


Bibliometric Analysis of Omnichannel Retailing: Mapping Research Trends and Future Directions

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Article Info	ABSTRACT
<p>Article history:</p> <p>Received March, 2025 Revised March, 2025 Accepted March, 2025</p> <hr/> <p>Keywords:</p> <p>Omnichannel retailing, bibliometric analysis, VOSviewer, customer experience</p>	<p>Omnichannel retailing has emerged as a transformative strategy in the retail sector, integrating online and offline channels to provide a seamless shopping experience. This study conducts a bibliometric analysis using data from Scopus and visualization techniques with VOSviewer to map the research landscape, trends, and future directions in omnichannel retailing. The findings reveal a significant increase in academic interest post-2020, driven by digital transformation and changing consumer behaviors. The keyword co-occurrence network highlights dominant themes such as customer experience, supply chain management, pricing strategies, and technological advancements. Additionally, the author and country collaboration networks identify key contributors and research hubs, with China and the United States leading in scholarly output. Despite progress in omnichannel research, gaps remain in areas such as sustainability, AI-driven personalization, and omnichannel adoption in emerging markets. This study provides valuable insights for researchers and practitioners, emphasizing the need for interdisciplinary collaboration and technological innovation to enhance omnichannel strategies.</p> <p><i>This is an open access article under the CC BY-SA license.</i></p> <div></div>

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<h2>1. INTRODUCTION</h2> <p>Omnichannel retailing has emerged as a transformative force in the retail sector, reshaping the way businesses engage with customers across multiple touchpoints [1]. Unlike traditional retail models, which operate through isolated channels, omnichannel retailing integrates online and offline interactions to create a seamless customer experience [2]. The rise of e-commerce, advancements in digital technology, and changing consumer expectations have accelerated the adoption of</p>	<p>omnichannel strategies. Retailers that successfully implement omnichannel approaches gain a competitive advantage by offering convenience, personalization, and a frictionless shopping journey [3]. Given the growing relevance of this topic, academic research on omnichannel retailing has proliferated, exploring various dimensions such as consumer behavior, supply chain integration, and technological enablers [4].</p> <p>The development of omnichannel retailing is closely linked to technological innovations, particularly in big data analytics, artificial intelligence (AI), and the Internet of</p>
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Things (IoT) [5]. These technologies facilitate real-time inventory management, personalized marketing, and seamless transactions across multiple platforms [6]. Retailers leverage customer data to understand shopping behaviors, predict demand, and offer customized recommendations. Furthermore, AI-driven chatbots and virtual assistants enhance customer service by providing instant support and guiding purchasing decisions [7]. As digital transformation continues to shape the retail landscape, understanding how omnichannel strategies evolve is essential for both researchers and practitioners.

Consumer expectations play a critical role in shaping omnichannel strategies. Today's consumers demand a unified shopping experience, expecting retailers to synchronize pricing, promotions, and product availability across different channels [8]. The rise of mobile commerce (m-commerce) and social media platforms has further complicated the retail ecosystem, as consumers now engage with brands through multiple touchpoints before making a purchase decision [9]. Research suggests that customers who interact with brands across multiple channels tend to be more loyal and generate higher lifetime value compared to single-channel shoppers [10]. Consequently, retailers are investing in omnichannel strategies to enhance customer retention and satisfaction.

Despite its advantages, omnichannel retailing presents numerous challenges for businesses. Retailers must overcome logistical complexities related to inventory synchronization, order fulfillment, and last-mile delivery [11]. Additionally, maintaining consistent branding and customer experience across multiple platforms requires robust digital infrastructure and effective channel coordination [12]. Privacy and data security concerns also pose significant challenges, as retailers collect vast amounts of customer data to personalize shopping experiences [13]. As the omnichannel landscape continues to evolve, researchers must explore innovative solutions to address these challenges while maximizing business performance.

Bibliometric analysis has become a valuable method for mapping research trends and identifying future directions in various academic fields, including retailing [14]. By analyzing citation networks, co-authorship patterns, and keyword co-occurrences, bibliometric studies provide insights into the intellectual structure of a research domain [15]. While numerous studies have examined different aspects of omnichannel retailing, there is a lack of comprehensive bibliometric analysis that synthesizes existing knowledge and highlights emerging trends. Given the increasing academic interest in omnichannel retailing, a bibliometric approach can provide a systematic overview of research developments, influential authors, and potential areas for future exploration.

Despite the rapid growth of omnichannel retailing research, there is still a lack of clarity regarding the intellectual structure, dominant themes, and emerging research directions in this domain. Prior studies have focused on specific aspects of omnichannel strategies, such as technology adoption, consumer behavior, and supply chain management [16], [17]. However, a comprehensive synthesis of the field remains limited. Without a systematic mapping of research trends, scholars and practitioners may struggle to identify key contributions, influential studies, and gaps that require further investigation. Therefore, a bibliometric analysis is necessary to consolidate existing knowledge and guide future research efforts in omnichannel retailing. The study seeks to (1) analyze publication trends and citation patterns, (2) identify the most influential authors, journals, and institutions in omnichannel retailing research, (3) explore the thematic structure of the field through keyword co-occurrence analysis, and (4) highlight emerging research topics and gaps that warrant further exploration.

