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RESEARCH STREAMS IN THE DOMAIN OF OMNICHANNEL IN MARKETING MANAGEMENT: BIBLIOMETRIC REVIEW

Omnichannel is viewed as a new approach to the company's marketing activity in an integrated environment that combines online and offline channels. For now, the omnichannel environment is actively transforming. The article has outlined the extant areas of omnichannel research in marketing management to form a whole view of omnichannel. To achieve this goal, a bibliometric performance analysis provided by the SCOPUS database, scientific mapping utilizing the VOSviewer program, and exploring the most cited papers have been conducted. Based on a study of 1125 documents regarding omnichannel within the 2013–2023 period, the bibliometric field of omnichannel research has been conducted and visualized, including total documents produced, subject areas, most productive sources, most impactful authors, top relevant institution affiliations, production of papers by country, thematic clustering, and review of the most cited articles. The scientific interest in the omnichannel issue appeared in 2013, and since then it has been steadily increasing maintaining "Business, Management and Accounting" as the top position. The majority of docs were published in the USA, China, and India. There has not been identified a strong concentration of publications at any university as well as the most productive source. Six high-ranking thematic clusters have been identified, i.e. managing sales online and offline, dimension of marketing and marketing strategy, commerce, retailing, customer experience and satisfaction. The earliest topic is related to commerce, and the latest one is connected to customer satisfaction. The issues of competition in the omnichannel environment, impact of the omnichannel on retail operations, metrics for monitoring omnichannel marketing, creating a positive service experience, and logistics as an off-topic have been highlighted in the most cited articles. The obtained results allow substantiating the modern agenda of omnichannel issues and the most priority areas of its research, to determine the sources of its scientific and methodological support on the way to further development.

Keywords: *omnichannel, marketing, management, bibliometric analysis, SCOPUS, VOSviewer, clustering.*

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НАПРЯМИ ДОСЛІДЖЕНЬ У СФЕРІ ОМНІКАНАЛЬНОСТІ В УПРАВЛІННІ МАРКЕТИНГОМ: БІБЛІОМЕТРИЧНИЙ ОГЛЯД

Омніканальність розглядається як новий підхід до маркетингової діяльності компанії в інтегрованому середовищі, яке поєднує онлайн і офлайн канали, та яке наразі активно трансформується. У статті окреслено наявні напрями дослідження омніканальності в маркетинговому менеджменті з метою формування цілісного уявлення про омніканальність. Для цього було проведено бібліометричний аналіз наукових публікацій, наданий базою даних SCOPUS, наукову кластеризацію за допомогою програми VOSviewer та вивчення найбільш цитованих статей. На основі дослідження 1125 документів щодо омніканальності протягом 2013–2023 років було проведено та візуалізовано бібліометричне поле омніканальності, включаючи загальну кількість документів, предметні галузі, найпродуктивніші джерела, найбільш впливових авторів, приналежність до відповідних установ, публікацію статей за країнами, тематичне кластеризування та вивчення найбільш цитованих статей. Науковий інтерес до омніканальності з'явився в 2013 році й з тих пір неухильно зростає, зберігаючи провідну позицію у сфері «Бізнес, управління та бухгалтерський облік». Більшість документів опубліковано в США, Китаї та Індії. Встановлено відсутність суттєвої концентрації публікацій в певному університеті, а також джерелі. Визначено шість важливих тематичних кластерів, а саме: управління продажами онлайн і офлайн, проблеми маркетингу та маркетингової стратегії, комерція, роздрібна торгівля, клієнтський досвід і задоволеність споживача. Початкова тема пов'язана з торгівлею (комерцією), натомість остання тема – із задоволеністю споживачів. Питання конкуренції в омніканальному середовищі, вплив омніканальності на рітейл, метрики для моніторингу омніканальності, створення позитивного сервісного досвіду та логістика як пов'язана тема висвітлюються в найбільш цитованих статтях.

Отримані результати надають змогу обґрунтувати сучасний порядок денний проблематики омніка-нальності та найбільш пріоритетні напрями її дослідження, визначити джерела її науково-методич-ного забезпечення для подальшого розвитку.

