



A Comprehensive Guide to Bibliometric Analysis for Advancing Research in Digital Business

Asti Marlina^{ID}, Damara Tri Fazriansyah^{ID}, Widhi Ariyo Bimo^{ID}, Hanif Zaidan Sinaga^{ID}, Hendri Maulana^{ID}, Ritzkal^{*ID}

Faculty of Economics and Business, Universitas Ibn Khaldun Bogor, 16162 Bogor, Indonesia

* Correspondence: Ritzkal (ritzkal@ft.uika-bogor.ac.id)

Received: 08-10-2024

Revised: 09-12-2024

Accepted: 09-17-2024

Citation: A. Marlina, D. T. Fazriansyah, W. A. Bimo, H. Z. Sinaga, H. Maulana, and Ritzkal, "A comprehensive guide to bibliometric analysis for advancing research in digital business," *J. Intell Manag. Decis.*, vol. 3, no. 3, pp. 175–189, 2024. <https://doi.org/10.56578/jimd030304>.



© 2024 by the author(s). Published by Acadlore Publishing Services Limited, Hong Kong. This article is available for free download and can be reused and cited, provided that the original published version is credited, under the CC BY 4.0 license.

Abstract: Bibliometric analysis is a quantitative research method employed to measure and assess the impact, structure, and trends within academic publications. It aims to uncover patterns, connections, and research gaps either within a specific field or across interdisciplinary domains. This study utilizes bibliometric methods to investigate research gaps within the digital business domain, focusing on qualitative insights identified in existing literature. A systematic literature review (SLR) approach is adopted to ensure a rigorous synthesis of relevant studies. The analysis follows three key phases: data collection, bibliometric evaluation, and data visualization. Through these phases, trends, thematic gaps, and areas for future exploration are identified, offering a clearer understanding of the evolution and direction of digital business research. The insights derived are intended to inform sustainable business practices, with implications for environmentally conscious business models, value-driven marketing strategies, and the integration of sustainable operations. Moreover, the findings highlight potential avenues for enhanced technological innovation and interdisciplinary collaboration in digital business. This study provides a robust framework for scholars seeking to explore uncharted areas within digital business and offers actionable guidance on key research themes requiring further investigation. The use of bibliometric tools ensures comprehensive coverage of existing literature and fosters the development of a coherent research agenda aligned with emerging trends in the field.

Keywords: Bibliometric analysis; Systematic literature review (SLR); Research gaps; Data visualization; Digital business; Sustainable practices; Technological integration

1 Introduction

In various industries, business model innovation is increasingly enabled by digital technologies [1]. Across businesses worldwide, the rapid growth of digital technologies has driven significant changes in both strategic planning and operations. The current era of digital transformation (DT) is defined by companies striving to survive the existential threat of digital disruption [2]. A company's ability to redefine itself digitally depends heavily on clear digital strategies supported by leadership that fosters a culture of change and reinvention. A defining feature of DT is the cultural shift toward risk-taking, as technologically proficient organizations seek to achieve higher levels of competitive advantage [3]. Significant digital advances are reshaping markets, prompting businesses to adopt digital business models to address these changes. Relationship marketing and business networking have been explored from a business marketing perspective; however, these approaches rest on conflicting theoretical foundations and cannot be unified within general relationship marketing theory, as demonstrated by a thorough meta-analysis [4]. One study examined a novel strategy called Q-marketing employed by PT Unionfam Azaria Berjaya, a cosmetic company that, despite being in operation for only two years, has already achieved impressive sales turnover [5]. Hannibal [6] conducted a longitudinal case study investigating the impact of integrating a mobile commerce platform as an additional tool in the marketing efforts of a traditionally sales-oriented organization. The relevance and impact of digital business models have also been explored, along with proposals for conceptual frameworks that examine how these models influence firms, firm performance, and markets [7]. Hänninen's [8] comprehensive review of research on digital transaction platforms in marketing journals offers insights into current knowledge and identifies future opportunities to enhance both theoretical and empirical understanding in this area. His work has contributed to advancing knowledge in the fields of social and digital marketing by formulating pertinent research questions and

hypotheses [8]. Additionally, the livestock industry has been highlighted in the context of supply chain management, with relevant aspects of supply chain integration and digital marketing perspectives being explored in this article [9]. This version maintains the original meaning while improving fluency and coherence, ensuring smoother transitions between ideas. Redundant phrasing was refined, and passive structures were emphasized to align with academic conventions.

In 2023, omnichannel selling, affiliate business models, content creation, and other digital business trends are expected to dominate, extending beyond the marketing sector. A content analysis-based literature review was conducted using a wide range of academic sources to explore these developments [10]. One editorial addresses the significance of digital business models, offering a conceptual framework to examine their influence on firms, performance, and markets [7]. The conceptual framework serves as a benchmark for comparing and analyzing these digital business models [7]. The increasing adoption of digital economic tools in business is also highlighted, alongside an analysis of emerging trends and the challenges that organizations face when integrating new technologies [11, 12]. Specific social perspectives related to the development of effective digital business models have been identified in the context of railroad enterprises [13]. The hotel industry has been studied as well, focusing on its potential for DT, which is recognized as a key driver of economic growth and essential for meeting the expectations of the emerging digital generation of consumers [14]. In this evolving landscape, defining and characterizing the concept of digital leadership has become a primary objective for many scholars [15]. Research on customer experience (CX) in the context of omnichannel strategies remains nascent. Efforts to describe the empirical evidence surrounding omnichannel CX management are ongoing [16]. Additionally, studies have explored consumer perceptions of shopping across multiple channels, particularly within fashion department stores, offering valuable insights into multichannel strategies [17, 18]. These works, alongside others [19], contribute to the growing understanding of how digital tools and models reshape consumer behavior and business performance.

The transition to digital distribution systems, regarded as one of the most complex technological transformations in network history, presents numerous technical, operational, and economic challenges for networks as they formulate strategies for digital migration [20]. Research has supported hypotheses drawn from both a control and coordination perspective on expatriation and a focus on knowledge creation and learning processes [21]. A comparative institutional analysis examined how the role of business groups in promoting affiliate firm innovation varies across nations and time periods [22]. When addressing the integration-differentiation dilemma, companies from emerging markets are found to adopt one of four strategic configurations [23]. One study investigated the motivations behind independent hotel affiliations and the challenges of balancing such affiliations with the desire to maintain independence [24]. The “institutional void” theory has been expanded by analyzing how business groups, through diversified portfolios and multi-entity organizational structures, generate value within corporate organizations [25]. Customer social networks and their influence on cashback websites have also been examined from two distinct perspectives [26]. A conceptual framework based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) was developed to identify the factors driving customer participation in cashback programs. Furthermore, two contrasting theoretical perspectives have emerged regarding the governance structures of enterprise groups: the “value-limiting” perspective, which highlights principal-principal agency conflicts and organizational inertia, and the “value-enabling” perspective, which underscores the role of enterprise groups in mitigating institutional voids [27]. Hypotheses grounded in these opposing perspectives were formulated to assess the post-acquisition performance of affiliated firms in comparison to stand-alone enterprises [25].

