Current Status and Future Prospects of Business Technology Research: A Multidimensional Bibliometric Review

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Abstract:

In the rapidly evolving field of business technology, understanding its current status and prospects is crucial for fostering innovation and achieving competitive advantage. This study aims to dissect business technology research's intellectual and influential dynamics, offering quantitative insights and a comprehensive review of its literature. Employing a multidimensional bibliometric approach, this research scrutinizes 177 articles published in the Scopus database from 1985 to 2024. Utilizing advanced analytical tools such as RStudio and VOSviewer, the study meticulously analyzes the data, applying sophisticated bibliometric tests to decode the complex dynamics of business technology research. The results highlight the leading journals, authors, and collaborative networks shaping the domain. Notably, the Journal of Information Technology Research emerges as a central hub of scholarly activity. The research delineates several major thematic streams within business technology: Digital Transformation and Industrial Management, Technology Innovation in SMEs, Information Technology and E-Commerce, E-Business Strategies and Profitability, Information Systems and Business Processes, and Supply Chain Management and Social Responsibility. The study also uncovers significant research gaps in the current literature and proposes future research directions, setting a foundation for further empirical exploration. This research represents a pioneering effort in applying a bibliometric approach to business technology. The findings and proposed future research avenues provide both researchers and practitioners with a robust quantitative foundation for understanding the scientific development of business technology, paving the way for further scholarly inquiry and practical application in this vital field.

Keywords: *Bibliometric; Business Technology; Trends Topic.*

الوضع الحالي والآفاق المستقبلية لبحوث تكنولوجيا الأعمال: مراجعة ببليومترية متعددة الأبعاد

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ملخص:

في مجال تكنولوجيا الأعمال سريع التطور، يُعدّ فهم الوضع الحالي والآفاق المستقبلية أمرًا بالغ الأهمية لتعزيز الابتكار وتحقيق الميزة التنافسية. تهدف هذه الدراسة إلى تشريح الديناميكيات الفكرية والمؤثرة لبحوث تكنولوجيا الأعمال، وتقديم رؤى كمية ومراجعة شاملة لأدبياتها. باستخدام نهج ببليومتري متعدد الأبعاد، يفحص هذا البحث (177) مقالاً نُشرت في قاعدة بيانات سكوبس من عام 1985 إلى عام 2024. باستخدام أدوات تحليلية مُتقدّمة مثل RStudio وVOSviewer، إذ تُحلّل الدراسة البيانات بدقة، وتُطبّق اختبارات ببليومترية مُتطوّرة لفك شفرة الديناميكيات المعقدة لبحوث تكنولوجيا الأعمال. تُسلّط النتائج الضوء على المجلات والمؤلفين والشبكات التعاونية الرائدة التي تُشكّل المجال. والجدير بالذكر أن مجلة أبحاث تكنولوجيا المعلومات تبرز كمركز مركزي للنشاط العلمي. يتناول البحث عدة مجالات موضوعية رئيسية في تكنولوجيا الأعمال: التحول الرقمي والإدارة الصناعية، والابتكار التكنولوجي في الشركات الصغيرة والمتوسطة، وتكنولوجيا المعلومات والتجارة الإلكترونية، واستراتيجيات الأعمال الإلكترونية والربحية، وأنظمة المعلومات وعمليات الأعمال، وإدارة سلسلة التوريد والمسؤولية الاجتماعية. كما يكشف البحث عن فجوات بحثية كبيرة في الأدبيات الحالية ويقترح اتجاهات بحثية مستقبلية، مما يضع الأساس لمزيد من الاستكشاف التجريبي. يمثل هذا البحث جهدًا رائدًا في تطبيق نهج القياس الببليومتري على تكنولوجيا الأعمال. توفر النتائج وسبل البحث المستقبلية المقترحة لكل من الباحثين والممارسين أساسًا كميًا قويًا لفهم التطور العلمي لتكنولوجيا الأعمال، مما يمهد الطريق لمزيد من الاستقصاء العلمي والتطبيق العملي في هذا المجال الحيوي.

