

Bibliometric Analysis on the Evolution of Digital Platforms. Future Research Perspectives

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Abstract

The purpose of this article is to conduct a bibliometric analysis aimed at identifying the major research directions and the scholarly impact associated with digital platforms. The study pursues two core objectives: (1) evaluating the performance of digital platforms through specific bibliometric indicators, and (2) mapping the scientific landscape related to digital platform research. The analysis draws on both national and international literature. Methodologically, the study employs a quantitative approach using bibliometric techniques and the analysis of several indicators relevant to the field. The dataset comprises 706 publications published between 1975 and 2024. The findings reveal a clear trend toward the expansion and consolidation of research on digital platforms. The conclusions emphasize the growing relevance of this domain for specialists in both economic and academic environments).

Keywords: *Digital platforms, bibliometric analysis, business models, future trends*

JEL Classification: C80

Introduction

Rapid advances in digital technologies have fundamentally transformed the modern economy. The pace of technological progress is so accelerated that a return to previous economic and social configurations appears unlikely; instead, embracing the digital age has become essential for remaining competitive in contemporary environments. Achieving the speed and agility required to operate under such conditions demands widespread adaptation to digital transformation. Over the past two decades in particular, the platform economy has experienced unprecedented global expansion and influence. Today, it has become both dominant and international in scope, with some of the world's most successful and highly

valued firms operating as platform-based enterprises [1-3]. Digital platforms are reshaping how individuals work, learn, innovate, and collaborate.

Digital platforms also generate new opportunities for business development by offering aspiring entrepreneurs access to diverse resources, incentives, and community-based environments. These environments enable users to cultivate and showcase their skills, often transitioning from consumers to producers and entrepreneurs within the digital economy. From an organizational perspective, a digital platform can be understood as an integrated space through which information, services, and goods circulate between producers and consumers, supported by the broader community that interacts with the platform. This community is, in fact, the essential component of the platform; without it, the platform holds limited value.

Platform structures further enable firms to shift from traditional product centric models toward generating continuous revenue streams through solution and service offerings embedded within broader ecosystems [4-7]. Consequently, an increasing number of scholars have examined how digital technologies allow platform owners to coordinate the activities of multiple stakeholders. Digital platforms function as standardized digital interfaces that leverage technological infrastructures to facilitate interactions among diverse parties.

Contemporary digital platforms increasingly integrate artificial intelligence. The emergence of generative AI models—such as OpenAI’s ChatGPT—has been similarly transformative, reshaping competitive dynamics across industries. Even well-established platforms are affected by these shifts. Building a successful digital platform requires several essential components, including ease of use and interface attractiveness; trust and security mechanisms that ensure privacy protection and safeguard intellectual property and data; connectivity enabled through IP based systems; facilitation of exchanges between users (producers and consumers); community value, which increases with community size; and scalability without performance degradation.

Despite significant progress in understanding digital platforms, scholars continue to call for further research given their growing practical relevance, technological evolution, and expanding use cases [8,9]. As digital platforms evolve, they compete for similar audiences by leveraging distinct competitive advantages and unique features. Designing a platform that ensures ease of use, trusted transactions, and protection against malicious behavior remains a delicate balance—yet one that can yield substantial success when effectively managed. Existing reviews often focus on specific types of platforms, such as crowdsourcing platforms [10], while others categorize research streams without offering comprehensive examinations of the specialized literature [8]. Digital platforms are widely recognized as key drivers of economic development and digital transformation [11,2,12]. Nevertheless, despite extensive macro and micro level evidence, scholarly understanding of the developmental opportunities enabled by digital platforms remains incomplete. This gap has motivated researchers to examine platform functioning, governance mechanisms, provider roles, and future development trajectories.

The primary purpose of our research is to conduct a bibliometric analysis aimed at identifying the general research directions and the impact associated with digital platforms. The main objectives are: (1) to analyze the performance of digital platforms using specific bibliometric indicators, and (2) to examine the scientific mapping of digital platform research. Our approach contributes to clarifying the global research landscape and identifying major thematic directions in the study of digital platforms.

The article is structured according to these aims and objectives. Section 2 provides an overview of literature review. Section 3 presents research methodology and data sources. Section 4 discusses empirical results and related interpretations. Finally, Section 5 outlines the conclusions, study limitations, and directions for future research.

1. Literature review

1.1. Bibliometric analysis

Bibliometrics is a research method used to develop systematic inventories of publishing activity at the level of countries, institutions, or research communities, enabling comparative analyses of productivity within a given scientific field. It provides a suite of methodological tools and indicators for examining the structure and dynamics of scientific communication. Bibliometric studies rest on the premise that scientific results must be publicly accessible to generate cumulative progress. At the same time, bibliometric data serve as reference points for identifying trends in science and technology, as longitudinal analyses of publication patterns help reveal research areas that are expanding as well as those that are declining. Bibliometric analysis typically involves the application of quantitative techniques, such as statistical analysis, citation analysis, and co-citation analysis, to bibliometric datasets. The widespread use of such analyses is relatively recent, driven by advances in and increased access to major academic indexing databases, including Web of Science, Scopus, and Dimensions, as well as specialized bibliometric software such as VOSviewer, Gephi, and Leximancer.

Bibliometric analysis has become an essential tool for assessing and evaluating scholarly research output [13]. A variety of software tools support bibliometric investigation, including bibliometrix [14], CitNetExplorer [15], and CiteSpace [16]. The present study analyzes 706 papers and employs VOSviewer, given its widespread adoption, mapping capabilities, and ease of application. Despite the growing use of bibliometric techniques, multidimensional approaches to the bibliometric analysis of global issues remain limited. Conducting timely bibliometric assessments is therefore crucial for understanding past, present, and emerging research trajectories from a comprehensive and integrative perspective.