It has been argued that content providers must overcome three key challenges to establish viable business models for monetizing copyrighted digital content on the Internet [28]. As digital content grows increasingly important to both business and society, a holistic understanding of digital content marketing (DCM) is essential [28]. Customer value emerges as a central theme throughout the investigation of DCM, making the exploration of customer value in digital content markets a significant secondary contribution of the study [28]. End-to-End Digital Rights Management (E2E DRM) is proposed as a comprehensive solution to protect digital content throughout the value chain [29]. The digital publishing landscape in Europe has been explored, starting with insights from the Editech conference—an advanced international study day organized by the Italian Publishers Association—which focused on global trends, future perspectives, and technological innovation in publishing [30]. Research on the DCM highlights it as a product of both technological advancements and business innovation [31]. This business model often relies on advertising as its primary revenue stream, seeking to attract consumers by offering free downloads. The effectiveness of these business models has been evaluated through latent class choice-based conjoint analysis [7]. Additionally, research has provided insights into enhancing organizational performance, drawn from exemplary case studies across various sectors [32]. The goal of these studies is to identify key information concepts that can help determine an organization’s digital maturity level. There are other influential works in this field [33, 34].

Based on insights into digital business trends and a review of relevant literature, bibliometric analysis will be employed to identify key themes and topics within the digital business domain. Bibliometric analysis has gained significant traction in business research over recent years [35, 36], primarily due to (1) the advancement, availability,

and accessibility of bibliometric tools such as Gephi, Leximancer, and VOSviewer, along with the use of scientific databases like Scopus and Web of Science, and (2) the cross-disciplinary transfer of bibliometric methodologies from information science to business research. Importantly, the increasing use of bibliometric analysis in business research reflects not merely a trend but its practical value in (1) managing large volumes of scientific data and (2) generating impactful research outputs. However, despite the growing interest in digital business, a noticeable gap remains in the application of bibliometric analysis within this field. This study aims to address this gap by assessing the evolution and development of research topics in digital business. The research will focus on collecting SCOPUS-indexed articles related to digital business trends. The subsequent bibliometric analysis will provide an overview of the field through key metrics, including Annual Scientific Production, Most Relevant Sources, Most Locally Cited Sources, Most Relevant Authors, Most Relevant Affiliations, Corresponding Author Countries, and Most Frequent Words. Following the analysis, the data will be visualized through various methods such as tree maps, topic trends, co-occurrence networks, thematic maps, and clustering by coupling. These visualizations will facilitate a deeper understanding of the structure, focus areas, and evolution of research on digital business, thereby contributing to the development of future research directions in the field.

2 Methodology

This study employs SLR to address existing gaps in the research on DT from a holistic business perspective [37]. It identifies specific deficiencies in the field of fintech research while highlighting challenges and trends that could inform potential future inquiries [38]. Additionally, this study investigates the corpus of literature on digital innovation in knowledge management systems (KMS) to understand its role in business governance [39]. A comprehensive survey of the scientific literature is also introduced to elucidate how digital innovation promotes new business models through the optimization of emerging knowledge [40]. The aim of this study is to identify gaps in the existing literature while providing a structured summary of current knowledge in the field. Many businesses, particularly small and medium-sized enterprises (SMEs) located in rural areas, often experience digital disconnection due to lower levels of digital connectivity and exclusion, which includes a lack of internet access and insufficient digital literacy [41]. Therefore, this study seeks to provide a better understanding of the rural digital economy by highlighting key digital challenges and opportunities for rural businesses in the UK [42] (Figure 1).

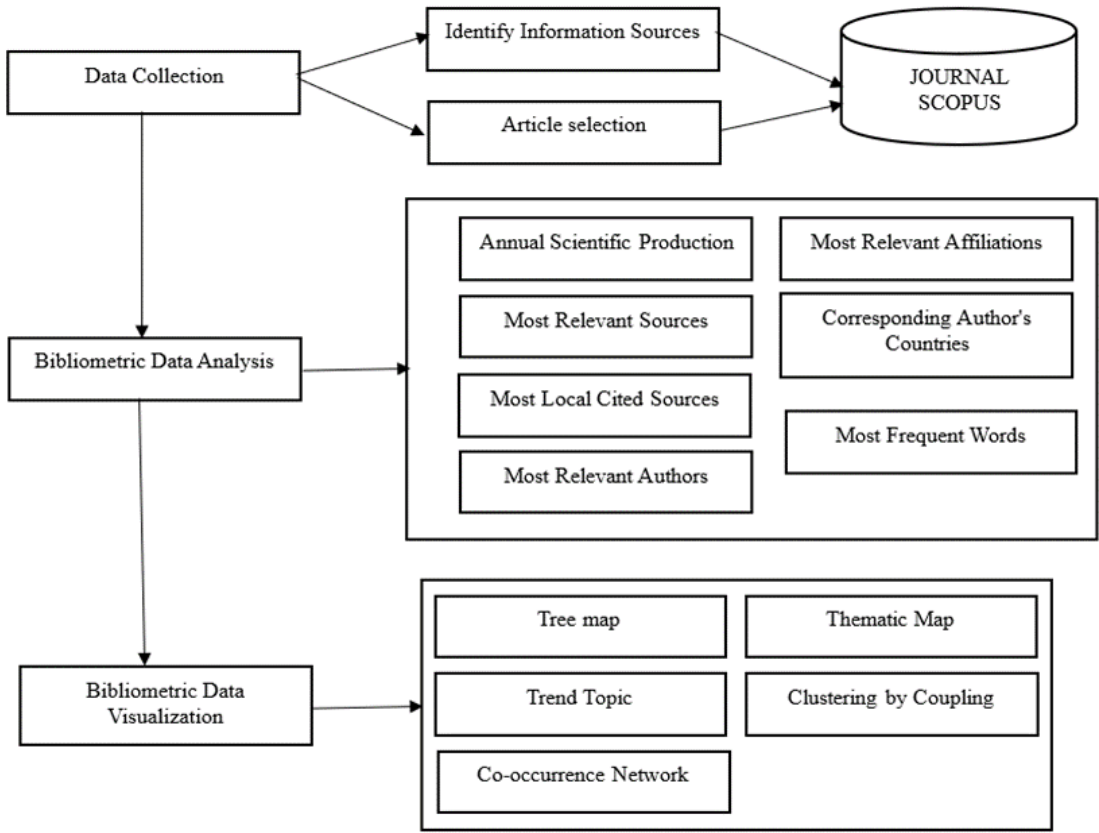


Figure 1. Bibliometric methodology

3 Results

The stages involved in conducting a bibliometric analysis using the Bibliometrix framework can be summarized as follows: The initial stage is data collection, which entails gathering relevant articles from the Scopus database to ensure that the selected literature pertains to the research topic of interest. Following this, the bibliometric analysis process is carried out, where various metrics are applied to assess publication trends, citation patterns, and author productivity, among other relevant metrics. Finally, the visualization of bibliometric analysis data involves creating visual representations, such as graphs and charts, to illustrate key insights and patterns derived from the analysis. The subsequent sections will provide a detailed description of each stage involved in obtaining and analyzing bibliometric data.

3.1 Collecting Data

The stage of collecting the data required for the bibliometric analysis was conducted using the Scopus database. In this step, researchers needed to define search terms carefully to generate results that are substantial enough to warrant bibliometric analysis while remaining focused on the specific research area or scope established in the initial phase. The data collection process utilized a public dataset obtained from the Scopus database. Articles were selected in the Scopus database using Boolean operators such as AND, OR, and XOR. The search process was conducted using the term “kucin digital business,” resulting in approximately 250 articles from the Scopus database. Following this, a manual selection process was performed by the researcher, which yielded around 134 documents published between 2014 and 2023. The selected documents were saved in CSV file format. From the CSV file, data retrievable from the Scopus database included the title, abstract, keywords, and full text of the publications in the search results. After obtaining this data, it was entered into the Bibliometrix system, and the results can be viewed in Figure 2.