الكلمات المفتاحية: *القياسات الببليومترية؛ تكنولوجيا الأعمال؛ التوجهات البحثية.*

1. Introduction

Today's economic environment experiences unprecedented efficiency and creativity thanks to the adopting of business technology (Dinsha, 2023). This utilizes advanced tools such as artificial intelligence and data analytics, allowing companies to improve their core operations through streamlined processes, decreasing costs and providing valuable insights into decision-making strategies (Siskos et al., 2011). Due to this technological integration, companies can easily incorporate new consumer demands and changing market dynamics in their activities, thus promoting flexibility and fostering innovation. Additionally, interaction with customers is improved by business technology, hence making it possible to create distinct personalized experiences aimed at establishing lasting customer loyalty (Sharma et al., 2023). It is through reading literature about business technology that one learns how they transform various industries into new value propositions that stimulate economic development. This research uncovers the current status of technological advancements and offers a glimpse into future prospects, guiding enterprises on how to harness technology for sustained success.

The study of literature on business technology is essential in contemporary innovation drives and comprehensions alike. The way innovations transform earlier modes of doing business, such that they promote growth on a sustainable basis amidst stiff competition from other parts of the world, can be demonstrated by such a study. Moreover, conducting a detailed bibliometric work would allow one to identify significant changes and emerging trends, which will be helpful to scholars, those practicing in the field, and policymakers to make necessary and informed decisions. The all-encompassing focus on business technology also serves to optimize research cultures together with innovative strategies, which necessitate effective practices and methodologies among universities, research institutes, and companies. This means that these changes have become solid forces for advancing societies, but they still affect investment choices and the formulation of policies.

The fragmented nature of interdisciplinary research and the need for robust impact indicators are critical gaps successfully addressed by this study, thus contributing to the literature on business technology. It explores overlooked areas, such as the differing contributions of various countries or regions, while showing that technological, institutional, and cultural contexts uniquely contribute to research on business technology. Through these insights, it comprehensively understands regional discrepancies and their implications for global business practices. Besides, this paper also focuses on how technological adoption and innovations could promote SME growth, all at once identifying their challenges and breakthrough points. It presents an integration between commercialization and social responsibility within supply chain management, thus showing how sustainable business practices can be achieved through technology application. Therefore, these results will be crucial in providing information for corporate investment decision-making and guiding future research funding mechanisms.

1.1 Research Questions

1. Who are the leading journals and influential authors in business technology?
2. What constitutes the research framework within business technology?
3. What collaboration networks are present in business technology research?
4. How has research in business technology evolved, and what are the current focal points?
5. What are the potential future research directions in business technology?

2. Research Methodology

The study began by identifying a database, then identifying meticulously through established search methods to collect data accurately in a more defined way that will be used in our analysis, as shown in Figure 1. Bibliometric analysis was conducted utilizing an advanced Bibliometrix package/BiblioShiny interface in Rstudio® (Ajouz & Abuamriah, 2023; Altarturi & Ajouz, 2021; Aria & Cuccurullo, 2017). We also used the VOSviewer software to explore keyword relationships interactively for richer insights. Based on the Scopus database, the initial steps in data analytics are illustrated in diagrammatic form in Figure 1.

The dataset consists of scholarly articles on business technology published since 1985 up to July 1st, 2024. These were extracted directly from the Scopus database, a global comprehensive platform for academic literature (Aguillo, 2012). Themes were identified and analyzed across time using the Bibliometrix package, where keywords analysis and analysis of other measurable parameters linked with publications and journals were employed to get significant themes of interest over time. Parameters considered while doing this analysis included the title, abstract, authorship, keywords, and number of citations for each document alone and in totality with their respective affiliations, among others. This detailed study gives insight into ongoing research about business technology and details its interdisciplinary and collaborative nature in current times.
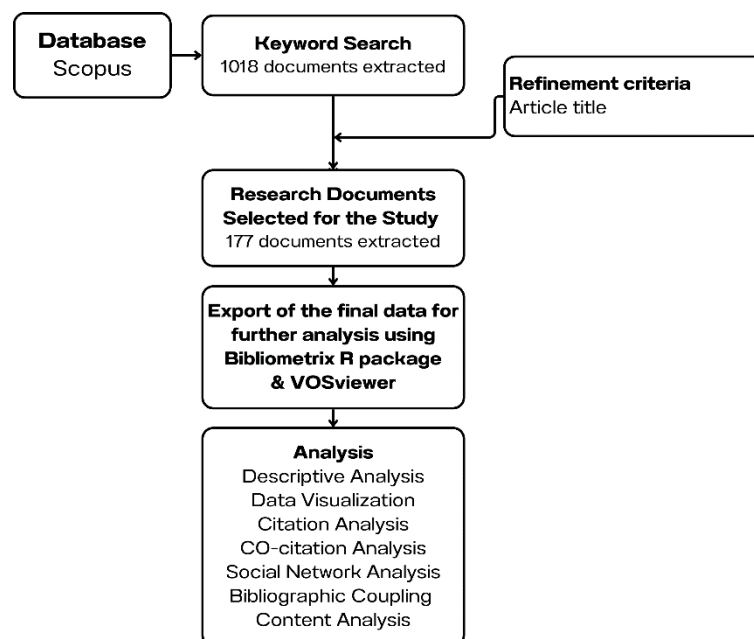

