



The evolution of consumer decision making: A bibliometric analysis and literature review

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Abstract: This bibliometric review examines the evolution of consumer decision-making (CDM) research from 1987 to 2024, focusing specifically on the integration of artificial intelligence (AI) into consumer behavior research. Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, a systematic analysis of 2,163 peer-reviewed articles from the Scopus database was conducted. To map the intellectual structure of the field, the VOSviewer software was used for comprehensive co-citation analysis, co-word analysis, and graphical network visualization. The results identified three distinct schools of thought: rational choice and behavioral economics, technology and digital systems adoption, and service quality evaluation. Furthermore, a significant paradigm shift from traditional psychological models toward AI-driven frameworks was observed, with the United States, the United Kingdom, and Germany leading global research output. Synthesizing these findings, this study proposes an adaptive-bounded rationality model as a critical conceptual direction for future research, confirming that AI has substantially redefined both theoretical and empirical approaches to understanding consumer behavior. Consequently, practitioners can leverage these insights to design consumer-centric marketing strategies utilizing predictive analytics while proactively addressing critical ethical concerns related to algorithmic transparency and consumer autonomy.

Keywords: *Artificial intelligence, Behavioral economics, Bibliometric analysis, Consumer decision-making, Technology acceptance model.*

1. Introduction

Consumer decision-making (CDM) encompasses the analysis of how individuals select products and services within a complex landscape influenced by psychological, social, and economic factors [1, 2]. Originally, CDM research stemmed from traditional economic models that emphasized completely rational utility-maximizing consumers [3, 4]. However, the introduction of bounded rationality fundamentally transformed this landscape by suggesting that cognitive limitations and available information inherently restrict individuals' decision-making processes [5-8]. Furthermore, prospect theory highlights the significant role of biases and heuristics, acknowledging that consumer choices often deviate from strict rationality due to underlying psychological influences [9]. Consequently, modern CDM exploration has evolved to provide a more holistic understanding by integrating emotional responses, environmental contexts, and heuristics into the bounded rationality framework [10-12].

While traditional theories have focused heavily on human cognitive processes, the recent advent of artificial intelligence (AI) has significantly redefined customer data [13]. Specifically, AI-powered systems can gather and analyze vast amounts of consumer data through advanced machine learning algorithms, leading to hyper-personalized marketing strategies [14, 15]. By predicting future behavior and catering to individual preferences, these sophisticated tools can influence consumer choices on an

unprecedented scale. Moreover, the ability to process big data extends far beyond traditional analytical methods, enabling a highly nuanced understanding of contemporary market trends [16]. Ultimately, the integration of AI transforms not only the mechanics of decision-making but also the theoretical and empirical study of consumer behavior.

Despite its analytical advantages, the rise of AI-driven personalization has brought critical ethical considerations to the forefront of CDM research. Advanced algorithms have the capability to subtly exploit consumer vulnerabilities and manipulate decision-making processes in ways that lack transparency and fairness [17]. This algorithmic influence necessitates a critical examination of how AI reshapes consumer choice, urging scholars and practitioners to balance technological advancements with ethical responsibility. Thus, AI integration represents a double-edged sword within the consumer domain. While it offers unprecedented opportunities for personalized marketing, it simultaneously poses significant challenges regarding consumer autonomy and ethical marketing practices [18].

This study aimed to chart the evolving trajectory of AI-focused research within the CDM domain [19, 20]. The review employed a systematic bibliometric approach to analyze, synthesize, and extend the current knowledge base by examining publications retrieved from the Scopus database [21, 22]. Utilizing graphical network analysis, this research unveils the intellectual structure and delineates emerging schools of thought at the confluence of AI and consumer behavior [23]. By mapping keyword co-occurrences and co-citation patterns, this analysis aims to illuminate how AI functions both as a sophisticated analytical tool and as a primary subject of study. Ultimately, this systematic examination highlights the evolving dynamics between traditional models and AI-driven paradigms, revealing a shift toward more holistic analytical approaches [24-26].

To guide this systematic exploration, this review is designed to shed light on the evolution of CDM research and identify areas that are ripe for further academic inquiry. Specifically, this study addresses the following refined research questions tailored to the current context of AI's impact on consumer behavior:

- RQ1: What is the volume, growth trajectory, and geographic distribution of research on consumer decision making?
- RQ2: Which authors and documents on consumer decision-making have had the most significant impact?
- RQ3: What is the intellectual structure of research on consumer decision making?
- RQ4: What are the key topical trends in consumer decision-making research?

The remainder of this paper is structured to systematically address the proposed research questions and explore the evolving landscape of consumer decision-making. Section 2 details the research methodology, outlining the bibliometric review process, criteria for identifying sources from the Scopus database, and specific graphical network techniques employed. Section 3 presents the results of data extraction, highlighting key publication trajectories, influential authors, and thematic co-occurrence networks that define the intellectual structure of the field. Section 4 synthesizes the findings in the discussion, examining the profound paradigm shift from traditional rational-choice models to multidimensional AI-integrated frameworks. Section 5 concludes the review by interpreting the broader implications of these technological shifts, acknowledging the methodological limitations of the study, and proposing critical directions for future research on AI-mediated consumer environments.

2. Methods

2.1. Research Design and Database Selection

To decipher and synthesize the evolving knowledge base in consumer decision-making (CDM), this study applies a science-mapping approach based on bibliometric analysis. Scopus was selected as the primary database due to its extensive coverage and recognized standing in social science research, providing a comprehensive 37-year perspective from 1987 to 2024. To ensure an effective and transparent review process, data collection strictly followed the Preferred Reporting Items for

Systematic Reviews and Meta-Analyses (PRISMA) guidelines [27, 28]. As detailed in Figure 1, this systematic procedure encompassed rigorous identification, screening, and eligibility phases, ultimately refining an initial pool of 3,100 records to a final dataset of 2,163 articles. Subsequently, a thesaurus file was developed to standardize metadata inconsistencies and facilitate a more accurate evaluation of the literature. This rigorous methodology provides a clear intellectual overview of the field by identifying key authors, influential articles, and leading academic journals.