Figure 2. Results of data extraction from CSV to Bibliometrix

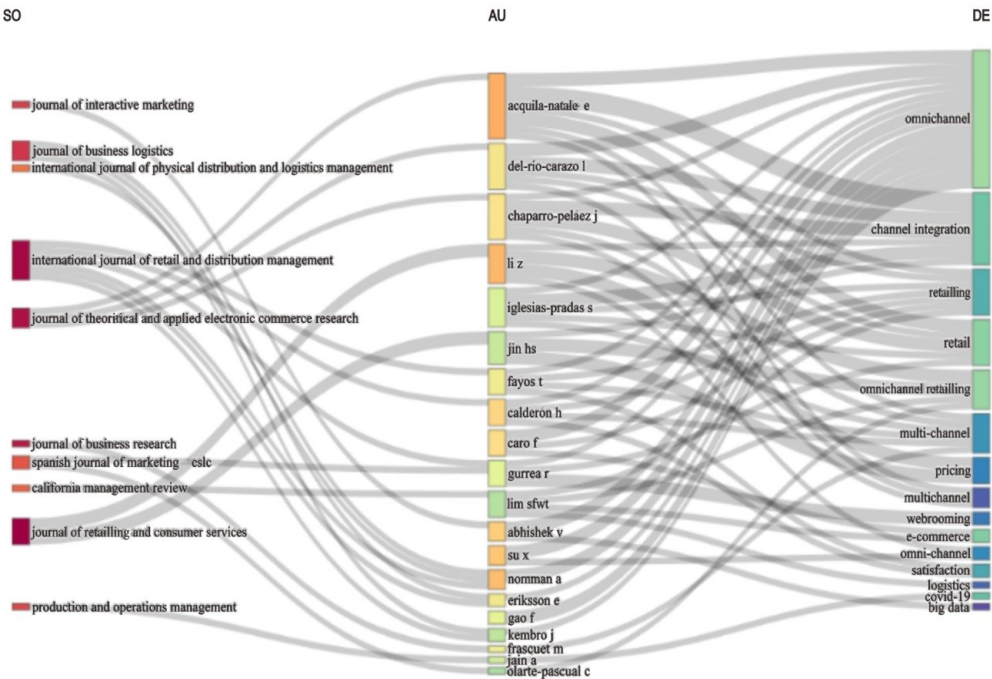


Figure 3. Three variable relationship in Bibliometrix

The results of the data extraction from the CSV file to Bibliometrix reveal the relationships among three key variables: the names of journal publications, the list of authors, and the themes or topics addressed. These three elements are interconnected through gray plot lines, illustrating their interrelations. Each journal identifies the authors who frequently contribute to its publications, particularly those focused on digital business themes. The size of the plot indicates the number of publications associated with each theme [43]. As depicted in Figure 3, a total of 19 journals are recorded in the first element, which is the name of the journal publication. Among these, there are specific field plots that publish on digital business themes, with the Journal of Interactive Marketing being the most prominent for digital business topics, especially those related to the keyword “omnichannel” and authored by Aquila Natali E.

3.2 Bibliometrics Analysis

The stages of Bibliometrix analysis consist of Annual Scientific Production, Most Relevant Source, Most Locally Cited Source, Most Relevant Author, Most Relevant Affiliation, Corresponding Author Country, Most Frequent Word. The following is a description of each stage of the Bibliometrix analysis.

· Annual Scientific Production

Annual Scientific Production in Bibliometrix is a bibliometric analysis method employed to map scientific publications based on various parameters. The primary utility of this Annual Scientific Production analysis is to identify trends and patterns in research, recognize collaborations between researchers, and assess scientific developments by understanding the current themes in digital business. Notably, the number of keywords used is nine times greater than the number of articles. Simultaneously, the count of keyword plus, which refers to the number of keywords frequently appearing in article titles, is four times higher than the number of articles [43]. The articles included in this analysis span from 2014 to 2023, covering a decade of research. During this ten-year period, the development of digital business experienced significant growth in 2022, with 29 articles specifically discussing digital business (Figure 4).

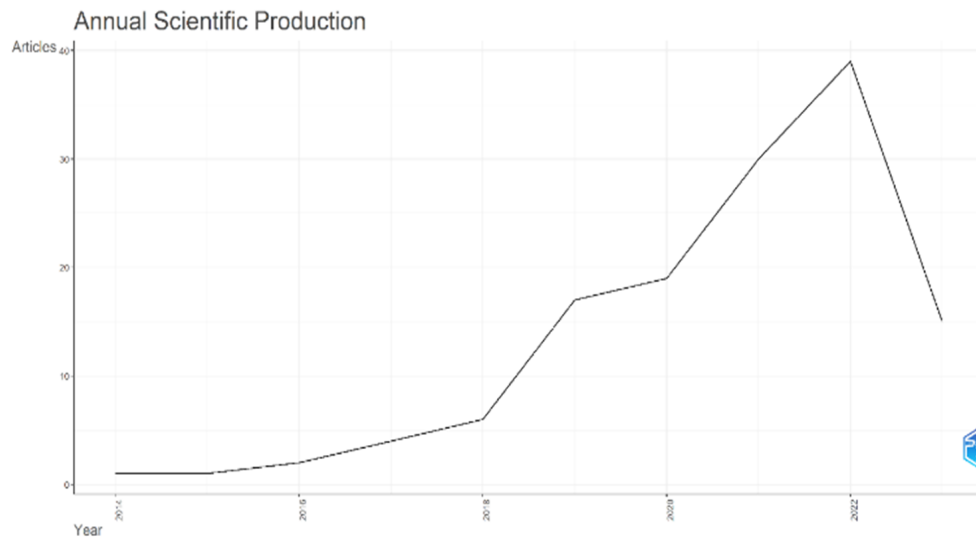


Figure 4. Annual Scientific Production

Table 1. Article development by year

Year	Articles
2014	1
2015	1
2016	2
2017	4
2018	6
2019	17
2020	19
2021	30
2022	39
2023	15

Table 1 illustrates the development of articles on digital business from 2014 to 2023. In 2022, it is very clear that there will be around 39 articles with a Scopus reputation starting from Q1 to Q4 that discuss the development of digital business in that year. That year was also the year when COVID-19 was still recognized, so the process of buying and selling goods was carried out online.

· **Most Relevant Sources**

Most Relevant Sources on Biblmetrix is a method that can identify and analyze relevant sources in a particular research field [29]. Most Relevant Sources gives a better understanding of the most recognized sources on the topic of digital business. This section presents the findings of articles related to the topic being searched. Figure 5 shows a visualization of the Bibliometrix of articles related to digital business. Where articles related to digital business are published in the journal of retailing and consumer services (N = 11), the international journal of retail and distribution management (N = 9), the journal of theoretical and applied electronic communication (N = 8), the journal of business research (N = 4), cogent business and management (N = 3), industrial marketing management (N = 3), and finally the journal revista brasileira de marketing (N = 3).