Evolution of Omnichannel Retailing

Omnichannel retailing has evolved from early multi-channel retail strategies, which primarily involved separate but coexisting online and offline sales channels [18]. Early studies on retailing focused on the

transition from traditional brick-and-mortar stores to e-commerce, highlighting challenges such as channel conflict, pricing inconsistencies, and operational inefficiencies [19]. However, as digital transformation progressed, businesses began integrating these channels to provide a seamless shopping experience, leading to the rise of omnichannel retailing [20]. The shift toward omnichannel retailing is driven by technological advancements and changing consumer behavior. Research has shown that customers increasingly expect a unified experience across multiple touchpoints, including physical stores, websites, mobile applications, and social media platforms ([21]. This evolution is further fueled by big data analytics, artificial intelligence (AI), and the Internet of Things (IoT), which enable retailers to synchronize inventory, personalize customer interactions, and optimize supply chain operations [22]. Consequently, omnichannel strategies have become a critical success factor in modern retailing.

Consumer Behavior in Omnichannel Retailing

Understanding consumer behavior is essential in the study of omnichannel retailing, as customers navigate seamlessly between digital and physical channels. Research indicates that omnichannel customers exhibit distinct shopping behaviors compared to single-channel consumers [23]. They tend to engage with brands through multiple touchpoints, conduct extensive research before making purchase decisions, and have higher lifetime value due to increased brand loyalty [24]. A key aspect of consumer behavior in omnichannel retailing is the "webrooming" and "showrooming" phenomenon. Webrooming refers to customers researching products online before purchasing them in a physical store, whereas showrooming involves browsing products in a store before buying them online [25]. Studies suggest that retailers who successfully integrate their online and offline channels can mitigate the risks of showrooming by offering price-matching strategies, in-store pickup options, and seamless return policies [26]. Additionally, personalization and

convenience are major drivers of consumer engagement in omnichannel retailing. AI-driven recommendation systems, location-based marketing, and predictive analytics enable retailers to provide tailored experiences that enhance customer satisfaction [25]. However, privacy concerns remain a significant challenge, as consumers are increasingly aware of data collection practices and demand greater transparency in how their personal information is used [27].

Technological Enablers of Omnichannel Retailing

Technology plays a pivotal role in the implementation of omnichannel retailing strategies. Several studies have examined the impact of various digital tools on the efficiency and effectiveness of omnichannel operations. Key technological enablers include big data analytics, AI, blockchain, and augmented reality (AR). Big data analytics allows retailers to gain valuable insights into consumer behavior, optimize inventory management, and enhance demand forecasting [6]. AI-powered chatbots and virtual assistants improve customer service by providing instant responses to inquiries, while machine learning algorithms help in predicting customer preferences and automating personalized marketing campaigns [13]. Blockchain technology is another emerging enabler of omnichannel retailing, particularly in ensuring supply chain transparency and security [24]. By providing a decentralized and tamper-proof ledger, blockchain enhances trust between retailers and consumers, especially in areas such as product authenticity and ethical sourcing. Meanwhile, AR and virtual reality (VR) technologies are revolutionizing the shopping experience by enabling customers to visualize products in real-world settings before making a purchase [26].

Supply Chain and Logistics Challenges

One of the most critical aspects of omnichannel retailing is supply chain management. Unlike traditional retailing, where inventory and logistics operations are relatively straightforward, omnichannel strategies require a highly integrated and flexible supply chain [25]. Retailers must

synchronize inventory across multiple distribution channels, optimize last-mile delivery, and ensure efficient order fulfillment to meet consumer expectations. Studies highlight the importance of real-time inventory visibility in omnichannel retailing. Accurate inventory data enables retailers to offer services such as "buy online, pick up in-store" (BOPIS) and same-day delivery, enhancing convenience for consumers [27]. However, maintaining inventory accuracy across multiple channels presents significant logistical challenges, as discrepancies can lead to stockouts, overstocking, and operational inefficiencies [28]. The rise of e-commerce has also put pressure on last-mile delivery logistics. Consumers expect faster and more flexible delivery options, prompting retailers to invest in alternative fulfillment models such as micro-fulfillment centers, drone deliveries, and crowdsourced logistics [29]. However, these innovations come with additional costs and require careful coordination between different supply chain stakeholders.