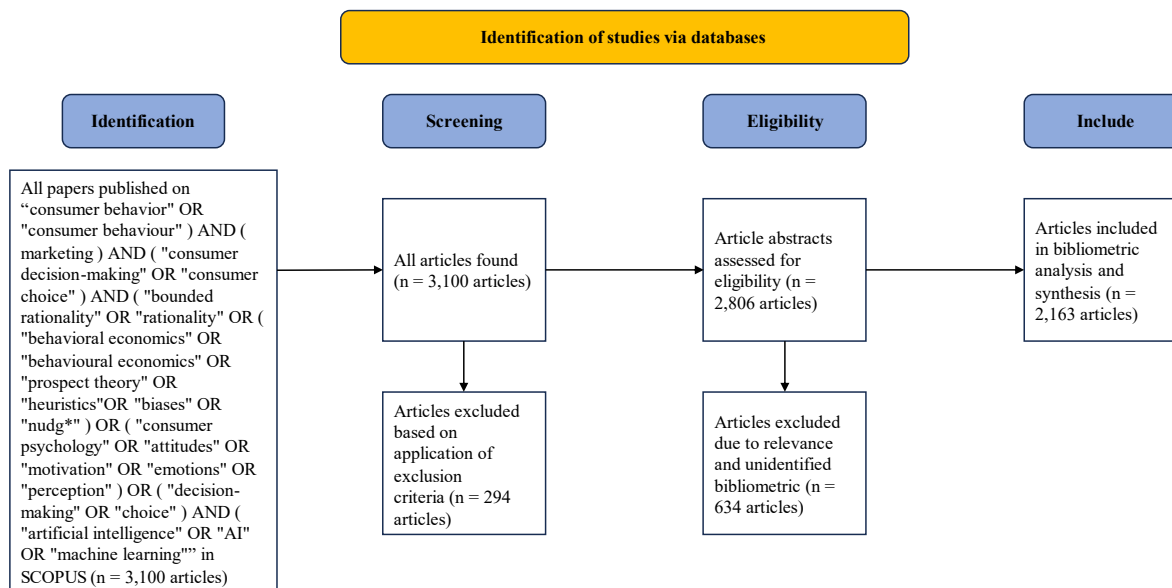


Figure 1.

PRISMA flow diagram for the selection of consumer decision-making research articles (N = 2,163).

2.2. Search Strategy and Data Extraction

Following the database selection, a rigorous keyword search strategy was designed to capture the multidisciplinary intersections of consumer decision-making (CDM), behavioral economics, and artificial intelligence. To comprehensively execute this within the Scopus database, the search query utilized specific Boolean operators targeting titles, abstracts, and keywords (TITLE-ABS-KEY). The exact formulation was executed as follows: TITLE-ABS-KEY(("consumer behavior" OR "consumer behaviour") AND (marketing) AND ("consumer decision making" OR "consumer choice") AND ("bounded rationality" OR "rationality" OR "behavioral economics" OR "behavioural economics" OR "prospect theory" OR "heuristics" OR "biases" OR "nudg*") OR ("consumer psychology" OR "attitudes" OR "motivation" OR "emotions" OR "perception") OR ("decision-making" OR "choice") AND ("artificial intelligence" OR "AI" OR "machine learning")). This complex combination of "AND" and "OR" functions ensured that both foundational behavioral theories and modern technological applications were simultaneously captured. Consequently, this initial comprehensive search yielded 3,100 potentially relevant scholarly articles.

To refine this initial pool and ensure strict topical relevance, specific inclusion and exclusion criteria were systematically applied to the retrieved records. The screening process purposefully isolated peer-reviewed research articles that explicitly intersected CDM frameworks with either behavioral economics or artificial intelligence applications. Conversely, the filtering protocol systematically excluded non-research publications, off-topic studies, and purely technical AI papers that lacked clear consumer-facing applications. This stringent curation guaranteed that only literature contributing directly to the understanding of consumer choices remained under consideration for the review. After rigorously screening for eligibility, removing duplicates, and eliminating non-conforming publications,

the final dataset was established. Ultimately, this extraction process yielded 2,163 highly relevant articles that were prepared for comprehensive bibliometric analysis.

2.3. Bibliometric Analysis Techniques

In the analytical phase, VOSviewer software was used to map the intellectual structure of the CDM research corpus [22, 23]. First, descriptive statistics were generated to establish an overview of the scope, growth, and geographic spread of the included literature [29, 30]. Next, citation and co-citation analyses assessed the relative impact of documents, highlighting intellectual linkages and the emergence of influential theoretical clusters [31]. Furthermore, a co-word analysis was conducted to probe the conceptual domain, where the size of visualization nodes reflects keyword frequency and color indicates temporal emergence. These visualization tools enabled a comprehensive examination of thematic relationships, successfully identifying “technology” and “decision making” as salient, forward-looking themes in recent scholarship.

3. Results

3.1. Prominent Publication Outlets

The initial phase of the results highlights the interdisciplinary nature of consumer decision-making (CDM) research across domains, such as marketing, information technology, and management science. As detailed in Table 1, the *Journal of Business Research* and the *Journal of Consumer Research* are the most influential and prolific sources within the dataset. These leading outlets have the highest overall citation counts, emphasizing their foundational roles in shaping contemporary academic discourse. Additionally, prominent IT-focused publications, notably *Computers in Human Behavior*, rank highly on this list, illustrating the critical role of digital environments in modern consumer behavior studies [32, 33]. Ultimately, these leading journals occupy authoritative positions, with their substantial citation metrics reflecting the perceived quality and broad applicability of their published research.