1.2. Digital platforms

The term platform has become a widely accepted metaphor, embedded in both academic and public discourse. In the contemporary global economy, leading firms such as Apple, Amazon, Alphabet (Google), and Alibaba exemplify how digital platforms constitute the core element of competitive success. To capture this phenomenon, scholars and practitioners frequently employ the term platform economy. A digital platform can be understood as the software and technological infrastructure that integrates and streamlines business operations and IT systems. It functions as the operational backbone of an organization, enabling transactions, interactions, and engagement with potential customers. Digital platforms are therefore central to organizational digital transformation, creating online environments in which businesses and consumers interact.

Conceptually, a platform facilitates value-creating interactions between external producers and consumers by providing an open, participatory infrastructure governed by a set of rules [17]. Its primary purpose is to match users and support the exchange of goods, services, or social interactions, thereby generating value for all participants. A simple distinction between traditional product-based firms and platform-based firms is that products

offer functionalities, whereas platforms cultivate communities. Community building is thus the defining element of platform success. From the perspective of industrial organization, platforms are viewed as specific types of markets that mediate interactions among heterogeneous groups of actors, such as producers and consumers [18]. Interdependencies within or across these groups give rise to network externalities, whereby a user's utility increases with the number of other users on the same side (direct network effects) or on the opposite side (indirect network effects) of the platform [19,20].

Digital platforms operate through standardized digital interfaces and rely on digital technologies to facilitate interactions among multiple parties. They represent a distinct organizational form in which governance is embedded in digital design features [21], such as shared digital resources and analytics-based information. Scholars adopt multiple perspectives to explain how digital platforms orchestrate actor systems to co-create value [22]. These perspectives include market-based economics [23-25], technology management with a technical focus [9,26-27], and information systems with a socio-technical orientation [28,29]. Among the most influential analytical lenses are the modular-architectural, technical, and socio-technical perspectives.

From a technical standpoint, digital platforms are conceptualized as extensible code bases [9,30]. They function as socio-technical ensembles that combine software and hardware components with organizational standards [31]. Platforms incorporate modular extensions (software subsystems or applications developed by third-party actors) that enhance and diversify functionality. Platforms with sufficiently large installed bases, often referred to as platform leaders, can leverage their dominant positions to expand market share [32]. Strategies include: (1) platform envelopment, whereby profits are used to enter adjacent markets by subsidizing cloud services or exploiting informational advantages over complementors [33]; and (2) behaviors that have triggered antitrust scrutiny, illustrating the "winner-takes-all" dynamics observed in cases involving Microsoft and Google [34, 35]. Beyond modular and architectural views, scholars emphasize the innovation potential of digital infrastructures [27, 36, 29], particularly their capacity to provide digital resources [37, 38]. Digital infrastructures rely on malleable software that can be reconfigured, adapted to user needs, and used to stimulate technological advancement [39, 40].

Technically, digital platforms are software-based systems composed of extensible core code and modular services [9, 27]. Each module extends platform functionality [26]. Standardized integration processes and modular architecture reduce interdependence and translation costs, thereby enhancing network externalities [41,42]. As a result, software-based platforms generate economies of scale and scope [43] as well as economies of substitution [44]. The socio-technical perspective examines how platforms integrate and govern actor systems [28]. A key governance mechanism is the provision of boundary resources, such as APIs and SDKs, that enable ecosystem participants to co-create complementary products and services [45]. Interfaces standardize interactions, while toolkits enhance interpretive flexibility and shared understanding among actors [22,46]. Research increasingly highlights the importance of platform boundaries and their management [47,48].

System structure determines how actors interact to create value. Recent studies emphasize three structural elements: activities, actors, and architectures [49,50]. Activities represent discrete actions through which value is co-created, such as developing applications or offering services like sharing or property listings. Digital platforms often function as bottlenecks that regulate and constrain these interactions [51]. Emerging research integrates

intra-organizational technical perspectives with inter-organizational economic, business, and social perspectives [49-50,52]. Digital platform businesses are reshaping the economy by unlocking underutilized resources and creating new markets. They meet user needs and facilitate value exchange between creators and consumers. Unlike traditional product firms that focus on managing internal resources, platform firms are outward-oriented: communities contribute resources, and platforms orchestrate them.

2. Research methodology

The primary objective of this review is to examine current research and emerging trends in the field of digital platforms, as well as to identify future research directions. To achieve this, the stages of the PRISMA 2020 protocol were followed. The Web of Science (WoS) database was selected as the primary data source due to its global reputation among scholars, its inclusion of highly ranked and rigorously indexed journals, and its status as one of the most influential resources for bibliometric investigations.

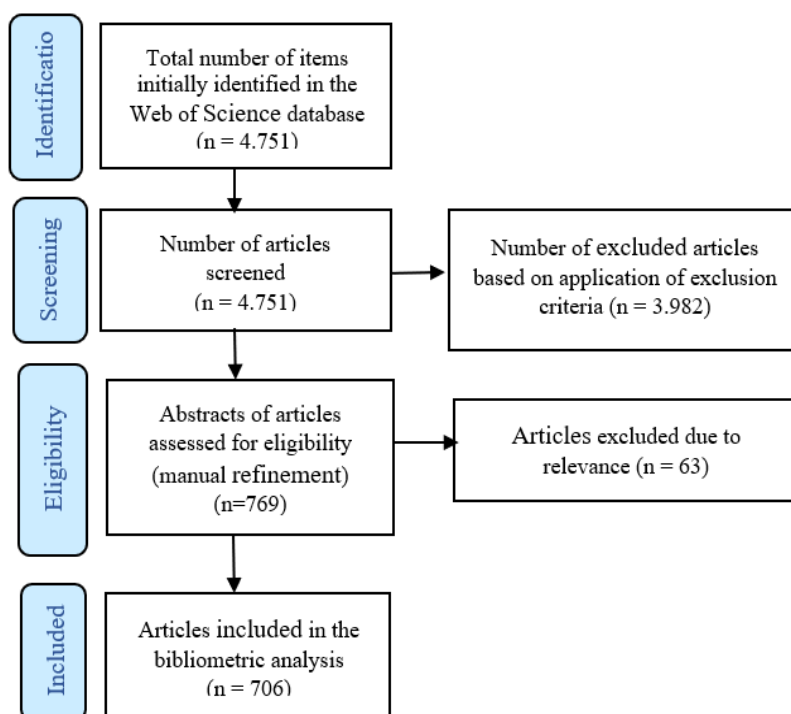


Figure 1. Prisma protocol.
(Source: Created by the authors)

The keyword “digital platforms” was used for the search, and the investigation period covered 1975–2023. In the initial stage of the PRISMA protocol, the WoS search generated 4,751 records (Figure 1). In the second stage, the results were refined by applying inclusion criteria that restricted the dataset to peer reviewed journal articles written in English and classified within the following research areas: computer science information systems, computer science interdisciplinary applications, business, management, and communication (Table 1).