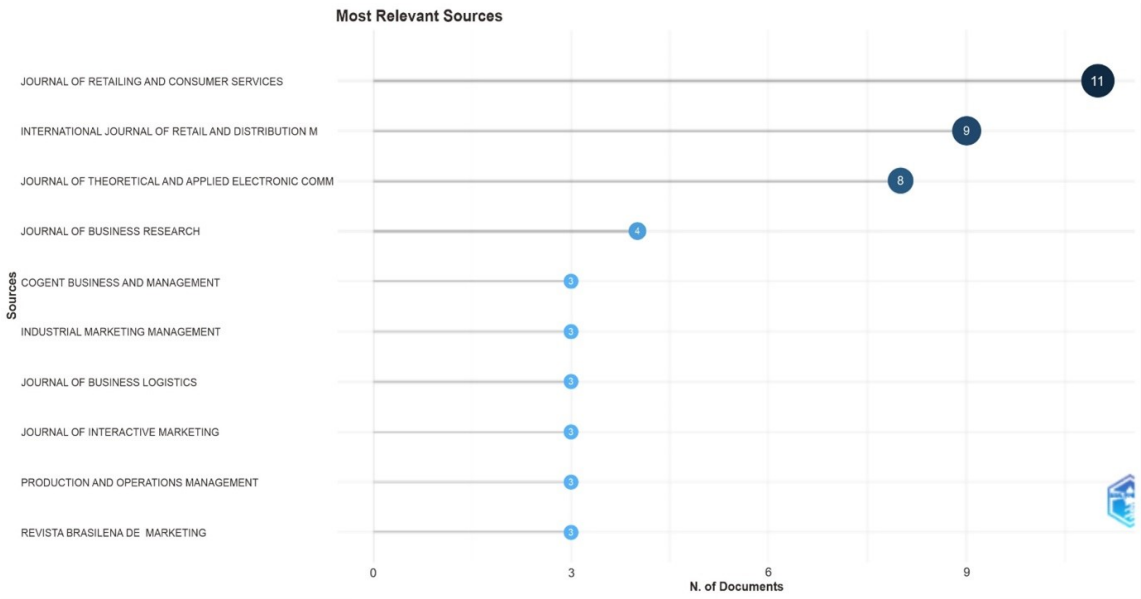


Figure 5. Most Relevant Sources

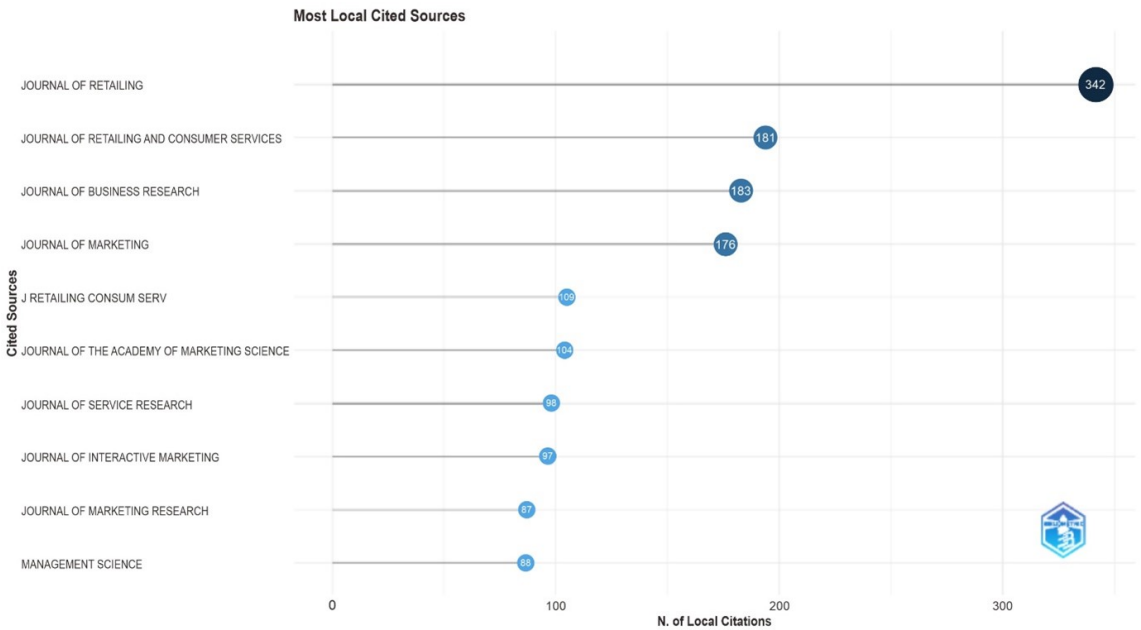


Figure 6. Most Cited Local Sources

· Most Locally Cited Sources

Most Locally Cited Sources on Bibliometrix depends on the context and purpose of its use; where the feature can help in understanding the contribution of local institutions in research, the evaluation of research quality and decision-making still requires broader consideration and a variety of other factors [44]. Figure 6 above presents the number of local citations of the 10 most cited journals. The most cited sources based on articles related to digital business are the journals of retailing (N = 342), retailing and consumer services (N = 194), business research (N = 183), marketing (N = 176), and management sciences (N = 86).

· Most Relevant Authors

Most Relevant Authors on Bibliometrix is a feature that is often used to identify the most relevant and influential authors in a field of research [45]. The findings of an analysis of the authors who have conducted research related to the most relevant digital businesses from each country are the most cited, including ACQUILA-NATALE E., who cited 83 of 3 articles, Li Z., who cited 67 of 3 articles, Norrman A., who cited 117 of 3 articles, and Ballot E., whose article has been cited 33 times. For more complete data, see Table 2.

Table 2. Most Relevant Authors

Authors	Articles	Articles Fractionalized
ACQUILA-NATALE E	3	83
LI Z	3	67
NORRMAN A	3	117
SU X	3	117
ABHISHEK V	2	32
CALDERÓN H	2	67
CARO F	2	83
CHAPARRO-PELÁEZ J	2	50
DEL-RÍO-CARAZO L	2	58
ERIKSSON E	2	67
FAYOS T	2	67
FRASQUET M	2	67
GAO F	2	100
GURREA R	2	67
IGLESIAS-PRADAS S	2	58
JAIN A	2	53
JIN HS	2	50
KEMBRO J	2	67
LIM SFWT	2	100
OLARTE-PASCUAL C	2	50
ORÚS C	2	67
PAUWELS K	2	46
RODRÍGUEZ-TORRICO P	2	50
SAN JOSÉ CABEZUDO R	2	50
SAN-MARTÍN S	2	50
TRABOLD APADULA L	2	50
VERHOEF PC	2	27
VIEJO-FERNÁNDEZ N	2	58
WANG D	2	50
YANG W	2	50
ZHANG J	2	50
ADISANTOSO J	1	33
AKTAS E	1	33
AKTER S	1	25
ALAMANOS E	1	33
ALESANCO-LLORENTE M	1	25
ALEXANDER B	1	50
ALONSO-GARCIA J	1	33
ALOYSIUS JA	1	25
AMBEKAR SS	1	25
AMEEN N	1	25
ANDREWS M	1	7
ANNA WANG Y	1	17
ARIEL XU Q	1	17
AUINGER A	1	11
AYENSA EJ	1	25
AZUMA N	1	33
BABAI MZ	1	25
BAI H	1	33
BALLOT E	1	33

· Most Relevant Affiliations

Most Relevant Affiliations on Bibliometrix is a feature that helps analyze the contribution and impact of certain affiliations or institutions in the research community [46]. The most relevant affiliations that are relevant to the topic of digital business can be seen in Figure 7, where Universidad Politecnica de Madrid is at number one with 11 articles. The article has provided a strong foundation for the digital business process it is describing. In second place is Lund University with 8 articles, followed by Universidad de la Rioja with 6 articles, and at the bottom is the KMITL Business School affiliation with 4 articles.