Table 1.
Ten Major Journals Focusing on Consumer Decision-Making Research, 1987–2024.

| Rank | Source | Co-Citations | Total Link Strength |
|------|---|--------------|---------------------|
| 1 | Journal of Business Research | 4,561 | 109,335 |
| 2 | Journal of Consumer Research | 4,012 | 104,393 |
| 3 | Journal of Retailing and Consumer Services | 3,116 | 65,872 |
| 4 | Journal of Marketing | 2,819 | 90,232 |
| 5 | Journal of Marketing Research | 2,564 | 79,105 |
| 6 | Computers in Human Behavior | 2,416 | 60,767 |
| 7 | Journal of the Academy of Marketing Science | 1,565 | 54,137 |
| 8 | Journal of Retailing | 1,533 | 53,428 |
| 9 | MIS Quarterly | 1,295 | 33,334 |
| 10 | Tourism Management | 1,225 | 27,273 |

Note: Scopus database, 1987–2024; analyzed using VOSviewer.

Further underscoring this interconnected academic structure, the co-citation analysis identifies the broader intellectual foundation upon which current CDM research is built. Table 2 presents the most highly co-cited sources, reaffirming the historical dominance of premier business and marketing journals in establishing core behavioral theories. Notably, the prominent ranking of *MIS Quarterly* within this co-citation network highlights the deep, sustained integration of information systems research into consumer decision-making frameworks. Furthermore, the analysis reveals significant conceptual overlaps with specialized, service-oriented outlets, such as *Tourism Management*, demonstrating how foundational CDM theories are actively applied across diverse industry contexts [34]. Collectively, these co-citation metrics confirm that, while the field is rapidly evolving with new technologies, it relies heavily on a stable, multidisciplinary core of established literature.

Table 2.
Top Ten Co-Cited Sources in Consumer Decision-Making Research, 1987–2024.

| Rank | Source | Co-Citations | Total Link Strength |
|------|---|--------------|---------------------|
| 1 | Journal of Business Research | 4,561 | 109,335 |
| 2 | Journal of Consumer Research | 4,012 | 104,393 |
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Note: Scopus database, 1987–2024; co-citation analysis conducted via VOSviewer.

3.2. Foundational Articles and Theoretical Frameworks

Beyond publication outlets, the analysis identified specific conceptual and empirical works that heavily influence current CDM scholarship. Table 3 lists the ten most highly cited articles, revealing that foundational work on hypermedia environments and recommender systems by Hoffman and Novak [35] and Adomavicius and Tuzhilin [36] anchors digital perspectives in consumer research. Additionally, Table 4 presents the top co-cited articles, demonstrating that seminal theories, such as Ajzen's theory of planned behavior and Davis's model of technology acceptance, form the theoretical backbone of the field [37–39]. Empirical studies on trust-based decision-making in e-commerce further underscore the sustained importance of digital adoption and relationship marketing in shaping modern choices. Collectively, these influential works demonstrate a progressive shift in the literature toward data-driven contexts while remaining firmly anchored in core psychological and behavioral models.

Table 3.
Ten Most Highly Cited Articles on Consumer Decision-Making Based on Scopus and Google Scholar Citations, 1987–2024 (N = 2,163).

| Rank | Document | Type* | Scopus Citations | GS Citations |
|------|---|-------|------------------|--------------|
| 1 | Hoffman and Novak [35]. Marketing in hypermedia computer-mediated environments: Conceptual foundations | Con | 3,272 | 10,188 |
| 2 | Kim, et al. [40]. A trust-based consumer decision-making model in electronic commerce | Empir | 2,231 | 5,203 |
| 3 | Smith, et al. [41]. Information privacy research: An interdisciplinary review | Rev | 1,433 | 2,498 |
| 4 | Pikkarainen, et al. [42]. Consumer acceptance of online banking: An extension of the TAM | Empir | 978 | 3,098 |
| 5 | Adomavicius and Tuzhilin [36]. Toward the next generation of recommender systems | Rev | 967 | 14,538 |
| 6 | De Veirman, et al. [43]. Marketing through Instagram influencers | Exp | 929 | 2,914 |
| 7 | Xiao and Benbasat [44]. E-commerce product recommendation agents: Use, characteristics, and impact | Rev | 822 | 6,456 |
| 8 | Davenport, et al. [45]. How artificial intelligence will change the future of marketing | Rev | 779 | 1,435 |
| 9 | Archak, et al. [46]. Deriving the pricing power of product features by mining consumer reviews | Empir | 728 | 1,287 |
| 10 | Dwivedi, et al. [47]. Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges | Con | 698 | 1,435 |

Note: Scopus database and Google Scholar, 1987–2024. GS = Google Scholar; TAM = Technology Acceptance Model; Con = Conceptual; Empir = Empirical; Rev = Review; Exp = Experimental.

Complementing these contemporary works, the co-citation analysis uncovers the enduring theoretical frameworks that form the underlying intellectual backbone of the field. As presented in

Table 4, fundamental psychological models remain centrally vital, with Ajzen's [37] theory of planned behavior commanding the highest co-citation count [37, 48]. In parallel, seminal technology-focused theories, specifically Davis's technology acceptance model (TAM) [39] and Venkatesh's unified framework, provide critical lenses for evaluating modern user adoption [49]. Bridging these behavioral and technological domains, empirical studies such as Kim et al. [40] research on trust-based decision-making in e-commerce prominently feature across both citation metrics [40]. Additionally, highly co-cited works detailing electronic word of mouth and customer journeys underscore the sustained importance of relationship marketing in shaping digital choices. Ultimately, these influential co-cited networks confirm that while CDM research rapidly embraces AI and digital platforms, it remains firmly anchored in core psychological principles.

Table 4.