Figure 1: Flowchart for Selection of Documents for Bibliometric Analysis

3. Results and Discussion

The data collection used in this bibliometric research report comprises one 177 articles accessed through the Scopus database. This part of the article provides us with findings derived from a detailed examination using the R software package, Bibliometrics, regarding results obtained from the analysis. Some of its outputs are descriptive statistics, graphical representations, and scientific mapping. It is divided methodically into four subsections, which talk about different aspects of data, i.e., descriptive analysis, data presentation in figures or tables, the organization of ideas within disciplines, search for connected works and text interpretation, and authorship identification.

3.1 Descriptive Analysis

3.1.1 Data Set

Table 1 thoroughly examines essential criteria drawn from 177 citations that came about through a specific study on Scopus standards. Thus, the time series includes documents from 1985 to 2024 published by 143 sources. This set experiences an annual increment rate of 1.79%. It has an average age of 12.5 documents, which shows that this field has remained practically stable over many years while slowly expanding. The average number of citations per document equals 10.03, implying little more than a primary influence on academia. The contents include 4,647 references and present multiple critical words with 287 authors involved. This data shows a collaborative research environment with 1.82 co-authors in each document; international co-authorships make up 11.3%. It includes 64 articles, 12 books, 14 book chapters, 47 conference papers, 16 conference reviews, five editorials, four notes, 12 reviews, and three short surveys.

Table 1: Summary of Data Set

Description	Results
Main Information About Data	
Timespan	1985:2024
Sources (Journals, Books, etc)	143
Documents	177
Annual Growth Rate %	1.79
Document Average Age	12.5
Average citations per doc	10.03
References	4647
Document Contents	
Keywords Plus (ID)	633
Author's Keywords (DE)	349
Authors	
Authors	287
Authors of single-authored docs	45
Authors Collaboration	
Single-authored docs	69
Co-Authors per Doc	1.82
International co-authorships %	11.3

3.1.2 Sources

Productivity in the sciences has been see-sawing for the past five years, but lately, there has been a general trend toward increase. The figure below tabulates how many articles have been released concerning this subject area since 1985. Over the years, there have always been ups followed by downs, while there were high points in particular instances like 2011 and 2012. These changes were attributed to trends that evolved in the field of study, grant modification, and institutional backing established many years ago. Finally, we are seeing new ways to conduct research.
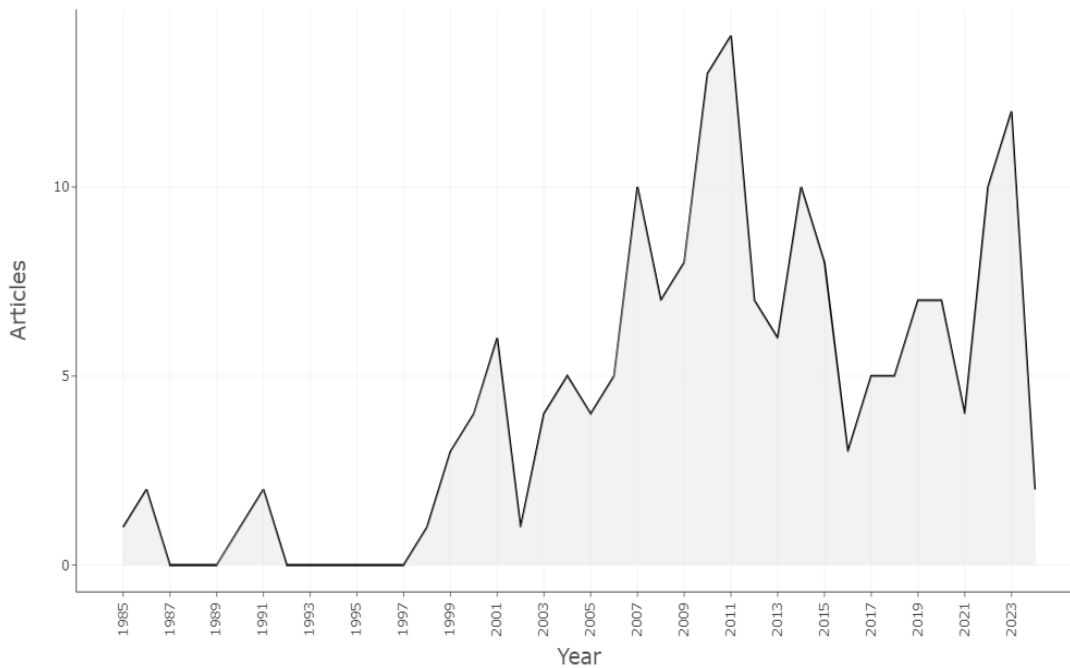
Figure 2: Scientific Productivity

