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#### ARTICLE

# A Bibliometric Analysis of Omnichannel Management

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#### **Abstract**

In the past decade, the retail industry has undergone a revolutionary transformation. Today, the rise of online and mobile shopping is reshaping consumer behaviour and business strategies, significantly impacting well-established retailers. As a result, retailers have begun concentrating on omnichannel management and providing customers with a seamless experience. For many traditional businesses, omnichannel management is now a necessity. It involves integrating all of the company's channels so that customers have an enjoyable experience and spread positive word of mouth. While omnichannel has recently attracted the interest of researchers, there still exists a need for an in-depth and comprehensive analysis of current research trends in this area of study. The study employs bibliometric analysis to examine research papers from the Web of Science database from 2011 to 2022. The selection of papers was conducted and reported using the PRISMA Protocol. It evaluated indicators such as research output, citation trends, thematic maps, leading contributors, countries, and journals by using the Web of Science database using Biblioshiny and VOSviewer. Patterns such as co-occurrence of keywords and authorship collaboration between countries were analyzed using network visualization analysis. Apart from the pattern analysis, this study also identified theoretical and conceptual developments in omnichannel retail environments, mapped the existing research, assessed contemporary interrelationships in research in this domain, and recommended potential research avenues for future researchers.

Keywords: Omni-channel Management, Omni-channel Retail, PRISMA, Bibliometric Review, Biblioshiny, Vos-Viewer.

#### 1 Introduction

Today, every industry in the globalized world is facing challenges and witnessing transformations in its traditional business models. The method of doing business has changed dramatically in every industry. Consumers are more educated and empowered now than they were a decade back(Mishra et al., 2022; Zhang et al., 2018). All of this has been possible through the internet, information flow and a digitally connected world primarily through social media. The modern consumer has also changed. Today the customer knows how to get the best deal for a product or service, share feedback and report grievances.(Brynjolfsson et al., 2013) The needs of modern customers no longer end by purchasing a product or service but by enjoying every step of the purchasing process. Traditionally, businesses were present in the 'Brick and Mortar' format in which the customer used to come physically to the store, purchase the product and leave the store(Gauri et al., 2021; Herhausen et al., 2015; Picot-Coupey et al., 2016). With the help of technology and the internet, a format known as 'Brick and Click' has emerged, in which the store is well equipped with technology to assist customers throughout their shopping experience. The main difference between both formats is that the obligation of physically visiting the store for shopping

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has ended. Customers are looking for businesses that can holistically satisfy their needs. With the advent of the Internet, customers are given multiple channels to shop for the same product or service (Bijmolt et al., 2021; J. Kembro & Norrman, 2019). A channel is "a customer contact point or a medium through which the company and the customer interact" (Beck & Rygl, 2015). To give a seamless shopping experience to their customers, businesses have started working on the integration of all channels. The Integration of all of these shopping channels is known as Omnichannel. Customer satisfaction has become very important for businesses. (Blom et al., 2021; Sorkun et al., 2020) Omnichannel management has become the centre of attention for all major businesses because these businesses have started realizing the importance of customer satisfaction. Omnichannel Management helps in giving a positive customer experience and getting positive word-of-mouth publicity from the customer. (Chang & Li, 2022; Pangarkar et al., 2022) While omnichannel has recently caught the attention of researchers, and studies in this domain have started mushrooming, including important research topics such as data integration among channels (Chen et al., n.d.; Saghiri & Mirzabeiki, 2021), structural changes in businesses, (Guo et al., n.d.; Hu & Zhou, n.d.) and logistics changes in business models (J. H. Kembro et al., 2018; Naclerio & De Giovanni, 2022). The omnichannel management domain needs a holistic yet comprehensive study to analyze the important trends and future research avenues. To get the desired result, bibliometric analysis using Biblioshiny and network visualization using Vosviewer is performed on the literature in this domain.