Top Ten Most Co-Cited Articles on Consumer Decision-Making, 1987–2024 (n = 2,163)

| Rank | Cited Reference | Co-Citations | Total Link Strength |
|------|---|--------------|---------------------|
| 1 | Ajzen [37]. The theory of planned behavior. <i>Organizational Behavior and Human Decision Processes</i> , 50(2), 179–211 | 75 | 123 |
| 2 | Kim, et al. [40]. A trust-based consumer decision-making model in electronic commerce. <i>Decision Support Systems</i> , 44(2), 544–564 | 64 | 166 |
| 3 | Davis [39]. Perceived usefulness, perceived ease of use, and user acceptance of information technology. <i>MIS Quarterly</i> , 13(3), 319–340 | 63 | 163 |
| 4 | Lemon and Verhoef [50]. Understanding customer experience throughout the customer journey. <i>Journal of Marketing</i> , 80(6), 69–96 | 42 | 91 |
| 5 | Chevalier and Mayzlin [51]. The effect of word of mouth on sales: Online book reviews. <i>Journal of Marketing Research</i> , 43(3), 345–354 | 39 | 74 |
| 6 | Häubl and Trifts [52]. Consumer decision making in online shopping environments. <i>Marketing Science</i> , 19(1), 4–21 | 37 | 46 |
| 7 | Podsakoff, et al. [53]. Common method biases in behavioral research. <i>Journal of Applied Psychology</i> , 88(5), 879–903 | 37 | 107 |
| 8 | Venkatesh, et al. [49]. User acceptance of information technology: Toward a unified view. <i>MIS Quarterly</i> , 27(3), 425–478 | 37 | 100 |
| 9 | Dhar and Wertenbroch [54]. Consumer choice between hedonic and utilitarian goods. <i>Journal of Marketing Research</i> , 37(1), 60–71 | 33 | 60 |
| 10 | Morgan and Hunt [55]. The commitment-trust theory of relationship marketing. <i>Journal of Marketing</i> , 58(3), 20–38 | 32 | 66 |

Note: Scopus database, 1987–2024; co-citation analysis conducted via VOSviewer.

3.3. Global Geographic Distribution

The geographic distribution of consumer decision-making (CDM) research highlights a significant concentration of scholarly output and impact within specific global regions. As detailed in Table 5, the United States unequivocally leads global research contributions, commanding the highest metrics across publication volume (450 articles), total citations (24,534 citations), and overall link strength (169,734 links). Following this dominant position, the United Kingdom and Germany also demonstrate robust scholarly influence, characterized by exceptionally high citation counts relative to their publication volumes. This pronounced concentration of highly cited literature likely reflects substantial, sustained investments in research infrastructure and a strong strategic focus on Industry 4.0 technologies within these advanced Western economies [56]. Consequently, these established hubs form the foundational core of the global CDM research network, historically driving theoretical and empirical advancements in the field.

Table 5.
Top Ten Countries Publishing Consumer Decision-Making Research, 1987–2024.

| Rank | Country | Articles | Citations | Total Link Strength |
|------|----------------|----------|-----------|---------------------|
| 1 | United States | 450 | 24,534 | 169,734 |
| 2 | United Kingdom | 227 | 10,176 | 110,184 |
| 3 | Germany | 132 | 6,338 | 72,288 |
| 4 | China | 344 | 6,041 | 150,146 |
| 5 | Canada | 76 | 4,788 | 43,925 |
| 6 | Spain | 119 | 4,153 | 66,896 |
| 7 | Australia | 130 | 4,014 | 66,076 |
| 8 | Netherlands | 58 | 3,781 | 23,954 |
| 9 | India | 208 | 3,535 | 103,802 |
| 10 | France | 86 | 3,299 | 50,079 |

Note: Scopus database, 1987–2024.

In addition, quantitative data and network visualization reveal a rapid global paradigm shift driven by emerging economies, most notably China. Although it ranks fourth in terms of total citations, China boasts the second-highest publication volume (344 articles) and total link strength (150,146) globally. This explosive growth signals a massive recent acceleration in academic output, highlighting China's emergence as a premier producer of artificial intelligence research and a vital contributor to contemporary CDM scholarship. Similarly, India demonstrates a remarkably strong presence in the network, exhibiting a high publication volume (208 articles) and substantial link strength (103,802) that notably surpasses several established European nations. Ultimately, these metrics underscore the expanding global relevance of this domain, supported by significant talent development and technological investment across the Asian continent.

Beyond individual country metrics, the network map in Figure 2 illustrates the dense collaborative topography that characterizes international CDM research. The visualization distinctly divides the global landscape into two primary, highly interconnected clusters, represented by green and red nodes. The green cluster is heavily anchored by the United States and China, visualizing intense cooperative links that bridge the largest Western and Eastern research powerhouses. In contrast, the red cluster is centered around the United Kingdom, India, and various European nations, demonstrating parallel networks of robust, cross-continental academic collaboration. Together, the thick interconnecting lines between these prominent nodes confirm that modern consumer behavior scholarship is no longer siloed but rather thrives on increasingly integrated, borderless research initiatives.