Ключові слова: *омніканальність, маркетинг, менеджмент, бібліометричний аналіз, SCOPUS, VOSviewer, кластерізація.*

Introduction. The process of digitalization has led to significant changes in the environment of the interaction between consumers and companies/brands. The necessity of integrating physical (offline) and digital (online) space appears to be the main feature of contemporary interaction. Recently, the concept of omnichannel has been used to denote activity in such kind of an integrated environment, which requires making decisions about issues such as theoretical background, strategic and operational aspects of the company's marketing activities, the changes in the company's business processes, the peculiarities of consumer behavior, their preferences and influence factors, etc. Thus, a rather significant scope of omnichannel issues actualizes the importance of the study of their modern agenda.

Materials and methods. We can find the first mentions of omnichannel in studies related to the economic activity in which digitalization manifested itself most actively, i.e. retailing [1]. However, omnichannel has begun to be explored in other activities such as tourism, the hospitality industry [2], banking [3], and healthcare [4] as well as in the B2B sphere [5].

Amongst the first papers related to the topic, Neslin S.A. et al. consider multichannel management and identify major challenges practitioners must address to manage the multichannel environment effectively, however, the omnichannel issue has not appeared yet [6]. Verhoef P.C. et al. examine omnichannel management compared to multichannel one. The paper summarizes shifting from multichannel to omnichannel retailing, and the latter is still a minority [7].

The first studies recapped previous retail research dates back to 2020. Hänninen M. et al. consider the development of retailing research over the last three decades focusing attention on the impact of digitalization and ICT [8]. From a retail channel perspective, a change concerns a shift from the physical store to online-to-offline business models. From a literature and theoretical contribution perspective, retail research moved from customer motivations or satisfaction in-store to the impact of digital retail channels on customer behavior, and retailer profitability in an omnichannel world. The study develops research propositions as well.

Gerea C. et al. focus on a key aspect of omnichannel management – the omnichannel customer experience (CX) [9]. The study provides three main findings. The first one was related to the General State of the Omnichannel CX Research Field. In this regard, retail research was determined as prevalent. The second one was related to determining the focus of research streams on Omnichannel CX, namely from consumer and organizational perspectives. The third one was related to determining Theoretical Perspectives to Address Omnichannel CX.

Furquim T.S.G. et al. identify and analyze the stages of the omnichannel retail purchase journey from the consumer's perspective through the medium of the literature review [10]. The main themes are outlined, i.e. (1) pre-purchase: purchase intention and adoption barriers; (2) purchase: channel selection and consumer segmentation; (3) post-purchase: perceived quality, satisfaction, and loyalty.

Iglesias-Pradas S. and Acquila-Natale, E. present an overview of multichannel and omnichannel retail based on qualitative analysis of studies and propose a comprehensive framework of themes [11]. Future research is proposed to adopt integrative views (from both customer and retailer perspectives) under the umbrella of channel integration as the central notion. Omnichannel strategy is defined as a key one in the development of the field.

Seeking to capture omnichannel issues can also be found in papers devoted to digital marketing research overall. For instance, within the research on Digital Marketing evolution, Güngör A.S. and Çardirci T.O. single out five consecutive periods of Interactive Marketing, among which the fourth and fifth ones consider the emergence of omnichannel [12]. Omnichannel marketing was spinning around 2014 (the 2010–2014 period). The themes were indicators of the actualization of technology in shaping consumer behavior. The focus partially moved from firm-based studies to consumer-based ones. The last five years (2015–2020) represented the strength of social media as a channel of commerce in digital marketing.

Chygryn O. et al. regard omnichannel as an enterprise's strategy, namely the theoretical basis for its implementation to develop the green competitiveness of enterprises [13]. The study followed the concept of omnichannel marketing strategies as a combination of online and offline tools. The article outlines increasing scientific and business interest in terms of omnichannel marketing.