## **Research Methodology**

To better understand the concept, research output, citation trends, thematic maps, leading contributors, countries, journals, and organizations trends, the study applied the "systematic review" approach. Many researchers have tried to do systematic literature reviews in this domain. Still, the studies are somehow fragmented and focus on narrow aspects like omnichannel supply chain integration, omnichannel pricing and omnichannel technology. The concept requires a holistic literature review, which talks about all the aspects which are important for omnichannel as a business. Hence, this study focuses on the omnichannel management aspect. The study has followed the 'Prisma Protocol' shown in figure 1, to identify and screen the papers. Only eligible papers were selected for further analysis. Bibliometric analysis software such as Biblioshiny and VOSviewer were used for the analysis. The analysis done by the software gave several insights and descriptive statistics and analysis of the situation of research in omnichannel management. The study also gave several future recommendations that will enhance the omnichannel concept studies.

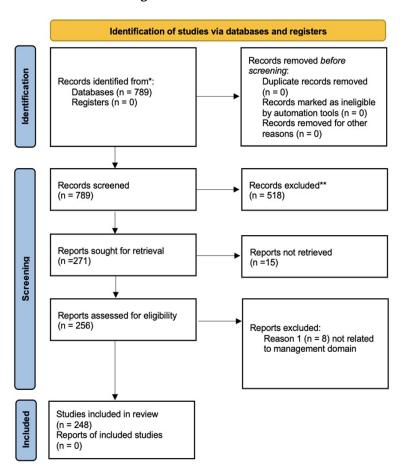


Figure 1: Prisma Protocol

In this paper, a five-step methodology based on the structured methodology outlined by (Rowley & Slack, 2004) for conducting literature reviews has been adopted. This methodology has been used in several bibliometric studies(Fahimnia et al., 2015; Hossain et al., 2020; Mahadevan & Joshi, 2022; Pinto et al., 2019)

#### **Step 1: Database Selection**

A Bibliometric analysis starts with the selection of a database. This database is selected on several measures and the relevance of the database for the subject which is to be enquired about. This study used the Web of Science (WoS) database to extract the papers published in the omnichannel domain. The WoS database has vast research literature from social science and science. This database has literature from several renowned publications that are known for their impactful research in the domain of indexing back in 1900.

#### Step 2: Keyword Identification

The second step in the process of bibliometric analysis is to identify a list of keywords that properly define the area of research and the author's research intentions. For this study, keywords about omnichannel management were identified. This step is very crucial because if the keywords are not well defined, then the collected data is not relevant. The study used common keywords such as "Omnichannel management" OR "Omni-channel management" OR "Omni channel management" and "Omni channel".

#### Step 3: Results of the initial search

After the keywords were entered and searched on the WoS database, various documents, including research articles, conference papers and book chapters came as a result. The first research in the omnichannel domain was published in the year 2011. Emphasizing that the topic of research is new. Following the first search, a total of 789 documents were obtained from the WoS database.

#### Step 4: Filtration of Research Articles

Since WoS is a database that includes vast publications, there is a possibility that the keywords that we enter may not be relevant to the study. Hence, to ensure that only relevant documents were selected for analysis, the preliminary search results were further reduced by the application of a few filters, which were: (1) Articles published in the English Language (2) Articles present in the management category of WoS categories

(3) Articles, Early Access and Review.

The above filters, as expected, filtered a lot of unwanted and irrelevant articles that were beyond the scope of this study. After the filtration, a total of 263 articles were extracted. Fifteen articles were removed from this number because the full versions of these articles were unavailable. A total of 248 articles were finally found eligible for the analysis.

## Step 5: Data analysis tool identification

The final step in the bibliometric analysis is to identify the tool through which the extracted data will be analyzed. In this study, The bibliometric analysis was conducted using the Biblioshiny app of the bibliometric software "Bibliometrix-an R-tool for comprehensive science mapping analysis" (Aria & Cuccurullo, 2017) and the network visualisation software VOSviewer (van Eck & Waltman, 2010) was used for the network visualization analysis. VOSviewer is a visualization software used to construct and visualize a network analysis of the research articles in the field of omnichannel retailing (van Eck & Waltman, 2010) Through VOSviewer, networks based on keyword co-occurrence and authorship collaboration between countries were analyzed.

### **Results & Discussion**

A study that uses bibliometrics examines the subject matter of knowledge using a variety of metrics and different perspectives. The purpose of this study was to investigate the topic on several different levels. The documents have been analyzed on multiple levels throughout the study, and the study has aimed to do a conceptual analysis through annual publication and keyword analysis. After the conceptual analysis, a document-level analysis was done which talked about the citation of articles and journals which reinstate the quality of the papers published in this domain. Lastly, a geographic level analysis was done which focused on the author's collaboration between different countries and country-wise paper production in the omnichannel domain.

