



Knowledge mapping of e-commerce supply chain management: a bibliometric analysis

Peng He^{1,2} · Tong-Yuan Wang³ · Qi Shang^{1,2} · Jun Zhang^{1,2} · Henry Xu⁴

Accepted: 17 August 2022

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2022

Abstract

E-commerce supply chain management is a considerably hot research topic in recent decades, and the research findings have been widely published in various well-known international journals. To explore its research status and trend, we employ a bibliometric analysis approach to conduct performance analyses and reveal the publication trend, the main discipline categories, the top contributing countries, institutions, authors, the most influential documents and the dominant academic journals. Furthermore, we shed light on the dynamic evolution tendency of research topics and hotspots in this field. The keywords co-occurrence analysis reveals implications into 7 major clusters including e-commerce operations, supply chain management, pricing strategy, coordination mechanism design, sustainable development management, cross-border e-commerce management, and closed-loop supply chain management. The research gap analysis suggests that future research directions could combine live-streaming, emerging technologies, disruption risk and behavioral preference into the e-commerce supply chain management research.

Keywords E-commerce · Supply chain management · Bibliometric analysis · Knowledge mapping · Systematic literature review

✉ Tong-Yuan Wang
tywang@henu.edu.cn

¹ Chongqing Key Laboratory of Electronic Commerce and Supply Chain System, Chongqing Technology and Business University, Chongqing 400067, China

² School of Management Science and Engineering, Chongqing Technology and Business University, Chongqing 400067, China

³ Present Address: School of Business, Henan University, Kaifeng 475004, China

⁴ UQ Business School, The University of Queensland, Brisbane, QLD 4072, Australia

1 Introduction

Electronic commerce (i.e., e-commerce) has been referred to as a popular business mode that firms can sell products, information and/or services through online channels and consumers can visit these Internet shops at any place at any time [1–3]. E-commerce enterprises can build their online channels and review their marketing processes to provide more competitive products/services, thereby attracting more consumers [4–6]. With the rapid development of the Internet and information technology, global e-commerce transactions have grown rapidly and witnessed a fast expanding trend in recent decades [7–11]. This is especially so during the period of COVID-19 with continuous development in the marketing of e-commerce. According to a report by eMarketer, the total e-commerce sales in the US (China) are projected to increase from \$4.894 (\$5.072) trillion in 2020 to \$5.940 (\$6.123) trillion in 2024, the growth rate of which would far exceed physical sales.¹ These indicate that e-commerce is of increasing significance in business and academia [12–14]. Meanwhile, it is evident that with a variety of management issues to be investigated, e-commerce is evolving into one of the most widely investigated domains of business practice [15–18].

A significant trend in the evolution of e-commerce research is that more attention has been paid to “supply chain management (SCM)” in both research and business practices. SCM that cares more about a firm’s internal resource allocation and resource integration with external partners in the same supply chain is a classical research topic involving all walks of life and has attracted much attention from scholars and practitioners over the last 6 decades [19–21]. Pioneering research in SCM originated in the 1950s when researchers aimed to explore methods for manufacturers/firms to reduce procurement materials and production-related costs [22]. After that, many scholars have investigated the topic by incorporating the e-commerce environment and some have published far-reaching documents in internationally renowned journals [23–26]. Therefore, it is urgent and imperative to review the related literature on e-commerce SCM so that scholars and managers can better understand the current research status and development tendencies. This paper addresses this need by analyzing and synthesizing the research topics and constructing the knowledge structure of e-commerce SCM.

So far, there have existed some review papers related to the e-commerce topic [27–33]. Particularly, Akter and Wamba [34] review the literature on big data analytics in the e-commerce field and propose an agenda for future research. Hua [35] reviews the existing e-commerce performance literature in the hospitality and tourism industry and proposes a coherent framework to explore research gaps and provide potential future research avenues. Ajmal et al. [36] summarize the review and models that can examine what the critical success factors would guide small and medium-sized enterprises’ e-commerce adoption strategies. Zeng et al. [31] perform a systematic literature review in the agricultural products e-commerce

¹ <https://www.emarketer.com/content/china-ecommerce-2020>.

field. Both Melacini et al. [37] and Cai and Lo [38] review the omni-channel operations issues in the context of e-commerce. Escursell et al. [39] review the literature on sustainable development in terms of e-commerce packaging. Li [2] systematically examines the use and value of business analytics in e-commerce through quantitative analysis. Yuan et al. [40] review 83 research papers relevant to consumer-to-consumer e-commerce research collaboration and pinpoint the research trend by using a content analysis approach. Although many review papers have addressed e-commerce issues, no one focuses on SCM in the context of e-commerce, especially by using a bibliometric analysis method and providing a systematic research framework of knowledge mapping about it. Kumar et al. [1] show that e-commerce research needs to pay more attention to embracing emerging tools and business models. Therefore, this paper reviews the relevant studies including SCM from the point of production and operations management.

SCM has attracted much attention from scholars, but most of prior review papers on it focus on coordination mechanisms design [41–43], sustainable SCM [44–47], supply chain risk management [48–51], supply chain disruption management [52], supply chain operations reference model [53], supply chain information asymmetry [43, 54], service SCM [55], supply chain flexibility management [56], supply chain uncertainty management [57, 58], smart SCM [59], humanitarian SCM [60], block-chain application in supply chains [61], and closed-loop SCM [62, 63]. Nevertheless, all the above reviews do not address e-commerce SCM from the perspective of production and operations management. This gap in the literature has motivated us to conduct a systematic literature review by using bibliometric and quantitative analysis methods, which could complement the qualitative analysis research of Taghipour et al. [64]. Johnson and Whang [65], and Bakker et al. [66] have reviewed e-commerce in the context of SCM. However, it is urgent to update the review as a significant amount of research has been done since then. Some papers have only considered the branch of e-commerce SCM recently such as e-commerce logistics [67] and supplier encroachment [68].

In comparison with other research fields in the context of e-commerce, SCM enables e-commerce and thus there is an urgent need to review its recent development in relation to e-commerce. Developing a systematic research framework and conducting knowledge mapping analysis are extremely necessary and desirable not only for summarizing the research status, hotspots, and trends of e-commerce SCM, but also for helping e-commerce firms to improve their actual operational performance [69]. E-commerce as a developing business mode has made great progress. Under this online business context, a comprehensive analysis of the literature on e-commerce SCM could yield valuable findings and insights for future research and business practice management. Accordingly, this paper aims to answer the following important and practical research questions (RQs):

RQ1 What are the main disciplines being covered in the e-commerce SCM research?

RQ2 What are the top contributing countries, institutions, authors, journals and articles in the e-commerce SCM field?

RQ3 What are the research status, themes and dynamic evolution trends of e-commerce SCM research?

RQ4 What are the future avenues for e-commerce SCM research?

This investigation will conduct a systematic and comprehensive review by using a bibliometric analysis containing co-occurrence analysis, collaboration network analysis, keywords cluster analysis and literature co-citation analysis to explore, understand and synthesize the research status, dynamic flows and knowledge structure of the e-commerce SCM literature on the basis of internationally well-known journals indexed in Web of Science (WOS) database. Therefore, we argue that this paper is the first one that aims to explore the status, hotspots and trends of research on e-commerce SCM from the perspectives of focus areas, theories and quantitative analysis. Specifically, this work contributes to the previous literature from the following 5 aspects: (1) build a systematic research framework for mining-related information from the e-commerce SCM literature; (2) visualize the knowledge mapping of the changing trend in the e-commerce SCM area based on international journals indexed in WOS; (3) emphasize the top contributing countries, institutions, authors and the most influential articles in the field of e-commerce SCM; (4) provide a comprehensive understanding of the research topics that scholars utilize to explore e-commerce SCM; and (5) propose future research directions for e-commerce SCM related academic communities.

The rest of the paper is organized as below. Section 2 describes the data collection and methodology. In Sects. 3 and 4, we conduct performance analysis and science mapping of the extant literature on e-commerce SCM with the help of CiteSpace and VOSviewer and reflect on the research gaps and future avenues in Sect. 5. Lastly, we summarize the main research findings and discuss the limitations of this review in Sect. 6.

2 Methodology

Following the works of Paul et al. [70] and Kumar et al. [71], we also employ the Scientific Procedures and Rationales for Systematic Literature Reviews (SPAR-4-SLR) mainly including assembling, arranging, and assessing stages to establish a review protocol, which is summarized and depicted in Fig. 1.

2.1 Assembling

Based on the previous relevant studies, we preliminarily determine the search keywords and further discuss with several experts in the e-commerce SCM field to ensure that the selected ones can represent “e-commerce SCM”. Specifically, we identify four keywords to represent “e-commerce” and “SCM”, which results in the following search string: (“E-commerce” or “Electronic Commerce” or “Online Retailing” or “Online Retail”) as the first topic and (“Supply Chain Management” or “Supply Chain Operations” or “Supply Chain Coordination” or “Supply Chain

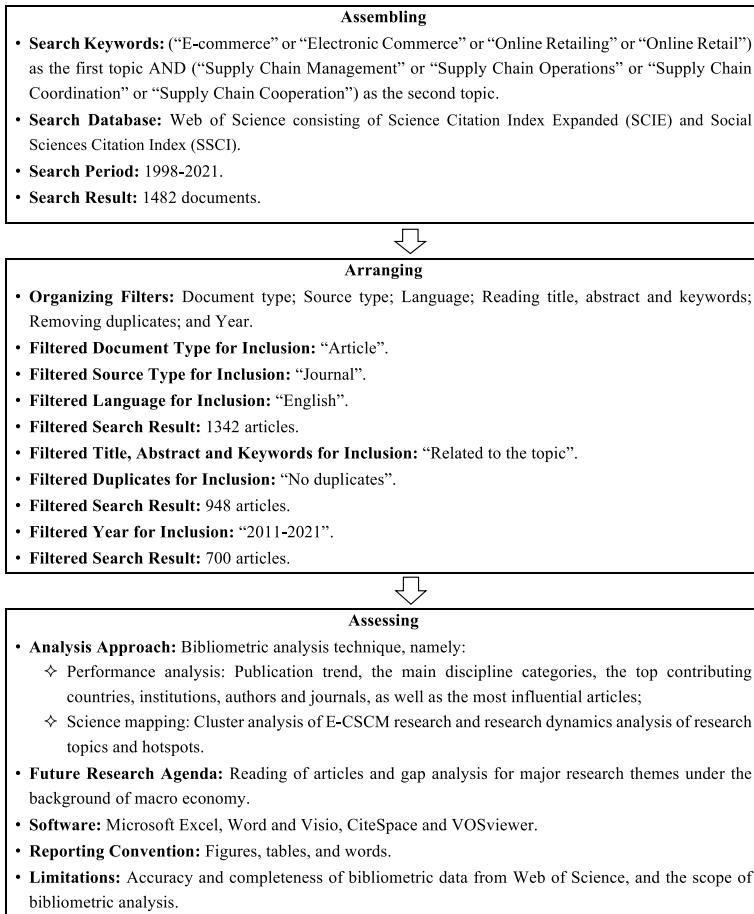


Fig. 1 Procedures for reviewing e-commerce SCM using the SPAR-4-SLR protocol

Cooperation”) as the second topic. To explore the knowledge structure and research progress concerning e-commerce SCM, this paper investigates the databases in the Web of Science (WOS) Core Collection, which is one of the largest scientific research information data repositories in the world [40, 72]. The collected databases include Science Citation Index Expanded (SCIE) and Social Sciences Citation Index (SSCI) with the search period from 1998 to 2021. As a result, 1482 documents have been obtained from the above search rules.

2.2 Arranging

Based on the 1482 documents returned from the assembling stage, this paper further utilizes the category function in the WOS to screen the search results by setting the “document type” as “article”, the “source type” as “journal”, the “language” as

“English”, thereby leading to 1342 articles. Based on these search rules, the authors of this review also read the titles, abstracts and keywords of these retrieved scientific documents carefully to identify if these research contents match the subject of e-commerce SCM closely and further utilize the WOS data preprocessing of CiteSpace software to exclude the duplicate literature. Therefore, a total of 948 papers are included. According to the publication trend analysis, we further constrain the timespan into nearly 11 years and highlight the main research status, topics and tendencies as the recent decade is a critical period to e-commerce SCM and the recent research helps researchers and managers to better understand this field. Lastly, a total of 700 articles will be deeply analyzed with the help of CiteSpace, VOSviewer and Microsoft Excel.