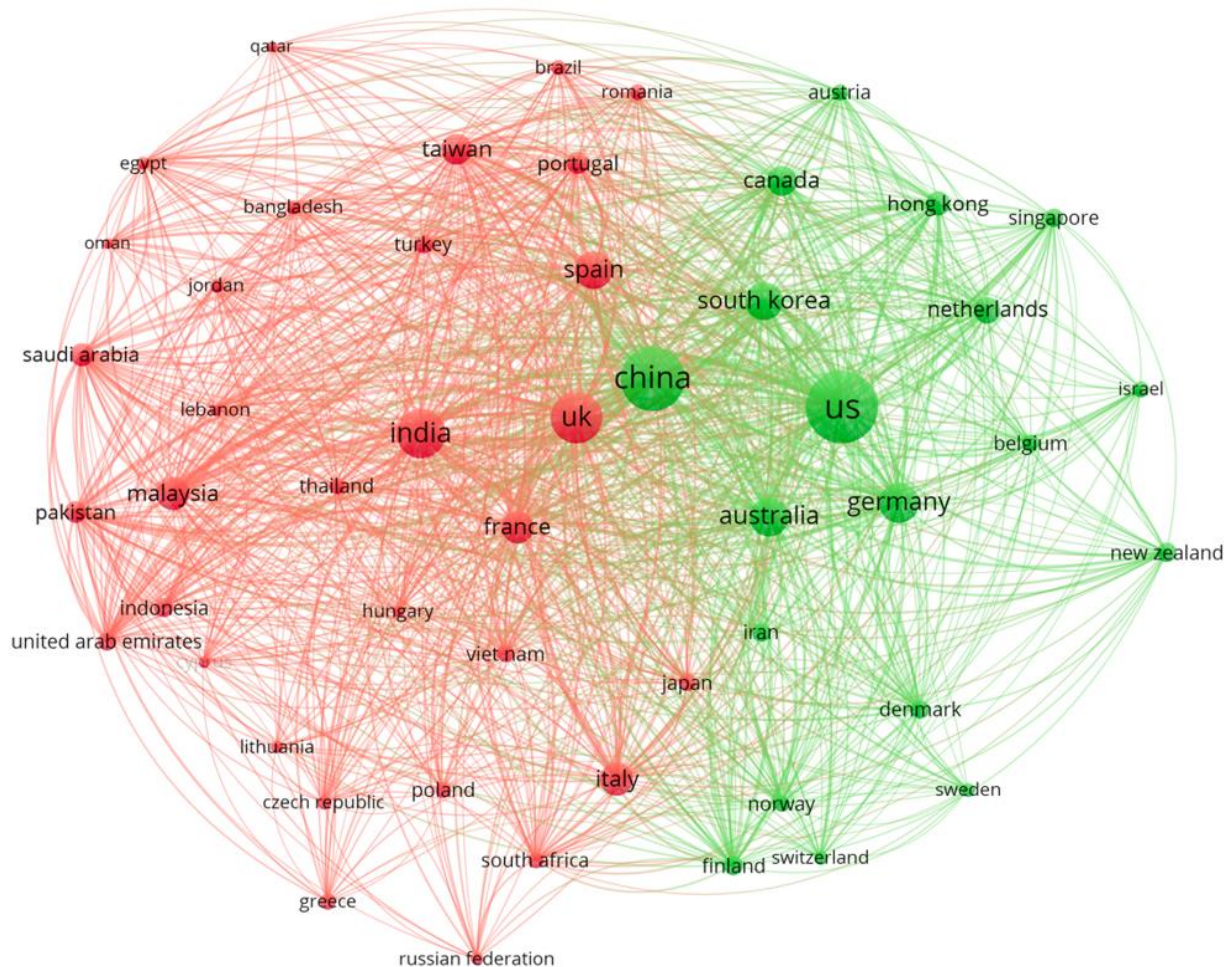


Figure 2. Geographic distribution of the top countries contributing to consumer decision-making research, 1987–2024.

3.4. Thematic Mapping and Evolution

The co-word analysis reveals a highly interconnected network of distinct thematic trends that define the intellectual landscape of consumer decision-making research. Specifically, Figure 3 presents this thematic structure through three primary conceptual clusters, each representing a distinct subfield of scholarly inquiry. The red cluster centers on e-commerce and digital marketplaces, encompassing themes such as sales, online consumer reviews, and social commerce dynamics. In contrast, the green cluster is anchored by fundamental consumer behavior concepts, reflecting a broad body of research examining psychological drivers, social influence, trust, and perceived risk. Finally, the blue cluster captures emerging technologies, including artificial intelligence, virtual reality, and augmented reality. Although these technological themes are less centrally positioned within the map, they signal rapidly growing academic interest in how advanced systems reconfigure modern consumer experiences and decision processes.

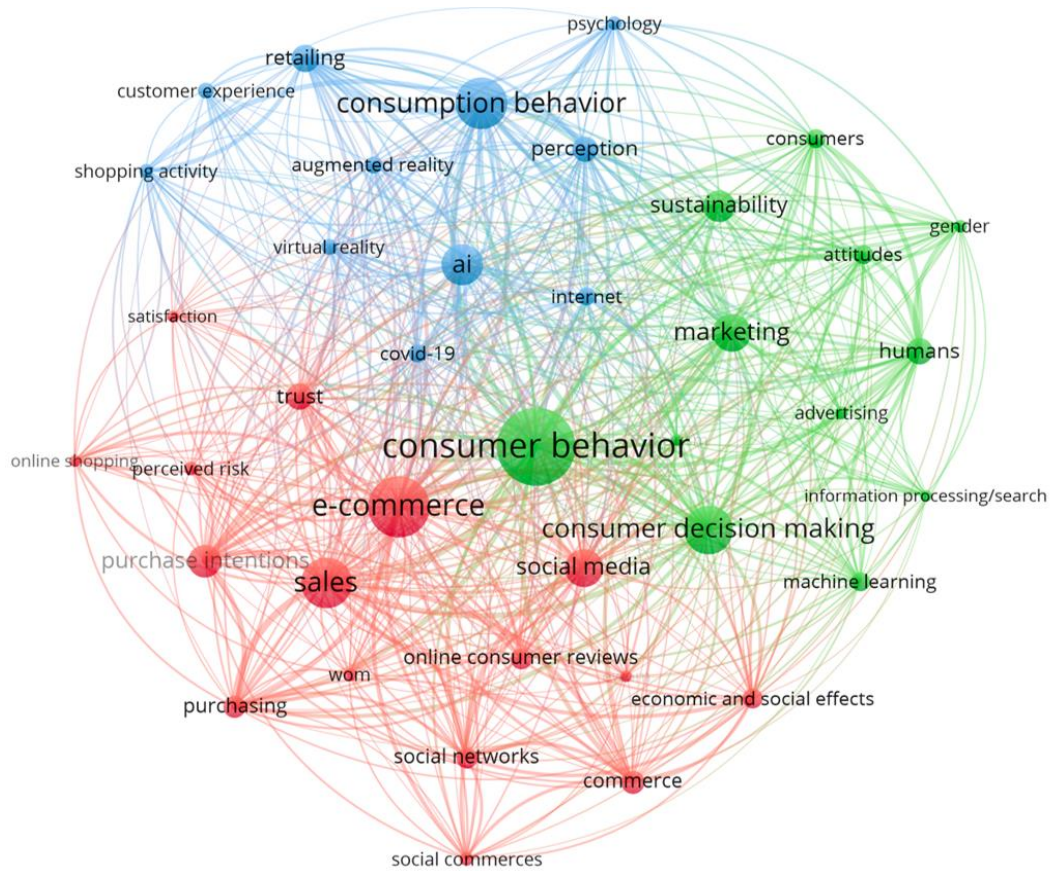


Figure 3.
Co-word map of key themes in consumer decision-making research, 1987–2024.