Table 1.

Description of the procedure and use of exclusion criteria

	CATEGORY	CRITERION	NUMBER OF ARTICLES
Stage 1	<i>Search string used in search refinement</i>	<i>Topic: "digital platforms"</i>	4.751
	<i>Access</i>	<i>Including both open access</i>	
	<i>Timeframe</i>	<i>1975-2023</i>	
Stage 2	<i>Subject area</i>	<i>Computer science information systems, computer science interdisciplinary applications, business, management, communication</i>	3.982
	<i>Type of document</i>	<i>Article (3.742), review article (240)</i>	
Stage 3		<i>Editorial material (51), early access (12)</i>	63
	<i>Total results</i>		706

(Source: Created by the authors)

3. Analysis of the results. Discussions

Following the methodology outlined in the previous section, this part of the study presents the results of a comprehensive bibliometric analysis of scientific publications related to digital platforms. The findings are organized according to the specific units of analysis examined. Our investigation is structured around two analytical dimensions: performance analysis and scientific mapping analysis.

3.1. Analysis of the performance of digital platforms

For the performance analysis of digital platforms, the following dimensions were examined: (1) the evolution of the number of publications; (2) the evolution of citation counts; (3) the contribution of institutions to scholarly output; (4) the contribution of journals to article dissemination; and (5) the contribution of countries to scientific production in this field. The overarching aim of this bibliometric assessment is to provide a comprehensive overview of past, current, and emerging trends in digital platform research, based on bibliometric indicators analyzed from a statistical perspective.

3.1.1. Evolution of the number of publications related to the performance of digital platform

The initial period considered for analysis was 1975–2023; however, because the Web of Science (WoS) query returned records only from 2002 onward, the final analysis focuses on the years 2002–2023. Accordingly, the dataset comprises 706 publications published during this interval. The evolution of the annual number of publications across this period is presented in Figure 2.

As shown in Figure 2, interest in this field was minimal, almost negligible, between 2002 and 2014. However, beginning in 2015, the trend shifts markedly upward. Considering this development, we anticipate that research on the performance of digital platforms will continue to gain prominence, particularly given the growing challenges faced by many countries in harmonizing legislation within the digital domain.

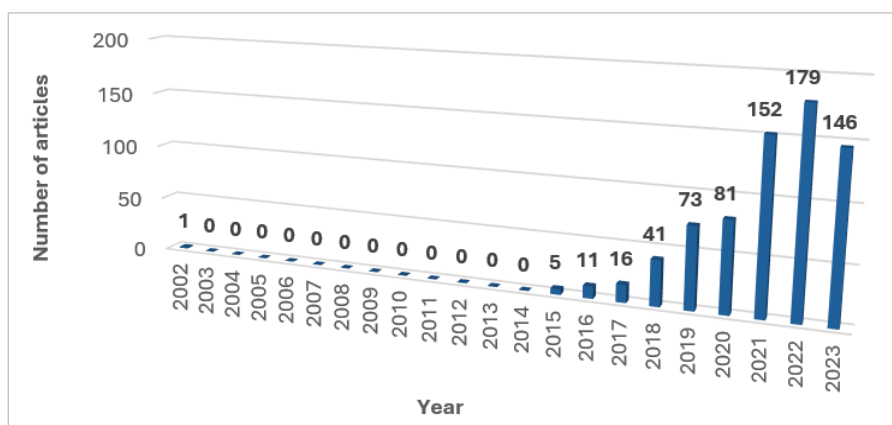


Figure 2. Evolution of the number of publications related to the performance of digital platforms during the period 2002-2023.

(Source: Created by the authors)

3.1.2. Evolution of the number of citations related to the performance of digital platforms

A similar upward trajectory for the period 2015–2023 is evident in the evolution of citation counts, as illustrated in Figure 3. The substantial increase in citations received by publications on the performance of digital platforms (particularly over the past six years) demonstrates the growing scholarly interest in and influence of this research domain. Notably, 2019 recorded the highest number of citations to date (2,833 citations). In the same year, the study by [38] received the most citations (623) and proposed a conceptualization of digitalization through three key dimensions: openness, affordances, and generativity.

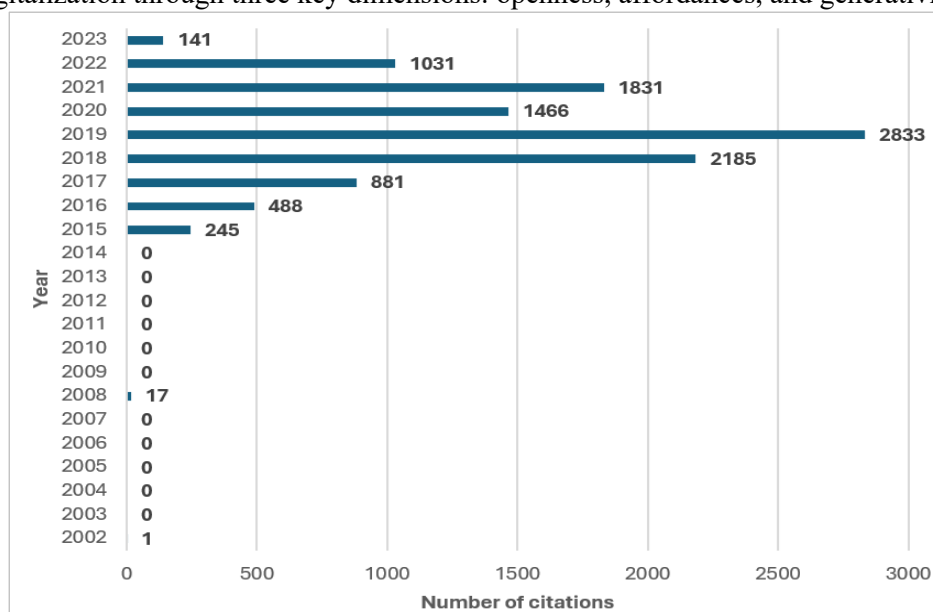


Figure 3. Evolution of the number of citations related to the performance of digital platforms during the period 2002-2023

