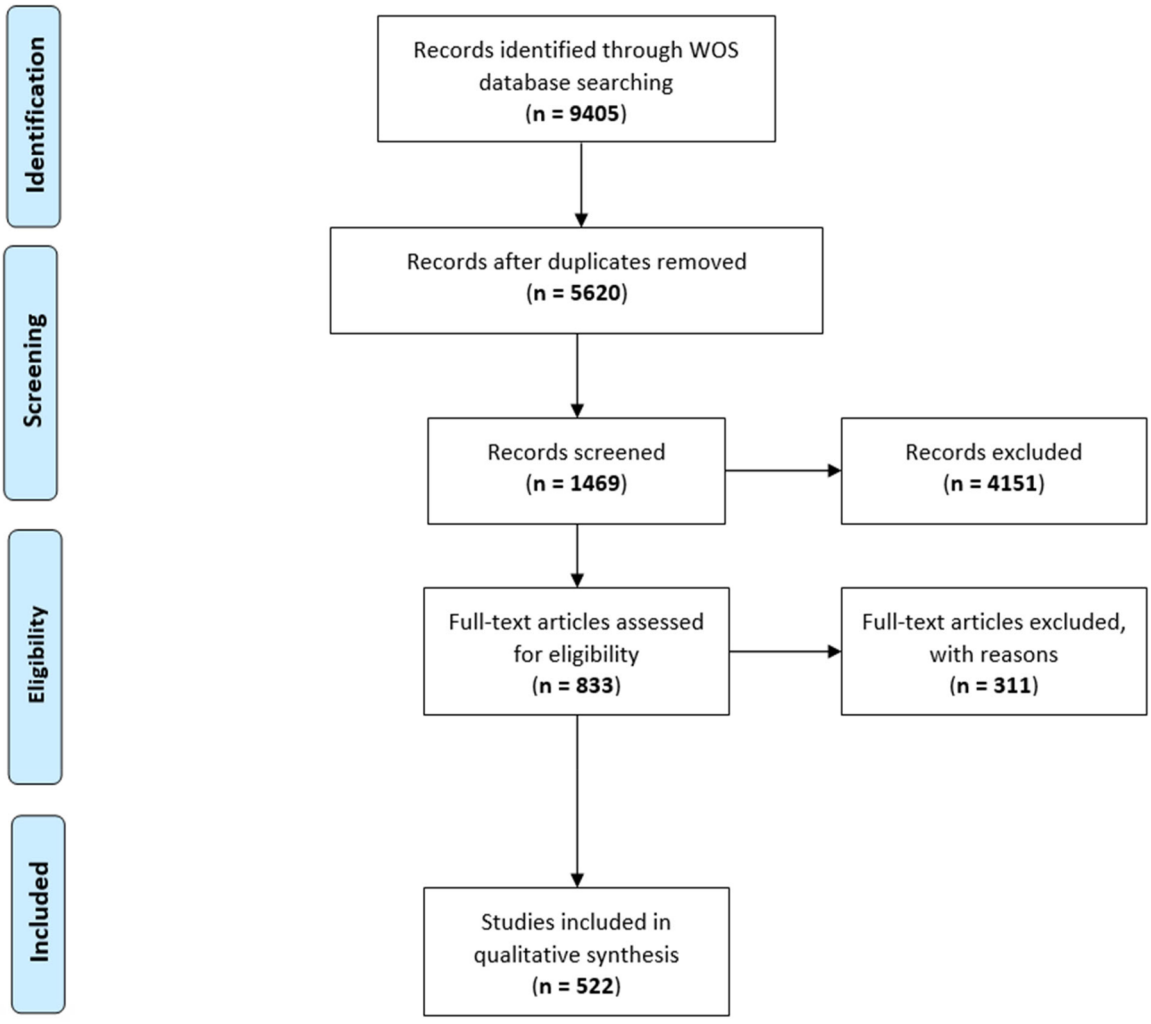

Figure 1. PRISMA diagram.

Analysis and results

The corpus of 522 studies was analysed and presented via descriptive analysis.