2. METHODS

3. RESULTS AND DISCUSSION

3.1 Publication by Year

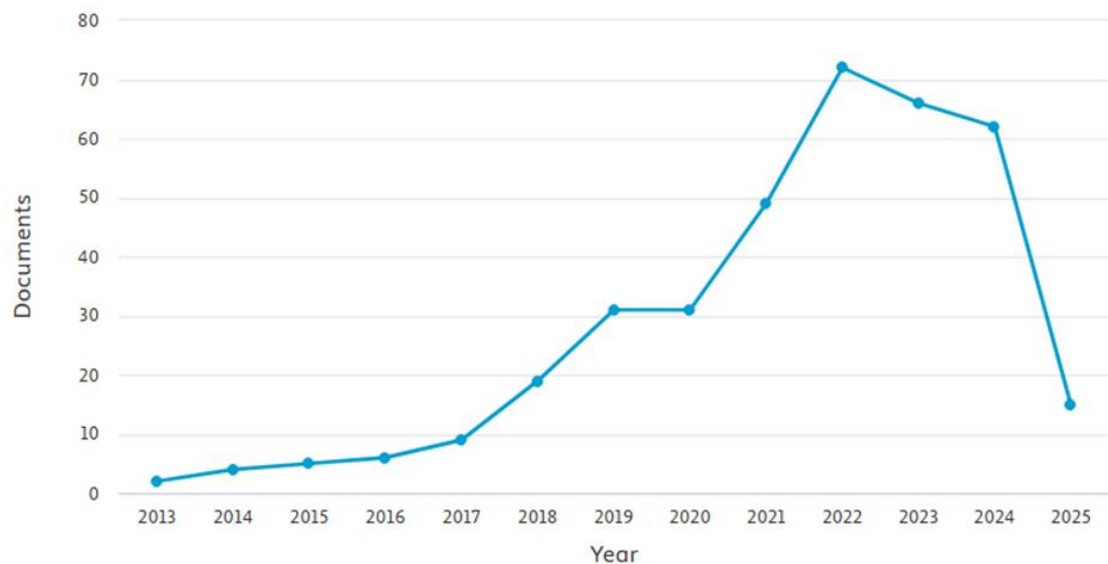


Figure 1. Documents by Year
Source: Scopus Database, 2025

The visualization represents the publication trend of research on omnichannel

This study employs a bibliometric analysis using data exclusively from the Scopus database to examine the research landscape of omnichannel retailing. The bibliometric approach enables the identification of key research trends, influential authors, and thematic structures within the field (Zupic & Čater, 2015). The research follows a structured methodology: (1) data collection, where relevant literature is retrieved from Scopus using predefined keywords such as "omnichannel retailing", "multichannel retailing", and "cross-channel shopping"; (2) data preprocessing, involving the removal of duplicate records and irrelevant publications to ensure accuracy; (3) descriptive analysis, focusing on publication trends, citation patterns, and journal impact; (4) network visualization, conducted using VOSviewer, to map co-citation networks, keyword co-occurrence relationships, and authorship collaborations; and (5) thematic clustering, where research hotspots and emerging topics are identified based on keyword and citation analysis.

retailing from 2013 to 2025, showing the number of documents published per year. The

data indicates a steady increase in research activity from 2013 to 2019, followed by a significant surge between 2020 and 2022, where the number of publications peaked in 2022 at approximately 75 documents. This sharp increase suggests a growing academic interest in omnichannel retailing, likely driven by digital transformation and the

3.2 Publication by Affiliation

impact of the COVID-19 pandemic on retail strategies. However, after 2022, the trend shows a slight decline in 2023 and 2024, followed by a steep drop in 2025. The sharp decline in 2025 may be due to incomplete data collection for the year or a shift in research focus to related emerging topics.

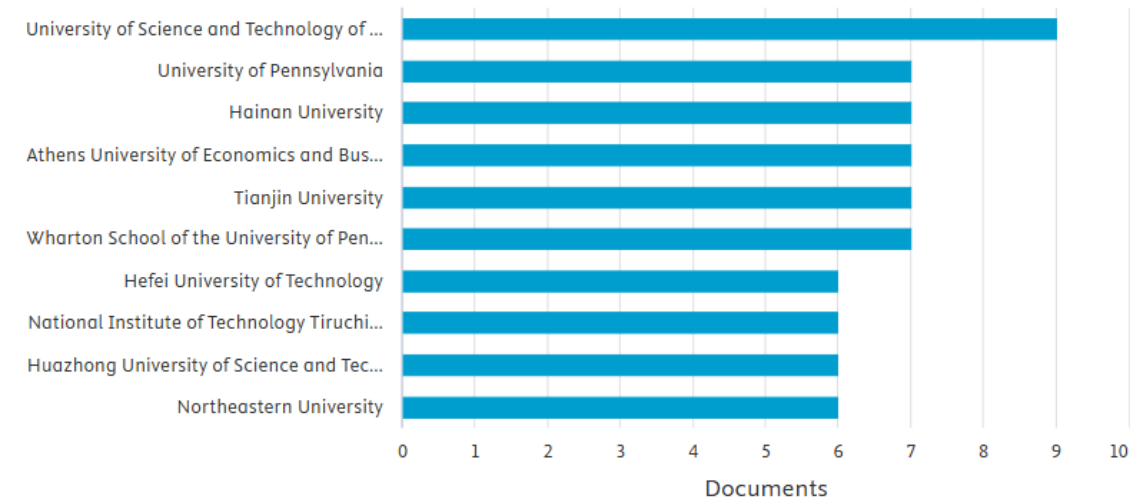


Figure 2. Documents by Affiliation
Source: Scopus Database, 2025

The visualization illustrates the top contributing institutions in omnichannel retailing research, measured by the number of published documents. The University of Science and Technology leads with the highest number of publications, followed by the University of Pennsylvania, Hainan University, and Athens University of Economics and Business, each contributing around seven publications. Other institutions, including Tianjin University, Wharton School of the University of Pennsylvania, and Hefei

3.3 Publication by Country

University of Technology, have also made significant contributions, publishing around six documents each. The presence of universities from different regions, including China, the United States, and Europe, suggests a global academic interest in omnichannel retailing research. The close distribution of publication counts among the institutions indicates that research in this field is not highly concentrated in one institution, but rather dispersed among multiple academic centers.