2.3 Assessing

Following many prior studies [73–75], this paper employs a bibliometric analysis approach, which uses quantitative techniques to retrospect and describe published documents and further helps researchers evaluate the scholarly papers’ scientific information and assess the final corpus of collected articles related to e-commerce SCM. Nowadays, it is very common for researchers to adopt bibliometrics to conduct systematic reviews such as e-business [76], channel operations [68] and SCM [77, 78] because it can provide a systematic, transparent, and reproducible review process [71, 74] and can reduce the potential deviation of manual analysis and subjectivity of qualitative analysis, especially for large sample data [79, 80]. Different from the conceptual or empirical study, the bibliometric review could contribute to the new knowledge development for a specific field through big data analytics and machine learning [81]. Bibliometric research also can promote objective assessment, ascertain reach for coverage claims, detect anomalies for further examination, and so on [82]. Accordingly, this study will conduct knowledge mapping and quantitative analyses including performance analysis and science mapping to investigate the extracted literature data that includes publication dates, countries, institutions, disciplines, journals, authors and references related to the collected documents and further employ the CiteSpace and VOSviewer to visualize the knowledge mapping of e-commerce SCM literature [83–85]. More importantly, this study proposes possible future research directions by reading the existing articles carefully and analyzing the gaps under the major research themes in the e-commerce SCM area.

3 Performance analysis of e-commerce SCM research

In this section, we will conduct performance analyses to reveal the publication trend, the main discipline categories, the top contributing countries, institutions, authors and journals, as well as the most influential articles of e-commerce SCM research, respectively.

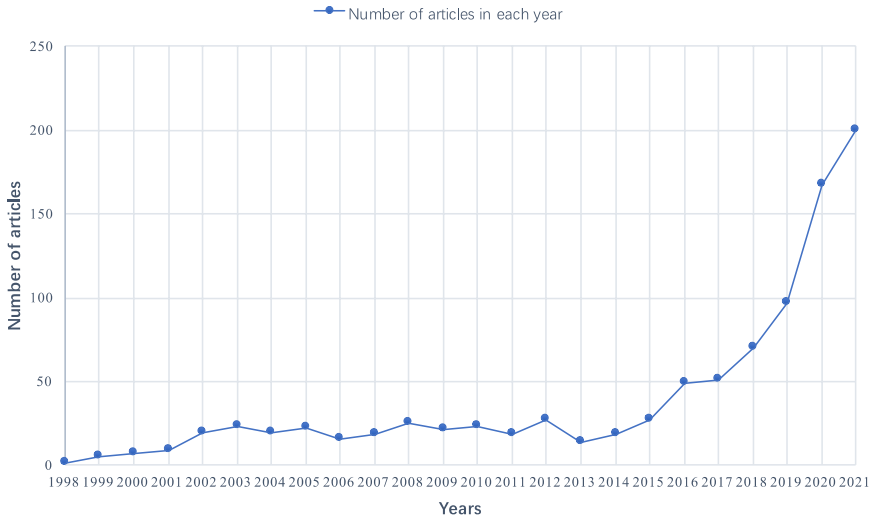


Fig. 2 Trend of publications on e-commerce SCM

3.1 Publication trend for e-commerce SCM research

Figure 2 illustrates an overview of the publications concerning e-commerce SCM per year, which could be divided into three main stages. Specifically, the emerging stage is from 1998 to 2001, wherein the publications were fewer than 10 per year but the number was increasing year by year at a relatively low growth rate. The second stage (2002–2013) is the fluctuation stage, with more than 10 but fewer than 30 publications per year. In this stage, the e-commerce SCM research was in a bottleneck period and had developed relatively slowly. This may be because the development of e-commerce was constrained by the global financial crisis. The last but the most important stage, from 2013 to 2021, represents the explosion stage. During this stage, the number of publications increased rapidly from 14 in 2013 to 200 in 2021, with a higher average growth rate, especially from 2018 to 2021. It also indicates that e-commerce SCM has become one of the most topical issues in academia since 2015. Due to the significance of the third stage, we next mainly analyze the documents issued during the last 11 years to highlight the recent research development trend in the e-commerce SCM field.

3.2 The main discipline categories for e-commerce SCM research

Through the co-occurrence analysis of discipline categories (see Fig. 3), it can be found that e-commerce SCM is a comprehensive and cross-cutting research topic that involves various disciplines and attracts much attention from scholars. From Table 1, Business and Economics with 277 publications is ranked first, followed by Engineering with 243 articles, then Operations Research and Management Science (218), Management (174), and Computer Science (155). Besides, Mathematics (79) and Mathematics Interdisciplinary Applications (63) are also very related

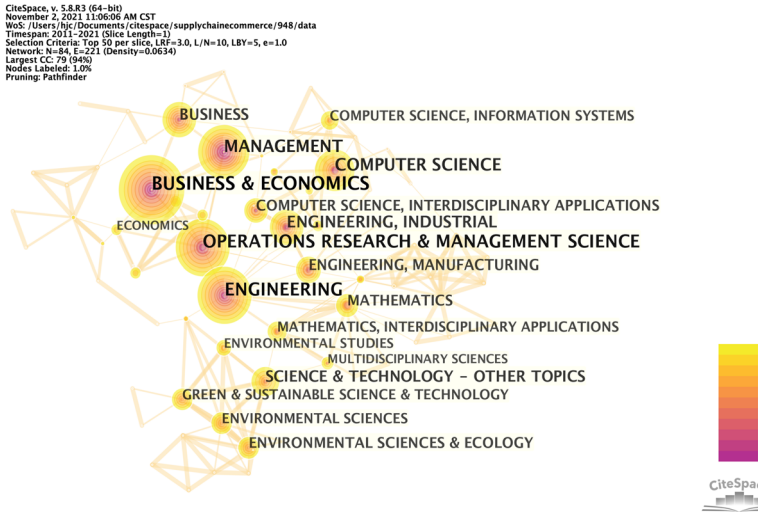


Fig. 3 Co-occurrence analysis of discipline categories. *Note* The different colors indicate the year when papers were published. The lighter the color, the closer it is to now

Table 1 Top 15 discipline categories of document distribution

Disciplines	Count	Percentage (%)
Business and economics	277	14.62
Engineering	243	12.82
Operations research and management science	218	11.50
Management	174	9.18
Computer science	155	8.18
Engineering, industrial	116	6.12
Science and technology—other topics	105	5.54
Business	102	5.38
Computer science, interdisciplinary applications	79	4.17
Mathematics	79	4.17
Engineering, manufacturing	78	4.12
Environmental sciences and ecology	71	3.75
Environmental sciences	70	3.69
Green and sustainable science and technology	65	3.43
Mathematics, interdisciplinary applications	63	3.32

to e-commerce SCM. The Environment discipline has also paid more attention to it, such as Environmental Sciences and Ecology (71) and Green and Sustainable Science and Technology (65). By reading some representative articles of different disciplines [23, 86–89], it could be found that some papers have involved multiple discipline categories. For instance, Gao and Su [90] involve multiple discipline categories of Management, Business and Economics, Information Science, and

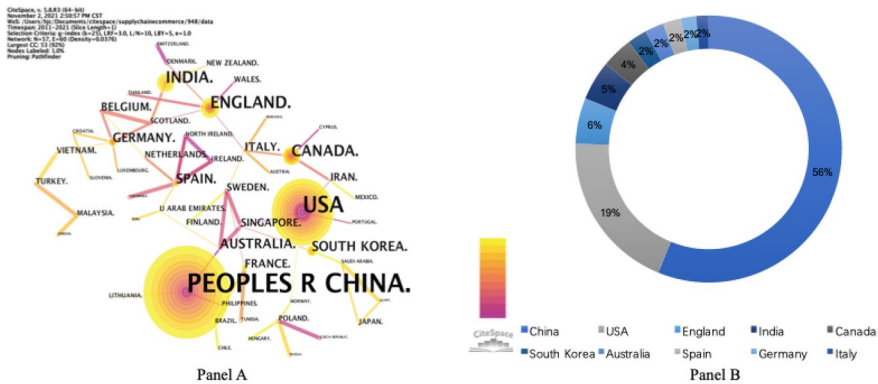


Fig. 4 Collaboration network of countries

Mathematics; The work of Qin et al. [91] relates to Finance, Operations Research and Management Science, and Environmental Sciences, and so on. In the recent decade, e-commerce SCM research has become an increasingly hot topic in the fields of Electronic Commerce Research, Production and Operations Management and spreads to other fields. The main purpose of this investigation is to provide an overview of the knowledge progress related to SCM in the e-commerce area, so this study will comprehensively analyze publications from different scientific fields.

3.3 Top contributing countries for e-commerce SCM research

Collaboration network analysis can show the collaborative network relationship among scholars in the knowledge production process, which can help people to understand the knowledge distribution, dissemination and diffusion of the previous research. Accordingly, we next aim to develop a collaboration network analysis of countries, institutions and authors to identify influential sources and documents consisting of the e-commerce SCM literature and provide more insights.

In terms of the collaboration network of countries, Fig. 4 indicates the most productive and influential countries publishing research on e-commerce SCM. The top 5 countries with the most publications are China (445) accounting for 56% of the top 10, USA (154) accounting for 19%, England (44), India (38) and Canada (30). By contrast, from the perspective of centrality showing the degree of connection between nodes (countries), Italy with 0.75 centrality is ranked firstly, followed by England (0.68), Sweden (0.67), Scotland (0.54) and Singapore (0.53), indicating relatively strong international cooperation relationships with other countries in the research of e-commerce SCM (see Table 2). However, the centralities of top contributing countries including China, USA and Canada are 0.13, 0.42 and 0.22 respectively, which show that they have a relatively weaker connection with other countries. Thus, it advises that some countries with most publications such as China, USA and Canada, as well as India with a centrality of 0.07 should strengthen their international cooperation with other countries and move beyond their current

Table 2 The centrality of collaboration network of countries

Rank	Centrality	Country	Rank	Centrality	Country
1	0.75	Italy	11	0.25	Norway
2	0.68	England	12	0.22	Canada
3	0.67	Sweden	13	0.19	South Korea
4	0.54	Scotland	14	0.19	France
5	0.53	Singapore	15	0.19	Vietnam
6	0.43	Australia	16	0.19	Poland
7	0.43	Germany	17	0.18	Iran
8	0.42	USA	18	0.16	Belgium
9	0.29	Spain	19	0.15	Netherlands
10	0.28	United Arab Emirates	20	0.13	China

academic circle by attending more international academic conferences in different countries and communicating with more researchers from more different countries.

3.4 Top contributing institutions for e-commerce SCM research

Figure 5 and Table 3 show the institutional partnerships and the number of publications of each institution in the e-commerce SCM field, respectively. The top five institutions with the largest number of publications are Tianjin University with 24 publications, followed by the South China University of Technology with 20 articles, then Hong Kong Polytechnic University (19), and lastly University of Science and Technology of China and Chongqing University (16). From the perspective of centrality, the City University of Hong Kong with 0.25 in centrality, Macau University of Science and Technology (0.22) and the University of Science and Technology of China (0.21) are the top three, which show a relatively stronger connection with other institutions. However, some productive institutions do not always have a higher centrality. Because the centrality can highlight the key nodes in the network in terms of link strength instead of publication numbers and some of their publications are cited less. By considering the number of publications and the centrality indicators comprehensively, Hong Kong Polytechnic University, University of Science and Technology of China, Beijing Jiaotong University and University of Electronic Science and Technology of China are the top contributing institutions for e-commerce SCM research. As illustrated by the collaboration network analysis, these institutions have been more productive and shown a broader connection with others simultaneously.