Given the diversity of exploring omnichannel, mainly in retail (from a retail channel perspective and a literature and theoretical contribution perspective as well as from the customer and company point of view), some theoretical ambiguity in the omnichannel domain (it is defined in different terms such as marketing, marketing strategy, and management, etc.) and
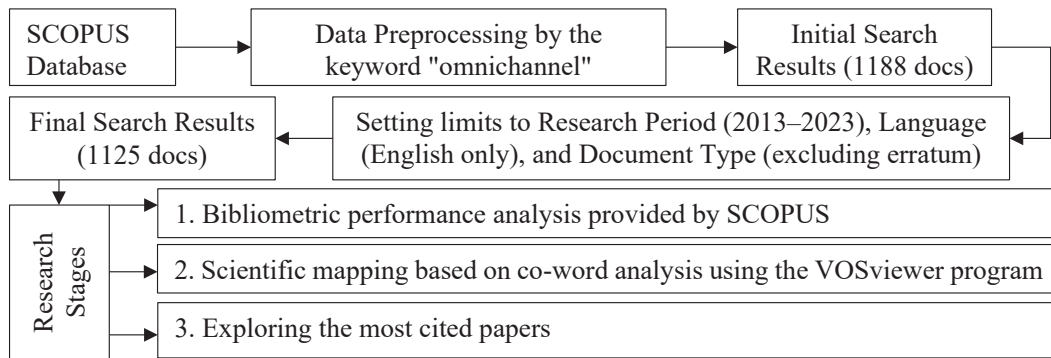
Figure 1 – The flowchart of the research stages

Source: compiled by the author

also the recent implementation of omnichannel in different activities, which strongly differ from retailing, drives endeavors to develop its theoretical background. That is, on the one hand, omnichannel research is still in its infancy, and on the other hand, the omnichannel environment is actively transforming, which makes it necessary to delineate the current agenda of modern research and identify relevant areas of study.

The purpose of the article is to outline the extant areas of omnichannel research in marketing management via tools of bibliometric analysis and reviews of the most cited papers to form a whole view of omnichannel.

Results. For the study purpose, bibliographic data were extracted from the SCOPUS database using the keyword "omnichannel". The initial search resulted in 1188 documents, the first one dated 2004. The next docs appeared in 2013. Given the quite significant lag between publications, the 2004 paper was excluded. The English language and erratum were established as the filters. Overall, 1125 papers were extracted from the SCOPUS database dated from 2013 to 2023 (Figure 1).

The analysis of the docs envisages some consecutive stages. The first one included a bibliometric performance analysis provided by SCOPUS, i.e. total documents produced, most productive sources, most impactful authors, top relevant institution affiliations, production of papers by country, etc. The second one focuses on major subthemes. The VOSviewer was utilized for thematic mapping. Co-word analysis creates clusters of keywords used within a corpus that are semantically or conceptually related based on their co-occurrences within the docs in the corpus [12, p. 68]. The last stage is to explore the most cited papers.

In the first stage of the research, a performance analysis was completed to compile the publication trends among papers in the domain (Figure 2).

The first docs in the domain of omnichannel appeared in 2013, then there was a steady increase until 2019. Later on, the rate of growth slowed down and amounted to 259 docs in 2023. According to the distribution of the docs by type, most of them are Articles (721 docs and 64.1 %), the further positions are the following: Conference Paper (176 docs),
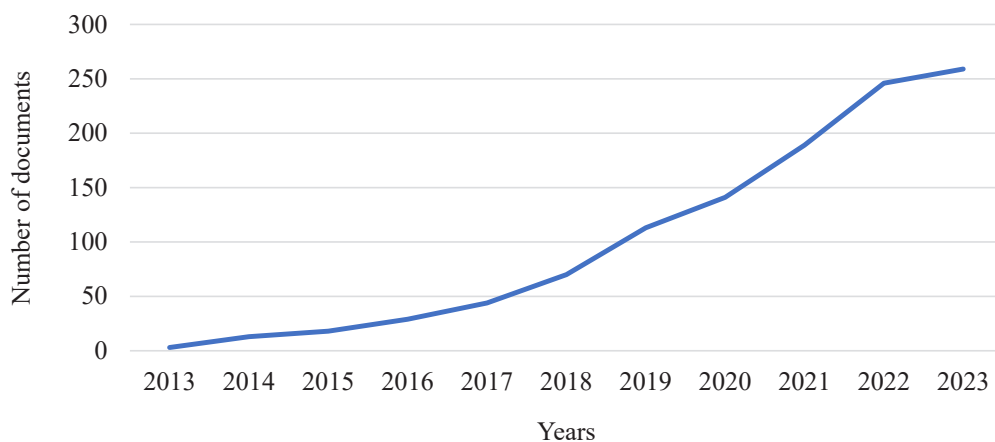

**Figure 2 – The number of documents in the domain of omnichannel
by the year in SCOPUS, 2013–2023**

Source: compiled by the author according to the SCOPUS database

Book Chapter (126 docs), and Review (32 docs). The distribution of the sample by subject area is as follows. "Business, Management and Accounting" holds the top position (722 docs and 32.8 % respectively), "Computer Science" includes 361 docs (16.4 %), Decision Sciences – 233 docs (10.6 %), "Engineering" (212 docs), "Economics, Econometrics and Finance" (198 docs), "Social Sciences" (158 docs), and "Mathematics" completed the list (112 docs).