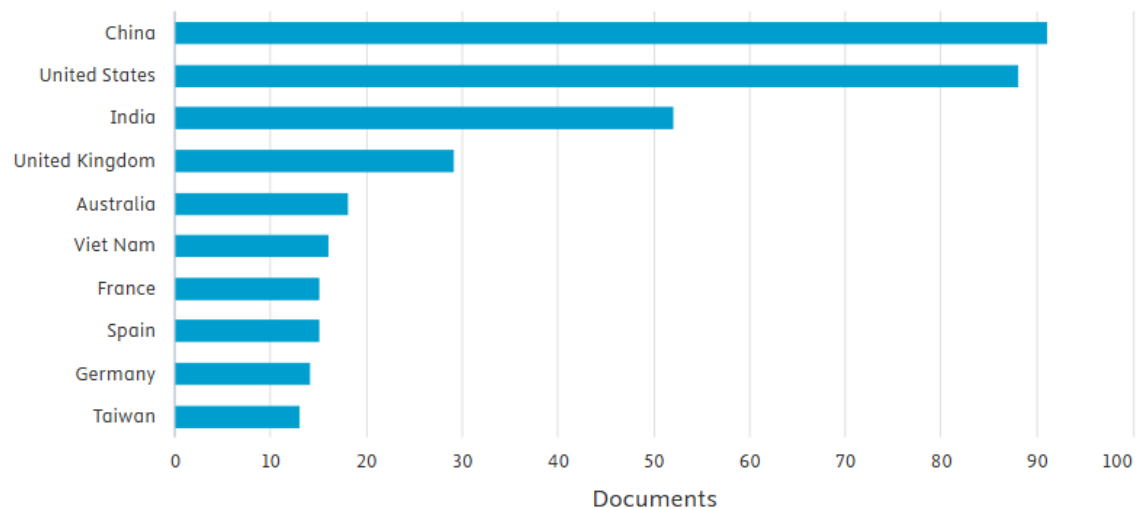


Figure 3. Documents by Country

Source: Scopus Database, 2025

The visualization displays the top contributing countries in omnichannel retailing research based on the number of published documents. China leads the field with the highest number of publications, closely followed by the United States. India ranks third, indicating a strong research presence in omnichannel retailing within the Asian region. The United Kingdom, Australia, and Vietnam also contribute significantly, reflecting academic interest in both developed and emerging markets. European countries such as France, Spain, and Germany also appear among the top contributors, though

with relatively fewer publications. Taiwan rounds out the list, highlighting its growing involvement in retail and digital transformation research. The dominance of China and the U.S. suggests that technological advancements, e-commerce growth, and digital retail innovations in these nations drive extensive academic inquiry. The presence of India and Vietnam indicates increasing interest from developing economies, where omnichannel retailing plays a crucial role in bridging digital and physical commerce

3.4 Keyword Co-Occurrence Network Visualization

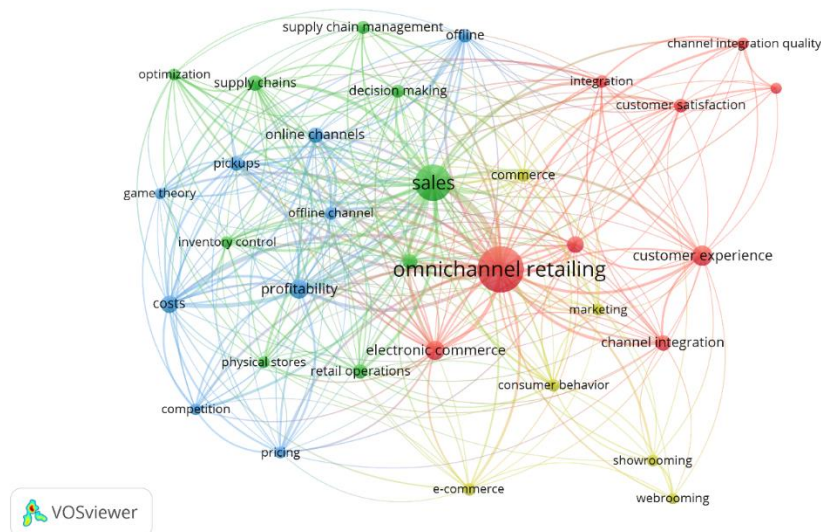


Figure 4. Network Visualization

Source: Data Analysis, 2025

The visualization represents a keyword co-occurrence network in omnichannel retailing research, highlighting the relationships between frequently occurring terms in academic publications. The size of each node indicates the frequency of a keyword's appearance in the dataset, while the thickness and proximity of the connecting lines illustrate the strength of the association between keywords. The central keyword, "omnichannel retailing," is the most prominent term, connecting with multiple research themes that branch into different clusters. The color-coded clusters indicate different thematic areas within omnichannel retailing, showing distinct but interconnected research directions. The red cluster, which includes keywords like "customer experience," "customer satisfaction," "channel integration," and "marketing," represents research focusing on the consumer-centric aspects of omnichannel retailing. Studies within this theme explore how businesses enhance customer engagement through seamless channel integration, personalized marketing, and superior customer experiences. The presence of terms like "channel integration quality" suggests that research is also addressing the challenges and effectiveness of merging multiple retail touchpoints. This cluster highlights a growing academic interest in how omnichannel strategies impact consumer behavior, loyalty, and satisfaction, reflecting the increasing demand for seamless shopping experiences.

The green cluster centers around "sales," "commerce," "online channels," "offline channel," and "decision making." This theme primarily addresses the operational and strategic aspects of omnichannel retailing. It focuses on how retailers optimize sales channels, balance online and offline interactions, and make data-driven decisions to improve profitability. The connection with "supply chain management" and "optimization" indicates that researchers are

investigating how retailers can efficiently manage inventory, logistics, and order fulfillment across multiple channels. This cluster is critical for understanding the business strategies that drive omnichannel success and the challenges associated with integrating traditional and digital retail infrastructures. The blue cluster, which includes terms like "costs," "competition," "pricing," "inventory control," and "profitability," represents research focusing on the economic and logistical challenges of omnichannel retailing. This cluster highlights studies examining cost implications, pricing strategies, and competition dynamics between online and offline channels. The inclusion of "game theory" suggests that some researchers are using mathematical and strategic models to analyze pricing competition and consumer decision-making in an omnichannel environment. As retailers strive to balance cost efficiency with enhanced customer service, this research area provides critical insights into financial sustainability and competitive strategy.