3.5 Top contributing authors for e-commerce SCM research

Based on the analysis of the authors' publishing articles, Yuyan Wang and Liang Shen from the Shandong University of Finance and Economics have more than ten publications in the recent decade (see Table 4). They are followed by Guo Li and Bo

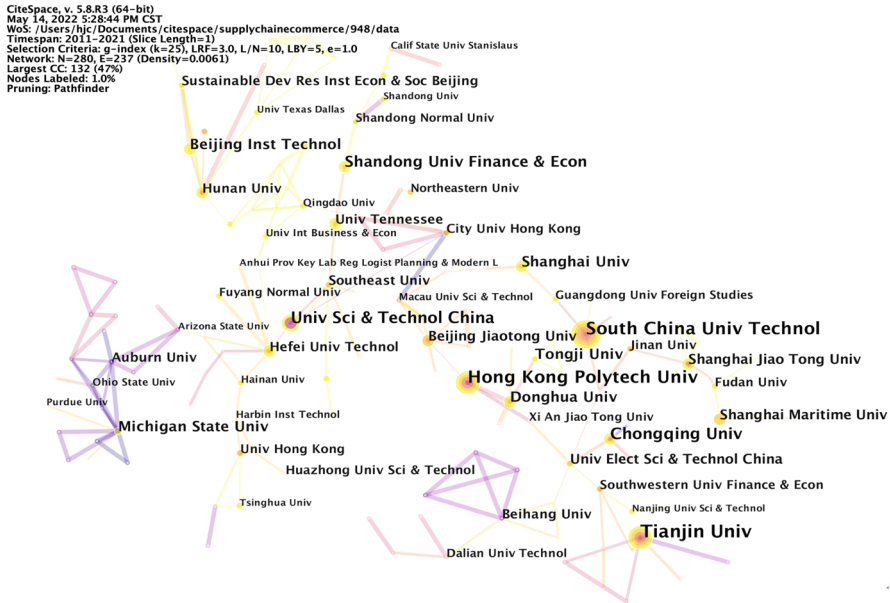


Fig. 5 Collaboration network of institutions

Li who published eight and six articles respectively, then Zhaoqing Yu, Baozhuang Niu, Lei Yang and Gang Li with five papers each. From the point of citations, Bo Li from Tianjin University and Lei Yang from South China University of Technology with 280 and 226 citations are two of the most influential authors whose publications have obtained average citations of 46.67 and 45.20 separately. The chart in Fig. 6 indicates the cooperative relationships among authors in the e-commerce SCM field. The darker the color of the author's name tag in the figure, the more the papers published by the author. It generally can be seen that the intellectual structure of the author cooperation network presents the characteristics of several decentralized networks, and the dispersion degree is usually lower than the institutional collaboration network diagram. Besides, it demonstrates that these researchers have formed their own relatively independent research groups but rarely cooperate with each other. Hence, it could be suggested that the relatively independent research teams should strengthen their collaboration with other research teams and disciplines.

3.6 Top contributing journals for e-commerce SCM research

Following some prior authors [92, 93], we utilize the co-citation analysis as an effective tool to map the knowledge structure of journals or articles as it not only generates a huge and measurable effect in the information science field itself from a large knowledge base, but also in extensive research fields. If two journals or documents are cited by a third paper together, it means that these two journals or documents have a correlation relationship in terms of topics. The more papers cite these

Table 3 The top contributing institutions by count and centrality

Panel A ranked by count			Panel B ranked by centrality		
Count	Centrality	Institutions	Centrality	Count	Institutions
24	0.03	Tianjin University	0.25	7	City University of Hong Kong
20	0.02	South China University of Technology	0.22	5	Macau University of Science and Technology
19	0.19	Hong Kong Polytechnic University	0.21	16	University of Science and Technology of China
16	0.21	University of Science and Technology of China	0.2	10	Beijing Jiaotong University
16	0.01	Chongqing University	0.19	19	Hong Kong Polytechnic University
13	0.03	Shandong University of Finance and Economics	0.19	10	University of Electronic Science and Technology of China
11	0.04	Michigan State University	0.18	9	Hefei University of Technology
11	0.03	Donghua University	0.16	6	Xi'an Jiaotong University
11	0.02	Shanghai University	0.11	4	Arizona State University
11	0.01	Tongji University	0.11	3	Cornell University
11	0	Beijing Institute of Technology	0.1	8	Auburn University
10	0.2	Beijing Jiaotong University	0.09	9	Southeast University
10	0.19	University of Electronic Science and Technology of China	0.07	5	Qingdao University
10	0.05	Shanghai Jiao Tong University	0.07	1	Civil Aviation University of China
10	0.01	Shanghai Maritime University	0.06	8	Hunan University

Table 4 Top contributing authors publishing documents on e-commerce SCM

Count	Authors	Institutions	Citations	Average citations
12	Yuyan Wang	Shandong University of Finance and Economics	90	7.50
10	Liang Shen	Shandong University of Finance and Economics	69	6.90
8	Guo Li	Beijing Institute of Technology	103	12.88
6	Bo Li	Tianjin University	280	46.67
5	Zhaoqing Yu	Shandong University of Finance and Economics	28	5.60
5	Baozhuang Niu	South China University of Technology	72	14.40
5	Lei Yang	South China University of Technology	226	45.20
5	Gang Li	Xi'an Jiaotong University	133	26.60

2 journals or documents simultaneously, the co-citation relationship between them would be stronger.

By summarizing the journals publishing e-commerce SCM topics from 2011 to 2021, the co-citation relationship of the journals is shown in Fig. 7. The top five contributing journals identified through co-citation analysis are the European Journal of Operational Research with 510 co-citations, followed by the International Journal of Production Economics (498), Management Science (478), Production and Operations Management (393) and Omega (328). It is noted that these journals such as the International Journal of Production Research (307), Marking Science (270) and Computers and Industrial Engineering (263) are also productive. This finding shows that the above-mentioned important and influential journals publish the main research outcomes related to e-commerce SCM, which can present the main knowledge structure of e-commerce SCM literature that can help readers to quickly understand the research status in this field and choose a more appropriate journal for their future research papers.

3.7 The most influential articles for e-commerce SCM research

Figure 8 depicts the co-citation network for publications with more than 10 co-citations, which can help the authors to find the key knowledge foundations and the relatively important articles in the e-commerce SCM field. The top three most influential articles are Gao and Su [94], Abhishek et al. [86] and Chen et al. [95], all of which study supply chain members' different marketing and operations strategies in the context of e-commerce. This implies that the topics of these co-citation articles have a closer correlation and represent the main topics of e-commerce SCM research. Specifically, Gao and Su [94], published in Management Science, have gained the most co-citations (49). In their work, they examine the influences of buy-online-and-pick-up in store (BOPS) on supply chain operational performance by considering the real-time information about inventory availability and the hassle cost of shopping. They confirm that the BOPS strategy is not suitable for all types of products but it could help retailers to reach new consumers to some extent. In a decentralized structure, participants can share BOPS revenue across channels and thus reduce channel

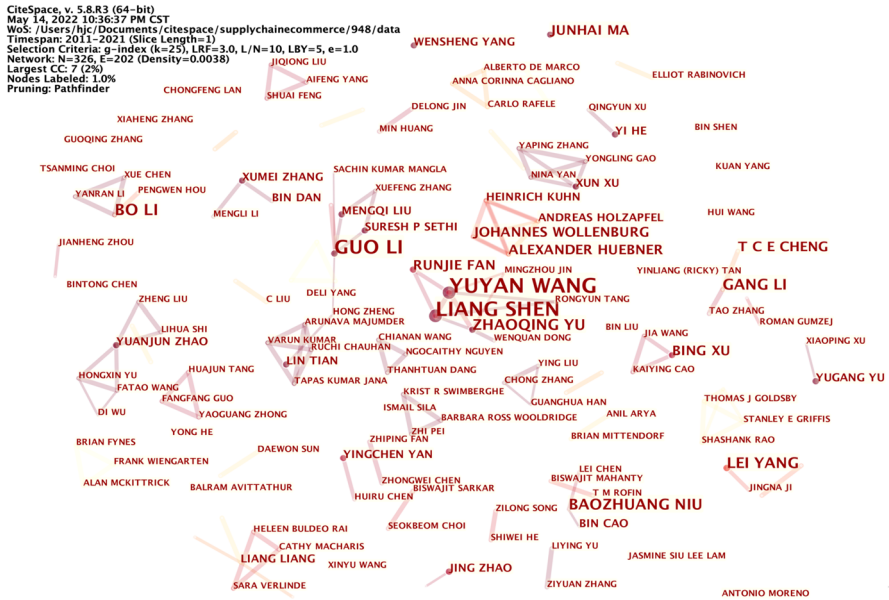


Fig. 6 The collaboration network of authors

conflict. The second is Abhishek et al. [86] published in *Management Science* with 44 co-citations. It has addressed the question of when the e-retailer should utilize an agency selling format or a conventional reselling format. The authors indicate that the former is more effective than the latter, which can lead to lower retail prices. The retailer would be more likely to embrace the agency selling format if the online channel does great harm to the traditional channel, otherwise, it prefers the reselling mode. Chen et al. [95] published in the *European Journal of Operational Research* with 38 co-citations is ranked third. They explore the optimal pricing and quality decisions in a dual-channel supply chain and analyze the effects of channel structure on the whole system's revenue, each player's profit and consumer surplus. They indicate that increasing a new channel can improve the entire supply chain's operational performance to some extent.

According to these studies, it is important to emphasize that channel structure management, pricing and quality decisions, cooperation among chain members, as well as supply chain performance improvement have constituted the knowledge foundations in the e-commerce SCM field as basic topics. Around these topics, many other scholars have also studied some expansive themes. Besides, it can be generally concluded that the most co-cited documents mostly belong to the most popular journals in the e-commerce SCM field (see Table 5), which could show the importance and influence of these articles and journals. Some of the theories, mathematical modeling approaches, and management insights presented in these papers could be referenced by readers, especially future scholars who intend to enter this field.

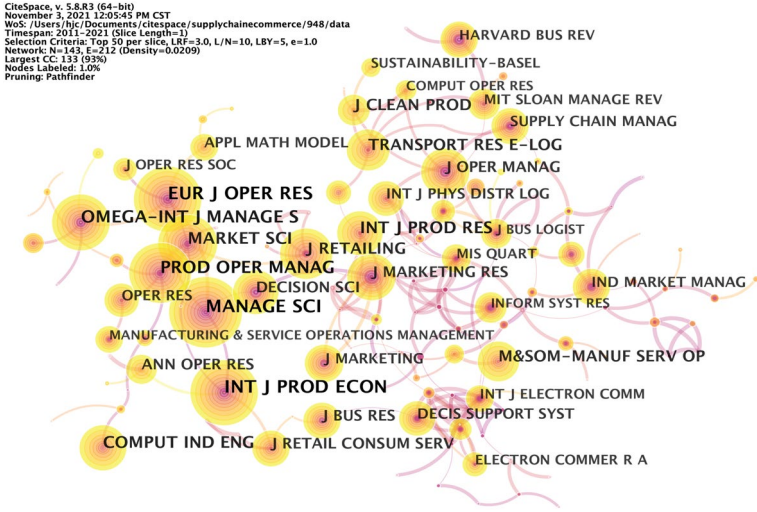


Fig. 7 The co-citation network of journals

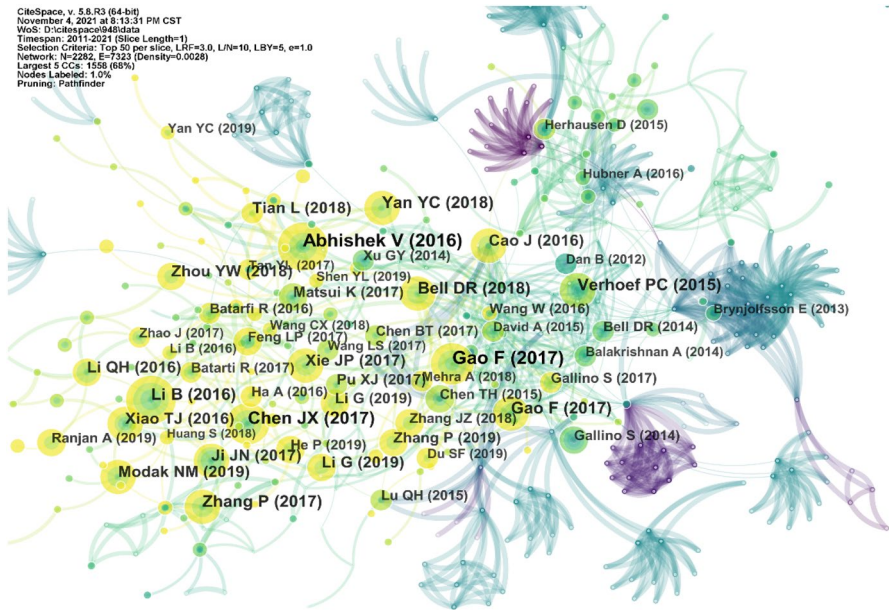


Fig. 8 The co-citation network of authors

Table 5 Top contributing articles in the e-commerce SCM field

Authors	Count	Centrality	Years	Publication journals
Gao and Su [94]	49	0.07	2017	Management Science
Abhishek et al. [86]	44	0.12	2016	Management Science
Chen et al. [95]	38	0.03	2017	European Journal of Operational Research
Gao and Su [90]	30	0.04	2017	Manufacturing & Service Operations Management
Bell et al. [147]	30	0.06	2018	Management Science
Li et al. [87]	29	0.04	2016	Journal of Cleaner Production
Li et al. [148]	28	0	2019	Transportation Research Part E: Logistics and Transportation Review
Zhang et al. [149]	28	0.01	2017	International Journal of Production Economics
Yan et al. [5]	28	0.01	2018	European Journal of Operational Research
Verhoef et al. [150]	28	0.04	2015	Journal of Retailing

4 Science mapping of e-commerce SCM research

4.1 Research dynamics analysis

In this subsection, we will perform time-zone mapping of keywords and keyword prominence analysis to explore the main emerging research topics year by year and when research hotspots began and how long they lasted.