As for geographic affiliations, about 80 % of docs were published in certain countries. The USA is the most influential country (222 docs), and China and India are the following countries (162 and 94 docs respectively). A significant number of docs were published in European countries, including Spain (78 docs), the United Kingdom (70 docs), France (66 docs), Italy (54 docs), and Germany (51 docs). It is also worth noting Australia (37 docs), South Korea (33 docs), and Turkey (28 docs).

Amongst institutional affiliations, institutions from China, the USA, Europe, and Indonesia dominate the list of top 10 institutions. The University of Science and Technology of China reported the largest number of docs – 12, the University of Pennsylvania, Wharton School of the University of Pennsylvania, and Huazhong University of Science and Technology (China) published 11 docs per institution, and Hefei University of Technology (China), Universitat de Valencia (Spain), University of Jyvaskyla (Finland), Bina Nusantara University (Indonesia) produced 10 docs per institution. However, there was not identified a strong concentration of publications on the topic at any university.

Figure 3 shows the publication activity amongst the main sources.

The most productive source is the Journal of Retailing and Consumer Services (41 docs); the journal is indexed by SCOPUS Q1. These are followed by the International Journal of Retail and Distribu-

tion Management (39 docs; SCOPUS Q1, Q2), the Sustainability Switzerland (23 docs; SCOPUS Q1, Q2), and the Journal of Business Research (19 docs; SCOPUS Q1). Initially, the docs were published in the Journal of Retailing and Consumer Services, and the Journal significantly exceeded other sources in 2022. However, in 2023 the placement of docs was no longer concentrated in one source, i.e. most docs were published in the Journal of Business Research, instead, the Journal of Retailing and Consumer Services ranked fourth.

The most productive authors were identified as follows: Gallino S., Lazaris C., Li Y., Natarajan T., Vrechopoulos A. (8 docs per author), Buldeo Rai H., Frank L., He Y., Werth D. (7 docs per author), Frasquet M., Gao F., Jain S., li Z., Macharis C., Makkonen M., Moreno A., Riedl R., Veera Raghavan D.R., Verlinde, S. (6 docs per author).

VOSviewer co-occurrence analysis was carried out based on the keywords and abstracts of the papers (Figure 4).

The semantic network analysis identified 8 thematic clusters that unite key concepts based on thematic proximity (Table 1). The map shows the frequency of use of terms (the size of the circle), the closeness of the ties between them (the closer, the tighter), and different combinations of terms within clusters and between them.

The main features of the sample are as follows – 256 items (154 of them have less than 10 occurrences), 5235 links, and 9956 total link strength. The sample covered the period from 2016.80 to 2023.00. The item (keyword) with the highest total link strength is "sales" (1457), which is followed by "omnichannel" (1076), "omnichannel retailing" (513), and "electronic commerce" (512).

The first cluster (red) is the most significant in terms of its characteristics. It brought together
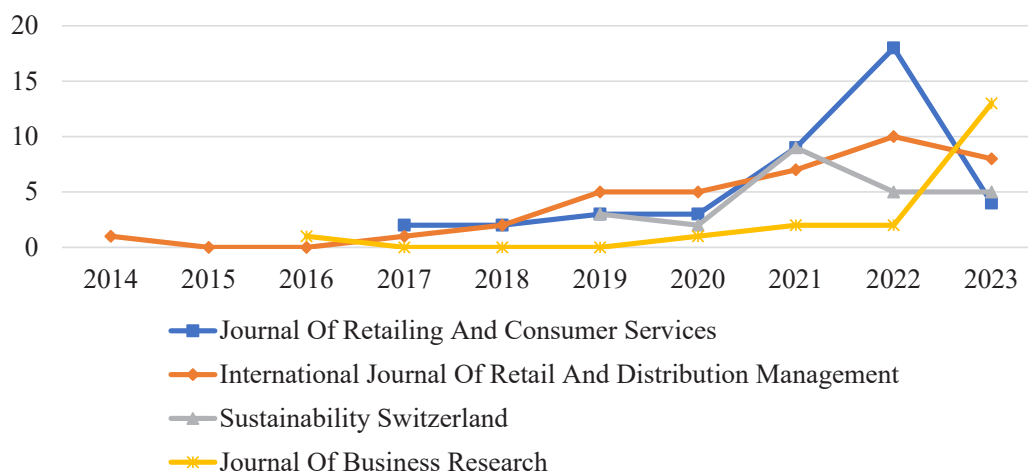