#### 3.1 Main Information

Since the first article on omnichannel was published in the Year 2011, the period chosen for this study was 2011 to 2022. This also satisfies the condition required for systematic literature review papers, which suggests that the topic should have a literature of at least ten years. The total number of journals came out to be 66, and the total number of papers published in these 66 journals was 248. In total, these papers have been cited 10,259 times. There are a total of 633 authors of these documents. Authors from different backgrounds are collaborating to do research in this domain, as out of the total 633 authors, 618 authors have done research by collaborating with more than one author. Authors per document have come out to be 2.55, In particular, the Authors per document is calculated as the ratio between the total number of authors and the total number of articles (Aria & Cuccurullo, 2017). The co-Author per document is 3.14. The Co-Authors per Articles index is calculated as the average number of co-authors per article. (Aria & Cuccurullo, 2017)In this case, the index takes into account the author's appearance while for the "authors per article" an author, even if he has published more than one article, is counted only once. For that reason, Authors per Article index ≤ Co-authors per Article index.(Aria & Cuccurullo, 2017) Overall the quality of the data collected for this study is very satisfactory. It can be concluded from the fact that the average citation per document is 31.1.

Table 1: Main Information about the Analysis

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2011-2022
Sources (Journals, Books, etc)	66
Documents	248
Average years from publication	2.4
Average citations per document	31.1
Average citations per year per doc	7.28
References	10259
DOCUMENT TYPES	
article	208
article; early access	28
review	10
review; early access	2
DOCUMENT CONTENTS	
Keywords Plus (ID)	575
Author's Keywords (DE)	789
AUTHORS	
Authors	633
Author Appearances	779
Authors of single-authored documents	15
Authors of multi-authored documents	618
AUTHORS COLLABORATION	
Single-authored documents	15
Documents per Author	0.392
Authors per Document	2.55
Co-Authors per Documents	3.14
Collaboration Index	2.65

#### 3.2 Annual Scientific Production

Figure 2: Annual Scientific paper production

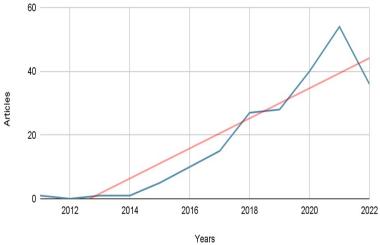


Fig 2 shows the articles published in the domain of omnichannel management annually from 2011 to the present. The Omnichannel topic saw its first research article in the year 2011. However, with the change in technology and faster internet penetration across the globe, the domain has attracted many researchers in the past decade, and since 2014 the graph has increased on a very prominent scale. The red trendline shows that this domain has been attracting researchers to do more research in this field and the trend is expected to continue at a similar pace.

#### **Keywords Network** 3.3

In a bibliometric analysis, keywords are very important because, through keywords, the current and upcoming trends of any domain can be anticipated. The Top 10 Keywords in the analysis were - "Omnichannel retailing", "Customer experience", "Supply chain", "Channel integration", "Customer satisfaction", "Online channel", "Customer journey", "Physical store", "Customer service", and "Offline channels", respectively. The most occurred keywords suggest the following Firstly, the researchers are most commonly researching omnichannel in the context of retailing. Secondly, omnichannel management themes are being researched, eg. the customer experience, customer journey, supply chain, channel integration between online and offline channels etc are the top keywords which somehow suggest that the overall interest of researchers lies in the management of an omnichannel business.