Expanding on these thematic groupings, the analysis also evaluated the temporal evolution of these concepts across the study period. Figure 4 visually maps the chronological emergence of these keywords using light-colored nodes to distinguish newly introduced topics from well-established theories. This chronological visualization indicates that dense hubs surrounding e-commerce and general consumer behavior represent a mature core of the foundational literature. Conversely, the map's sparser links identify topics such as purchase intention, sustainability, virtual reality, and augmented reality as the newest themes within the domain. These lighter nodes indicate underexplored yet highly promising research directions, particularly concerning sustainable consumption and immersive digital environments. Consequently, the overall network structure suggests that although the field is securely based on established foundational theories, these developing technological and sustainable areas will likely drive future research trajectories.

Table 6.
Top Ten Cited Authors in Consumer Decision-Making Research, 1987–2024 (N = 2,163).

| Rank | Author | Nation | Research Focus | Documents | Scopus Citations | CPD* |
|------|----------------|--------|-------------------------|-----------|------------------|--------|
| 1 | Benbasat, I. | CAN | Information systems | 6 | 1,807 | 301.17 |
| 2 | Grewal, D. | USA | Retailing and marketing | 5 | 1,263 | 252.6 |
| 3 | Dwivedi, Y. K. | UK | Information systems | 11 | 1,151 | 104.64 |
| 4 | Wang, Y. | CAN | Cognitive computing | 13 | 819 | 63 |
| 5 | Zhang, H. | CHN | Decision analysis | 8 | 769 | 96.13 |
| 6 | Filieri, R. | FRA | Online marketing | 5 | 752 | 150.4 |
| 7 | Ghose, A. | USA | Data science | 7 | 569 | 81.29 |
| 8 | Kim, J. | NZL | Consumer choice | 14 | 497 | 35.5 |
| 9 | Chen, Y. | TWN | Social media | 12 | 457 | 38.08 |
| 10 | Rana, P. | QAT | Computer science | 5 | 361 | 72.2 |

Note: Scopus database, 1987–2024. CPD = Citations per document; CAN = Canada; USA = United States; UK = United Kingdom; CHN = China; FRA = France; NZL = New Zealand; TWN = Taiwan; QAT = Qatar.

Source: Komiak and Benbasat [57]; Puccinelli, et al. [58]; Ismagilova, et al. [59]; Wang and Benbasat [60]; Zhang, et al. [61]; Filieri [62]; Ghose [63]; Kim and Park [64]; Chen [65] and Kaushik, et al. [66].

Building on these individual contributions, co-citation analysis reveals the specific authors who occupy central positions in the intellectual network of CDM research. As presented in Table 7, Grewal, Kim, and Wang are the most frequently co-cited scholars, indicating that their work serves as a shared reference point across multiple subfields. They are closely followed by influential figures such as Ajzen, Davis, and Venkatesh, whose seminal theories frequently anchor both behavioral and technological studies. Collectively, these authors represent key streams of research spanning marketing, cognitive computing, attitude-behavior relations, and technology acceptance. The presence of foundational management and social psychology scholars, such as Bagozzi and Liu, further highlights the conceptual breadth of this domain. Ultimately, these strong co-citation links suggest that modern CDM research has successfully integrated behavioral theories, technology adoption models, and data-driven approaches into a highly cohesive conceptual framework.

Table 7.
Top Ten Impact Scholars in Consumer Decision-Making Based on Co-Citation Analysis, 1987–2024.

| Rank | Author | Research Focus | Co-Citations | Total Link Strength |
|------|----------------|----------------------------------|--------------|---------------------|
| 1 | Grewal, D. | Marketing and consumer behavior | 639 | 12,410 |
| 2 | Kim, J. | AI and business analytics | 632 | 13,078 |
| 3 | Wang, Y. | Cognitive computing | 602 | 13,758 |
| 4 | Ajzen, I. | Attitude-behavior relations | 562 | 11,401 |
| 5 | Liu, Y. | Decision analysis | 544 | 11,602 |
| 6 | Davis, F. D. | Technology acceptance | 530 | 13,350 |
| 7 | Dwivedi, Y. K. | Information systems | 518 | 13,989 |
| 8 | Venkatesh, V. | Computer science | 496 | 12,768 |
| 9 | Bagozzi, R. P. | Management and social psychology | 494 | 11,176 |
| 10 | Benbasat, I. | Information systems | 459 | 10,705 |

Note: Scopus database, 1987–2024; co-citation analysis conducted via VOSviewer. Minimum co-citation threshold: 183; total authors identified: 102.

Source: Puccinelli, et al. [58]; Kim and Park [64]; Wang and Benbasat [60]; Ajzen [37]; Zhang, et al. [61]; Davis [39]; Dwivedi, et al. [47]; Venkatesh, et al. [49]; Bagozzi, et al. [67] and Benbasat and Barki [68].

Visualizing this interconnected structure, Figure 5 maps the co-citation network of these influential authors to reveal distinct schools of thought. The dense connections surrounding prominent scholars vividly highlight how marketing, behavioral, and technology acceptance perspectives jointly underpin our understanding of digital consumer environments. Specifically, the resulting map delineates three major intellectual clusters, beginning with a prominent red cluster that captures research grounded in rational choice theory and behavioral economics. This specific school of thought focuses heavily on how consumers make decisions under the assumption of utility maximization while simultaneously accounting for cognitive and psychological constraints. Within this domain, researchers have explored

the mental processes underlying purchasing behavior, including critical factors such as perception and attitudes [69–71]. Consequently, authors such as Wang and Benbasat [60] and Kim et al. [40] appear densely interconnected in this red cluster, reflecting their vital role in integrating analytical decision models with deep behavioral insights.