As seen in Figure 3, the number of publications from top-ranking journals tell a lot about how good the Journal of Information Technology Research is in terms of content in that area, with six of them. At the same time, Communication in Computer and Information Science follows, with five before Cutter IT Journal takes the third slot with four publications. From the presence of other such journals producing two to three papers, each one gets an idea that this research ground is characterized by variety and complexity ranging from IT to conferences. Given all this, it is apparent that in this particular field, while specialized journals are leading specific lines of inquiry, many others form a significant part of what is written on this subject (field), including applications and other varied research interests.
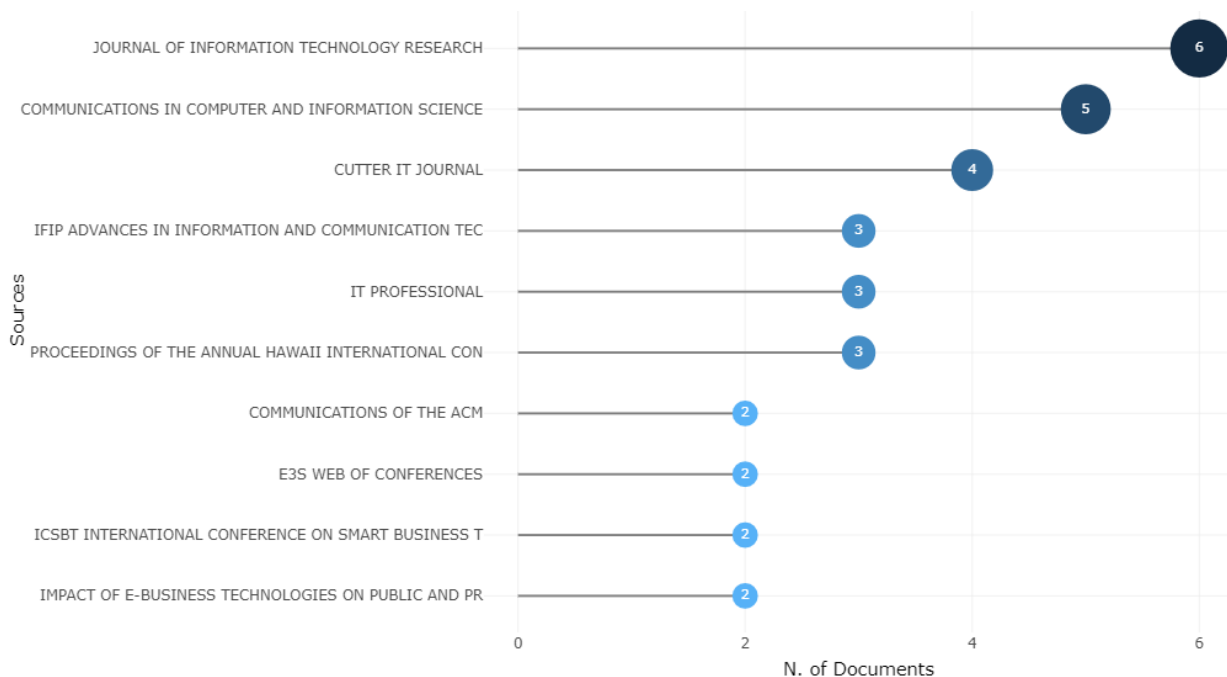