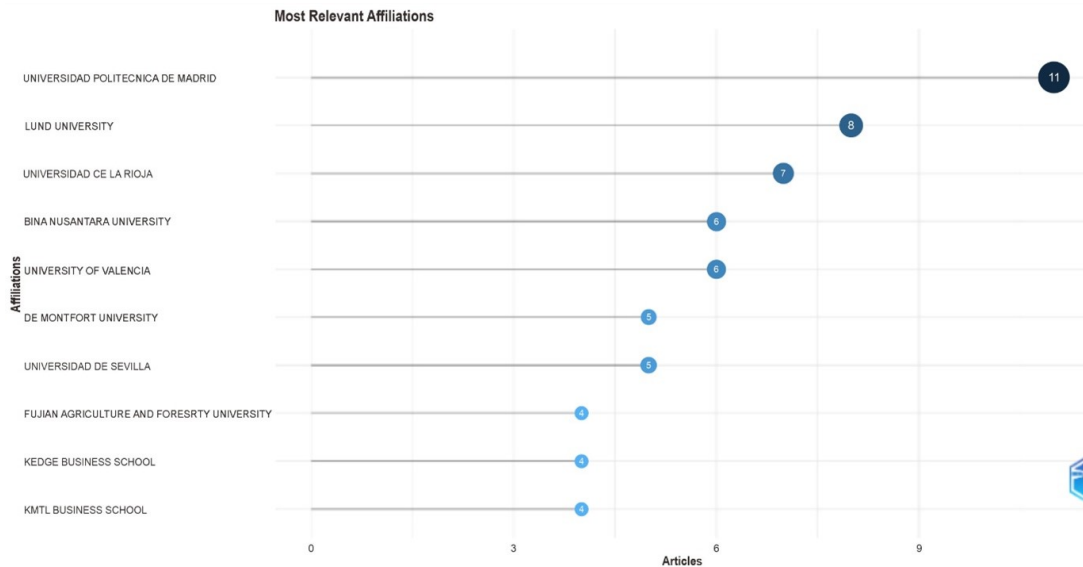


Figure 7. Most Relevant Affiliates

· Corresponding Author's Countries

Corresponding Author's Countries on Bibliometrix is a feature used to analyze the country of the correspondence author. A correspondence author is the author who is responsible for communication related to publications [47]. A country contribution analysis is used to evaluate the role and contribution of countries in research in the field of digital business. Figure 8 and Table 3 show the scientific production in the countries with the most publications on digital business topics: SPAIN (39%), UNITED KINGDOM (9%), USA (9%), CHINA (6%), FRANCE (5%), SWEDEN (5%), GERMANY (2%), INDONESIA (2%), AUSTRALIA, FINLAND, INDIA, ITALY, KOREA, MALAYSIA, SOUTH AFRICA, THAILAND, AUSTRIA, BRAZIL (1%), CHILE (1%), GREECE (1%), IRAN (1%), JAPAN (1%), MEXICO (1%), MONACO (1%), NETHERLANDS (1%), NORWAY (1%), POLAND (1%), PORTUGAL (1%), SWITZERLAND (1%), and UNITED ARAB EMIRATES (1%).

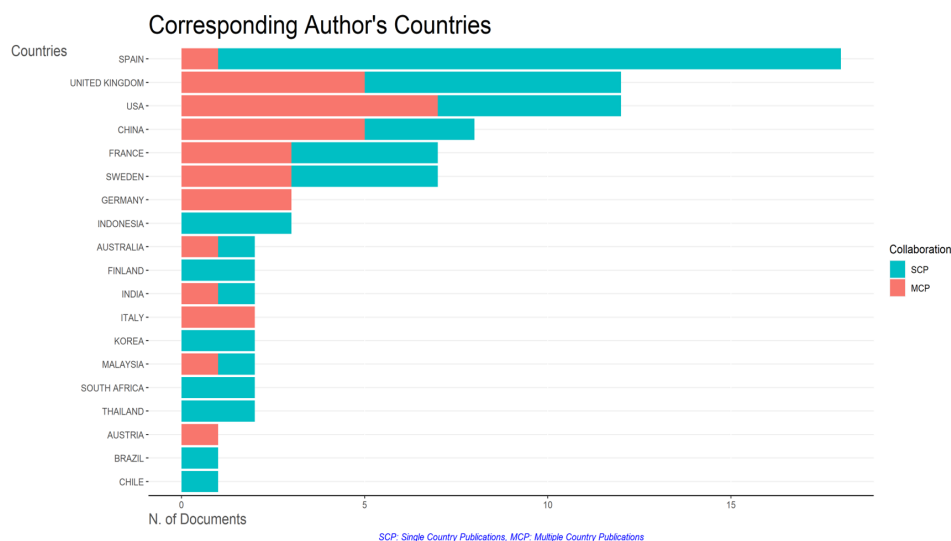


Figure 8. Country of Corresponding Author

Table 3. Country of Corresponding Author (country and articles)

Country	Articles
SPAIN	52
UNITED KINGDOM	12
USA	12
CHINA	8
FRANCE	7
SWEDEN	7
GERMANY	3
INDONESIA	3
AUSTRALIA	2
FINLAND	2
INDIA	2
ITALY	2
KOREA	2
MALAYSIA	2
SOUTH AFRICA	2
THAILAND	2
AUSTRIA	1
BRAZIL	1
CHILE	1
GREECE	1
IRAN	1
JAPAN	1
MEXICO	1
MONACO	1
NETHERLANDS	1
NORWAY	1
POLAND	1
PORTUGAL	1
SWITZERLAND	1
UNITED ARAB EMIRATES	1

· Most Frequent Words

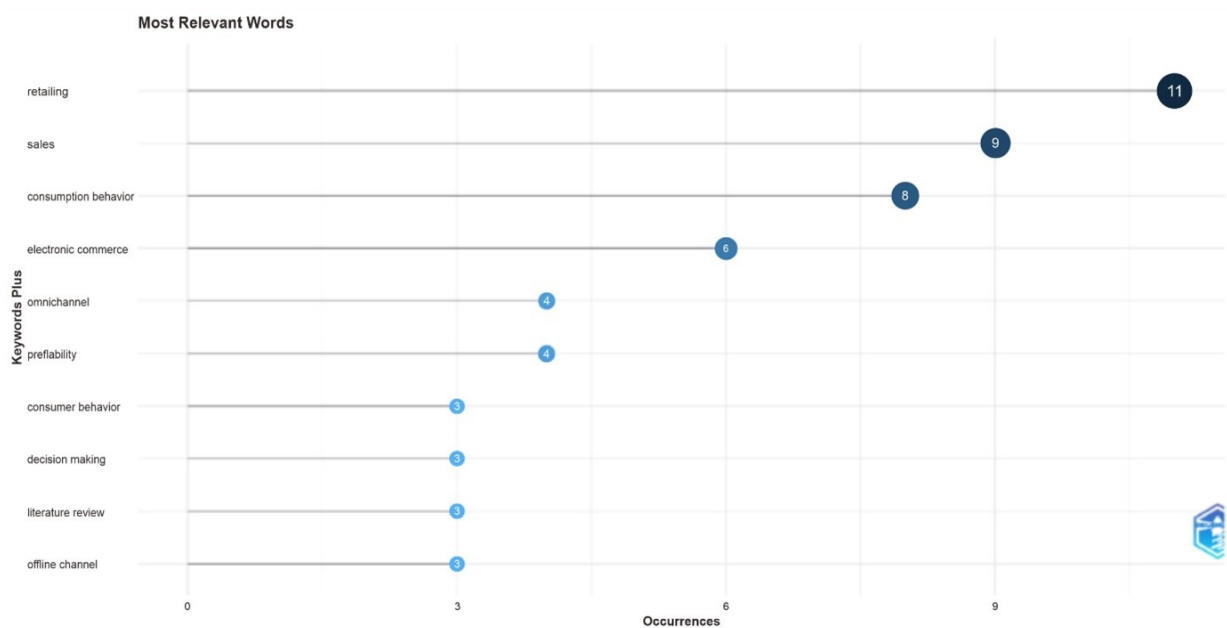


Figure 9. Most Frequent Words

The Most Frequent Words function in Bibliometrix is used to identify the most commonly occurring words in scientific publications within the field of digital business [36]. Optimizing keyword selection during the search