The yellow cluster, which contains terms like "electronic commerce," "consumer behavior," "showrooming," and "webrooming," focuses on the changing shopping behaviors in the omnichannel retail landscape. This cluster explores how technology, digital platforms, and consumer expectations shape purchasing decisions. The presence of "showrooming" and "webrooming" suggests that a significant portion of the research is dedicated to understanding how consumers shift between online and offline channels before making purchases. This aligns with current retail trends where consumers research products online but prefer to buy in-store, or vice versa. The yellow cluster is crucial for identifying emerging patterns in consumer preferences and how businesses can adapt their strategies to meet evolving expectations.

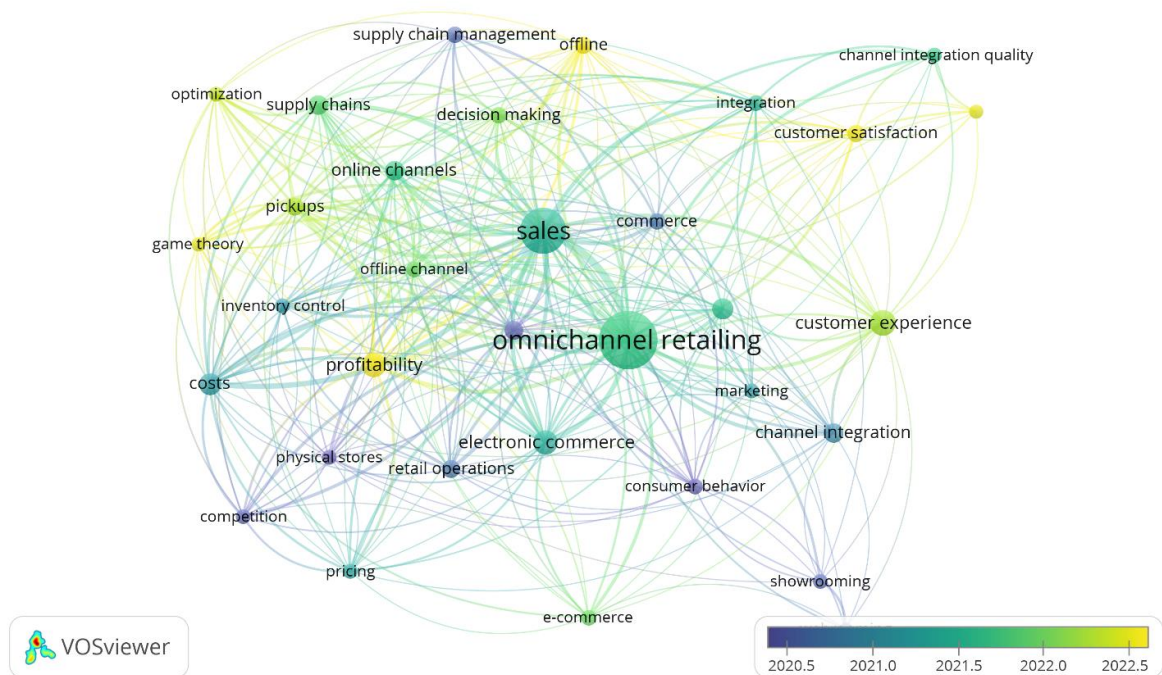


Figure 5. Overlay Visualization

Source: Data Analysis, 2025

This keyword co-occurrence network visualization displays research trends in omnichannel retailing over time, with the color gradient representing the average publication year of each keyword. The darker blue and purple nodes correspond to keywords that appeared more frequently in earlier research (around 2020), while yellow nodes indicate newer research trends emerging closer to 2022. The size of each node represents the frequency of occurrence, with "omnichannel retailing" being the most dominant term, suggesting that it is the central focus of research. Other large nodes such as "sales," "customer experience," and "electronic commerce" indicate significant subthemes within the field.

The blue and purple keywords, including "competition," "costs," "pricing," and "profitability," suggest that earlier research in omnichannel retailing was more focused on economic and operational factors, such as how businesses balance cost efficiency, pricing strategies, and market competition across channels. Additionally, terms like "inventory control" and "physical stores" highlight an early emphasis on the

logistics and supply chain challenges of integrating multiple retail channels. These foundational studies helped set the stage for deeper exploration of customer-centric and technology-driven aspects of omnichannel retailing.

More recent research trends, represented by yellow and green nodes, emphasize customer experience, channel integration quality, and customer satisfaction, indicating a shift toward a consumer-driven approach in omnichannel retailing. The emergence of "integration," "optimization," and "decision-making" suggests that newer studies are focusing on enhancing seamless shopping experiences, improving real-time data synchronization, and leveraging advanced technologies to personalize retail interactions. This shift reflects the growing importance of data-driven retail strategies, AI-powered personalization, and omnichannel marketing innovations, as businesses aim to enhance customer satisfaction and loyalty in an increasingly digital marketplace.