(Source: Created by the authors)

This research has contributed significantly to understanding the digital transformation of the economy by integrating multiple and cross disciplinary levels of analysis, drawing on concepts from various fields, and explicitly acknowledging the central role of digital technologies in reshaping organizational structures and social relations. Furthermore, several other influential works also received a high number of citations, particularly in 2018, including [28] with 554 citations, [53] with 283 citations, [54] with 235 citations, and [55] with 226 citations.

3.1.3. The contribution of institutions to the publication of articles related to the performance of digital platforms

Table 2 presents the top 10 most active educational institutions contributing to research on digital platform performance. To provide a comprehensive understanding of these institutions and their relevance within the field, the table includes key information such as the number of published articles, country of origin, total citation count, and average citations per article. A noteworthy observation concerns the Queensland University of Technology, which ranks first in terms of publication volume (16 articles). Despite this, its total number of citations (288) and average citation rate (18.00 citations per article) are relatively modest compared with the London School of Economics and Political Science, ranked fifth. Although the latter has published fewer articles (11), it records the highest total citations (1,003) and the highest citation rate (91.18 citations per article) among the top ten institutions. Another interesting aspect emerges from the institutions ranked second and third, both of which have published 14 articles. However, their citation impact differs substantially: the University of Amsterdam has accumulated 614 citations, whereas Aalto University has received 361 citations.

Table 2.

Contribution of Educational Institutions to the Publication of Articles on Digital Platform Performance and Their Geographical Distribution

No.	Affiliation/ Institution	Country	Number of Articles	Total Number of Citations	Average Number of Citations
1	Queensland University of Technology	Australia	16	288	18.00
2	University of Amsterdam	Netherland	14	614	43.86
3	Aalto University	Finland	14	361	25.79
4	University of Oxford	England	12	171	14.25
5	London School of Economics and Political Sciences	England	11	1003	91.18
6	Politecnico Milano	Italy	10	224	22.40
7	The University of Sydney	Australia	10	143	14.30
8	University College Dublin	Ireland	9	230	25.56
9	University of Melbourne	Australia	9	158	17.56
10	Copenhagen Business School	Denmark	8	249	31.13

(Source: Created by the authors)

The same pattern is observed for the institutions ranked in positions 6 and 7 (each with 10 articles) and those in positions 8 and 9 (each with 9 articles). Although Australia

(three institutions) and England (two institutions) dominate the ranking of countries whose institutions contribute to research on the performance of digital platforms, several other countries (including the Netherlands, Italy, Finland, Ireland, and Denmark), also demonstrate notable scholarly activity in this field.

3.1.4. The most active journals for publications related to the performance of digital platforms

Table 3 presents the ten most productive journals in this research area, ranked by the number of published articles. To provide a comprehensive understanding of these sources and their relevance within the field, the table includes information on total citation counts, average citations per article, and each journal's impact factor, including its 2022 citation index.

It is important to emphasize that the ranking is based on scientific output (number of articles) rather than citation volume. Notable patterns emerge from this comparison. For example, social media + Society ranks first with 25 articles and an impact factor of 5.2, yet its total citation count (264) is relatively modest when compared with the Journal of Business Research, which ranks third. Although the latter has published fewer articles (18), it has a substantially higher impact factor (11.3) and a greater number of citations (684). This pattern is not unusual: several journals with lower impact factors nonetheless achieve higher citation counts and publish more extensively in this field for instance, Information, Communication & Society and New Media & Society. Regarding publishers, the largest contributions come from SAGE Publications Ltd. (three journals) and Elsevier Science Inc. (two journals).

3.1.5. Countries that contributed to publications related to the performance of digital platforms

Table 4 presents the ten most productive countries in this research area, ranked by the number of published articles. To provide a comprehensive understanding of each country's role and relevance, the table also reports total citation counts, average citations per publication, and each country's percentage contribution to overall scientific output.

The most influential countries contributing to the global development and dissemination of research on digital platform performance are England (134 articles, cited 4,052 times), the United States (97 articles, cited 3,554 times), and Spain (82 articles, cited 785 times). These three countries also exhibit the highest shares of scientific production in this field: England accounts for 18.98%, the United States for 13.74%, and Spain for 11.61% of all publications included in the dataset.

3.1.6. The most cited article titles

Table 5 presents the top ten authors in this research area, along with their most cited publications, ranked by total citation count. Citation frequency is widely regarded as one of the most reliable indicators of a publication's scholarly quality and influence. According to the data in Table 5, the most influential contribution is the article by [38], which has received 623 citations. This is followed by de [28] with 554 citations and [53] with 283 citations.