Performance analysis

Publication trends

The AI in marketing has witnessed a dynamic change and a significant increase in research and scholarly activities. A review of the publishing pattern from 2015 to 2023 denotes a consistent and impressive development in scholarly production. Initially, several publications were produced in 2015 and 2016, totalling four publications with rather low citation counts. Nevertheless, the following years revealed a remarkable increase in the number and effect of research. Observably, 2018 was a watershed moment, which ushered in a significant increase in publications amounting to 25 and a total of 2193 citations.

This tendency intensified in 2019 and 2020 when research production increased to 42 and 90 papers with 2564 and 3500 citations, respectively. The rising trend continued in 2021 with 110 articles and 2687 citations, which emphasised the expanding importance of the field. The year 2022 denoted a strong continuation of this pattern with 143 publications and 1108 citations. Meanwhile, 2023 disclosed a consistent pace with 105 papers and 213 citations. These figures amounted to an outstanding 522 papers and a total citation count of 12,574, hence verifying the increasing scholarly interest in the subject and the effect of AI on marketing. Figure 2 depicts the publication trends.

Most influential journals

Table 2 demonstrates the most influential journals in AI in marketing based on WoS, Impact Factors (WoS IF), and Australian Business Deans Council (ABDC) ratings. The 'Journal of Business Research' and 'Industrial Marketing Management' are influential journals. The 'Journal of Retailing and Consumer Services,' also emphasises consumer-oriented AI debates. Moreover, the 'Annals of Operations Research' and 'European Journal of Marketing' provide insights into operational AI aspects and European perspectives. Collectively, these publications serve as crucial platforms for advancing the impact of AI on marketing.

Most influential authors

Table 3 presents prominent authors who have made significant contributions to the discipline, as outlined by the number of publications. For instance, CHATTERJEE S and CHAUDHURI R have eight and seven publications, respectively, which indicates their significant commitment to the subject. BAG S, GUPTA S, and VAN ESCH P contributed six publications each, which further extended the topic.

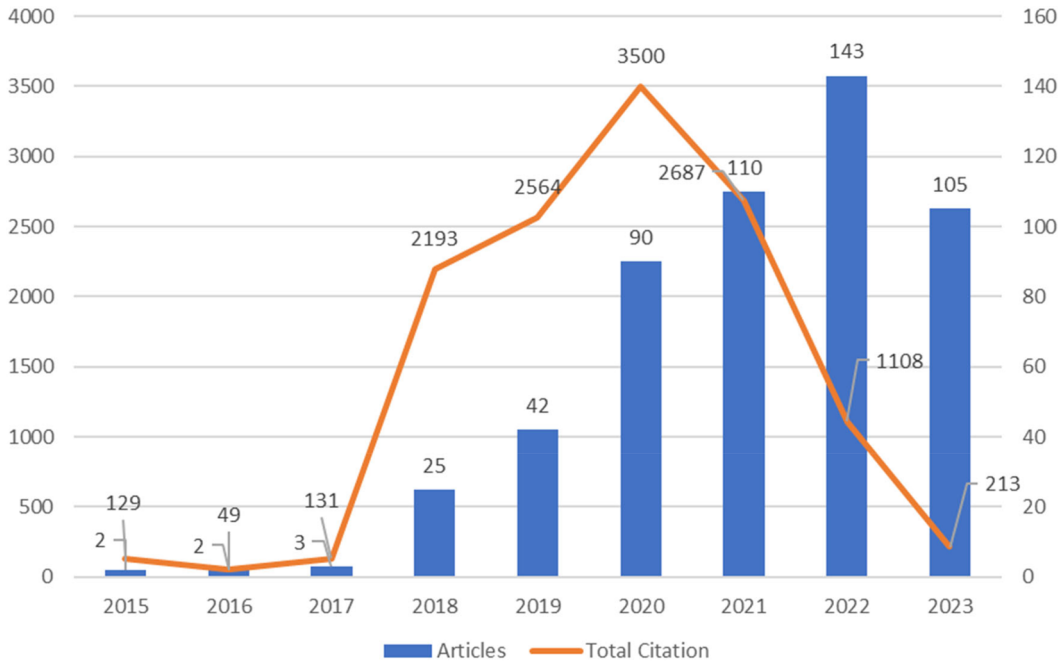

Figure 2. Publication trends.

Table 2. Most influential journals.