4.1.1 Dynamic evolution of research topics

Figure 9 illustrates the time-zone mapping of keywords. By analyzing it, we can discover the historical evolution of research priorities and explore the emerging research trends in the field of e-commerce SCM. Firstly, the main research topics such as supply chain (management), firm performance, information technology, dual-channel, consumer return, contract design and integration had emerged before 2011. Thus, from 2011 to 2013, these main research themes in this field attracted much attention from researchers. In this stage, it should be noted that supply chain coordination (including contract design), firms' performance management, information technology, pricing policy and dual channel are the prominent topics. Besides, "Internet+", consumer return/behavior, product quality, channel choice and sustainability became well-researched issues. From 2014 to 2017, the new emerging topics showed a declining trend but still maintained a moderate level of popularity. For example, logistics, disruption, multichannel, algorithm design, channel encroachment, and risk management that extended from the previous themes have also attracted much attention. During the recent 4 years (2018–2021), the research topics have been linked to other issues such as store brand, reverse logistics, cap-and-trade, loop-supply chain, platform, money-back guarantee, trade credit and bank financing. Lastly, behavioral preference (e.g., risk-averse, corporate social responsibility,

carbon emission reduction awareness, commitment and trust) has also become a hot spot in segmentation.

In summary, the e-commerce SCM has been widely studied in various topics. At present, it is relatively mature and has entered a relatively tight bottleneck period of emerging topics but is still popular. Therefore, it is necessary to combine emerging technologies and integrate them with other fields (e.g., live broadcast with goods, short video promotion, and emergency management, etc.) to explore a better research entry point and identify some relevant subtle issues.

4.1.2 Dynamic evolution of research hotspots

The keyword prominence analysis can help us to identify when the research hotspots began to be concerned and how long they lasted. The emerging research hotspots on e-commerce SCM are summarized in Fig. 10 since 2011. It is worthy of noting that this paper examines these emerging keywords only in the field of e-commerce SCM. In general, we can divide the research period (2011–2021) into three main stages. In the first stage (2011–2013), e-commerce, firm performance, information technology, EDI, innovation, e-procurement and supply chain integration have attracted much attention all around the world since 2011. Most of them have maintained popular for several years. Particularly, e-commerce, customer satisfaction and e-procurement were the hotspots for more than 5 years. Please note that the duration of them may be longer as we only examine the data starting from 2011. In 2012, the word of mouth began to be a hot topic and kept popular for 7 years. In the second stage, from 2014 to 2017, the scholars paid more attention to mathematic modeling, demand/production uncertainty, and diffusion. Most of these topics were maintained for a relatively short time compared to that in the first stage. In the third stage (2018–2021), the hotspots became diversified and were maintained for a relatively short period. After that, researchers have begun to pay more attention to multichannel operations management, algorithm, sustainability, transportation, order allocation, retailer benefit and consumer protection. Wherein algorithm has become a hot topic in the past 4 years and some scholars also extended the e-commerce SCM topic to other fields such as closed-loop SCM.

4.2 Cluster analysis of e-commerce SCM research

Cluster analysis embedded in VOSviewer can automatically extract the relevant information of keywords to generate clusters allowing scholars to identify the main knowledge domains of research [85, 96]. Accordingly, this section conducts a cluster analysis based on keywords co-occurrence, presented in Fig. 11, which indicates that the research themes of e-commerce SCM mainly include seven clusters: e-commerce operations, SCM, pricing strategy, coordination mechanism design, sustainable development management, cross-border e-commerce management, and closed-loop SCM (see Table 6). Based on this clustering map, the authors further



Fig. 10 Top 25 keywords with the strongest citation bursts

read relevant papers carefully to summarize the main thematic areas and analyze them in the next subsections.

4.2.1 Cluster 1: e-commerce operations

The first cluster relates to e-commerce operations, consisting of 22.73% of all keywords and 17.66% of total link strength in the network of e-commerce SCM research. The most prevalent keyword in this cluster is “e-commerce”, which

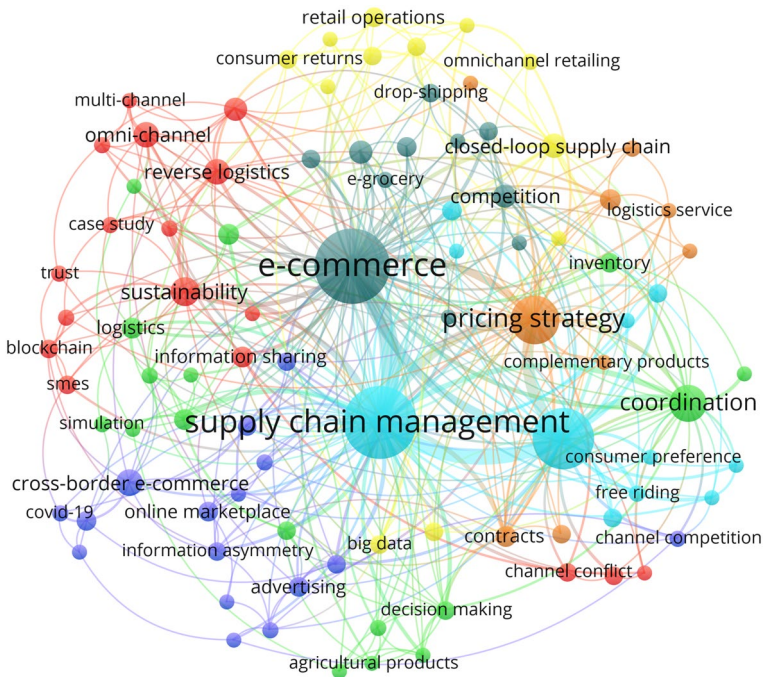


Fig. 11 Major clusters of e-commerce SCM research

could be found in 186 previous papers and is linked to other 199 keywords. Besides, the topics of “omni-channel retailing”, “altruistic preference”, “drop-shipping”, “order fulfillment”, “e-grocery”, “power structure”, and “retail/multi-channel supply chain” are relevant to the e-commerce operations. It also shows that many researchers prefer establishing mathematical models to investigate related issues. Under this cluster, the prior scholars have paid more attention to e-commerce selling mode choices such as agency selling and reselling modes [97–99], online and offline channels competition [25, 100], order allocation and fulfillment [101], as well as the effects of some other factors (e.g., power structure, altruistic preference, consumer preference and product category) on e-commerce operational performance [102–104].

4.2.2 Cluster 2: supply chain management

SCM accounting for 29.82% of total keywords and 29.78% of total link strength is also a relatively large cluster in the e-commerce SCM research. It has appeared in 173 articles and been connected to 249 other keywords, followed by “dual-channel”, which is closely related to 111 papers and is connected to 157 other keywords. This implies that dual-channel SCM is one of the hottest research topics in this cluster. The issues of this topic addressed include whether manufacturers run dual channels [105, 106], selling mode choice [99, 107], and online and offline channel synergy

in the context of “new retail” [108–110]. Other popular themes in this cluster that are investigated in conjunction with SCM include “showrooming”, “green supply chain/products”, “remanufacturing”, “free riding”, “consumer preference”, “customization”, and “pricing policies”. In the context of e-commerce, previous researchers have studied different supply chain types such as green/sustainable SCM [111], dual/multi-channel SCM [87, 101], online platform SCM [112], e-commerce logistics (service) SCM [113], cross-border e-commerce SCM [114], and closed-loop SCM [115].

4.2.3 Cluster 3: pricing strategy

The third cluster with 9 keywords encompasses articles that aim to examine pricing strategy, accounting for 9.91% and 11.27% of total keywords and total links respectively in the network of electronic commerce supply chain research, which focuses on the formulation of prices among multiple channels. Other related popular themes on pricing strategy in this cluster contain “channel strategy”, “contracts”, “e-commerce logistics (service)”, “online platform”, “complementary products”, “customer loyalty”, and “service supply chain”. Undoubtedly, the coexistence of multiple channels is bound to cause fierce price competition among channels, so there are differences in pricing strategies for different channels combined with some other decisions such as service, quality and channel strategies [116–118]. The topics addressed include pricing strategies such as uniform pricing [119], price matching [120], reference price effects [25], personalized pricing [121], and behavior-based price discrimination [122–125]. Additionally, some papers such as Zhen and Xu [126] and Zhou et al. [127] identify the conditions under which firms should adopt the uniform pricing strategy or the differentiated pricing strategy to mitigate channel conflicts and control the selling price. These imply that managers expect to use different pricing strategies to efficiently manage multiple channels and earn more.

4.2.4 Cluster 4: coordination mechanism design

The fourth cluster pertains to coordination mechanism design, consisting of 11% of total keywords and 13.76 total link strength in the e-commerce SCM research network. The most popular keyword with 34 total occurrences in this cluster is “coordination”, which links with 63 other keywords. The other popular themes concerning coordination mechanism design in cluster four include “omnichannel”, “information technology”, “logistics”, “inventory (control)”, “agricultural products”, “bullwhip effect”, “e-procurement”, “internet of things”, and “revenue-sharing” etc. Of particular interest in this theme to researchers is designing coordination mechanisms to improve the overall supply chain performance while allowing all chain members to achieve their individual maximization objectives. So far, a variety of contracts have been proposed for supply chain coordination, including revenue sharing contracts, two-part tariff contracts, quantity discount contracts, cost-sharing contracts, buyback contracts, sales rebate contracts, option contracts, and some corresponding reformation and improvement contracts [128–131]. However, these basic contracts cannot coordinate some special models under certain conditions. Therefore, some scholars

Table 6 Major clusters and keywords for e-commerce SCM research

Keywords	Occurrences	TLS	Keywords	Occurrences	TLS
<i>Cluster 1: E-commerce operations</i>					
E-commerce	186	199	<i>Cluster 2: Supply chain management</i>	173	249
Competition	11	20	Supply chain management	111	157
Omni-channel retailing	11	12	Dual-channel	7	13
Retail supply chain	7	8	Showrooming	6	5
Altruistic preference	6	7	Green supply chain	6	15
Drop-shipping	6	10	Remanufacturing	5	11
Order fulfillment	6	8	Free riding	4	5
E-grocery	5	4	Consumer preference	4	9
Mathematical model	4	10	Customization	4	9
Multi-channel supply chain	4	4	Green products	4	4
Power structure	4	8	Price competition	4	12
<i>Cluster 3: Pricing strategy</i>					
Pricing strategy	66	109	<i>Cluster 4: Coordination mechanism design</i>	34	63
Channel strategy	8	15	Coordination	9	10
Contracts	8	27	Omnichannel	8	16
E-commerce logistics	6	4	Information technology	8	14
Online platform	5	5	Logistics	7	8
Complementary products	4	7	Inventory	6	22
Customer loyalty	4	4	Decision making	6	15
Logistics service	4	9	Internet	5	9
Service supply chain	4	5	Fresh produce	5	6
<i>Cluster 5: Sustainable development management</i>					
Sustainability	18	31	Simulation	5	6
Omni-channel	14	20	12	4	9
Reverse logistics	13	26	Agricultural products	4	6
			Bullwhip effect	4	5
			E-procurement	4	5

Table 6 (continued)

Keywords	Occurrences	TLS	Keywords	Occurrences	TLS
Product returns	11	17	Internet of things	4	7
Information sharing	9	13	Inventory control	4	6
Blockchain	6	9	Production	4	13
Channel conflict	6	8	Revenue-sharing	4	5
Cooperative advertising	6	7	<i>Cluster 6: Cross-border e-commerce management</i>		
SMEs	6	7	Cross-border e-commerce	15	13
Case study	5	8	Advertising	7	12
Performance	5	8	Online marketplace	7	8
Service	5	9	Supply chain resilience	7	8
Supply chain finance	5	8	Blockchain technology	6	9
Trust	5	4	Information asymmetry	6	12
Marketing strategies	4	6	Licenses	6	19
Multi-channel	4	8	Reselling	6	9
Technology adoption	4	5	Channel competition	5	9
<i>Cluster 7: Closed-loop supply chain management</i>			Covid-19	5	6
Closed-loop supply chain	12	28	Manufacturer encroachment	5	9
Omnichannel retailing	11	13	Supplier encroachment	5	5
Retail operations	7	10	Channel structure	4	3
Big data	6	12	Multi-channel retailing	4	5
Consumer returns	6	11	Service quality	4	7
Inventory management	6	10	Supply chain design	4	4
Sustainable development	6	6			
Channel integration	4	9			
Demand uncertainty	4	6			

Table 6 (continued)

Keywords	Occurrences	TLS	Keywords	Occurrences	TLS
Forecasting	4	6			
Optimization	4	9			

TLS total link strength for keyword co-occurrences among all keywords

try to combine them to design a new hybrid coordination contract and achieve better results [132]. For example, Heydari et al. [133] developed a cost-revenue sharing contract to balance price and green quality in the presence of consumer environmental awareness.