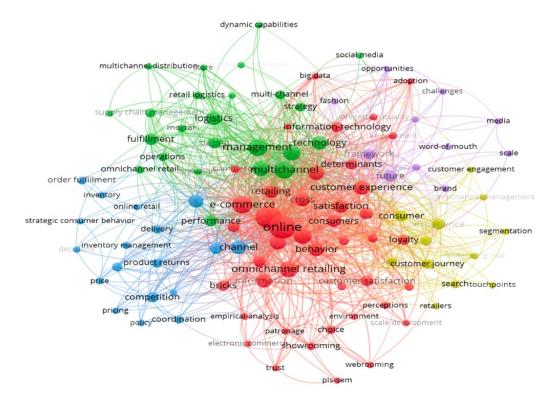


Figure 3: Keyword Co-occurrence Network

Figure 3 shows the keyword co-occurrence network visualization using Vos Viewer. The network indicates the cooccurrence of different keywords like omnichannel retailing, e-commerce, online, multichannel, inventory management, logistics, customer journey, segmentation and showrooming. All these keywords relate to different domains of omnichannel management. This reiterates the fact that omnichannel management has now started to gain the attention of researchers. While each node indicates a different keyword, the size of each node signifies the number of times the keyword occurred. The thickness of the link signifies the occurrence and co-occurrence between the keywords. Each colour in the figure together forms a cluster and each cluster talks about a theme, the nodes and links between the clusters talk about the coverage of the topics(nodes) and the relationship (links) between the topic(nodes).

#### 3.4 Keyword Clustering

Fig 4 talks about the broad clusters in which the keywords of the article lie. In the analysis, broadly, 4 clusters were formed. The Clusters were formed according to the subject of the papers in which they were published. The size of the keywords' text represents its occurrence in the domain. In Cluster 1, "Omnichannel", "retailing", and "customer" were a few keywords which were the highest occurring keywords denoted by the red colour. This cluster mainly talks about the marketing and retailing side of omnichannel management. Cluster 2 majorly talks about the "supply chain", "logistics", and "service

quality" parts denoted by the purple colour. Cluster 3 talks about the integration of channels denoted by the blue colour as the major keywords are "Integration", "online & offline", and "strategies". Cluster 4 talks about the holistic management of omnichannel, denoted by the orange colour as the major keywords are "marketing", "future", and "framework" Lastly cluster 5 talks about the customer perspective of omnichannel as it includes keywords such as "customer", "journey" and "experience".

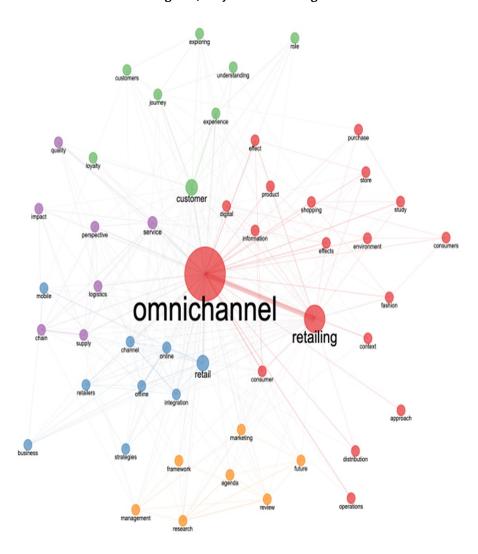


Figure 4: Keyword Clustering

## 3.5 Most Cited Countries

Fig 5 shows the country-wise contribution in the domain of omnichannel management. Research in omnichannel retailing is dominated by the United States of America and China. Both countries have contributed 171 and 94 research articles, respectively. The Top ten countries have contributed a significant amount of research articles. Research in this area has also received attention from several other countries, such as Germany and the United Kingdom. The Global retail industry is expected to rise multifold in the next few years. As a result, it is expected that this domain will witness contributions in the academic literature from several authors as digitalization will open new gateways for the retail industry in future.

## 3.6 Most Cited Countries

Table 2 has tabulated the citations according to the country and given the average article citations for the top 10 countries which have published articles in this domain. This table helps to identify the countries that are producing the research which is being recognized and found helpful by other researchers. While countries like the USA and China have more papers than other countries countries like Netherlands and Switzerland have the highest average article citations. It Re-emphasises that more countries have started researching this topic and it is adding to the existing knowledge of this domain.