**Figure 3 – The number of documents in the domain of omnichannel per year
by source, 2013–2023**

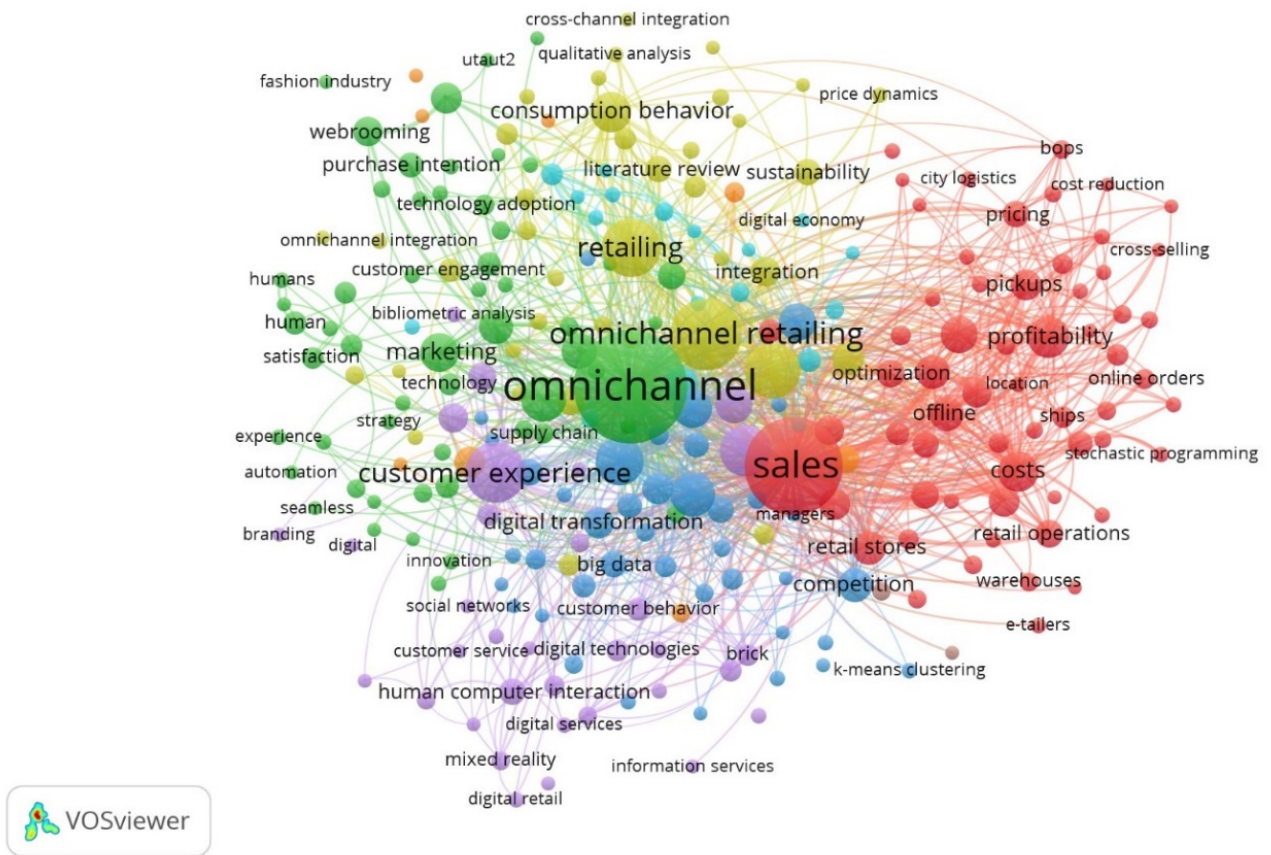*Source: compiled by the author according to the SCOPUS database*

**Figure 4 – Network visualization of co-occurrence amongst keywords of publications
of the Scopus scientometric database within the framework of omnichannel research, implemented
by the VOSviewer toolkit**