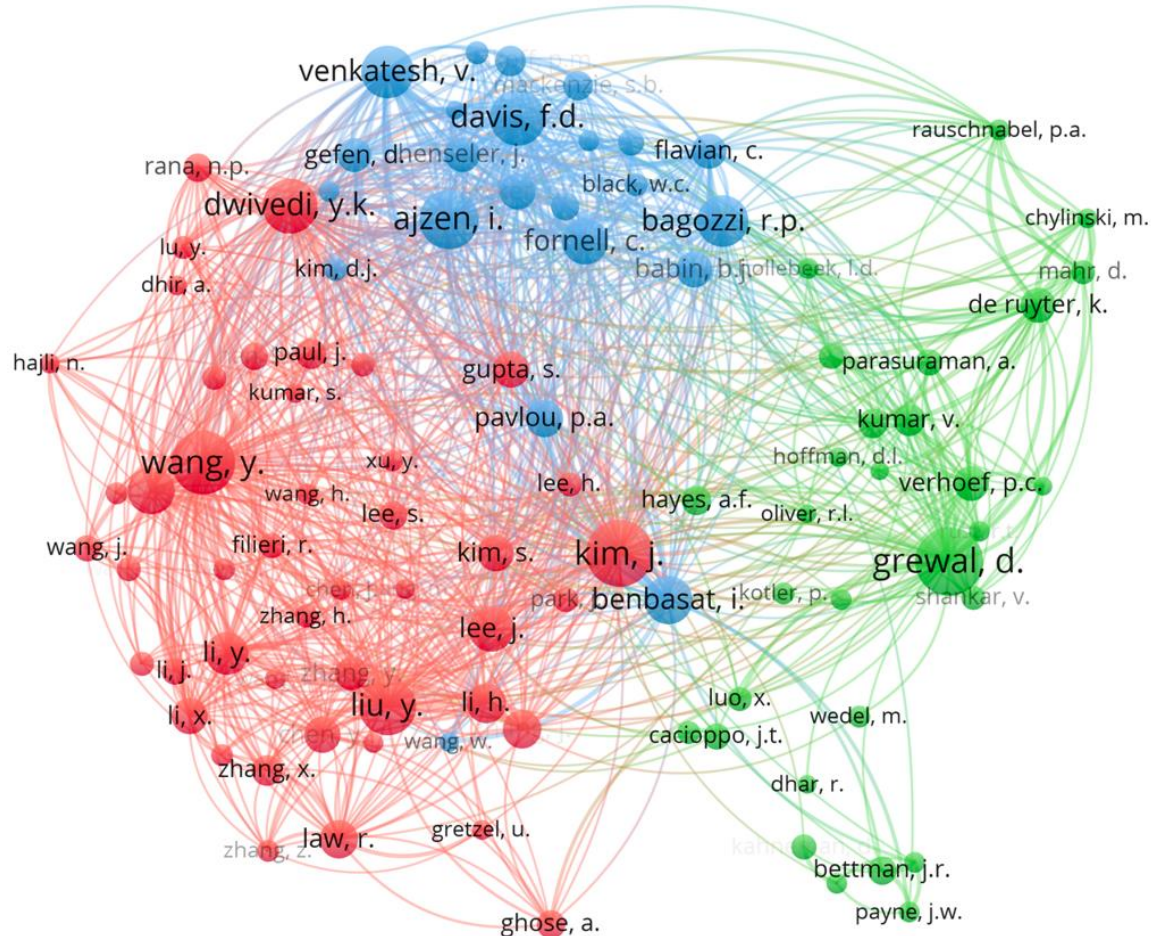


Figure 5. Co-citation network map of influential authors in consumer decision-making research, 1987–2024.

In addition to behavioral economics, Figure 5 illustrates a distinct blue cluster representing the profound impact of technology and digital systems on consumer behavior. This technological school emphasizes utilitarian evaluations, focusing specifically on consumers' perceived usefulness, ease of use, and overall technology acceptance patterns. Key authors anchoring this cluster include Davis et al. [72] and Venkatesh et al. [49], whose established models are widely employed to understand consumer adoption of AI-powered tools and digital technology. Conversely, the green cluster centers on service quality and functional value, addressing how consumers rationally assess services and overall shopping experiences. Prominent authors such as Grewal et al. [73], Dodds et al. [74], and Parasuraman et al. [75] dominate this space, indicating a strong academic tradition of evaluating reliability, responsiveness, and perceived service value. Taken together, these three interconnected clusters confirm that rational economics, technology acceptance frameworks, and service value models collectively shape the contemporary understanding of consumer decision-making.

4. Discussion

4.1. *The Shift Toward Adaptive-Bounded Rationality*

The findings from this comprehensive bibliometric review illuminate significant thematic and geographic shifts in consumer decision-making (CDM) scholarship. Specifically, these evolving trajectories reflect adaptive academic responses to changing market dynamics in a highly globalized, technology-intensive context [76, 77]. The emergence of distinct thematic clusters underscores the fact that contemporary research increasingly adopts a multidimensional perspective, moving decisively beyond traditional rational-choice assumptions [78, 79]. Within this framework, the behavioral cluster prominently highlights the profound influence of psychological, emotional, and cognitive factors on modern purchasing choices. While classical models assume that consumers systematically weigh options to maximize benefits, the integration of artificial intelligence (AI) validates the concept of adaptive, bounded rationality [80]. Ultimately, AI-driven tools can analyze massive datasets to uncover previously unobservable behavioral patterns, thereby supporting and refining existing psychological theories [81, 82].

4.2. *Expanding Technology Acceptance and Service Frameworks*

Beyond behavioral insights, the proliferation of AI has significantly extended the application of the Technology Acceptance Model (TAM) and related digital frameworks [83]. Understanding consumer adoption of AI-driven services now requires incorporating complex dimensions, such as algorithmic trust, perceived transparency, and ethical data governance [84]. Furthermore, predictive analytics and hyper-personalization are actively reshaping service quality paradigms by demonstrating how proactive support influences customer loyalty in digital environments. [85, 86]. This transformative potential is mirrored across other domains, where AI optimizes operations in healthcare, finance, and education through advanced data individualization [87-89]. Recognizing this cross-domain versatility clarifies AI's role as a general-purpose technology, highlighting the critical need for CDM scholars to monitor advancements in adjacent fields [90]. Consequently, the synthesis of technological and service-quality clusters reflects the modern expectation for seamless, highly integrated consumer interactions [91].