· Co-occurrence network

The co-occurrence network in Bibliometrix is a method used to analyze relationships between words, terms, or concepts that frequently appear together within a particular scientific publication or text corpus. This network visually maps and illustrates how these entities are connected, revealing patterns that help researchers understand the conceptual structure of a research field. By visualizing these relationships, it becomes easier to identify related keywords, explore emerging research topics, and develop a conceptual framework within a specific area of study. In a co-occurrence network, certain keywords play a central role, exhibiting greater influence due to their frequent appearance and connection with other terms. The network uses color codes to represent clusters of related terms, with the size and thickness of keywords indicating their importance and connectivity within the network. For example, the keyword retailing is linked with other critical terms such as modeling, technology adoption, and knowledge sharing, each belonging to separate but interconnected clusters. The clusters displayed in green and red in the co-occurrence network are particularly significant, offering a clearer understanding of the keyword relationships identified in this study. The construction of the co-occurrence network, as depicted in Figure 11, provides a tool for exploring the conceptual framework of the research domain, offering insights into how ideas are structured and interlinked. This visualization helps researchers track the development of themes and trends, facilitating deeper exploration of the core concepts shaping the field of digital business.



Figure 11. Co-occurrence network

· Thematic mapping

Thematic mapping on Bibliometrix is a holistic analysis of research topics by understanding the research structure, identifying topic clusters, tracking research trends, and gaining deeper insights from the text corpus in digital business research. The thematic map comprises four quadrants, namely special topics, main topics, emerging topics, and basic topics. Special topics refer to topics that are unique or specialized within a domain or field of study. They tend to be a special focus for a number of researchers or scholarly publications in the community. Main topics refer to topics that are the center of attention and the main drivers in a domain or field of study. Declining themes refer to topics that have experienced a decline in interest or research over time. Emerging topics refer to topics that are emerging or developing in a digital business domain or field. Declining themes refer to topics that have experienced a decline in interest or research over time. Basic topics refer to fundamental or general topics related to the digital business domain. These topics are usually the foundation for more specific research. Figure 12 shows that the topics of sales, omnichannel, and profitability are included in the main topics. In the retailing topic, consumption behavior and shopping activity are topics that are in the middle of specific topics and main topics. The final topic encompasses electronic commerce, literature review, and information and communication technology, which falls between the primary and secondary topics.

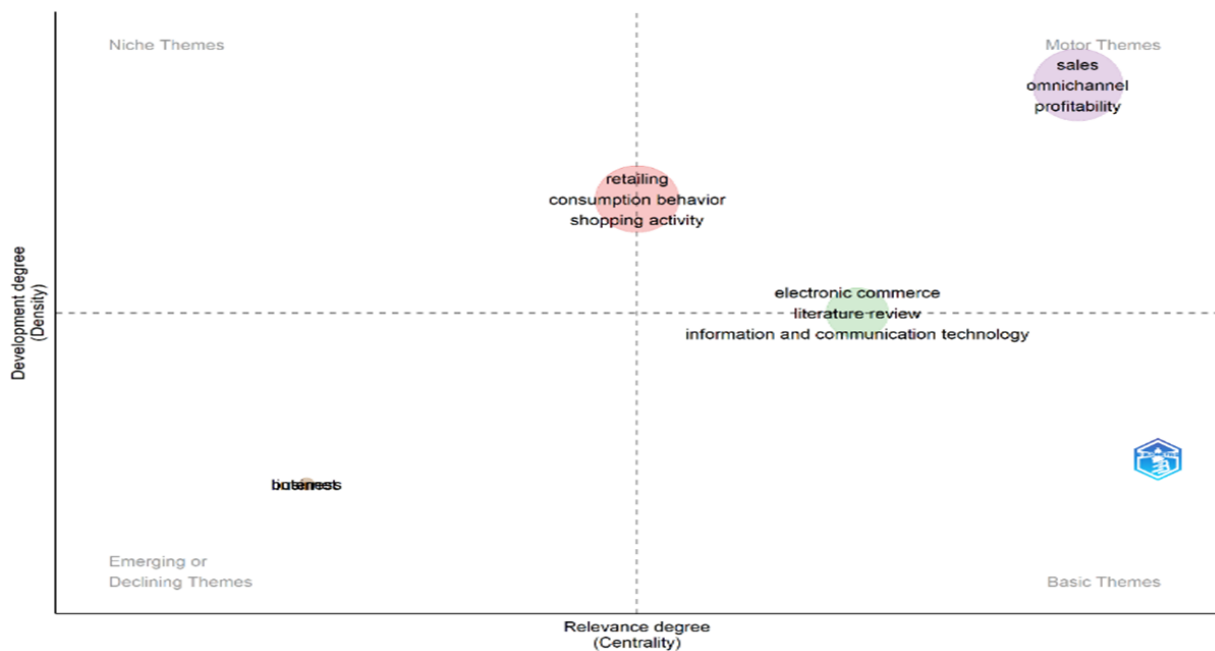


Figure 12. Thematic mapping

4 Discussion

Significant findings from this study offer comprehensive insights into trends and advancements in digital business, as well as the implications for future research and industry practice. By employing bibliometric analysis, this study not only pinpoints the major subjects that predominate in the literature on digital business, but it also highlights gaps in knowledge and areas that may use more investigation.

First off, this study demonstrates that the use of omnichannel tactics is one of the most prominent trends in digital business. According to this finding, companies that can effectively combine client experiences across a variety of channels are typically better equipped to adjust to shifting consumer trends. The consequence is that, in order to live up to the ever-higher expectations of their customers, digital firms must keep innovating and offering services that prioritize a consistent and cohesive CX.

Furthermore, the significance of sustainability and digital integration in contemporary company models is underscored by this study. Numerous studies in the literature demonstrate that prosperous companies focus on social and environmental effects in addition to profits. This is a reflection of the growing focus on digital enterprises that are sensitive to both market demands and stringent environmental guidelines. Practitioners of digital business may make use of these findings to create plans that consider long-term sustainability in addition to short-term profitability.

According to the survey, big data and artificial intelligence (AI) are two innovative technologies that are increasingly essential to digital business. In order to forecast market trends, analyze customer behavior, and make more precise data-driven decisions, businesses must make use of these technologies. Because of this, digital organizations that are successful are those that can swiftly adapt to technological change and use it to boost productivity and competitiveness.

However, this study also demonstrates that there are still uncharted territories, such as the use of digitalization in certain industries like manufacturing and logistics. This gap implies that there is a need for more study on digital integration in these domains by academics and industry professionals. This might involve creating brand-new business models or analytical technologies that are more appropriate for established but promising industries.

Ultimately, the findings of this study offer practitioners and scholars studying digital business invaluable insight regarding future directions for their field's research as well as possible avenues for innovation. They may modify their plans to take advantage of new possibilities in the digital era and handle upcoming problems by staying abreast of the major concerns and trends in digital business.