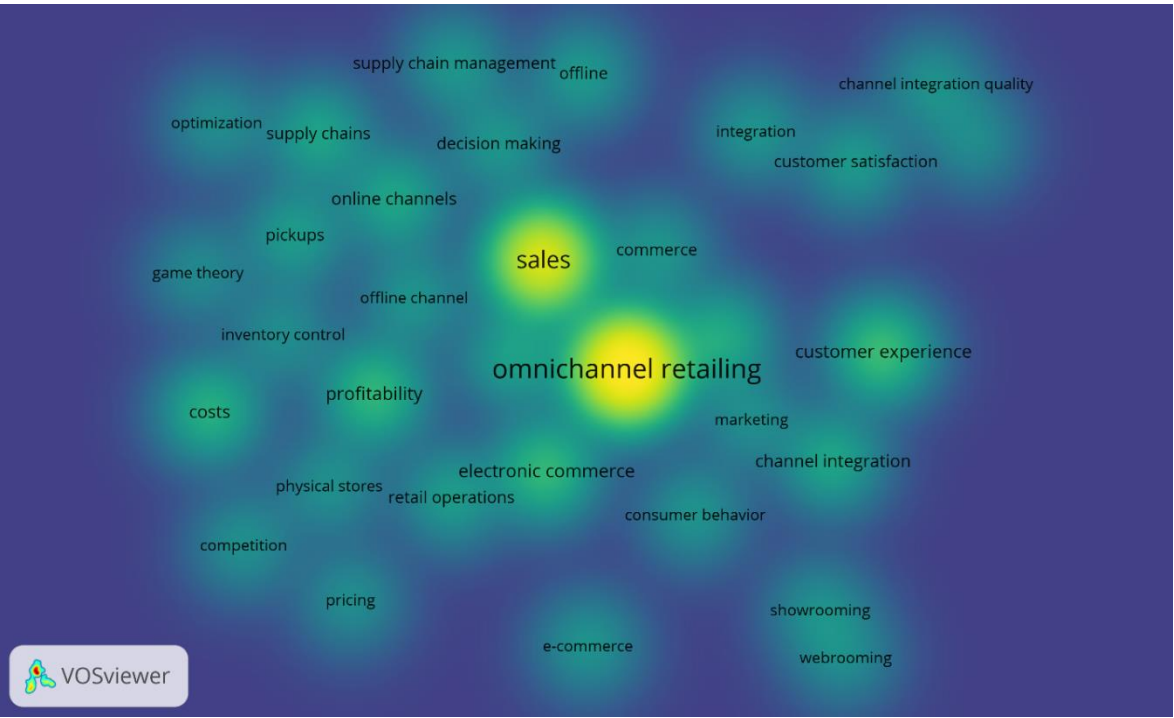


Figure 6. Density Visualization
Source: Data Analysis, 2025

This heatmap visualization from VOSviewer represents the intensity of keyword occurrences in omnichannel retailing research, where brighter areas (yellow) indicate higher occurrences of specific terms, and darker areas (blue/purple) represent less frequent keywords. The central term, "omnichannel retailing," appears as the most prominent keyword, confirming its role as the core research focus. Other high-frequency keywords include "sales," "customer experience," and "electronic commerce," suggesting that research in this field heavily revolves around retail performance, consumer behavior, and digital commerce integration. These hotspots indicate key themes driving academic discussions, such as how omnichannel strategies impact business profitability, sales

optimization, and customer satisfaction. Less intense areas in green and blue shades suggest emerging or supporting themes, including "supply chain management," "pricing," "competition," and "channel integration quality." These keywords indicate that research is also exploring logistical, operational, and strategic challenges within omnichannel retailing. The presence of terms like "game theory" and "optimization" hints at the use of quantitative models and decision-making frameworks to address these challenges. Furthermore, the customer-focused terms such as "showrooming," "webrooming," and "consumer behavior" indicate a growing emphasis on how shoppers interact with multiple retail channels.

3.5 Citation Analysis

Table 5. Top Cited Documents

Citation	Author	Title	Source
605	[2]	Competing in the age of omnichannel retailing	MIT Sloan Management Review
486	[30]	Integrating Bricks with Clicks: Retailer-Level and Channel-Level Outcomes of Online-Offline Channel Integration	Journal of Retailing

482	[6]	Introduction to the special issue information technology in retail: Toward omnichannel retailing	International Journal of Electronic Commerce
397	[17]	Offline showrooms in omnichannel retail: Demand and operational benefits	Management Science
340	[9]	Online and offline information for omnichannel retailing	Manufacturing and Service Operations Management