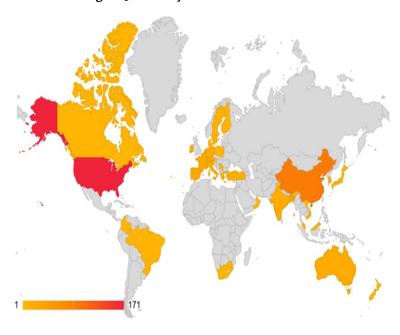


Figure 5: Countrywide Citations Received

Table 2: Country-wise Average Article Citation

Country	Total Citations	Average Article Citations
USA	2708	43.68
NETHERLANDS	1062	177.00
GERMANY	701	53.92
UNITED KINGDOM	524	40.31
CHINA	514	12.54
SWITZERLAND	333	111.00
ITALY	317	31.70
FRANCE	298	24.83
SWEDEN	110	18.33
SPAIN	106	6.62

#### 3.7 Collaboration Between Countries

Links of co-authorship between countries provide information about authors from different countries collaborating to publish their research in a particular domain or topic. The United States of America has the largest collaborative relationships with China, the Netherlands, Spain, and India. This is amidst having the highest total number of research articles. Other nations that worked together with the United States of America included France, the Netherlands, Taiwan, the United Kingdom, Turkey, Sweden, Canada, and Hong Kong. In a similar vein, China had substantial collaborative links with the United States of America, Australia, and the United Kingdom.

## 3.8 Sankey Diagram

The Three Plot field between Title (TI\_TM), Keyword (DE) and Authors' Country (AU\_CO) is shown using Figure 6 a Sankey Plot. This diagram helps identify the relationship between the Keywords used in the title, the keywords mentioned in the article and the country of the authors. This plot helps to identify what research is being carried out in which country. The Network created in this diagram shows the cross-integration between the three fields. The more cluttered the network, the stronger interlinkages are there.

## **Most Global Cited Article**

Fig 7 shows the most cited Article. This analysis is important for research in this domain because it tells about which Article has the most number of citations globally. The Top cited article is "From Multi-Channel Retailing to Omni-Channel Retailing: Introduction to the Special Issue on Multi-Channel Retailing" published in the "Journal of Retailing" authored by Verhoef et al., 2015. This article has put the cornerstone of research in omnichannel retailing. They have shown the transition from multichannel to omnichannel. This article has very well articulated and justified the contribution of all other authors. Similarly, the article titled "Competing in the Age of Omnichannel Retailing" authored by (Brynjolfsson et al., 2013) has the most citation after (Verhoef et al., 2015). Followed by an article titled "Integrating Bricks with Clicks: Retailer-Level and Channel-Level Outcomes of Online-Offline Channel Integration" authored by (Herhausen et al., 2015)

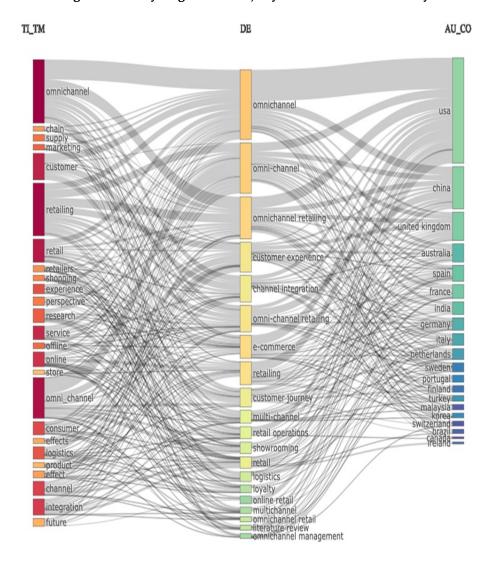


Figure 6: Sankey Diagram of Title, Keyword and Authors' Country

## 3.10 Most Cited Journals

The basic purpose of any bibliometric study is to find important research in the domain. It is a crucial step to find out the journals that are publishing research papers on the concept that is being inquired. For the Concept of Omnichannel management, the most prominent journals publishing research papers in this domain are; The Journal of Retailing, the International Journal of Physical Distribution and Logistic Management, and the Journal of Retailing and Consumer Services. These journals are currently considered to be the three most influential journals in this field.