Source: compiled by the authors using the VOSviewer

**Table 1 – Research clustering of the publications in the domain of omnichannel according
to the SCOPUS database, 2013–2023**

Cluster	Colour	N of items	Top-ranked term	High-ranked term	Period
1	Red	61	sales	costs, profitability, supply chains, retail stores, offline, online channels	2018.64–2022.60
2	Green	55	omnichannel	marketing, retail, multichannel, COVID-19, online shopping, showrooming	2018.20–2022.50
3	Blue	40	commerce	consumer behavior, decision making, competition, channel integration, information systems, information management	2016.80–2022.17
4	Yellow	39	omnichannel retailing	electronic commerce, retailing, consumption behavior, supply chain management, integration	2017.83–2022.23
5	Purple	33	customer experience	e-commerce, omnichannel retail, human computer interaction, brick, mortar, customer journey	2017.72–2022.57
6	Turquoise	18	customer satisfaction	service quality, artificial intelligence, behavioral research, investments, design/methodology/ approach, quality of service	2020.25–2023.00
7	Orange	8	e-commerces	omnichannel marketing, multi channel, online shops	2019.20–2022.60
8	Brown	2	–	online retail, online retails	2019.80–2020.00

Source: compiled by the author according to the SCOPUS database

research related to sales. The item had the highest total link strength within the sample. Its average publication year (avg. pub. year) is 2020.59. Most docs focus on sales online and offline, supply chains, costs, and profitability. Thus, it can be argued that the main part of omnichannel research is linked to managing sales online and offline in terms of their efficiency.

The second cluster (green) of the research is delineated with the keyword "omnichannel" itself (2020.80 avg. pub. year). It reflects the dimension of marketing and marketing strategy. Accordingly, it is mainly related to the interaction between channels (multichannel, cross-channel, channel choice, distribution channels, etc.), impacts of COVID-19 and technology (augmented reality, technology adoption, etc.), the field of applying omnichannel (retail, fashion industry, etc.), consumer behavior (perception, personalization, customer loyalty, CX, etc.).

The third cluster (blue) of the research refers to "commerce" (2020.62 avg. pub. year). The scope of the cluster comprises consumer behavior (shopping behavior as well), decision-making (big data, data analytics, machine learning, data mining, etc.), competition, channel integration, and information systems and management. It is worthy of note that the collocations with the term "management" appeared in the cluster. Except for the mentioned one, there are the following – omnichannel management, channel management, and operations management. In this context, "business models" as one of the keywords is properly considered in the cluster. Also, it has the earliest date of forming the sample.

The fourth cluster (yellow) is formed around the item "omnichannel retailing" (2020,92 avg. pub. year). It includes electronic commerce, retailing, consumption behavior, supply chain management, and integration. The cluster is close to the second one, but the main difference lies in the strong link to the marketing practice. The fourth cluster has one of the earliest dates of forming as well.

"Customer experience" (2020.93 avg. pub. year) is defined as the main item of the fifth cluster (purple). The important items mainly outline issues related to customers, namely human-computer interaction, and customer journey, and ones referred to the field of applying omnichannel – e-commerce, retail, and brick-and-mortar. The fifth cluster has one of the earliest dates of forming as well.

The driving theme of the sixth cluster (turquoise) is "customer satisfaction" (2020.77 avg. pub. year), which is mainly connected with service quality, artificial intelligence, and behavioral research. The cluster peculiarity is its latest date.

The seventh and eighth clusters are characterized by fewer items that cannot be reasonable to consider in terms of analysis. Judging by some dispersion of studies within the sample, e.g. consumers are divided into two clusters, and a significant number of clus-

Table 2 – The most cited publications in the domain of omnichannel according to the SCOPUS database, 2013–2023