Source: Scopus Database, 2025

3.6 Co-Authorship Visualization

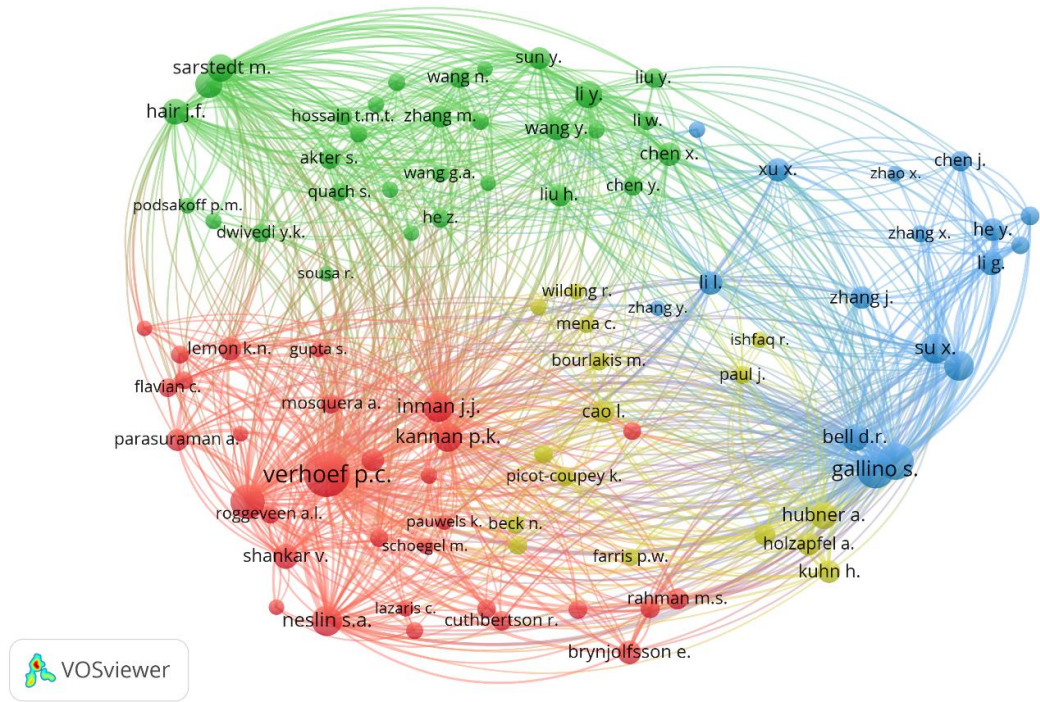


Figure 7. Author Visualization
Source: Data Analysis, 2025

This author collaboration network visualization from VOSviewer represents the most influential researchers in omnichannel retailing based on co-authorship connections. The nodes represent individual authors, with larger nodes indicating higher publication impact, while the links between them represent co-authorship relationships. The visualization is divided into distinct color-coded clusters, signifying different research groups or collaborations. The red cluster, centered around Verhoef P.C. and Neslin S.A., represents a major group focusing on

consumer behavior, marketing strategies, and omnichannel customer experiences. The green cluster includes authors like Liu Y. and Sun Y., focusing more on technology, supply chain management, and decision-making in omnichannel retailing. The blue cluster, led by Gallino S. and Bell D.R., appears to focus on logistics, inventory management, and operational challenges in omnichannel retailing. The yellow cluster serves as a bridge between these groups, indicating interdisciplinary research collaborations.

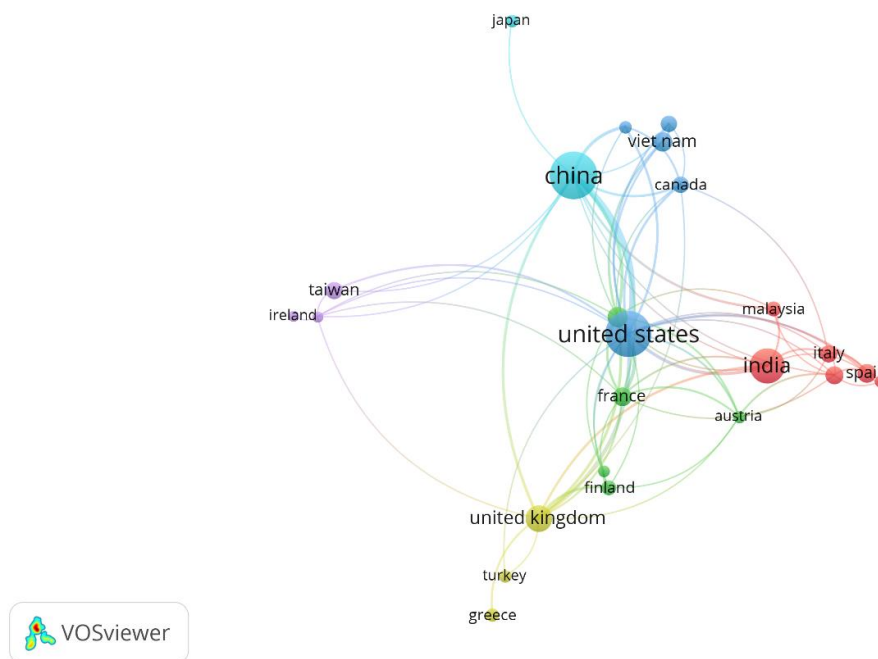


Figure 8. Country Visualization

Source: Data Analysis, 2025

This country collaboration network visualization illustrates the co-authorship relationships between different countries in omnichannel retailing research. The size of each node represents the number of publications from that country, while the lines connecting nodes indicate collaboration between countries, with thicker lines representing stronger research ties. The United States and China emerge as the most influential contributors, with extensive collaborations, particularly with Vietnam, Canada, France, and the United Kingdom. India, forming a distinct cluster with Italy, Spain, and Malaysia, suggests regional cooperation in research efforts. Meanwhile, Taiwan and Ireland, though smaller in size, have their own network of collaborations, primarily linking to the United States. The diverse interconnections indicate that omnichannel retailing research is a globally interconnected field, with cross-border partnerships helping to drive advancements. The prominence of Asian countries (China, India, Vietnam, and Malaysia) suggests that emerging markets play a significant role in shaping the future of omnichannel retailing.

DISCUSSION

Growth and Evolution of Omnichannel Retailing Research

The findings from the bibliometric analysis reveal a substantial growth in research on omnichannel retailing, particularly after 2020. The publication trends indicate a surge in academic interest, likely fueled by the rapid digital transformation of the retail sector and the impact of the COVID-19 pandemic on consumer shopping behaviors. The peak in publications around 2022 suggests that this period saw a heightened focus on omnichannel strategies as businesses adapted to shifting market demands. However, the decline in 2024 and 2025 could either indicate a shift in research focus to more specific or adjacent topics, such as artificial intelligence (AI) in retail, the metaverse, or sustainable omnichannel practices. One of the key insights from this study is the interdisciplinary nature of omnichannel retailing research. The bibliometric network highlights contributions from marketing, operations management, information systems, and supply chain logistics, demonstrating that omnichannel strategies are not limited to a single domain. This convergence of disciplines suggests that

future research should adopt a more integrated approach, examining the intersection between technology, consumer behavior, and supply chain efficiency to provide a holistic understanding of omnichannel retailing.

Key Research Themes and Emerging Topics

The keyword co-occurrence network provides valuable insights into the dominant thematic clusters in omnichannel retailing. The largest and most interconnected cluster focuses on customer experience, customer satisfaction, and channel integration, indicating that much of the recent research has been consumer-driven. This aligns with the increasing industry emphasis on seamless, personalized, and consistent shopping experiences across multiple channels [30]. The presence of terms such as "customer experience," "channel integration quality," and "customer satisfaction" suggests that researchers are investigating how retailers can create frictionless omnichannel journeys that enhance customer loyalty and lifetime value.