Table 3.
Contribution of Journals and Publishers to the
Publication of Articles on the Performance of
Digital Platforms

NO.	JOURNALS	PUBLISHER	NUMBER OF ARTICLES	NUMBER OF TOTAL CITATIONS	AVERAGE NUMBER OF CITATIONS	IMPACT FACTOR OF THE JOURNAL (2022)	JOURNAL CITATION INDICATOR (2022)
1	Social Media + Society	SAGE Publications Ltd.	25	264	10.56	5.2	2.04
2	Electronic Markets	Springer Heidelberg	20	317	15.85	8.5	1.51
3	Journal of Business Research	Elsevier Science Inc.	18	684	38.00	11.3	2.3
4	Technological Forecasting and Social Change	Elsevier Science Inc.	18	324	18.00	12	2.46
5	New media & Society	SAGE Publications Ltd.	17	232	13.65	5	2.1
6	Internet Policy Review	Alexander von Humboldt Inst Internet & Soc.	15	181	12.07	3.6	2.48
7	Profesional de la Información	Ediciones Profesionales Informacion SL-EPI	13	191	14.69	4.2	1.14
8	Convergence -The International Journal of Research into New Media Technologies	SAGE Publications Inc.	12	83	6.92	2.8	1.17
9	Media and communication	Cogitatio Press	12	79	6.58	3.1	1.26
10	Information, Communication & Society	Routledge Journals, Taylor & Francis Ltd.	11	350	31.82	4.2	2

Table 4.
Contribution of Countries to the
Publication of Articles on the
Performance of Digital Platforms

NO.	COUNTRIES	NUMBER OF ARTICLES	PERCENTAGE (%)	TOTAL NUMBER OF CITATIONS	AVERAGE OF NUMBER OF CITATIONS
1	England	134	18.98	4052	30.24
2	USA	97	13.74	3554	36.64
3	Spain	82	11.61	785	9.57
4	Germany	61	8.64	958	15.70
5	Italy	60	8.50	1124	18.73
6	Australia	59	8.36	807	13.68
7	Netherlands	42	5.95	1590	37.86
8	Finland	42	5.95	880	20.95
9	China	35	4.96	425	12.14
10	France	35	4.96	352	10.06

(Source: Created by the authors)

Table 5.

Most cited article titles

NO.	AUTHORS	ARTICLE TITLE	JOURNAL	YEAR	NUMBER OF CITATIONS	AVERAGE NUMBER OF CITATIONS
1	Nambisan, S.; Wright, M.; Feldman, M.	The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes	Research Policy	2019	623	184.24
2	De Reuver, M.; Sorensen, C.; Basole, R.C.	The digital platform: a research agenda	Journal of Information Technology	2018	554	27.32
3	van Doorn, N	Platform labor: on the gendered and racialized exploitation of low-income service work in the 'on-demand' economy	Information Communication & Society	2017	283	35.00
4	Cenamor, J.; Parida, V.; Wincent, J.	How entrepreneurial SMEs compete through digital platforms: The roles of digital platform capability, network capability and ambidexterity	Journal of Business Research	2019	235	57.75
5	Tauscher, K.; Laudien, S.M.	Understanding platform business models: A mixed methods study of marketplaces	European Management Journal	2018	226	65.00
6	Nambisan, S.; Siegel, D.; Kenney, M.	On open innovation, platforms, and entrepreneurship	Strategic Entrepreneurship Journal	2018	189	80.24
7	Lambrecht, A.; Tucker, C.	Algorithmic Bias? An Empirical Study of Apparent Gender-Based Discrimination in the Display of STEM Career Ads	Management Science	2019	184	59.78
8	Hein, A.; Schreieck, M.; Riasanow, T.; Setzke, D.S.; Wiese, M.; Bohm, M.; Kremer, H.	Digital platform ecosystems	Electronic Markets	2020	171	20.24
9	Wahl-Jorgensen, K.	An Emotional Turn in Journalism Studies?	Digital Journalism	2020	141	19.56
10	Xie, K.; Wu, Y.; Xiao, J.H.; Hu, Q.	Value co-creation between firms and customers: The role of big data-based cooperative assets	Information & Management	2016	138	12.32

(Source: Created by the authors)

The analysis reveals that scholars have pursued several major research directions, including: (1) conceptualizing and transforming digitalization through openness, affordances, and generativity [38], as well as examining the regulatory, digitalization, and globalization factors that have shaped the development of digital platforms and entrepreneurial innovation environments [56]; (2) advancing theoretical perspectives on value co creation and alternative competitive strategies for firms operating in the era of big data [57]; (3) clarifying the concept and socio technical nature of digital platforms, including their degree of digitalization within information systems research [28], and analyzing the role of network capacity in shaping the financial performance of entrepreneurial SMEs [54]; (4) developing a conceptually and empirically grounded taxonomy of business models based on digital platforms [55]; (5) examining the interactions between digital platforms and social networks [58], the relationship between value and visibility [53], and the performance of selection algorithms on specific digital platforms [59]; (6) investigating the diversity of platform ecosystems and their varying degrees of influence depending on platform ownership, value creation mechanisms, and complementor autonomy [60].

3.2. Scientific mapping analysis

According to bibliometric scholars [61,62], scientific mapping techniques typically incorporate several key indicators, including co-citation analysis, co-authorship analysis, bibliographic coupling, and keyword co-occurrence.

3.2.1. Analysis of co-citations

Understanding the evolution of a research topic within a specific field is made possible through a comprehensive analysis of scientific mapping. Co-citation analysis, as a core component of this approach, examines the references cited within the selected body of scientific publications and evaluates the relationships formed among these cited works.