4.2.5 Cluster 5: sustainable development management

The fifth-largest cluster closely relates to sustainable development management, which encapsulates 11.45% of total keywords and 11.81% of total link strength in the e-commerce SCM research network. The most popular keyword or topic on sustainable development management is “sustainability”, which is found in 18 prior papers and is connected to 31 other keywords. Under the sustainable development and e-commerce background, the previous researchers have studied more related topics such as “multi/omni-channel”, “reverse logistics”, “product returns”, “information sharing”, “blockchain”, “cooperative advertising”, “supply chain finance”, “trust”, and “technology adoption” etc. Under this cluster, researchers have focused on issues as follows: whether (or how) firms should switch from a traditional production and operation mode to a sustainable one and how managers adopt advanced sustainable production technologies, what effects different operations modes among competitors and technology adoptions would have on supply chain performance, as well as how firms can make optimal decisions in terms of pricing and green level settings [134, 135].

4.2.6 Cluster 6: cross-border e-commerce management

The sixth-largest cluster including 16 keywords is related to cross-border e-commerce management, which represents 8.73% and 8.40 of all keywords and all links in the e-commerce SCM research network. Wherein “cross-border e-commerce” appearing in 15 papers and linking to 13 other keywords is the most prevalent theme. The other significant keywords or themes in the cross-border e-commerce management cluster consist of “advertising”, “online marketplace”, “supply chain resilience”, “blockchain technology”, “channel competition/structure”, “information asymmetry”, “COVID-19”, “manufacturer/supplier encroachment”, “service quality”, and “supply chain design” etc. Under the background of cross-border e-commerce, many scholars have studied storage and logistics transportation mode [136–138], supply chain coordination [139], blockchain-based framework building [15] and disruption forecasts [114], etc.

4.2.7 Cluster 7: closed-loop supply chain management

The last but not the least cluster that contains 11 keywords accounts for 6.36% of total keywords and 7.31% of total link strengths in the e-commerce SCM literature network. The most frequent co-occurrence topic is “closed-loop supply chain”, which appears in 12 prior studies and is linked to 28 relevant keywords. This cluster also includes other important research topics closely related to closed-loop SCM such as “big data”, “consumer returns”, “inventory management”, “omnichannel

retailing”, “sustainable development”, “channel integration”, “demand uncertainty”, “forecasting”, and “optimization”. Under this cluster, many previous scholars have shed light on the effects of product returns [140, 141] and old product recovery on forward supply chain operational performance [113, 115] and studied the issues of how to choose the right recycling channels (e.g., the third-party professional recycler or the offline retailer or the online recycling channel) and how to manage end-of-use products to reduce the production cost of enterprises and how to cooperate with other chain members, as well as some key decision-makings such as optimal retailing and recycling prices and optimal product recovery quantity [6, 142].

5 Implications for future research

Based on the above qualitative and quantitative analysis, it is clear to see that the major clusters are interrelated and could therefore interact with each other, indicating some opportunities for e-commerce SCM research. Further, the authors read many prior studies associated with e-commerce SCM carefully and consider the macro-economic development trends, thus putting forward several potential avenues for future research from the perspective of production and operations management, which are outlined as follows.

One emerging and interesting avenue for future research related to e-commerce SCM is to investigate the roles of live-streaming in selling goods. According to the latest data released by China Internet Network Information Center, the number of online live-streaming users in China has reached 703 million up to December 2021, with an increase of 86.52 million compared to December 2020, accounting for 68.2% of the total netizens. Therefore, many production and operations issues associated with SCM would arise with the rapid development of live streaming e-commerce [143]. Unlike the traditional e-commerce supply chain, the live streaming e-commerce supply chain involves more participants who have closer interaction with each other [144]. Accordingly, we identify four main types of supply chain members at the firm level, namely, upstream brand suppliers, MCN (Multi-Channel Network), live-streaming/e-commerce platform, and logistics service providers. It is very important and challenging to explore how this emerging supply chain structure and short video marketing strategy affect the optimal decisions of each player (e.g., pricing, service, advertising) and the revenue distribution among supply chain members and how to encourage all node firms to achieve cooperation and maximize the whole supply chain performance under different market situations (e.g., channel and/or product competition, demand information asymmetry, etc.).

The second important direction for future research is to consider the application of emerging technologies in e-commerce SCM. With the rapid development and gradual maturity of information and data acquisition/processing technologies, digital economy and digital transformation become hotspots in academic and practical circles, especially considering the effects of the COVID-19 pandemic on global business and organizational excellence [145]. Among the themes not widely investigated in the e-commerce SCM research yet, we realize that big data analytics, deep

learning, blockchain and cryptocurrencies as well as smart and digital performance management systems could facilitate firms to make better decisions and improve e-commerce supply chain performance [34]. In addition, artificial intelligence customer service and robo-advisors such as Google's Google Assistant, Xiaomi's Xiaoi Classmate, Amazon's Alexa, and Tmall's Tmall Genie would help enterprises to service consumers and lure them to buy again as a burgeoning marketing pattern. Therefore, how to adopt a suitable emerging technology and how to invest in technology research and development, and what effects these technologies would have on e-commerce supply chain operational performance are the key decision-making problems faced by the practitioner and scholars in industrial 4.0.

The third fundamental future avenue of e-commerce SCM research could be extended to consider the disruption risk management caused by different types of emergencies and the recent Ukraine—Russia war. As demonstrated during the recent COVID-19 pandemic emergency, e-commerce enterprises are facing the opportunity of e-commerce market growth, but at the same time, they are also facing challenges such as interruption of raw material supply, interruption of production, increase in logistics transportation costs, as well as demand interruption and so on. The Ukraine—Russia war also leads to many practical problems such as supply shortage, inflation and false information dissemination among supply chain members [146]. Thus it can be seen that it is very important and necessary for firms to understand how to design fulfillment centers at various locations and adopt effective proactive and/or preventative strategies for reducing the influences of disruptions on supply chain operational costs and increasing the supply chain resilience. This is especially so for cross-border e-commerce operations where how the real-time international trade forms and COVID-19 prevention policies of different countries significantly affect the cross-border e-commerce firms' operations decisions would be well worth studying in the future.

Last but not the least, it is extremely interesting to take the cognitive characteristics and behavior preferences of business managers, entrepreneurs, consumers and government administrators into account when conducting the e-commerce SCM research. Nowadays, enterprises' executives more and more tend to make incompletely rational decision-makings with the gradual widening of the differentiation of people's cognitive levels. Moreover, we have identified a very promising future research direction that investigates the effects of supply chain members' cognitive characteristics such as corporate social responsibility, green preference, altruistic preference, fairness preference, overconfidence and risk appetite on e-commerce SCM [46, 47]. On the side of consumers, people's different behavioral preferences such as environmental protection awareness, product personalization preference, channel preference, strategic consumer behavior, trust and brand loyalty would influence firms significantly in developing their productions and marketing strategies [33]. In the context of the Internet trading market, consumer privacy protection is also an issue of particular importance that enterprises and academic researchers could focus on in the future.

6 Conclusion

This paper employs science mapping and bibliometric analysis methods to explore the research status and general progress of documents pertaining to e-commerce SCM, which can supplement prior reviews by providing a comprehensive research framework and an updated knowledge structure analysis based on articles published in SCIE and SSCI of WOS. By doing so, we have obtained some important results as summarized as follows.

Firstly, it can be generally found from the initial data description analysis that the publications on e-commerce SCM have passed through three main stages: the embryonic stage (1998–2001), relatively stable development stage (2002–2013) and high-speed development stage (2013–2021). It appears that the number of publications on e-commerce SCM continues to increase in recent years. Based on the bibliometric analysis of the literature on e-commerce SCM, it reveals that the top five contributing disciplines are Business and Economics, Engineering, Operations Research and Management Science, Management, and Computer Science.

Secondly, China has the most publications of studies on e-commerce SCM, followed by the United States of America and England. The institution that publishes the most documents is Tianjin University, followed by the South China University of Technology, then Hong Kong Polytechnic University. Besides, Yuyan Wang is the most prolific author in this field, followed by Liang Shen, and then Guo Li and Bo Li.

Thirdly, the top 5 contributing academic journals are the European Journal of Operational Research, International Journal of Production Economics, Management Science, Production and Operations Management, and Omega. Hence, it also indicates that interested scholars could find the main research results from these journals and quickly understand the main research status in this field. The most influential article is Gao and Su [94], published in Management Science, followed by Abhishek et al. [86], and then by Chen et al. [95].

Lastly, through the keyword clustering analysis, we identify seven main research themes, viz., e-commerce, SCM, pricing strategy, coordination mechanism design, sustainable development management, cross-border e-commerce management, and closed-loop SCM. Although the e-commerce SCM field has attracted much attention from the academic community, relevant research topics could be further expanded, especially considering the latest emerging technologies and global economic development trends. Therefore, future researchers could incorporate the live-streaming, short video advertising, big data analytics, intelligent manufacturing, block-chain technology, consumer behavior preference into the research of sustainable development, cross-border trade, supply and/or demand disruption and so on, thereby enriching the research of e-commerce SCM field.

Despite some insightful results obtained in this research, there also exist some limitations like most review studies. This paper focuses on the internationally renowned database WOS limited to SCIE and SSCI. Although most valuable papers have been considered, relevant publications contained in other databases could be

collected to further enrich the understanding of the intellectual structure of e-commerce SCM. Furthermore, we artificially screen the literature and mainly select relevant publications from the perspective of production and operations management, so future literature on this topic could be conducted from other perspectives such as empirical research.

Acknowledgements This work was supported by the National Natural Science Foundation of China (Grant No. 72101039), the Ministry of Education Project of Humanities and Social Sciences of China (Grant No. 21YJC630039), the Natural Science Foundation of Chongqing (Grant No. cstc2021jcyj-msxmX0780), the National Social Sciences Funding Project (Grant No. 18BGL007), the High-level Talents Start-up Project of Chongqing Technology and Business University (Grant No. 2055034), Youth project of Chongqing Technology and Business University (Grant No. 2152017), and Chongqing Social Sciences Planning Project (Grant Nos. 2021TBWT-ZD09, 2020TBWT09).