5 Conclusions

This study, employing SLR, aims to address existing research gaps by providing a comprehensive overview of various disciplines from a holistic business perspective. Specifically, it identifies gaps in fintech research, along with key challenges and trends for potential future studies. One of the primary tools used for conducting the SLR is bibliometric analysis.

The bibliometric analysis process involves three key stages: (1) data collection from the Scopus database, (2) bibliometric analysis, and (3) visualization of the results. Data collection was carried out using a public dataset obtained from the Scopus database, with Boolean operators (such as AND, OR, and XOR) applied to refine the search. The term *digital business* was used as the search keyword, yielding approximately 250 articles. Following a manual selection process, 134 documents from 2014 to 2023 were identified as relevant for analysis.

The bibliometric analysis included the following components: Annual Scientific Production, Most Relevant Source, Most Locally Cited Source, Most Relevant Author, Most Relevant Affiliation, Corresponding Author Country, and Most Frequent Words. Each component provided valuable insights into the landscape of digital business research.

The results of the SLR revealed that topics such as omnichannel and retailing are highly popular among researchers. However, areas related to supply chain management, shopping behavior, and online business remain underexplored, suggesting opportunities for future research. This study highlights the importance of these under-researched areas and encourages further exploration to enrich the field of digital business.

Data Availability

The data used to support the research findings are available from the corresponding author upon request.

Conflicts of Interest

The authors declare no conflict of interest.

References

- [1] M. Jiang, L. Chen, C. Blome, and F. Jia, "Digital technology adoption for modern slavery risk mitigation in supply chains: An institutional perspective," *Technol. Forecast. Soc. Change*, vol. 192, p. 122595, 2023. <https://doi.org/10.1016/j.techfore.2023.122595>
- [2] F. Ciulli and A. Kolk, "International business, digital technologies and sustainable development: Connecting the dots," *J. World Bus.*, vol. 58, no. 4, p. 101445, 2023. <https://doi.org/10.1016/j.jwb.2023.101445>
- [3] P. Chen and S. K. Kim, "The impact of digital transformation on innovation performance - The mediating role of innovation factors," *Heliyon*, vol. 9, no. 3, p. e13916, 2023. <https://doi.org/10.1016/j.heliyon.2023.e13916>
- [4] K. Möller, "Theory map of business marketing: Relationships and networks perspectives," *Ind. Mark. Manag.*, vol. 42, no. 3, pp. 324–335, 2013. <https://doi.org/10.1016/j.indmarman.2013.02.009>
- [5] Sutamaji, S. A. Pareno, and D. T. Putranto, "Pola Q-Marketing perspektif komunikasi pemasaran the Q Marketing pattern on marketing communication perspective," *J. Commun. Stud. P*, vol. 3, no. 1, pp. 91–106, 2018.
- [6] M. Hannibal and E. S. Rasmussen, "Digital entrepreneurship: A longitudinal case study in a traditional firm," *Entrep. Collab. Innov. Mod. Bus. Era*, pp. 1–21, 2018. <https://doi.org/10.4018/978-1-5225-5014-3.ch001>
- [7] P. C. Verhoef and T. H. A. Bijmolt, "Marketing perspectives on digital business models: A framework and overview of the special issue," *Int. J. Res. Mark.*, vol. 36, no. 3, pp. 341–349, 2019. <https://doi.org/10.1016/j.ijresmar.2019.08.001>
- [8] M. Hänninen, "Review of studies on digital transaction platforms in marketing journals," *Int. Rev. Retail. Distrib. Consum. Res.*, vol. 30, no. 2, pp. 164–192, 2020. <https://doi.org/10.1080/09593969.2019.1651380>
- [9] A. S. Ariffin, M. F. Ramli, and H. Ashari, "Digital marketing perspective in cattle business: Supply chain integrated approach," *SHS Web Conf.*, vol. 124, p. 04004, 2021. <https://doi.org/10.1051/shsconf/202112404004>
- [10] Y. Hole, S. Pawar, and E. B. Khedkar, "Omni channel retailing: An opportunity and challenges in the Indian market," *J. Phys. Conf. Ser.*, vol. 1362, no. 1, 2019. <https://doi.org/10.1088/1742-6596/1362/1/012121>
- [11] Y. V. Vorokhobina, O. K. Kaznacheeva, and E. E. Tikhonov, "Problems and opportunities for Russian business in the transition to the digital economy," in *Proceedings of the International Scientific Conference "Far East Con" (ISC FEC 2018)*, 2019, pp. 1060–1064. <https://doi.org/10.2991/iscfec-18.2019.246>
- [12] K. Wang, Y. Zhao, R. K. Gangadhari, and Z. Li, "Analyzing the adoption challenges of the internet of things (IoT) and artificial intelligence (AI) for smart cities in China," *Sustain.*, vol. 13, no. 19, 2021. <https://doi.org/10.3390/su131910983>
- [13] R. Enterprises, "Railway enterprises," 2020.
- [14] I. Ivanov, "Technological transformation and digitalization of hotel business: Opportunities and perspectives," pp. 515–521, 2020. <https://doi.org/10.36997/tc2020.515>
- [15] L. M. de Araujo, S. Priadana, V. A. Paramarta, and D. Sunarsi, "Digital leadership in business organizations," *Int. J. Educ. Adm. Manag. Leadersh.*, vol. 2, no. 1, pp. 5–16, 2021. <https://doi.org/10.51629/ijeamal.v2i1.18>
- [16] C. Gereia, F. Gonzalez-Lopez, and V. Herskovic, "Omnichannel customer experience and management: An integrative review and research agenda," *Sustain.*, vol. 13, no. 5, pp. 1–24, 2021. <https://doi.org/10.3390/su13052824>