Journal name	TP	WOS (IF)	ABDC
Journal of Business Research	54	11.3	A
Industrial Marketing Management	54	10.3	A*
Journal of Retailing and Consumer Services	16	10.4	A
Annals of Operations Research	15	4.8	A
European Journal of Marketing	15	4.4	A*

Table 3. Most influential authors.

Authors	TP	Articles fractionalised
CHATTERJEE S	8	2.58
CHAUDHURI R	7	2.33
BAG S	6	1.35
GUPTA S	6	2.23
VAN ESCH P	6	1.92
GREWAL D	5	1.12
KIETZMANN J	5	1.32
LUO X	5	1.33
SHARMA A	5	1.37
WANG Y	5	1.42

Furthermore, GREWAL D, KIETZMANN J, LUO X, SHARMA A, and WANG Y contributed five publications, which demonstrated their active involvement in promoting discussions on AI in marketing.

Descriptive analysis

A dual strategy was used with the assistance of VOSviewer and RStudio tools to determine the top 20 most referenced works (Donthu et al., 2021). Subsequently, the study performed a manual evaluation that involved a quick review of the technique and abstract parts. Authors were later selected for inclusion in the analysis if they received five or more citations within each cluster.

Research focus

The implementation of AI-based technologies in marketing is the core focus of over 90% of the research. Although most studies focused on the potential of these technologies, De Bruyn et al. (2020) examined the possible drawbacks of marketers implementing AI without caution. The significant privacy issue arising when using consumer data for marketing is a crucial concern. Given the relative novelty of AI in the marketing sector, scholarly focus has been on its applications and the revolutionary possibilities for the corporate world. Nevertheless, the impact of AI on marketing and customer relationship management (CRM) is actively examined by researchers. This trend may result from the widespread use of AI technologies to improve consumer engagement and increase the standard of goods and services.

Research methodology

Depending on the study objectives, researchers can apply various research techniques, including descriptive, explanatory, exploratory, conceptual, and experimental techniques. In order to systematically describe situations, issues, events, or activities, descriptive research employs data that is frequently gathered to support hypotheses or provide a sound understanding of the subject matter (Goundar, 2012). Exploratory research investigates uncharted territory, while explanatory studies attempt to comprehend the relationships between components within occurrences or phenomena (Goundar, 2012). Conceptual studies explain relationships thoroughly by exploring existing data and frequently proposing new connections between variables (Jaakkola, 2020). Contrarily, experimental research unveils causal links by adjusting factors and contrasting outcomes (Goundar, 2012).

Exploratory approaches are preferred when addressing the question of regularly used research methodology in AI marketing, specifically considering the dynamic nature of this field (Verma et al., 2021). Researchers often use this strategy to analyse this emerging field, which aligns with the emergent nature of AI (Nueman, 2014). Nonetheless, several technical articles in the field have emphasised conceptual frameworks and creative models that incorporate AI technologies into marketing. The frequency of exploratory design parallels the development stage of AI in marketing given its current state of development (Verma et al., 2021).

Analysis technique

The two key types of data analysis are qualitative and quantitative analysis. Statistics are not used in qualitative research. Instead, statements, symbols, or observations are employed to collect data, which are evaluated via content analysis, sentiment analysis, or thematic analysis (Nueman, 2014). Quantitative analysis employs statistical methods to examine data linkages and evaluate the gathered data (Nueman,

2014). The aforementioned explanation and data insights outline a pattern among the top 20 frequently referenced publications, which collectively highlight a preference for qualitative analysis. Only two writers (Deng et al., 2019; Kaiser et al., 2020) used statistical analysis, while the majority adopted qualitative approaches, which proves that marketing AI remains in its infancy and that few empirical studies exist. Therefore, academics favour qualitative analysis of textual data as a practical means to comprehending this developing field.

Cluster analysis

The cluster analysis was performed based on the corpus of 522 publications. A keyword co-occurrence analysis technique was adopted to develop the cluster (Donthu et al., 2021). Publication keywords as mentioned in the search strategy were employed as primary unit of analysis. Table 4 demonstrates six clusters formed based on the analysis.