Declarations

Conflict of interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

1. Kumar, S., Lim, W. M., Pandey, N., & Westland, J. C. (2021). 20 years of Electronic Commerce Research. *Electronic Commerce Research*, 21(1), 1–40. <https://doi.org/10.1007/s10660-021-09464-1>
2. Li, X. (2021). Business analytics in e-commerce: A literature review. *Journal of Industrial Integration and Management*, 6(1), 31–52. <https://doi.org/10.1142/S2424862220500207>
3. Matsui, K. (2022). Should a retailer bargain over a wholesale price with a manufacturer using a dual-channel supply chain? *European Journal of Operational Research*, 300(3), 1050–1066. <https://doi.org/10.1016/j.ejor.2021.09.012>
4. Li, T., Xie, J., & Zhao, X. (2015). Supplier encroachment in competitive supply chains. *International Journal of Production Economics*, 165, 120–131. <https://doi.org/10.1016/j.ijpe.2015.03.023>
5. Yan, Y., Zhao, R., & Liu, Z. (2018). Strategic introduction of the marketplace channel under spillovers from online to offline sales. *European Journal of Operational Research*, 267(1), 65–77. <https://doi.org/10.1016/j.ejor.2017.11.011>
6. He, P., He, Y., & Xu, X. (2019). Channel structure and pricing in a dual-channel closed-loop supply chain with government subsidy. *International Journal of Production Economics*, 213, 108–123. <https://doi.org/10.1016/j.ijpe.2019.03.013>
7. Lu, Q., & Nan, L. (2015). Effects of e-commerce channel entry in a two-echelon supply chain: A comparative analysis of single- and dual-channel distribution systems. *International Journal of Production Economics*, 165, 100–111. <https://doi.org/10.1016/j.ijpe.2015.03.001>
8. Wang, X., Wang, X., Yu, B., & Zhang, S. (2019). A comparative study of entry mode options for e-commerce platforms and suppliers. *Electronic Commerce Research and Applications*, 37, 100888. <https://doi.org/10.1016/j.elerap.2019.100888>
9. Ponce, D., Contreras, I., & Laporte, G. (2020). E-commerce shipping through a third-party supply chain. *Transportation Research Part E: Logistics and Transportation Review*, 140, 101970. <https://doi.org/10.1016/j.tre.2020.101970>
10. Cao, K., Xu, Y., Wu, Q., Wang, J., & Liu, C. (2021). Optimal channel and logistics service selection strategies in the e-commerce context. *Electronic Commerce Research and Applications*, 48, 101070. <https://doi.org/10.1016/j.elerap.2021.101070>

11. Zhang, H., Jia, F., & You, J. X. (2021). Striking a balance between supply chain resilience and supply chain vulnerability in the cross-border e-commerce supply chain. *International Journal of Logistics Research and Applications*. <https://doi.org/10.1080/13675567.2021.1948978>
12. Yu, Y., Wang, X., Zhong, R. Y., Huang, G. Q., & Chan, H. K. (2017). E-commerce logistics in supply chain management: Implementations and future perspective in furniture industry. *Industrial Management & Data Systems*, 117(10), 2263–2286. <https://doi.org/10.1016/j.procir.2016.08.002>
13. Xie, J., Wei, L., Zhu, W., & Zhang, W. (2021). Platform supply chain pricing and financing: Who benefits from e-commerce consumer credit? *International Journal of Production Economics*, 242, 108283. <https://doi.org/10.1016/j.ijpe.2021.108283>
14. He, P., He, Y., Tang, X., Ma, S., & Xu, H. (2022). Channel encroachment and logistics integration strategies in an e-commerce platform service supply chain. *International Journal of Production Economics*, 244, 108368. <https://doi.org/10.1016/j.ijpe.2021.108368>
15. Liu, Z., & Li, Z. (2020). A blockchain-based framework of cross-border e-commerce supply chain. *International Journal of Information Management*, 52, 102059. <https://doi.org/10.1016/j.ijinfor.2019.102059>
16. Wang, Y., Fan, R., Shen, L., & Jin, M. (2020). Decisions and coordination of green e-commerce supply chain considering green manufacturer's fairness concerns. *International Journal of Production Research*, 58(24), 7471–7489. <https://doi.org/10.1080/00207543.2020.1765040>
17. Liu, X. L., Dou, Z. W., & Yang, W. (2021). Research on influencing factors of cross border e-commerce supply chain resilience based on integrated fuzzy DEMATEL-ISM. *IEEE Access*, 9, 36140–36153. <https://doi.org/10.1109/ACCESS.2021.3059867>
18. Wang, J., & Tao, Y. (2021). Reverse integration and optimisation of agricultural products e-commerce omnichannel supply chain under Internet technology. *Acta Agriculturae Scandinavica, Section B-Soil & Plant Science*, 71(7), 604–612. <https://doi.org/10.1080/09064710.2021.1890202>
19. Zhong, Y. G., Guo, F. F., Wang, Z. Q., & Tang, H. J. (2019). Coordination analysis of revenue sharing in e-commerce logistics service supply chain with cooperative distribution. *SAGE Open*, 9, 1–15. <https://doi.org/10.1177/2158244019870536>
20. Tang, R., & Yang, L. (2020). Financing strategy in fresh product supply chains under e-commerce environment. *Electronic Commerce Research and Applications*, 39, 100911. <https://doi.org/10.1016/j.elerap.2019.100911>
21. Li, D., Liu, Y., Hu, J., & Chen, X. (2021). Private-brand introduction and investment effect on online platform-based supply chains. *Transportation Research Part E: Logistics and Transportation Review*, 155, 102494. <https://doi.org/10.1016/j.tre.2021.102494>
22. Habib, M. (2011). Supply chain management (SCM): Theory and evolution. Retrieved 7 Dec, 2021 from <https://www.intechopen.com/chapters/17671>
23. He, P., Wen, J., Ye, S., & Li, Z. (2020). Logistics service sharing and competition in a dual-channel e-commerce supply chain. *Computers & Industrial Engineering*, 149(2), 106849. <https://doi.org/10.1016/j.cie.2020.106849>
24. Lamba, D., Yadav, D. K., Barve, A., & Panda, G. (2019). Prioritizing barriers in reverse logistics of e-commerce supply chain using fuzzy-analytic hierarchy process. *Electronic Commerce Research*, 20(2), 381–403. <https://doi.org/10.1007/s10660-019-09333-y>
25. Wang, N., Zhang, T., Zhu, X., & Li, P. (2021). Online-offline competitive pricing with reference price effect. *Journal of the Operational Research Society*, 72(3), 642–653. <https://doi.org/10.1080/01605682.2019.1696154>
26. Wang, Y., Yu, Z., Shen, L., & Dong, W. (2021). Impacts of altruistic preference and reward-penalty mechanism on decisions of e-commerce closed-loop supply chain. *Journal of Cleaner Production*, 315(15), 128132. <https://doi.org/10.1016/j.jclepro.2021.128132>
27. Liao, H., Proctor, R. W., & Salvendy, G. (2008). Content preparation for cross-cultural e-commerce: A review and a model. *Behaviour & Information Technology*, 27(1), 43–61. <https://doi.org/10.1080/01449290601088424>
28. Vaithianathan, S. (2010). A review of e-commerce literature on India and research agenda for the future. *Electronic Commerce Research*, 10(1), 83–97. <https://doi.org/10.1007/s10660-010-9046-0>
29. Paredes, M. R., Barrutia, J. M., & Echebarria, C. (2014). Resources for value co-creation in e-commerce: A review. *Electronic Commerce Research*, 14(2), 111–136. <https://doi.org/10.1007/s10660-014-9135-6>

30. Hwang, Y. J., & Jeong, J. (2016). Electronic commerce and online consumer behavior research: A literature review. *Information Development*, 32(3), 377–388. <https://doi.org/10.1177/0266666914551071>
31. Zeng, Y., Jia, F., Wan, L., & Guo, H. (2017). E-commerce in agri-food sector: A systematic literature review. *International Food and Agribusiness Management Review*, 20(4), 439–460. <https://doi.org/10.22434/IFAMR2016.0156>
32. Kolhar, M. (2018). E-commerce review system to detect false reviews. *Science and Engineering Ethics*, 24(3), 1577–1588. <https://doi.org/10.1007/s11948-017-9959-2>
33. Gajda, K. (2020). Factors shaping interorganizational trust in e-commerce based on literature review. *Management*, 24(1), 23–38. <https://doi.org/10.2478/manment-2019-0034>
34. Akter, S., & Wamba, S. F. (2016). Big data analytics in e-commerce: A systematic review and agenda for future research. *Electronic Markets*, 26(2), 173–194. <https://doi.org/10.1007/s12525-016-0219-0>
35. Hua, N. (2016). E-commerce performance in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 28(9), 2052–2079. <https://doi.org/10.1108/IJCHM-05-2015-0247>
36. Ajmal, F., Yasin, N. M., & Norman, A. A. (2017). Critical success factors influencing e-commerce adoption in SMEs: A review and mode. *International Journal of Advanced and Applied Sciences*, 4(7), 159–172. <https://doi.org/10.21833/ijaas.2017.07.023>
37. Melacini, M., Perotti, S., Rasini, M., & Tappia, E. (2018). E-fulfilment and distribution in omni-channel retailing: A systematic literature review. *International Journal of Physical Distribution & Logistics Management*, 48(4), 391–414. <https://doi.org/10.1108/IJPDLM-02-2017-0101>
38. Cai, Y. J., & Lo, C. K. Y. (2020). Omni-channel management in the new retailing era: A systematic review and future research agenda. *International Journal of Production Economics*, 229, 107729. <https://doi.org/10.1016/j.ijpe.2020.107729>
39. Escursell, S., Llorach-Massana, P., & Roncero, M. B. (2021). Sustainability in e-commerce packaging: A review. *Journal of Cleaner Production*, 280, 124314. <https://doi.org/10.1016/j.jclepro.2020.124314>
40. Yuan, C. H., Wu, C. H., Wang, D., Yao, S., & Feng, Y. (2021). Review of consumer-to-consumer e-commerce research collaboration. *Journal of Organizational and End User Computing*, 33(4), 167–184. <https://doi.org/10.4018/JOEUC.20210701.oa8>
41. Li, X., & Wang, Q. (2007). Coordination mechanisms of supply chain systems. *European Journal of Operational Research*, 179(1), 1–16. <https://doi.org/10.1016/j.ejor.2006.06.023>
42. Shen, B., Choi, T. M., & Minner, S. (2019). A review on supply chain contracting with information considerations: Information updating and information asymmetry. *International Journal of Production Research*, 57(15–16), 4898–4936. <https://doi.org/10.1080/00207543.2018.1467062>
43. Vosooghidizaji, M., Taghipour, A., & Canel-Depitre, B. (2019). Supply chain coordination under information asymmetry: A review. *International Journal of Production Research*, 58(6), 1805–1834. <https://doi.org/10.1080/00207543.2019.1685702>
44. Singh, A., & Trivedi, A. (2016). Sustainable green supply chain management: Trends and current practices. *Competitiveness Review*, 26(3), 265–288. <https://doi.org/10.1108/CR-05-2015-0034>
45. Bastas, A., & Liyanage, K. (2018). Sustainable supply chain quality management: A systematic review. *Journal of Cleaner Production*, 181, 726–744. <https://doi.org/10.1016/j.jclepro.2018.01.110>
46. Koberg, E., & Longoni, A. (2019). A systematic review of sustainable supply chain management in global supply chains. *Journal of Cleaner Production*, 207(10), 1084–1098. <https://doi.org/10.1016/j.jclepro.2018.10.033>
47. Chiang, C. T., Kou, T. C., & Koo, T. L. (2021). A systematic literature review of the it-based supply chain management system: Towards a sustainable supply chain management model. *Sustainability*, 13(5), 1–18. <https://doi.org/10.3390/su13052547>
48. Chiu, C. H., & Choi, T. M. (2016). Supply chain risk analysis with mean-variance models: A technical review. *Annals of Operations Research*, 240(2), 489–507. <https://doi.org/10.1007/s10479-013-1386-4>
49. Zhu, Q., Krikke, H., & Caniëls, M. C. J. (2017). Integrated supply chain risk management: A systematic review. *The International Journal of Logistics Management*, 28(4), 1123–1141. <https://doi.org/10.1108/IJLM-09-2016-0206>