4.3. *Global Expansion and Identified Literature Gaps*

In tandem with these theoretical advancements, the geographic distribution of CDM research reveals a notable expansion into developing economies. The rapid growth in scholarship in countries such as Malaysia, Turkey, Vietnam, Saudi Arabia, India, and Pakistan signals the expanding global relevance of this domain. Internationalization presents valuable opportunities for multidisciplinary research that captures diverse and culturally nuanced consumer decision-making processes. Simultaneously, the heavy concentration of highly cited literature in economically developed regions underscores the necessity of broadening empirical coverage to ensure global representativeness. Furthermore, bibliometric mapping identifies critical literature gaps, particularly concerning the intersection of AI, sustainability, and social commerce within the tourism and service sectors [92]. Addressing these gaps provides fertile ground for future inquiry, ultimately fostering more holistic and socially integrated approaches to studying digital consumerism [93, 94].

4.4. *Theoretical and Practical Implications*

This bibliometric review provides significant theoretical contributions by synthesizing previously isolated streams of consumer decision-making research into a cohesive, technology-integrated framework. Specifically, the analysis demonstrates that traditional psychological models can no longer be evaluated independently from digital system adoption theories, such as the technology acceptance model. Furthermore, the findings empirically validate the academic transition toward an adaptive-bounded rationality perspective, illustrating how artificial intelligence fundamentally alters historical assumptions about cognitive processing limits. By mapping the intellectual structure across the business, psychology, and computer science domains, this study establishes a vital multidisciplinary foundation for future scholarship. Additionally, the identification of dense, cross-continental research

networks highlights the pressing necessity of expanding theoretical models to account for culturally nuanced digital behaviors. Ultimately, these theoretical advancements provide scholars with a robust, updated roadmap for exploring complex human–computer interactions in modern consumption environments.

From a practical standpoint, the insights generated by this comprehensive analysis offer critical strategic value to marketers, system developers, and policymakers. Industry professionals can leverage these interconnected behavioral and technological frameworks to design more effective, AI-driven hyper-personalization strategies that accurately predict sophisticated consumer needs. Moreover, the strong thematic emphasis on service quality dictates that businesses must prioritize algorithmic transparency and reliability to build sustained consumer trust in digital marketplaces. In tandem with technological deployment, practitioners must proactively address the ethical challenges identified in the literature, particularly concerning data privacy, algorithmic bias, and subtle consumer manipulation. Consequently, policymakers are urged to utilize these synthesized academic insights to formulate robust governance frameworks that protect consumer autonomy without stifling digital innovation. Taken together, these practical applications empower organizations to navigate the complex, AI-mediated retail landscape responsibly, ethically, and competitively.

5. Conclusions

5.1. Key Findings

Synthesizing insights from this 37-year review, it is evident that CDM research has experienced substantial theoretical and empirical growth. The analysis of 2,163 articles confirmed a critical paradigm shift, moving from isolated behavioral models toward highly integrated, technology-centric frameworks [95, 96]. This narrowing gap between traditional psychology and digital systems literature indicates a scholarly consensus that modern consumer choices cannot be understood without analyzing algorithmic influences [97]. Additionally, consistent publications within top-tier management and marketing journals underscore the deepening inquiry into how decision-support platforms reshape everyday consumer reality. Although high-impact output remains concentrated in advanced economies, geographic diversification confirms that the interplay between humans and AI is becoming a global focal point. Ultimately, this evolution reveals an inseparable relationship in which advanced technologies fundamentally redefine how consumers search, evaluate, and interact within a networked marketplace [98].

5.2. Limitations

Despite the comprehensive nature of this systematic review, several methodological limitations must be acknowledged to contextualize the findings. First, the exclusive reliance on the Scopus database introduces potential selection bias, suggesting that incorporating repositories such as Web of Science could uncover additional influential works [24]. Second, the methodological focus on English-language publications inherently risks language bias, potentially overlooking vital CDM research published in other linguistic regions. Third, bibliometric reviews are susceptible to publication bias because studies with highly visible or positive results are more likely to be published and cited. Fourth, considering the rapid developmental pace of AI, this review captures a specific snapshot in time, indicating that emergent themes may quickly alter the current intellectual landscape. Finally, reliance on quantitative citation metrics may not fully capture the substantive academic quality or practical impact of individual studies [99].

5.3. Direction of Future Research

Future research should adopt an integrated approach to explore how sustainable thinking, immersive technology, and overall experience design influence consumer decision-making. To better understand why consumers choose to act on or not act on their sustainable intentions, researchers should investigate how choice decisions and the use of digital tools can support users in developing

sustainable habits within a circular economy. At the same time, the rise of several modern technological tools, including augmented reality (AR), requires an investigation into how virtual product visualization changes the way we think, reducing fear and doubts about product characteristics and building confidence before purchase.

To advance the field effectively, future research must proactively address the ethical, societal, and psychological implications of AI integration. Scholars should rigorously examine the long-term consequences of algorithmic bias on consumer autonomy and prioritize investigations into trust, transparency, and perceived control. Sector-specific empirical studies focusing on sustainable products, healthcare, and financial services are necessary to generate tailored frameworks that reflect unique industry constraints. Researchers must also explore the nuanced intersection of AI and consumer psychology to identify how digital systems might inadvertently exploit cognitive biases or induce decision fatigue. Furthermore, longitudinal study designs are critical for tracking how artificial intelligence reshapes market structures and business strategies over extended periods. By pursuing these targeted directions, the academic community can develop robust, context-sensitive theories that ensure responsible AI governance during stable periods and rapid market shifts.

Institutional Review Board Statement:

This study is a bibliometric analysis based solely on published literature and database records. No primary data were collected from the human participants.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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