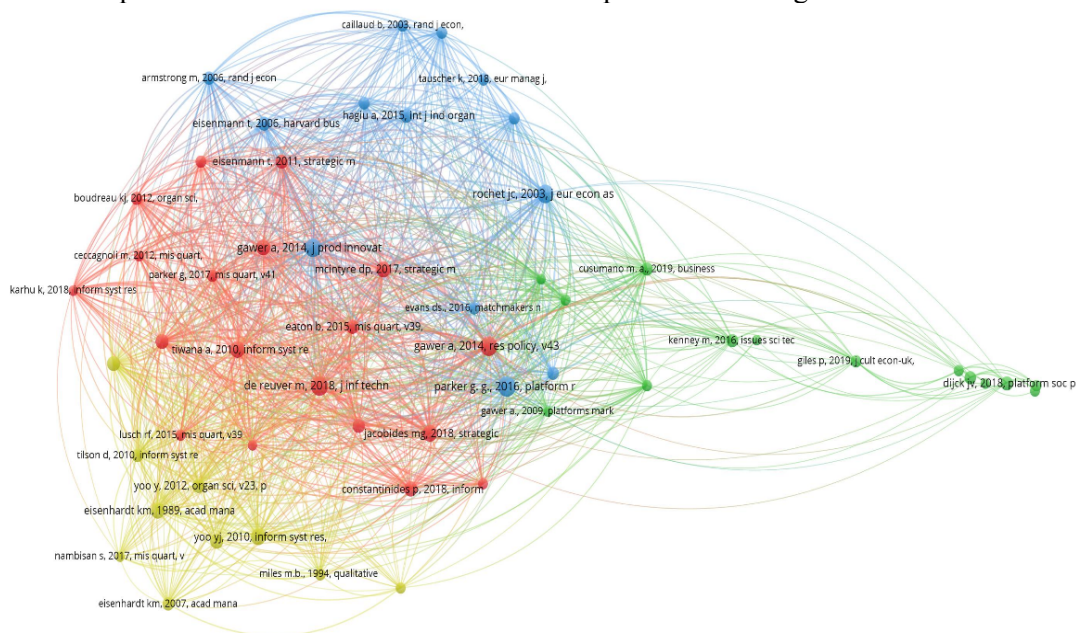


Figure 4. Co citation Network Diagram of Cited References
(Source: Created by the authors)

Through two complementary bibliometric techniques (bibliographic coupling and co-citation analysis) the results enable the identification of the most active and influential articles, journals, and authors in the field, thereby revealing rankings, collaboration networks, and clusters of scholarly contributions [63]. The network diagram presented in Figure 4 visualizes the co-citation network of researchers working on digital platform performance. The dataset comprises 706 articles on digital platforms, from which 38,433 cited references were extracted. A minimum threshold of 20 citations per reference was applied, resulting in 56 cited references meeting the inclusion criterion. Figure 4 highlights four major clusters of cited references. The largest cluster (red) contains 19 cited works, followed by the second cluster (blue) with 14 references, the third cluster (green) with 13 references, and the fourth cluster (yellow) with 10 references.

Table 6 presents the top ten cited references among the 706 articles included in the selected sample. This table consolidates the most frequently cited works, highlighting those with the highest total link strength, citation counts, and number of co-citation links within the field of digital platforms. Notably, nearly all the top ten cited references belong to the red cluster, except for [20].

Table 6.

Top 10 cited references from the selected sample

No.	Author (References)	Number of Citations	Number of Strong Links
1.	[64]	64	740
2.	[20]	58	668
3.	[65]	51	656
4.	[28]	65	631
5.	[17]	70	626
6.	[52]	47	596
7.	[32]	58	584
8.	[51]	42	577
9.	[45]	40	549
10.	[39]	49	532

(Source: created by the authors)

3.2.2. Analysis of co-authors

Co-authorship analysis is employed to examine and evaluate patterns of scientific collaboration within a given research field. This method assesses the extent of cooperation among researchers and research institutions by analyzing the number of jointly authored publications. In this study, the dataset of 706 articles includes 26,224 authors. A minimum co-citation threshold of 25 citations per author was applied, resulting in a selection of 86 authors who met the criterion. To facilitate interpretation, the analysis highlights the most collaborative authors within the field of digital platform performance. Table 7 presents the top ten authors, ranked according to the total strength of their co-authorship links. The analysis of the most collaborative authors reveals that the first two scholars listed in Table 7 [66,67] do not have any co-authors. The data also indicates that a group of seven publications provides particularly valuable contributions to this research domain. Among these, the three most prominent in terms of total link strength are the studies by [68-70].

Table 7.

Top Ten Most Collaborative Authors in the Field of Digital Platform Performance

No.	Author (References)	Number of Citations	Number of Strong Links
1.	[66]	217	4698
2.	[67]	110	3010
3.	[68]	84	2529
4.	[69]	125	2289
5.	[70]	88	2140
6.	[71]	89	2102
7.	[72]	97	2055
8.	[73]	83	2025
9.	[74]	98	2023
10.	[75]	64	1895

(Source: Created by the authors)

The network diagram shown in Figure 5 visualizes the co-authorship network of cited references in the field of digital platform performance. Based on the selection criterion (authors with at least 25 co-citations), the analysis identifies four major clusters of references. The largest cluster (blue) comprises 41 articles, followed by the second cluster (green) with 27 cited articles, the third cluster (yellow) with 24 articles, and the fourth cluster (red) with 20 articles. Consequently, the most collaborative authors within the selected sample are concentrated in the first cluster.

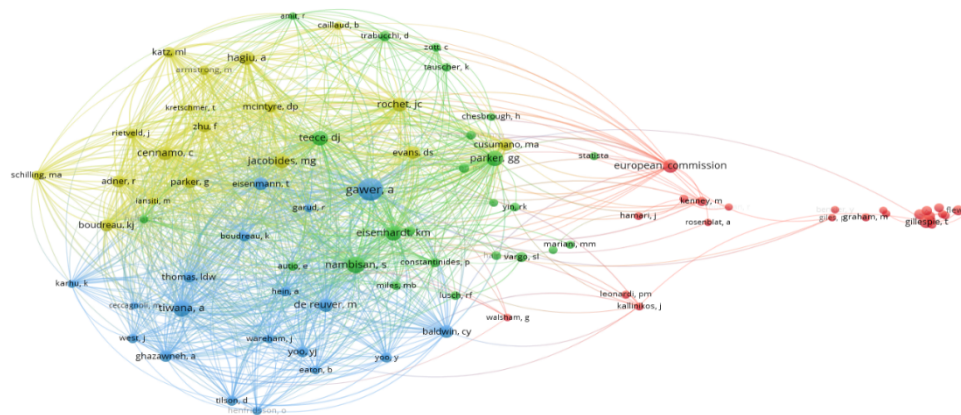


Figure 5. Co-authorship Network Diagram of Cited References

(Source: Created by the authors)

3.2.4. Bibliographic coupling

According to [61], bibliographic coupling occurs when two documents cite the same third source, indicating that they address a related topic. This technique enables the identification of connections among publications, thereby providing insights into their significance within the selected dataset and their relative positioning in the broader scholarly network. In this study, a minimum threshold of five documents per journal and at least five citations per journal was applied, resulting in a final set of 27 journals that met the inclusion criteria. Table 8 presents the top ten journals ranked by total link strength.