50. Behzadi, G., O'Sullivan, M. J., Olsen, T. L., & Zhang, A. (2018). Agribusiness supply chain risk management: A review of quantitative decision models. *Omega*, 79(9), 21–42. <https://doi.org/10.1016/j.omega.2017.07.005>
51. Pournader, M., Kach, A., & Talluri, S. S. (2020). A review of the existing and emerging topics in the supply chain risk management literature. *Decision Sciences*, 51(4), 867–919. <https://doi.org/10.1111/dec.12470>
52. Shen, B., & Li, Q. Y. (2017). Market disruptions in supply chains: A review of operational models. *International Transactions in Operational Research*, 24(4), 697–711. <https://doi.org/10.1111/itor.12333>
53. Huan, S. H., Sheoran, S. K., & Wang, G. (2004). A review and analysis of supply chain operations reference (SCOR) model. *Supply Chain Management*, 9(1), 23–29. <https://doi.org/10.1108/13598540410517557>
54. Lotfi, Z., Mukhtar, M., Sahran, S., & Zadeh, A. T. (2013). Information sharing in supply chain management. *Procedia Technology*, 11(1), 298–304. <https://doi.org/10.1016/j.protcy.2013.12.194>
55. Wang, Y., Wallace, S. W., Shen, B., & Choi, T. M. (2015). Service supply chain management: A review of operational models. *European Journal of Operational Research*, 247(3), 685–698. <https://doi.org/10.1016/j.ejor.2015.05.053>
56. Manders, J. H. M., Caniëls, M. C. J., & Ghijsen, P. W. T. (2017). Supply chain flexibility: A systematic literature review and identification of directions for future research. *International Journal of Logistics Management*, 28(4), 964–1026. <https://doi.org/10.1108/IJLM-07-2016-0176>
57. Simangunsong, E., Hendry, L. C., & Stevenson, M. (2012). Supply chain uncertainty: A review and theoretical foundation for future research. *International Journal of Production Research*, 50(16), 4493–4523. <https://doi.org/10.1080/00207543.2011.613864>
58. Coenen, J., Van Der Heijden, R. E. C. M., & Van Riel, A. C. R. (2018). Understanding approaches to complexity and uncertainty in closed-loop supply chain management: Past findings and future directions. *Journal of Cleaner Production*, 201, 1–13. <https://doi.org/10.1016/j.jclepro.2018.07.216>
59. Wu, L., Yue, X., Jin, A., & Yen, D. C. (2016). Smart supply chain management: A review and implications for future research. *International Journal of Logistics Management*, 27(2), 395–417. <https://doi.org/10.1108/IJLM-02-2014-0035>
60. Abidi, H., De Leeuw, S., & Klumpp, M. (2014). Humanitarian supply chain performance management: A systematic literature review. *Supply Chain Management*, 19(5–6), 592–608. <https://doi.org/10.1108/SCM-09-2013-0349>
61. Harshitha, M. S., Shashidhar, R., & Roopa, M. (2021). Block chain based agricultural supply chain—a review. *Global Transitions Proceedings*, 2(2), 220–226. <https://doi.org/10.1016/j.gltp.2021.08.041>
62. Govindan, K., Soleimani, H., & Kannan, D. (2015). Reverse logistics and closed-loop supply chain: A comprehensive review to explore the future. *European Journal of Operational Research*, 240(3), 603–626. <https://doi.org/10.1016/j.ejor.2014.07.012>
63. Govindan, K., & Soleimani, H. (2017). A review of reverse logistics and closed-loop supply chains: A journal of cleaner production focus. *Journal of Cleaner Production*, 142, 371–384. <https://doi.org/10.1016/j.jclepro.2016.03.126>
64. Taghipour, A., Murat, S., & Huang, P. (2021). E-supply chain management: A review. *International Journal of e-Education, e-Business, e-Management and e-Learning*, 11(2), 51–61. <https://doi.org/10.17706/ijeeee.2021.11.2.51-61>
65. Johnson, M. E., & Whang, S. (2002). E-business and supply chain management: An overview and framework. *Production and Operations management*, 11(4), 413–423. <https://doi.org/10.1111/j.1937-5956.2002.tb00469.x>
66. Bakker, E., Zheng, J., Knight, L., & Harland, C. (2008). Putting e-commerce adoption in a supply chain context. *International Journal of Operations & Production Management*, 28(4), 313–330. <https://doi.org/10.1108/01443570810861543>
67. Yu, Y., Wang, X., Zhong, R. Y., & Huang, G. Q. (2016). E-commerce logistics in supply chain management: Practice perspective. *Procedia CIRP*, 52, 179–185. <https://doi.org/10.1016/j.procir.2016.08.002>
68. Li, H., & Li, Z. (2021). Supplier encroachment in the supply chain in the e-commerce age: A systematic literature review. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(7), 2655–2671. <https://doi.org/10.3390/jtaer16070146>

69. Lim, W. M., Rasul, T., Kumar, S., & Ala, M. (2022). Past, present, and future of customer engagement. *Journal of Business Research*, *140*, 439–458. <https://doi.org/10.1016/j.jbusres.2021.11.014>
70. Paul, J., Lim, W. M., O’Cass, A., Hao, A. W., & Bresciani, S. (2021). Scientific procedures and rationales for systematic literature reviews (SPAR-4-SLR). *International Journal of Consumer Studies*, *45*(4), O1–O16. <https://doi.org/10.1111/ijcs.12695>
71. Kumar, S., Sahoo, S., Lim, W. M., & Dana, L. P. (2022). Religion as a social shaping force in entrepreneurship and business: Insights from a technology-empowered systematic literature review. *Technological Forecasting and Social Change*, *175*, 121393. <https://doi.org/10.1016/j.techfore.2021.121393>
72. Guan, G., Jiang, Z., Gong, Y., Huang, Z., & Jamalnia, A. (2021). A bibliometric review of two decades, research on closed-loop supply chain: 2001–2020. *IEEE Access*, *9*, 3679–3695. <https://doi.org/10.1109/ACCESS.2020.3047434>
73. Cui, Y., Mou, J., & Liu, Y. (2018). Knowledge mapping of social commerce research: A visual analysis using CiteSpace. *Electronic Commerce Research*, *18*(4), 837–868. <https://doi.org/10.1007/s10660-018-9288-9>
74. Ding, X., & Yang, Z. (2020). Knowledge mapping of platform research: A visual analysis using VOSviewer and CiteSpace. *Electronic Commerce Research*. <https://doi.org/10.1007/s10660-020-09410-7>
75. Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, *133*, 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>
76. Rosário, A., & Raimundo, R. (2021). Consumer marketing strategy and e-commerce in the last decade: A literature review. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*, 3003–3024. <https://doi.org/10.3390/jtaer16070164>
77. Sun, L., Xu, X., Yang, Y., Liu, W., & Jin, J. (2020). Knowledge mapping of supply chain risk research based on CiteSpace. *Computational Intelligence*, *36*(4), 1686–1703. <https://doi.org/10.1111/coin.12306>
78. Pournader, M., Ghaderi, H., Hassanzadegan, A., & Fahimnia, B. (2021). Artificial intelligence applications in supply chain management. *International Journal of Production Economics*, *241*, 108250. <https://doi.org/10.1016/j.ijpe.2021.108250>
79. Burton, B., Kumar, S., & Pandey, N. (2020). Twenty-five years of The European Journal of Finance (EJF): A retrospective analysis. *The European Journal of Finance*, *26*(18), 1817–1841. <https://doi.org/10.1080/1351847X.2020.1754873>
80. Kumar, S., Sharma, D., Rao, S., Lim, W. M., & Mangla, S. K. (2022). Past, present, and future of sustainable finance: Insights from big data analytics through machine learning of scholarly research. *Annals of Operations Research*. <https://doi.org/10.1007/s10479-021-04410-8>
81. Lim, W. M., Kumar, S., & Ali, F. (2022). Advancing knowledge through literature reviews: “What”, “why”, and “how to contribute.” *The Service Industries Journal*, *42*(7–8), 481–513. <https://doi.org/10.1080/02642069.2022.2047941>
82. Mukherjee, D., Lim, W. M., Kumar, S., & Donthu, N. (2022). Guidelines for advancing theory and practice through bibliometric research. *Journal of Business Research*, *148*, 101–115. <https://doi.org/10.1016/j.jbusres.2022.04.042>
83. Van Eck, N. J., & Waltman, L. (2017). Citation-based clustering of publications using CitNetExplorer and VOSviewer. *Scientometrics*, *111*(2), 1053–1070. <https://doi.org/10.1007/s11192-017-2300-7>
84. Goodell, J. W., Kumar, S., Lim, W. M., & Pattnaik, D. (2021). Artificial intelligence and machine learning in finance: Identifying foundations, themes, and research clusters from bibliometric analysis. *Journal of Behavioral and Experimental Finance*, *32*, 100577. <https://doi.org/10.1016/j.jbef.2021.100577>
85. La, L., Xu, F., & Buhalis, D. (2021). Knowledge mapping of sharing accommodation: A bibliometric analysis. *Tourism Management Perspectives*, *40*, 100897. <https://doi.org/10.1016/j.tmp.2021.100897>
86. Abhishek, V., Jerath, K., & Zhang, Z. J. (2016). Agency selling or reselling? Channel structures in electronic retailing. *Management Science*, *62*(8), 2259–2280. <https://doi.org/10.1287/mnsc.2015.2230>
87. Li, B., Zhu, M., Jiang, Y., & Li, Z. (2016). Pricing policies of a competitive dual-channel green supply chain. *Journal of Cleaner Production*, *112*(20), 2029–2042. <https://doi.org/10.1016/j.jclepro.2015.05.017>

88. Rofin, T. M., & Mahanty, B. (2018). Optimal dual-channel supply chain configuration for product categories with different customer preference of online channel. *Electronic Commerce Research*, 18(3), 507–536. <https://doi.org/10.1007/s10660-017-9269-4>
89. Li, G., Tian, L., & Zheng, H. (2021). Information sharing in an online marketplace with co-opetitive sellers. *Production and Operations Management*, 30(10), 3713–3734.
90. Gao, F., & Su, X. (2017). Online and Offline Information for Omnichannel Retailing. *Manufacturing & Service Operations Management*, 19(1), 84–98. <https://doi.org/10.1287/msom.2016.0593>
91. Qin, J., Fu, H., Wang, Z., & Xia, L. (2021). Financing and carbon emission reduction strategies of capital-constrained manufacturers in e-commerce supply chains. *International Journal of Production Economics*, 241(8), 108271. <https://doi.org/10.1016/j.ijpe.2021.108271>
92. Van Oorschot, J. A. W. H., Hofman, E., & Halman, J. I. M. (2018). A bibliometric review of the innovation adoption literature. *Technological Forecasting & Social Change*, 134, 1–21. <https://doi.org/10.1016/j.techfore.2018.04.032>
93. Goyal, K., & Kumar, S. (2020). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, 45(1), 80–105. <https://doi.org/10.1111/ijcs.12605>
94. Gao, F., & Su, X. (2017). Omnichannel retail operations with buy-online-and-pick-up-in-store. *Management Science*, 63(8), 2478–2492. <https://doi.org/10.1287/mnsc.2016.2473>
95. Chen, J., Liang, L., Yao, D. Q., & Sun, S. (2017). Price and quality decisions in dual-channel supply chains. *European Journal of Operational Research*, 259(3), 935–948. <https://doi.org/10.1016/j.ejor.2016.11.016>
96. Chen, C. (2017). Science mapping: A systematic review of the literature. *Journal of Data and Information Science*, 2(2), 1–40. <https://doi.org/10.1515/jdis-2017-0006>
97. Chen, B., & Chen, J. (2017). When to introduce an online channel, and offer money back guarantees and personalized pricing. *European Journal of Operational Research*, 257(2), 614–624. <https://doi.org/10.1016/j.ejor.2016.07.031>
98. Zhang, S., & Zhang, J. (2020). Agency selling or reselling: E-tailer information sharing with supplier offline entry. *European Journal of Operational Research*, 280(1), 134–151. <https://doi.org/10.1016/j.ejor.2019.07.003>
99. Liu, Y., Ma, D., Hu, J., & Zhang, Z. (2021). Sales mode selection of fresh food supply chain based on blockchain technology under different channel competition. *Computers & Industrial Engineering*, 162, 107730. <https://doi.org/10.1016/j.cie.2021.107730>
100. Hua, G., Wang, S., & Cheng, T. (2010). Price and lead time decisions in dual-channel supply chains. *European Journal of Operational Research*, 205(1), 113–126. <https://doi.org/10.1016/j.ejor.2009.12.012>
101. Rafay, I., & Naeem, B. (2019). Profitability of online order fulfillment in multi-channel retailing. *European Journal of Operational Research*, 272, 1028–1040. <https://doi.org/10.1016/j.ejor.2018.07.047>
102. Rodríguez, B., & Aydn, G. (2015). Pricing and assortment decisions for a manufacturer selling through dual channels. *European Journal of Operational Research*, 242(3), 901–909. <https://doi.org/10.1016/j.ejor.2014.10.047>
103. Xiao, T., & Shi, J. (2016). Pricing and supply priority in a dual-channel supply chain. *European Journal of Operational Research*, 254, 813–823. <https://doi.org/10.1016/j.ejor.2016.04.018>
104. Huang, M., & Jin, D. (2020). Impact of buy-online-and-return-in-store service on omnichannel retailing: A supply chain competitive perspective. *Electronic Commerce Research and Applications*, 41(4), 100977. <https://doi.org/10.1016/j.elerap.2020.100977>
105. Ailawadi, K. L., & Farris, P. W. (2017). Managing multi-and omni-channel distribution: Metrics and research directions. *Journal of Retailing*, 93(1), 120–135. <https://doi.org/10.1016/j.jretai.2016.12.003>
106. Xu, L., Shi, J., & Chen, J. (2021). Platform encroachment with price matching: Introducing a self-constructing online platform into the sea-cargo market. *Computers & Industrial Engineering*, 156, 107266. <https://doi.org/10.1016/j.cie.2021.107266>
107. Liu, W., Yan, X., Li, X., & Wei, W. (2020). The impacts of market size and data-driven marketing on the sales mode selection in an Internet platform based supply chain. *Transportation Research Part E: Logistics and Transportation Review*, 136, 101914. <https://doi.org/10.1016/j.tre.2020.101914>
108. Herhausen, D., Binder, J., & Schoegel, M. (2015). Integrating bricks with clicks: Retailer-level and channel-level outcomes of online–offline channel integration. *Journal of Retailing*, 91(2), 309–325. <https://doi.org/10.1016/j.jretai.2014.12.009>