Psychosocial dynamic of AI

The psychosocial dynamics of AI in marketing involve the multidimensional examination of human actions, feelings, and perceptions in technological integration. The acceptability and uptake of AI-driven methods uncover a complex interplay between consumer involvement and intention where the psychological variables regarding competence and communications impact people's perceptions of these technologies. As the ability of AI to comprehend and react to user emotions can substantially impact the entire user experience, the world of emotions and psychology becomes even more intertwined with the engagement process. The acceptance and use of this technology are influenced by functional competence and the emotional connections made, which is a complicated web that extends to service robots.

The subtleties of social pressure and corporate social responsibility must be considered when developing strategies to utilise AI in marketing given that these elements significantly influence customer behaviour and perceptions. Concepts of behaviour, engagement, and intent are included in the psychosocial domain, which explains the underlying mechanics defining how AI technology and human psychology interact in marketing environments. Comprehending these dynamic characteristics is vital for developing strategies that cognitively and emotionally connect with customers, which influences the future of marketing interactions as the AI-driven marketing paradigm continues to develop.

The AI-enhanced market dynamics and strategies

The cluster 'AI-enhanced market dynamics & strategies' is a focal area within AI in marketing, which encapsulates the union of modern technology with the subtleties of market behaviour. This cluster examines the complex web of rivalry, dynamics, and networks where insights and predictions fuelled by AI are revolutionising the area of supply chain management and market regulations. The responding strategies of the market change as the predictive capabilities of AI expand, which enhances comprehension of consumer behaviour, affecting sales trajectories, and facilitating reasoned decision-making. Word-of-mouth acquires new dimensions through the amplification of AI, which assists in distributing dynamic information and changing market dynamics. This cluster denotes the integration of AI capabilities with the fundamentals of market dynamics, thus forming policies and projections that enable enterprises to

Table 4. Cluster analysis.

Cluster no	Cluster name	Keywords
1st	Psychosocial dynamic of AI	Acceptance, adoption, behaviour, competence, communication, emotions, engagement, intention, perceptions, personality, service robots, responses, usage, strategies, social pressure, corporate social responsibility
2nd	AI-Enhanced market dynamic & Strategies	Competition, dynamic, networks, policy, prediction, supply chain management, word-of-mouth, sales, market
3rd	AI for consumer services	Anthropomorphism, e-commerce, trust, satisfaction, augmented reality, brand engagement
4th	AI for decision making	Artificial intelligence, CRM, big data, decision-making, dynamic capabilities, predictive analytics, value-creation
5th	AI for value-transformation	Innovation, knowledge, perspective, transformation, value co-creation
6th	AI for ethical marketing	Analytics, competitive advantage, discrimination, employment

traverse the dynamic landscape with unmatched foresight and agility. This cluster also emphasises the critical role of AI in navigating the complex web of contemporary marketplaces, which eventually encourages growth and success as it continues to redefine marketing paradigms.

AI for consumer services

A revolutionary area is present within the 'AI for consumer services' cluster, where the fusion of technology and human-centred interactions reshapes the marketing field. Anthropomorphism takes the stage as AI closes the gap between computers and users, which creates personalised connection to e-commerce experiences. Trust and enjoyment become interwoven as AI-driven recommendations and interactions are tailored to individual tastes, which encourages dependability and fulfilment. The difference between virtual and real-world encounters is blurred by augmented reality, which adds another level of immersive interaction.

The power of AI to comprehend consumer behaviour and preferences revitalises brand engagement and paves the path for specialised marketing campaigns that connect with them personally. In this cluster, technology plays a human-like role in increasing trust, contentment, and brand resonance. This cluster also exemplifies the synergy between AI and consumer services. The use of AI changes conventional paradigms in the dynamic field of e-commerce, which fosters an environment, where customer requirements are predicted and expertly managed, hence raising the customer experience to new heights.

The AI for decision-making

The 'AI for decision-making' cluster presents a paradigm-shifting area where the effective fusion of marketing tactics and AI transforms the environment of informed decision-making. A new era is established by the integration of AI into CRM, which employs big data to internalise complex consumer behaviours and empowers organisations with dynamic capabilities. Predictive analytics is a pillar of this cluster, which provides decision-makers with foresight and allows them to foresee trends, determine opportunities, and minimise risks.

A collaboration of AI and decision-making results in value creation as the data-driven insights of AI encourage more strategic and significant decisions. The dynamic interplay of these terms demonstrates the aptitude of AI for deciphering enormous volumes of data to raise the decision-making processes to a new level of precision. The 'AI for decision-making' cluster is a catalyst for revolutionary strategies as organisations traverse the dynamic market, thus empowering them to adapt, thrive, and innovate in a period marked by data-driven agility and strategic insight.