Name of Journal	Total Citation
JOURNAL OF RETAILING	1368
INTERNATIONAL JOURNAL OF PHYSICAL DISTRIBUTION & LOGISTICS MANAGEMENT	1007
JOURNAL OF RETAILING AND CONSUMER SERVICES	792
INTERNATIONAL JOURNAL OF RETAIL & DISTRIBUTION MANAGEMENT	791
MANAGEMENT SCIENCE	648
MIT SLOAN MANAGEMENT REVIEW	572
JOURNAL OF BUSINESS RESEARCH	277
HARVARD BUSINESS REVIEW	248
JOURNAL OF RESEARCH IN INTERACTIVE MARKETING	231
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH	194

Table 3: Top 10 Most Cited Journals

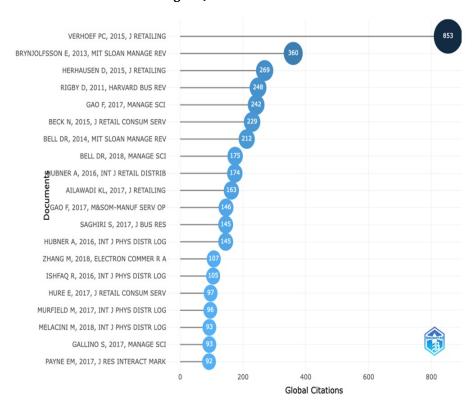


Figure 7: Most Cited article

## Conclusion

Bibliometric analysis and network visualization were conducted in this study to evaluate the global trends in research on omnichannel management. 2011 was the year that research on omnichannel retailing first got underway. On the other hand, throughout the past twelve years, there has been a discernible rise in the number of research publications published in this particular field. Furthermore, many authors have worked together to produce multi-authored research documents on this topic. According to the results of the bibliometric study performed on the 248 research papers drawn from the WoS databases, the United States of America and China, both of which have substantial co-authorship ties with one another, are responsible for the majority of the research that is conducted in this area. Roughly three-quarters of the research publications are done by the top ten countries. The findings of the paper suggest that research in the omnichannel retailing domain is not limited to just a mode of retailing or a method of providing multi-touchpoints to customers but also in the fields of supply chain management, logistics, distribution channel and order fulfilment as well. Research investigating the impact of omnichannel integration on customer satisfaction and consumer behaviour is also carried out by different researchers. The Linkages between these subdomains will give new horizons to research in omnichannel retailing.

## Implications of the Study

### **Theoretical Implications**

To quantitatively assess the development in the domain of omnichannel management since the inception of research articles in this field, this study has focused on the omnichannel management perspective. While this study has successfully collated literature related to omnichannel retailing, the study has also given trends in research within omnichannel management. The study has highlighted significant research and connected dots between existing studies which were earlier focused. Omnichannel management has strong research potential as it is counted as a future for retail stores riding on the back of the technology transformation era, with the increase in dependency on technology in the daily lives of customers. The study can be used by new researchers as a starting point to have an understanding of omnichannel management.

#### 5.2 Managerial Implications

The study suggests that omnichannel management as a research topic is gaining attention on a global stage. Various countries especially developed nations, are researching more about this topic. This topic has gained attention from academicians as well as big businesses, through this study, it was found that the top countries who have dominated the research in this domain are the USA and China, but other countries like the Netherlands, Australia, Germany and the UK are also working on this research field. Omnichannel management as a topic has seen many cross-country collaborations

between the authors. A detailed study of the research papers analyzed in this study could give a very good understanding of important issues in omnichannel management. The importance of the integration of channels and the role of integration in the customer experience is one of the major themes identified in this study.

With the changing shopping habits and expectations of customers, the demand for integrated shopping experiences has started. Today, customers want to have a seamless shopping experience in which they can easily switch from one channel to another. Brands which have started focusing on these aspects are already enjoying positive word of mouth and increased customer satisfaction levels. (Rodriguez-Torrico et al., n.d., 2020) Retailers will need to research to determine what customers anticipate from omnichannel shopping. The modern consumer craves knowledge that allows them to make informed purchasing decisions. Retailers should focus on each touchpoint that they are providing to their customers and maintain a seamless experience across all channels. In-store digital touchpoints could help consumers used to physical stores to access online product ratings and reviews to improve the information-seeking experience of the consumer (Kang,

## Limitations of the Study

Although the current study has tried to do a bibliometric analysis of omnichannel management articles, there are still some limitations to this study. To begin, the papers were chosen from the Web of Science database alone to guarantee the accuracy of the documents that were retrieved. Because of this, some data may be overlooked. The study could be much improved by the collection of sample data from several other independent databases. In addition, researchers and practitioners should refine the search keywords that are used while querying the database so that they consist of keywords that are more relevant to the search. This constraint should serve as motivation for future work in which academics should investigate ways of collecting data from numerous databases with broader keyword searches to conduct a more in-depth study.