Another important theme identified in the analysis relates to supply chain management and logistics challenges. Keywords such as "inventory control," "supply chain optimization," and "order fulfillment" highlight the growing complexities of managing product availability and distribution in an omnichannel environment. Research in this area addresses the need for real-time inventory synchronization, last-mile delivery efficiency, and flexible fulfillment strategies such as buy-online-pickup-in-store (BOPIS) [31]. As omnichannel retailing continues to evolve, future studies may focus on leveraging AI, blockchain, and IoT to enhance supply chain transparency and operational efficiency. The pricing and competition cluster sheds light on another critical area of research. Keywords like "pricing," "profitability," and "competition" indicate that scholars are examining how businesses set prices across multiple channels and navigate the competitive landscape. Pricing consistency remains a major challenge in omnichannel retailing, as businesses must balance dynamic pricing models, promotions, and consumer

price perceptions across online and offline stores. Future research should explore how retailers can use predictive analytics and personalized pricing strategies to optimize revenue without alienating customers.

An emerging area of interest is the role of consumer behavior in omnichannel shopping. The presence of terms such as "showrooming" and "webrooming" suggests that researchers are examining how shoppers interact with different channels before making a purchase decision. Showrooming (browsing in-store and buying online) and webrooming (researching online and purchasing in-store) have been extensively studied in recent years, but new trends such as "social commerce" and "metaverse retailing" could redefine these behaviors. The increasing integration of virtual reality (VR) shopping, AI-driven chatbots, and immersive e-commerce experiences presents a new frontier for omnichannel retailing research.

Most Influential Authors and Institutions

The author collaboration network identifies several key scholars who have significantly contributed to omnichannel retailing research. Verhoef P.C. emerges as one of the most influential authors, with extensive connections in the field of marketing and customer experience research. Other leading scholars, such as Gallino S. and Neslin S.A., have contributed to the study of channel integration, pricing strategies, and consumer behavior in an omnichannel context. The strong interconnections among these authors suggest that omnichannel retailing research is highly collaborative, with scholars building on each other's work to advance knowledge in the field. The institutional collaboration analysis highlights the dominance of universities from China, the United States, and Europe in omnichannel retailing research. The University of Science and Technology, the University of Pennsylvania, and Hainan University are among the top contributors, reflecting the global interest in omnichannel strategies. The presence of universities from both developed and emerging economies suggests that omnichannel retailing is a relevant topic across different market environments. Future

research should explore regional differences in omnichannel adoption, examining how factors such as infrastructure, digital literacy, and cultural preferences influence omnichannel success.

Global Research Collaboration in Omnichannel Retailing

The country collaboration network reveals strong research ties between China and the United States, the two leading contributors to omnichannel retailing literature. This collaboration reflects the global nature of the retail industry, where both technological advancements from the U.S. and large-scale digital commerce ecosystems in China drive innovation. Countries such as India, Vietnam, and Malaysia also appear as growing research hubs, suggesting an increasing focus on omnichannel strategies in emerging markets. Interestingly, European countries such as the United Kingdom, France, and Spain show moderate but well-connected collaborations, indicating active research in this field. However, some regions, including Africa and South America, are underrepresented in the bibliometric network. Future research should investigate how omnichannel retailing operates in these regions, considering the challenges posed by infrastructure limitations, digital accessibility, and economic constraints. Expanding omnichannel research into these markets could provide valuable insights into inclusive retail strategies that cater to diverse consumer segments.

Implications for Future Research and Practice

The findings from this bibliometric analysis offer several implications for both academia and industry. From a research perspective, there is a clear need for more interdisciplinary studies that integrate marketing, supply chain management, and emerging technologies to provide a comprehensive understanding of omnichannel dynamics. Future research should also explore the role of artificial intelligence, big data, and machine learning in optimizing omnichannel strategies, particularly in areas such as predictive analytics, personalized recommendations, and automated customer interactions. For

practitioners, this study underscores the importance of seamless channel integration, customer experience management, and operational efficiency in omnichannel retailing. Businesses must leverage real-time data, AI-driven insights, and agile supply chains to remain competitive in the evolving retail landscape. The increasing focus on consumer behavior and experience personalization suggests that retailers should prioritize customer engagement strategies that foster long-term loyalty. Additionally, as sustainability concerns gain traction, future research should examine eco-friendly omnichannel practices, such as carbon-neutral logistics, ethical sourcing, and sustainable packaging solutions.

4. CONCLUSION

This bibliometric analysis of omnichannel retailing research provides a comprehensive overview of the field's evolution, key themes, influential scholars, and global research collaborations. The findings indicate a significant growth in academic interest, particularly after 2020, driven by rapid digital transformation and shifting consumer behaviors. The analysis reveals that research in this domain is interdisciplinary, encompassing areas such as customer experience, supply chain management, pricing strategies, and technological advancements. The keyword network highlights the increasing focus on seamless channel integration, personalized marketing, and AI-driven retail solutions, while the author and country collaboration networks underscore the global nature of omnichannel research, with strong contributions from China, the United States, and Europe. Despite substantial progress, gaps remain in understanding omnichannel adoption in emerging markets and sustainability-oriented strategies. Future research should explore how emerging technologies such as AI, blockchain, and the metaverse will shape the future of omnichannel retailing. By bridging theoretical insights with practical applications, this study contributes to advancing both academic

knowledge and industry innovation in omnichannel retailing.

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