AI for value-transformation

The 'AI for value-transformation' cluster focuses on a crucial area, in which marketing and AI interact to redefine innovation and knowledge-sharing paradigms. This cluster orchestrates a transformation in how value is co-created and views are developed within the marketing world. The importance of the catalytic role of AI in value co-creation cannot be overstated as it uses insights from massive databases to create novel solutions deeply in tune with consumer requirements. Combining AI and marketing propel firms towards disruptive strategies that produce outstanding levels of engagement and satisfaction. Rising AI-driven innovations ignite a dynamic revolution in conventional thinking, which develops fresh windows of opportunity and changes how companies perceive and deliver value. This cluster demonstrates how AI exceeds traditional limitations, which sparks a fundamental transformation in marketing strategies that improve value generation, encourage collaboration, and paves an intimately intertwined future.

The AI for ethical marketing

The power of analytics unites with competitive advantage within the cluster of 'AI for ethical marketing,' while vigilance against discrimination and considerations for ethical employment practises consolidating. This dynamic cluster underlines the value of making thoughtful decisions as it navigates the challenging environment where AI seamlessly integrates with marketing strategies. Using data-driven insights allows businesses to gain a competitive edge via the analytical prowess of AI, which facilitates the development

of well-informed plans that reflect customer values and preferences. The cluster highlights the need to eliminate prejudice in algorithmic processes and preserve fair employment practices, as the ethical implications of the effects of AI cannot be disregarded. The marriage of AI with ethical marketing represents a dedication to success based on openness, responsibility, and diversity. This cluster functions as a compass that directs marketers towards growth-oriented tactics while upholding moral standards, protecting brand reputation, and encouraging long-term consumer trust as firms unveil the potential of AI. Innovation and responsibility collaborate to build success in AI for ethical marketing where competitive advantage flourishes without jeopardising equality, fairness, and the larger benefit of society.

Future research direction

Theory

Davenport et al. (2019) mentioned that the adoption of AI-based systems by people differs from the adoption of traditional technology. Terzopoulos and Satratzemi (2020) explained that AI-based systems usually function independently contrary to prior technologies requiring manual operation. In light of the new challenges arising from this technical difference, previous theories can merely describe how AI works in the marketing domain (Davenport et al., 2019). A promising future research area in management and computer sciences is emerging as AI transforms the marketing landscapes, which calls for a merger of theories (Dwivedi et al., 2019). An investigation of the ideal theoretical framework for AI in marketing occurs along different trajectories, which lays the groundwork for future research. The relevance of current theories must first be investigated based on how AI is incorporated into marketing strategies. The second question is whether a requirement for developing innovative theories exists that complement this dynamic environment. The focus extends beyond the areas of technology, company management, and consumer behaviour. Instead, the project includes unexplored areas that overlap these domains. It is possible to pave the path for the future by creating a comprehensive model or theory that precisely describes the current context of AI system adoption in the field of marketing. This research agenda aims to identify the theoretical foundation that thoroughly supports the disruptive role of AI in marketing through multidisciplinary inquiry and integration.

Context

Marketing has developed a landscape of numerous AI-based solutions to take advantage of the inherent benefits of AI. Huang and Rust (2020) mentioned that the deployment includes multiple technologies from collaborative machines that facilitate packaging to drones that plan delivery and service robots that provide assistance. Future researchers are prepared to discover unexplored territory as the story of AI in marketing develops. This investigation requires a complex mapping of the numerous AI-based technologies in use. The priority is identifying the characteristics that differentiate these systems while identifying their similarities. Furthermore, a crucial aspect involves comprehending the contextual variables influencing organisational decisions to implement a certain AI-based technology. This investigation also examined the organisational elements that impact how AI systems are integrated for marketing objectives. The current study also included an analysis of features that distinguish organisations within the same industry and across various sectors and an examination of the factors influencing the adoption trajectory of these transformative technologies to broaden the scope. Researchers could shed light on the choices, processes, and variables that integrate AI-based systems in marketing into the contemporary business landscape by initiating these investigative trajectories.