The analysis of Table 8 indicates that Electronic Markets (317 citations across 20 published articles) is the most influential journal in this field, reflecting its strong degree of interconnectedness within the bibliographic coupling network. This pattern is visually represented in the bibliographic coupling network diagram of cited journals (Figure 5). Within the representative sample shown in Table 8, the journal Internet Policy Review ranks lowest in terms of bibliographic coupling link strength, with 181 citations from 15 published articles.

Table 8.

Top Ten Journals Ranked by the Strength of Bibliographic Coupling Links

No.	Journals	Number of Articles	Number of Citations	Number of Strong Links
1.	Electronic markets	20	317	2642
2.	Journal of Business Research	18	684	1570
3.	Technological Forecasting and Social Change	18	324	1389
4.	Technovation	7	109	1267
5.	Creativity and Innovation Management	6	80	1084
6.	Journal of Information Technology	6	708	970
7.	Technology Innovation Management Review	10	99	674
8.	Social Media+Society	25	264	599
9.	New Media & Society	17	232	509
10.	Internet Policy Review	15	181	449

(Source: Created by the authors)

According to the diagram, the journal *Social Media + Society* (25 published articles), located in the red cluster in Figure 6, emerges as the most prolific source in terms of publication volume. However, when considering citation impact, the most highly cited journals are the *Journal of Information Technology* (708 citations) and the *Journal of Business Research* (684 citations). The journals exhibiting the strongest bibliographic coupling links are grouped within the green cluster.

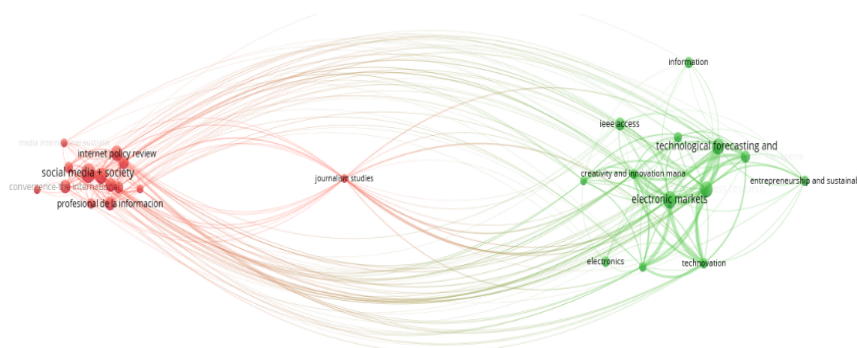


Figure 6. Diagram of the Bibliographic Coupling Network of Cited Journals

(Source: Created by the authors)

Extending the bibliographic coupling analysis to authors and applying a minimum threshold of 4 publications per author yields a set of 12 authors who meet the criterion. Table 9 presents the highest-ranked authors based on total bibliographic link strength. As noted by [61], higher bibliographic link strength indicates greater centrality within the citation network and reflects the extent to which these authors are embedded in ongoing scholarly conversations.

Table 9.

Top 10 authors in terms of bibliographic coupling link strength

No.	Authors (References)	Number of Articles	Number of Citations	Number of Strong Links
1.	[76]	8	163	1640
2.	[77]	7	131	1534
3.	[78]	5	294	1119
4.	[79]	4	249	958
5.	[60]	4	291	952
6.	[80]	5	9	836
7.	[81]	5	9	836
8.	[82]	4	4	744
9.	[83]	5	188	677
10.	[84]	4	48	638

(Source: created by the authors)

The analysis of the top ten authors generating the strongest bibliographic coupling links (Table 9) highlights several notable contributions. The most prominent are the works of [76], which exhibit 1,640 links derived from 163 citations across eight publications. These are followed by another publication by the same authors [77] with 1,534 links, resulting from 131 citations and seven publications. At the lower end of the ranking, yet still within the top ten, is a broader collaborative work by the same authors, [84], which records 638 strong links based on 48 citations from four published articles.



Figure 7. Diagram of the bibliographic coupling network of cited authors

(Source: created by the authors)

Figure 7 provides the graphical representation of the bibliographic coupling analysis from the perspective of cited authors. In terms of link strength, the data indicate that [76-77,84] are the most influential authors in the selected sample, represented in red, reflecting their central position within the network. At the opposite end of the spectrum are [80] and [81,82], represented in blue, who occupy the second position in terms of publication volume and citation counts.

According to Table 10, the most highly cited work is [85], with 107 citations, followed by [83] with 116 citations and [60] with 169 citations, the ranking being based on the strength of bibliographic coupling links. At the lower end of the ranking is [86], with 72 citations. The bibliographic coupling network of the cited articles is illustrated in Figure 7.

Table 10.

Top Ten Articles Ranked by the Strength of Bibliographic Coupling Links

No.	Articles (References)	Number of Citations	Number of Strong Links
1.	[85]	107	383
2.	[83]	116	325
3.	[60]	169	313
4.	[87]	60	267
5.	[88]	76	260
6.	[89]	81	250
7.	[28]	543	239
8.	[21]	62	233
9.	[48]	99	219
10.	[86]	72	218

(Source: Created by the authors)

The analysis of Figure 8 highlights the two leading authors in terms of strong link strength and citation counts: [28], with 543 citations, and [38], with 599 citations.