## References

Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. Journal of Informetrics, 11(4), 959-975. https://doi.org/10.1016/j.joi.2017.08.007

Beck, N., & Rygl, D. (2015). Categorization of multiple channel retailing in Multi-, Cross-, and Omni-Channel Retailing for retailers and retailing. Journal of Retailing and Consumer Services, 27, 170-178. https://doi.org/10.1016/j.jretconser .2015.08.001

Bijmolt, T. H. A., Broekhuis, M., de Leeuw, S., Hirche, C., Rooderkerk, R. P., Sousa, R., & Zhu, S. X. (2021). Challenges at the marketing-operations interface in omni-channel retail environments. Journal of Business Research, 122, 864874. https://doi.org/10.1016/j.jbusres.2019.11.034

Blom, A., Lange, F., & Hess, R. L. (2021). Omnichannel promotions and their effect on customer satisfaction. European Journal of Marketing, 55(13), 177-201. https://doi.org/10.1108/EJM-12-2018-0866

Brynjolfsson, E., Hu, Y. J., & Rahman, M. S. (2013). Competing in the Age of Omnichannel Retailing. MIT Sloan Management Review, 54(4), 23-29.

Chang, Y. P., & Li, J. (2022). Seamless experience in the context of omnichannel shopping: scale development and empirical validation. Journal of Retailing and Consumer Services, 64. https://doi.org/10.1016/j.jretconser.2021.102800

Chen, T. Y., Yeh, T. L., Wu, H. L., & Deng, S. (n.d.). Effect of channel integration quality on consumer responses within omni-channel retailing. Asia Pacific Journal of Marketing And Logistics. https://doi.org/10.1108/APJML-04-2021--0270

Fahimnia, B., Sarkis, J., & Davarzani, H. (2015). Green supply chain management: A review and bibliometric analysis. International Journal of Production Economics, 162, 101-114. https://doi.org/10.1016/j.ijpe.2015.01.003

Gauri, D. K., Jindal, R. P., Ratchford, B., Fox, E., Bhatnagar, A., Pandey, A., Navallo, J. R., Fogarty, J., Carr, S., & Howerton, E. (2021). Evolution of retail formats: Past, present, and future. Journal of Retailing, 97(1), 42-61. https://doi.org/10.101 6/j.jretai.2020.11.002

Guo, Q., He, L., & He, Y. (n.d.). Omnichannel service operations with order-online-and-dine-in-store strategy. Managerial and Decision Economics, 43(6), 2311-2325. https://doi.org/10.1002/mde.3527

Herhausen, D., Binder, J., Schoegel, M., & Herrmann, A. (2015). Integrating Bricks with Clicks: Retailer-Level and Channel-Level Outcomes of Online-Offline Channel Integration. Journal of Retailing, 91(2, SI), 309-325. https://doi.org/ 10.1016/j.jretai.2014.12.009

Hossain, T. M. T., Akter, S., Kattiyapornpong, U., & Dwivedi, Y. (2020). Reconceptualizing Integration Quality Dynamics for Omnichannel Marketing. Industrial Marketing Management, 87, 225-241. https://doi.org/10.1016/j.indmarman.2019

Hu, F., & Zhou, Z. (n.d.). Information services and omnichannel retailing strategy choices of e-commerce platforms with supplier competition. Electronic Commerce Research. https://doi.org/10.1007/s10660-022-09557-5

Kang, J.-Y. M. (2018). Showrooming, Webrooming, and User-Generated Content Creation in the Omnichannel Era. Journal of Internet Commerce, 17(2), 145-169. https://doi.org/10.1080/15332861.2018.1433907

Kembro, J. H., Norrman, A., & Eriksson, E. (2018). Adapting warehouse operations and design to omni-channel logistics: A literature review and research agenda. In International Journal of Physical Distribution and Logistics Management (Vol. 48, Issue 9, pp. 890-912). Emerald Group Holdings Ltd. https://doi.org/10.1108/IJPDLM-01-2017-0052