Content

Dwivedi et al. (2019) highlighted how in the early stages of AI incorporation into marketing, the potential seems limitless and broadens the research arena. Researchers could demonstrate the multidimensional influence of AI in various marketing scenarios by posing a compelling proposition. Several lines of inquiry promise to reveal new information, such as exploring the influence of organisational capabilities

on the choice to integrate AI into marketing practices. The complexities surrounding the adoption or exclusion of AI system installation in marketing is an excellent research field. In integrating AI systems into marketing strategies, the ethical factor has increased in significance and demands insights into the responsible measures that firms must implement to secure consumer data and privacy. Researchers who follow these lines of study reveal the complex tapestry of the potential of AI in numerous marketing environments, which advances the grasp of the effects, complexities, and potentialities of this technology.

Method

As new technologies entice users' acceptance (Huang & Rust, 2020), a complex interaction of multiple elements emerges and influences how quickly those new technologies are integrated, as highlighted by Hamm and Klesel (2021). Numerous study disciplines become apparent in light of this dynamic as promising areas for further investigation. An examination could emphasise identifying the best techniques or models for effectively analysing the adoption of AI technologies in marketing environments. Researchers are also encouraged to investigate how AI impacts marketing strategies to differentiate between companies that have employed the technology and those that have not. Additionally, the area of methodological variety becomes more prominent, hence raising the question of whether various AI marketing applications require different assessment procedures to comprehend their overall business impact. If so, a new issue presents itself: How can scholars combine these various approaches to holistically comprehend the entire area? Researchers who follow these paths shed light on the complex dynamics of AI integration into marketing, which could radically alter company models, practices, and landscapes.

Research implications

The long-lasting impact of AI on marketing is undeniable given the rapid development of technology based on Davenport et al. (2019). Dwivedi et al. (2019) stated that the transformation of the marketing landscape has sparked a quick rise in research interest due to organisations continuing to invest in AI-based technologies. The issue of in-depth analysis of this rising body of information is illuminated by this exponential increase, which is reflected in the expanding publication trend. Hence, this study offered a comprehensive analysis of AI in marketing literature using bibliometric analysis to identify past patterns and prospective future trajectories. The current study provided a compass for scholars to navigate citations and publications by examining key journals, organisations, and countries. This study outlined the future development of AI role in marketing domain by considering the range of approaches, methodology, context and contents studying issues, and examining problems. This thorough analysis outlines weaknesses in existing approaches and guides scholars towards unexplored directions that could advance the discipline. The convergence of these ideas and an explanation of common methodologies equip researchers with the knowledge and tools required to successfully navigate the complex world of AI in marketing.

Conclusion

Artificial Intelligence (AI) has revolutionized marketing domain, driving rapid digital transformation by enhancing processes, accelerating growth, and transforming the business landscape. Despite the growing attention towards artificial intelligence review studies, there remains a dearth of comprehensive reviews within the marketing domain. To address these gaps the aim of this review study to explore the use of artificial intelligence in marketing as an emerging research topic using a systematic literature review (SLR) method. The bibliometric analysis of 522 studies highlight that AI in marketing domain has six clusters: psychosocial dynamic of AI, AI-enhanced market dynamic & strategies, AI for consumer services, AI for decision making, AI for value-transformation and AI for ethical marketing. The review study highlights that there is a possibility to pave the path for the future by creating a comprehensive model or theory that precisely describes the current context of AI system adoption in the field of marketing. Moreover, future researchers could shed light on the choices, processes, and variables that integrate

AI-based systems in marketing into the contemporary business landscape by initiating these investigative trajectories.

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Author contributions

Concept, writing, analysis, and revision are done by Ebtisam Labib.

Disclosure statement

No potential conflict of interest was reported by the author(s).

About the author

Ebtisam Labib is a dedicated Assistant Professor and Director of the Academic Advising Unit, bringing over 15 years of experience to the realm of higher education. Her academic journey is anchored by a Ph.D. in Marketing with a specialized focus on Consumer Behavior from Universiti Sains Malaysia, complemented by an MBA from King Abdulaziz University. Her academic interest areas are Artificial Intelligence, Digital Marketing, consumer behavior, block chains, social media marketing, blended learning, open and distance learning.

Data availability statement

Data will be available on request.

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