109. Gao, F., & Su, X. (2018). Omnichannel service operations with online and offline self-order technologies. *Management Science*, 64(8), 3595–3608. <https://doi.org/10.1287/mnsc.2017.2787>
110. Jing, B. (2018). Showrooming and webrooming: Information externalities between online and offline sellers. *Marketing Science*, 37(3), 469–483. <https://doi.org/10.1287/mksc.2018.1084>
111. Wei, J., Wang, Y., & Lu, J. (2020). Information sharing and sales patterns choice in a supply chain with product's greening improvement. *Journal of Cleaner Production*, 278(8), 123704. <https://doi.org/10.1016/j.jclepro.2020.123704>
112. Xu, X., Zhang, M., & He, P. (2020). Coordination of a supply chain with online platform considering delivery time decision. *Transportation Research Part E: Logistics and Transportation Review*, 141, 101990. <https://doi.org/10.1016/j.tre.2020.101990>
113. Batarfi, R., Jaber, M. Y., & Aljazzar, S. M. (2017). A profit maximization for a reverse logistics dual-channel supply chain with a return policy. *Computers & Industrial Engineering*, 106, 58–82. <https://doi.org/10.1016/j.cie.2017.01.024>
114. Niu, B., Chen, K., Chen, L., Ding, C., & Yue, X. (2021). Strategic waiting for disruption forecasts in cross-border e-commerce operations. *Production and Operations Management*, 30(9), 2840–2857. <https://doi.org/10.1111/poms.13371>
115. Xie, J. P., Liang, L., Liu, L. H., & Ieromonachou, P. (2017). Coordination contracts of dual-channel with cooperation advertising in closed-loop supply chains. *International Journal of Production Economics*, 183, 528–538. <https://doi.org/10.1016/j.ijpe.2016.07.026>
116. Zhang, R., Li, M., & Liu, B. (2019). Pricing decisions and provider choice on extended warranty service in supply chain. *International Journal of Information Systems and Supply Chain Management*, 2(4), 55–71. <https://doi.org/10.4018/IJISSCM.2019100104>
117. He, P., He, Y., & Xu, H. (2021). Buy-online-and-deliver-from-store strategy for a dual-channel supply chain considering retailer's location advantage. *Transportation Research Part E: Logistics and Transportation Review*, 144, 102127. <https://doi.org/10.1016/j.tre.2020.102127>
118. Lin, X., Zhou, Y. W., & Hou, R. (2021). Impact of a “buy-online-and-pickup-in-store” channel on price and quality decisions in a supply chain. *European Journal of Operational Research*, 294(3), 922–935. <https://doi.org/10.1016/j.ejor.2020.03.064>
119. Chen, Y., & Cui, T. H. (2013). The benefit of uniform price for branded variants. *Marketing Science*, 32(1), 36–50. <https://doi.org/10.2139/ssrn.1419182>
120. Chen, J., & Chen, B. (2019). When should the offline retailer implement price matching. *European Journal of Operational Research*, 277(3), 996–1009. <https://doi.org/10.1016/j.ejor.2019.03.013>
121. Li, W., Chen, J., Liang, G., & Chen, B. (2018). Money-back guarantee and personalized pricing in a Stackelberg manufacturer's dual-channel supply chain. *International Journal of Production Economics*, 197, 84–98. <https://doi.org/10.1016/j.ijpe.2017.12.027>
122. Jing, B. (2017). Behavior-based pricing, production efficiency, and quality differentiation. *Management Science*, 63(7), 2365–2376. <https://doi.org/10.1287/mnsc.2016.2463>
123. Choe, C., King, S., & Matsushima, N. (2018). Pricing with cookies: Behavior-based price discrimination and spatial competition. *Management Science*, 64(12), 5669–5687. <https://doi.org/10.1287/mnsc.2017.2873>
124. Li, K. J. (2018). Behavior-based pricing in marketing channels. *Marketing Science*, 37(2), 310–326. <https://doi.org/10.1287/mksc.2017.1070>
125. Li, K. J. (2020). Behavior-based quality discrimination. *Manufacturing & Service Operations Management*, 23(2), 425–436. <https://doi.org/10.1287/msom.2019.0847>
126. Zhen, X., & Xu, S. (2021). Who should introduce the third-party platform channel under different pricing strategies. *European Journal of Operational Research*, 299(1), 168–182. <https://doi.org/10.1016/j.ejor.2021.06.030>
127. Zhou, C., Ma, N., Cui, X., & Liu, Z. (2020). The impact of online referral on brand market strategies with consumer search and spillover effect. *Soft Computing*, 24(4), 2551–2565. <https://doi.org/10.1007/s00500-018-3661-4>
128. Wang, Y., Yu, Z., & Shen, L. (2018). Study on the decision-making and coordination of an e-commerce supply chain with manufacturer fairness concerns. *International Journal of Production Research*, 57(9), 2788–2808. <https://doi.org/10.1080/00207543.2018.1500043>
129. Wang, Y., Yu, Z., & Jin, M. (2019). E-commerce supply chains under capital constraints. *Electronic Commerce Research and Applications*, 35, 100851. <https://doi.org/10.1016/j.elerap.2019.100851>

130. Zhang, M., Fu, Y., Zhao, Z., Pratap, S., & Huang, G. Q. (2019). Game theoretic analysis of horizontal carrier coordination with revenue sharing in e-commerce logistics. *International Journal of Production Research*, 57(7), 1524–1551. <https://doi.org/10.1080/00207543.2018.1492754>
131. Ma, J., Ai, X., Yang, W., & Pan, Y. (2019). Decentralization versus coordination in competing supply chains under retailers' extended warranties. *Annals of Operations Research*, 275(2), 485–510. <https://doi.org/10.1007/s10479-018-2871-6>
132. Xie, X., Zhang, W., Liang, L., Xia, Y., Yin, J., & Yang, G. (2018). The revenue and cost sharing contract of pricing and servicing policies in a dual-channel closed-loop supply chain. *Journal of Cleaner Production*, 191, 361–383. <https://doi.org/10.1016/j.jclepro.2018.04.223>
133. Heydari, J., Govindan, K., & Basiri, Z. (2021). Balancing price and green quality in presence of consumer environmental awareness: A green supply chain coordination approach. *International Journal of Production Research*, 59(7), 1957–1975. <https://doi.org/10.1080/00207543.2020.1771457>
134. Heydari, J., Govindan, K., & Aslani, A. (2019). Pricing and greening decisions in a three-tier dual channel supply chain. *International journal of production economics*, 217, 185–196. <https://doi.org/10.1016/j.ijpe.2018.11.012>
135. Ranjan, A., & Jha, J. K. (2019). Pricing and coordination strategies of a dual-channel supply chain considering green quality and sales effort. *Journal of Cleaner Production*, 218, 409–424. <https://doi.org/10.1016/j.jclepro.2019.01.297>
136. Niu, B., Wang, J., Lee, C. K. M., & Chen, L. (2019). “Product+ logistics” bundling sale and co-delivery in cross-border e-commerce. *Electronic Commerce Research*, 19(4), 915–941. <https://doi.org/10.1007/s10660-019-09379-y>
137. Xu, Y., Gui, H., Zhang, J., & Wei, Y. (2019). Supply chain analysis of cross border importing e-commerce considering with bonded warehouse and direct mailing. *Sustainability*, 11(7), 1909. <https://doi.org/10.3390/su11071909>
138. Wang, X., Xie, J., & Fan, Z. P. (2021). B2C cross-border e-commerce logistics mode selection considering product returns. *International Journal of Production Research*, 59(13), 3841–3860. <https://doi.org/10.1080/00207543.2020.1752949>
139. Yan, W., Zhou, H., & Li, H. (2021). Decision and coordination of cross-border e-commerce supply chain: Based on four modes of cooperation. *Scientific Programming*, 2021(33), 5561357. <https://doi.org/10.1155/2021/5561357>
140. Letizia, P., Pourakbar, M., & Harrison, T. (2018). The impact of consumer returns on the multi-channel sales strategies of manufacturers. *Production and Operations Management*, 27(2), 323–349. <https://doi.org/10.1111/poms.12799>
141. Nageswaran, L., Cho, S. H., & Scheller-Wolf, A. A. (2020). Consumer return policy in omnichannel operations. *Management Science*, 66(12), 5558–5575. <https://doi.org/10.1287/mnsc.2019.3492>
142. Zheng, B., Chu, J., & Jin, L. (2021). Recycling channel selection and coordination in dual sales channel closed-loop supply chains. *Applied Mathematical Modelling*, 95, 484–502. <https://doi.org/10.1016/j.apm.2021.02.022>
143. Yang, X., Gou, Q., Wang, X., & Zhang, J. (2022). Does bonus motivate streamers to perform better? An analysis of compensation mechanisms for live streaming platforms. *Transportation Research Part E: Logistics and Transportation Review*, 164, 102758. <https://doi.org/10.1016/j.tre.2022.102758>
144. Zhu, L., & Liu, N. (2021). Game theoretic analysis of logistics service coordination in a live-streaming e-commerce system. *Electronic Commerce Research*. <https://doi.org/10.1007/s10660-021-09502-y>
145. Lim, W. M. (2022). Ushering a new era of global business and organizational excellence: Taking a leaf out of recent trends in the new normal. *Global Business and Organizational Excellence*, 41(5), 5–13. <https://doi.org/10.1002/joe.22163>
146. Lim, W. M., Chin, M. W. C., Ee, S. Y., Fung, C. Y., Giang, C. S., Heng, K. S., Kong, M. L. F., Lim, A. S. S., Lim, B. C. Y., Lim, R. T. H., Lim, T. Y., Ling, C. C., Mandrinos, S., Nwobodo, S., Phang, C. S. C., She, L., Sim, C. H., Su, S. I., Wee, G. W. E., & Weissmann, M. A. (2022). What is at stake in a war? A prospective evaluation of the Ukraine and Russia conflict for business and society. *Global Business and Organizational Excellence*. <https://doi.org/10.1002/joe.22162>
147. Bell, D. R., Gallino, S., & Moreno, A. (2018). Offline showrooms in omnichannel retail: Demand and operational benefits. *Management Science*, 64(4), 1629–1651. <https://doi.org/10.1287/mnsc.2016.2684>

148. Li, G., Li, L., & Sun, J. (2019). Pricing and service effort strategy in a dual-channel supply chain with showrooming effect. *Transportation Research Part E: Logistics and Transportation Review*, 126, 32–48. <https://doi.org/10.1016/j.tre.2019.03.019>
149. Zhang, P., He, Y., & Shi, C. V. (2017). Retailer's channel structure choice: Online channel, offline channel, or dual channels?. *International Journal of Production Economics*, 191, 37–50. <https://doi.org/10.1016/j.ijpe.2017.05.013>
150. 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.2015.02.005>

Springer Nature or its licensor holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.