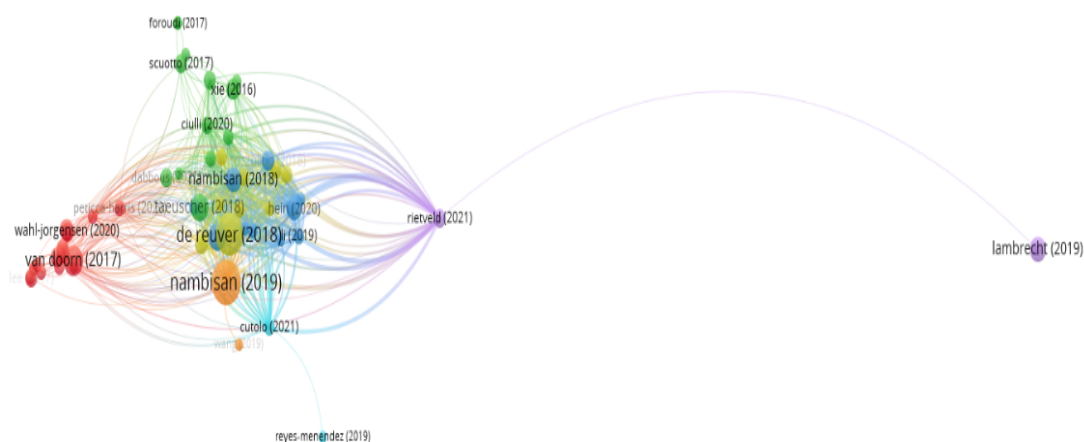


Figure 8. Diagram of the Bibliographic Coupling Network of the Cited Articles

(Source: Created by the authors)

3.2.5. Keyword occurrence analysis

For the keyword occurrence analysis, a minimum frequency threshold was applied, resulting in the identification of 25 keywords out of a total of 3,514. The ten most frequently occurring keywords (Table 11) are: *digitized platforms* (210 occurrences), *innovation* (115 occurrences), *technology* (66 occurrences), *social networks* (98 occurrences), *competition* (46 occurrences), *platforms* (51 occurrences), *internet* (50 occurrences), *strategy* (30 occurrences), *strategies* (31 occurrences), and *information* (42 occurrences).

Table 11.

Top Ten Keywords Ranked by the Strength of Bibliographic Coupling Links

No.	Keywords	Number of Appearances	Number of Strong Links
1.	Digital platforms	210	303
2.	Innovation	115	256
3.	Technology	66	144
4.	Social media	98	137
5.	Competition	46	117
6.	Platforms	51	91
7.	Internet	50	89
8.	Strategy	30	82
9.	Strategies	31	79
10.	Information	42	78

(Source: Created by the authors)

The graphical representation of keyword relationships based on the strength of bibliographic coupling links is shown in Figure 9. The visualization indicates that the most frequently used keywords are concentrated in the red-marked area corresponding to Cluster 1. Among the most prominent keywords within this cluster are *competition*, *digital platform*, and *governance*.

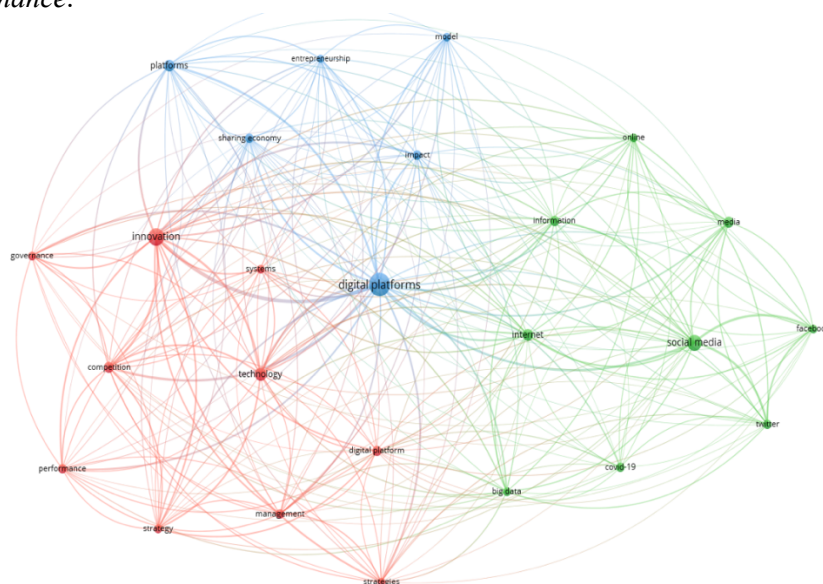


Figure 9. Keyword occurrence network diagram.

(Source: Created by the authors)

The bibliometric analysis reveals a substantial expansion of research on digital platforms, driven by the need to examine developments across diverse domains—ranging from emerging global trends in digital platform evolution to studies assessing ecosystem level impacts. This growth is evident in the specialized literature, which includes scientific articles, journals, books, and other scholarly documents addressing digital platform-related themes. The topic has become globally significant, particularly as digitalization intensifies

across all sectors of activity, with scholarly interest increasing steadily from 2015 to the present.

Despite the rise in publications, the findings of this study indicate that conceptual ambiguity persists regarding the definition and theoretical framing of digital platforms within the information systems field. The analysis also shows that bibliometric approaches and methods have become predominant tools for examining digital platforms in recent years.

4. Conclusions. Limitations and future research trends

The primary aim of this research was to conduct a bibliometric analysis to identify the major research directions and the scholarly impact associated with digital platforms. We consider that both objectives of the study have been successfully achieved: (1) the analysis of digital platform performance using specific bibliometric indicators, and (2) the scientific mapping of the digital platform research landscape. Overall, the study offers a holistic view of the field's intellectual structure, providing a comprehensive assessment of the specialized literature published between 1975 and August 2023.

This scientific approach contributes to the digital platform literature by offering a broader analytical framework for identifying future research directions and emerging trends, particularly compared with studies that rely solely on traditional narrative literature reviews. The paper also examines research perspectives identified by domain specialists and highlights the degree of scholarly collaboration through indicators derived from scientific mapping techniques.

As with any study, certain limitations must be acknowledged. These include the exclusive use of the Web of Science database, the restriction to peer-reviewed journal articles (thereby excluding conference papers, books, and other document types), and the focus on a narrower set of research areas (information systems, interdisciplinary computer science, business, management, and communication).

Nevertheless, given the advantages of bibliometric analysis and its alignment with the study's objectives, this research provides a comprehensive scientific map of the digital platform research domain. It also identifies several promising avenues for future inquiry, such as interdisciplinary research (e.g., intersections among management, organization studies, information systems, and marketing), systematic and interdisciplinary literature reviews, and meta-analyses examining competition on digital platforms, the effects of competitive dynamics, and the influence of digital platforms on market transformation processes.

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