Kembro, J., & Norrman, A. (2019). Exploring trends, implications and challenges for logistics information systems in omni-channels: Swedish retailers perception. International Journal of Retail & Distribution Management, 47(4), 384-411. https://doi.org/10.1108/IJRDM-07-2017-0141

Mahadevan, K., & Joshi, S. (2022). Omnichannel retailing: a bibliometric and network visualization analysis. Benchmarking: An International Journal, 29(4), 11131136. https://doi.org/10.1108/BIJ-12-2020-0622

Mishra, S., Malhotra, G., Arora, V., & Mukhopadhyay, S. (2022). Omnichannel retailing: does it empower consumers and influence patronage? International Journal of Retail & Distribution Management, 50(2, SI), 229-250. https://doi.org/10 .1108/IJRDM-04-2021-0199

Naclerio, A. G., & De Giovanni, P. (2022). Blockchain, logistics and omnichannel for last mile and performance. International Journal of Logistics Management, 33(2), 663-686. https://doi.org/10.1108/IJLM-08-2021-0415

Pangarkar, A., Arora, V., & Shukla, Y. (2022). Exploring phygital omnichannel luxury retailing for immersive customer experience: The role of rapport and social engagement. Journal Of Retailing and Consumer Services, 68. https://doi.org/10 .1016/j.jretconser.2022.103001

Picot-Coupey, K., Hure, E., & Piveteau, L. (2016). Channel design to enrich customers' shopping experiences Synchronizing clicks with bricks in an omnichannel perspective - the Direct Optic case. International Journal of Retail & Distribution Management, 44(3), 336-368. https://doi.org/10.1108/IJRDM-04-2015-0056

Pinto, M., Fernández-Pascual, R., Caballero-Mariscal, D., Sales, D., Guerrero, D., & Uribe, A. (2019). Scientific production on mobile information literacy in higher education: a bibliometric analysis (20062017). Scientometrics, 120(1), 57-85. https://doi.org/10.1007/s11192-019-03115-x

Rodriguez-Torrico, P., Apadula, L. T., San-Martin, S., & San Jose Cabezudo, R. (2020). Have an omnichannel seamless interaction experience! Dimensions and effect on consumer satisfaction. Journal Of Marketing Management, 36(17–18), 1731-1761. https://doi.org/10.1080/0267257X.2020.1801798

Rodriguez-Torrico, P., San Jose Cabezudo, R., San-Martin, S., & Apadula, L. T. (n.d.). Let it flow: the role of seamlessness and the optimal experience on consumer word of mouth in omnichannel marketing. Journal Of Research in Interactive Marketing. https://doi.org/10.1108/JRIM-06-2021-0154

Rowley, J., & Slack, F. (2004). Conducting a literature review. Management Research News, 27(6), 31–39. https://doi.or g/10.1108/01409170410784185

Saghiri, S., & Mirzabeiki, V. (2021). Omni-channel integration: the matter of information and digital technology. International Journal of Operations & Production Management, 41(11), 1660-1710. https://doi.org/10.1108/IJOPM-04-202

Sorkun, M. F., Yumurtaci Huseyinoglu, I. O., & Boruhan, G. (2020). Omni-channel capability and customer satisfaction: mediating roles of flexibility and operational logistics service quality. International Journal of Retail & Distribution Management, 48(6), 629-648. https://doi.org/10.1108/IJRDM-07-2019-0235

van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. Scientometrics, 84(2), 523-538. https://doi.org/10.1007/s11192-009-0146-3

Verhoef, P. C., Kannan, P. K., & Inman, J. J. (2015). From Multi-Channel Retailing to Omni-Channel Retailing. Introduction to the Special Issue on Multi-Channel Retailing. Journal of Retailing, 91(2), 174-181. https://doi.org/10.1016/j.jretai.2

Zhang, M., Ren, C., Wang, G. A., & He, Z. (2018). The impact of channel integration on consumer responses in omnichannel retailing: The mediating effect of consumer empowerment. Electronic Commerce Research and Applications, 28, 181-193. https://doi.org/10.1016/j.elerap.2018.02.002