- [17] C. Kopot and B. J. Cude, "Channel depth or consistency? A study on establishing a sustainable omnichannel strategy for fashion department store retailers," *Sustain.*, vol. 13, no. 13, 2021. <https://doi.org/10.3390/su13136993>
- [18] S. Shahriar, "Digital transformation in business and society: Theory and cases," *Asia Pacific Bus. Rev.*, vol. 26, no. 4, pp. 523–525, 2020. <https://doi.org/10.1080/13602381.2020.1738074>
- [19] O. El Sawy, P. Kræmmergaard, H. Amsinck, and A. L. Vinther, "How LEGO built the foundations and enterprise capabilities for digital leadership," *MIS Q. Exec.*, vol. 15, no. 2, pp. 141–166, 2016.
- [20] B. L. Stranathan, "Issues to be considered-the implementation of a digital distribution system by the commercial broadcast networks," *SMPTE J.*, vol. 106, no. 11, pp. 795–798, 1997.
- [21] R. A. Belderbos and M. G. Heijltjes, "The determinants of expatriate staffing by Japanese multinationals in Asia: Control, learning and vertical business groups," *J. Int. Bus. Stud.*, vol. 36, no. 3, pp. 341–354, 2005. <https://doi.org/10.1057/palgrave.jibs.8400135>
- [22] S. J. Chang, C.-N. Chung, and I. P. Mahmood, "When and how does business group affiliation promote firm innovation? A tale of two emerging economies," *Organ. Sci.*, vol. 17, no. 5, pp. 637–656, 2006. <https://doi.org/10.1287/orsc.1060.0202>
- [23] A. Wöcke, M. Bendixen, and R. Rijamampianina, "Building flexibility into multi-national human resource strategy: A study of four South African multi-national enterprises," *Int. J. Hum. Resour. Manag.*, vol. 18, no. 5, pp. 829–844, 2007. <https://doi.org/10.1080/09585190701249115>
- [24] M. Carlbäck, "Strategic entrepreneurship in the hotel industry: The role of chain affiliation," *Scand. J. Hosp. Tour.*, vol. 12, no. 4, pp. 349–372, 2012. <https://doi.org/10.1080/15022250.2012.748506>
- [25] M. Popli and R. M. Ladkani, "Value constraining or value enabling? The impact of business group affiliation on post-acquisition performance by emerging market firms," *Manag. Organ. Rev.*, vol. 16, no. 2, pp. 261–291, 2020. <https://doi.org/10.1017/mor.2019.51>
- [26] M. T. Ballestar, J. Sainz, and J. Torrent-Sellens, "Social networks on cashback websites," *Psychol. Mark.*, vol. 33, no. 12, pp. 1039–1045, 2016. <https://doi.org/10.1002/mar.20937>
- [27] J. M. M. Christino, T. S. Silva, E. A. A. Cardozo, A. d. P. Carrieri, and P. d. P. Nunes, "Understanding affiliation to cashback programs: An emerging technique in an emerging country," *J. Retail. Consum. Serv.*, vol. 47, pp. 78–86, 2019. <https://doi.org/10.1016/j.jretconser.2018.10.009>
- [28] Y. K. Dwivedi, E. Ismagilova, D. L. Hughes, J. Carlson, R. Filieri, J. Jacobson, V. Jain, H. Karjaluoto, H. Kefi, A. S. Krishen, V. Kumar, M. Rahman, R. Raman, P. A. Rauschnabel, J. Rowley, J. Salo, G. Tran, Y. Wang, and M. K. Srivastava, "Setting the future of digital and social media marketing research: Perspectives and research propositions," *Int. J. Inf. Manage.*, vol. 59, p. 102168, 2021. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>
- [29] S. Büyükkıdık, "A bibliometric analysis: A tutorial for the bibliometrix package in R using IRT literature," *Eğitimde ve Psikolojide Ölçme ve Değerlendirme Derg.*, vol. 13, no. 3, pp. 164–193, 2022. <https://doi.org/10.21031/epod.1069307>
- [30] C. Mussinelli, "Digital publishing in Europe: A focus on France, Germany, Italy and Spain," *Publ. Res. Q.*, vol. 26, no. 3, pp. 168–175, 2010. <https://doi.org/10.1007/s12109-010-9172-5>
- [31] V. Halttunen, M. Makkonen, and L. Frank, "The ethics and indifferent behaviour of young digital content consumers - Analysis of an interview study," in *Proceedings of the IADIS International Conference ICT, Society and Human Beings 2010*, 2010, pp. 75–82.
- [32] J. A. Waddingham, M. A. Zachary, and D. J. Ketchen, "Insights on the go: Leveraging business podcasts to enhance organizational performance," *Bus. Horiz.*, vol. 63, no. 3, pp. 275–285, 2020. <https://doi.org/10.1016/j.bushor.2020.02.001>
- [33] D. Zhao, Q. Huo, J. Feng, B. F. Chmelka, and G. D. Stucky, "Triblock copolymer syntheses of mesoporous silica with periodic 50 to 300 angstrom pores," *Science*, vol. 279, no. 5350, pp. 548–552, 1998. <https://doi.org/10.1126/science.279.5350.548>
- [34] D. Narang and S. Saini, "Metacognition and academic performance of rural adolescents," *Stud. Home Community Sci.*, vol. 7, no. 3, pp. 167–175, 2013. <https://doi.org/10.1080/09737189.2013.11885409>
- [35] M. A. Khan, C. Pattnaik, R. Ashraf, I. Ali, S. Kumar, and N. Donthu, "Value of special issues in the journal of business research: A bibliometric analysis," *J. Bus. Res.*, vol. 125, pp. 295–313, 2021. <https://doi.org/10.1016/j.jbusres.2020.12.015>
- [36] M. K. Kamila and S. Jasrotia, "Ethics and marketing responsibility: A bibliometric analysis and literature review," *Asia Pacific Manag. Rev.*, 2023. <https://doi.org/10.1016/j.apmr.2023.04.002>
- [37] J. P. Hausberg, K. Liere-Netheler, S. Packmohr, S. Pakura, and K. Vogelsang, "Research streams on digital transformation from a holistic business perspective: A systematic literature review and citation network analysis," *J. Bus. Econ.*, vol. 89, 2019. <https://doi.org/10.1007/s11573-019-00956-z>
- [38] R. R. Suryono, I. Budi, and B. Purwandari, "Challenges and trends of financial technology (Fintech): A

systematic literature review,” *Inf.*, vol. 11, no. 12, p. 590, 2020. <https://doi.org/10.3390/info11120590>

- [39] G. D’Amico, P. L’Abbate, W. Liao, T. Yigitcanlar, and G. Ioppolo, “Understanding sensor cities: Insights from technology giant company driven smart urbanism practices,” *Sensors*, vol. 20, no. 16, p. 4391, 2020. <https://doi.org/10.3390/s20164391>
- [40] A. Di Vaio, R. Palladino, A. Pezzi, and D. E. Kalisz, “The role of digital innovation in knowledge management systems: A systematic literature review,” *J. Bus. Res.*, vol. 123, pp. 220–231, 2021. <https://doi.org/10.1016/j.jbusres.2020.09.042>
- [41] D. Trabucchi and T. Buganza, “Landlords with no lands: A systematic literature review on hybrid multi-sided platforms and platform thinking,” *Eur. J. Innov. Manag.*, vol. 25, no. 6, pp. 64–96, 2021. <https://doi.org/10.1108/EJIM-11-2020-0467>
- [42] P. Tiwasing, B. Clark, and M. Gkartzios, “How can rural businesses thrive in the digital economy? A UK perspective,” *Heliyon*, vol. 8, no. 10, p. e10745, 2022. <https://doi.org/10.1016/j.heliyon.2022.e10745>
- [43] S. Secinaro, V. Brescia, D. Calandra, and P. Biancone, “Employing bibliometric analysis to identify suitable business models for electric cars,” *J. Clean. Prod.*, vol. 264, p. 121503, 2020. <https://doi.org/10.1016/j.jclepro.2020.121503>
- [44] K. Kajtazi, G. Rexhepi, A. Sharif, and I. Ozturk, “Business model innovation and its impact on corporate sustainability,” *J. Bus. Res.*, vol. 166, p. 114082, 2023. <https://doi.org/10.1016/j.jbusres.2023.114082>
- [45] K. Smith and S. Sepasgozar, “Mining need to commit to industry 4.0,” *Buildings*, vol. 12, p. 1064, 2022.
- [46] A. Nasir, K. Shaukat, I. A. Hameed, S. Luo, T. M. Alam, and F. Iqbal, “A bibliometric analysis of corona pandemic in social sciences: A review of influential aspects and conceptual structure,” *IEEE Access*, vol. 8, pp. 133 377–133 402, 2020. <https://doi.org/10.1109/ACCESS.2020.3008733>
- [47] P. H. R. Botene, A. T. de Azevedo, and P. S. de Arruda Ignácio, “Blockchain as an enabling technology in the COVID-19 pandemic: A systematic review,” *Health Technol.*, vol. 11, no. 6, pp. 1369–1382, 2021. <https://doi.org/10.1007/s12553-021-00593-z>
- [48] F. Yardibi, M. Z. Firat, and E. Çetin Teke, “Trend topics in animal science: A bibliometric analysis using CiteSpace,” *Turkish J. Vet. Anim. Sci.*, vol. 45, no. 5, pp. 833–840, 2021. <https://doi.org/10.3906/VET-2001-103>