Title	Authors	Year	Source (Journal)	N Citations
Competing in the age of omnichannel retailing	Brynjolfsson E., Hu Y.J., Rahman M.S.	2013	*MIT Sloan Management Review*	549
Omnichannel retail operations with buy-online-and-pick-up-in-store	Gao F., Su X.	2017	*Management Science*	444
City logistics: Challenges and opportunities	Savelsbergh M., Van Woensel T.	2016	*Transportation Science*	439
Introduction to the special issue information technology in retail: Toward omnichannel retailing	Piotrowicz W., Cuthbertson R.	2014	*International Journal of Electronic Commerce*	430
Integrating Bricks with Clicks: Retailer-Level and Channel-Level Outcomes of Online-Offline Channel Integration	Herhausen D., Binder J., Schoegel M., Herrmann A.	2015	*Journal of Retailing*	427
How to win in an omnichannel world	Bell D.R., Gallino S., Moreno A.	2014	*MIT Sloan Management Review*	323
Offline showrooms in omnichannel retail: Demand and operational benefits	Bell D.R., Gallino S., Moreno A.	2018	*Management Science*	312
Online and offline information for omnichannel retailing	Gao F., Su X.	2017	*Manufacturing and Service Operations Management*	276
Customer engagement in service	Kumar V., Rajan B., Gupta S., Pozza I.D.	2019	*Journal of the Academy of Marketing Science*	271
Managing Multi- and Omni-Channel Distribution: Metrics and Research Directions	Ailawadi K.L., Farris P.W.	2017	*Journal of Retailing*	262

Source: compiled by the author according to the SCOPUS database

ters, one can argue that omnichannel research is at the initial state. It should be taken into account, that spelling of the same phenomenon, e.g. e-commerce, electronic commerce, e-commerces, can be different and it influences forming clusters as well.

The 10 most cited publications in the domain "omnichannel" concern mainly retailing (Table 2).

The omnichannel is still the focus of retailing. The main interests are of the following. The initial topic is connected with competition in the new omnichannel environment [1; 14]. A significant number of papers are dedicated to researching the impact of the omnichannel on retail operations as well as other market indicators [15–17]. For instance, in which way implementing BOPS (buy-online-and-pick-up-in-store) influences the profitability of the operations, reaching new customers, etc. [15]. Bell D.R. et al. consider showrooms in combination with online fulfillment in terms of demand, operational spillovers, efficiency, etc. [16]. Gao F and Su X. study how retailers can effectively deliver online and offline information to omnichannel consumers and in which ways they impact store operations [17]. Ailawadi K.L. and Farris P.W. propose metrics for monitoring omnichannel marketing. A basic framework is based on two dimensions – coverage (breadth), and in-store attractiveness (depth) [18].

The key issues about new technologies are on the focus as well, namely the need for channel integration, the impact of mobile technologies, the growing role of social media, the changing role of physical brick-and-mortar stores, the need to respond to diverse customer requirements, the balance between personalization and privacy, and supply chain redesign [19].

Research related to consumers in the omnichannel environment is also in the top-ranked articles. Kumar V. et al. provide how interaction orientation and omnichannel model can be used to create a positive service experience [20]. Herhausen D. et al. examine the impact of online-offline channel integration on the shopping experience of customers by conceptualizing a theoretical model [21].

Except for the research of omnichannel itself, there is the article where omnichannel is considered in connection with different topics, such as logistics [22].

Conclusions. Drawing on the SCOPUS database, the study provides the results of bibliometric performance analysis, scientific mapping based on co-word analysis, and exploring the most cited papers in the domain of omnichannel. It can be stated that omnichannel is nowadays a relevant topic in scientific research. It was conceived in retailing, then it mainly shifted to customer issues in the omnichannel environment and started to be an interest of other fields of economy, but still has been in its infancy.

The scientific persistent interest in the omnichannel issue appeared in 2013, and since then it has been steadily growing, reaching its maximum in 2022 and 2023 in terms of the number of docs. "Business, Management and Accounting" holds the top position during the research period. As for geographic affiliations, approximately 80 % of docs were published in the USA, China, and India. However, there has not been identified a strong concentration of publications on the topic at any university. Judging by the distribution of docs in several sources, we can argue that omnichannel issues have become on focus not only on retailing but other fields of economic science and business.

Based on the semantic network analysis provided by the VOSviewer program, eight thematic clusters have been identified, amongst which the last two are not important. The main themes, which are the focus of omnichannel research, concern managing sales online and offline, dimension of marketing and marketing strategy, commerce, retailing, customer experience and satisfaction. Amongst them the earliest topic is related to commerce and the latest one is connected to customer satisfaction.

The most cited articles highlight the issues of competition in the new omnichannel environment, the impact of the omnichannel on retail operations, metrics for monitoring omnichannel marketing, creating a positive service experience, and logistics as an off-topic.

The derived results allow substantiating the modern agenda of omnichannel issues and the most priority areas of its research, to determine the sources of its scientific and methodological support on the way to further development.

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