Figure 3: Top Impactful Resources

Based on Figure 4, we can appreciate how research is changing within this area. The Journal of Information Technology Research has increased its number of publications significantly over time

and has become one of the top sources of information about information technology studies. The research data shows that this field has increasingly become interdisciplinary, with contributions from "Communications in Computer and Information Science" and "Cutter IT Journal." This, therefore, represents an extension into various research areas with different applications and interests in the subject matter. The trends shown in Figure 4 establish an upward path for cumulative occurrences across different journals, supporting growth and interest in this subject.
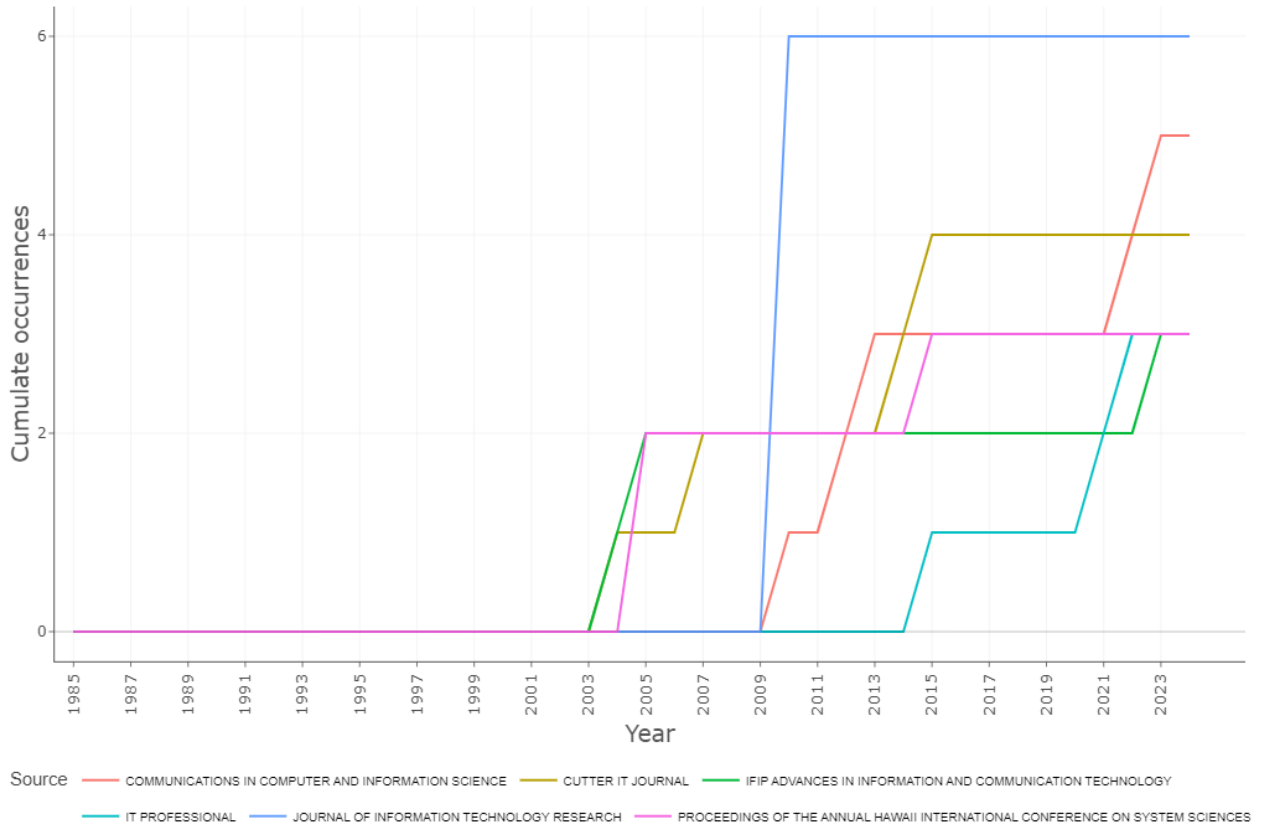

Figure 4: Source Dynamics

3.1.3 Authors

The list of the most productive authors in the field of Business Technology, as depicted in the attached figure, reveals a diverse group of contributors, led by Andriole SJ with 14 articles. Following him are Andriole S and Ifinedo P, each with 4 publications. Other notable contributors include Gagnon S and Stewart G, each with 3 articles, and several authors with 2 publications each, including Ajamieh A, Benitez J, Chen Y, Deeds DW, and Elliot S.
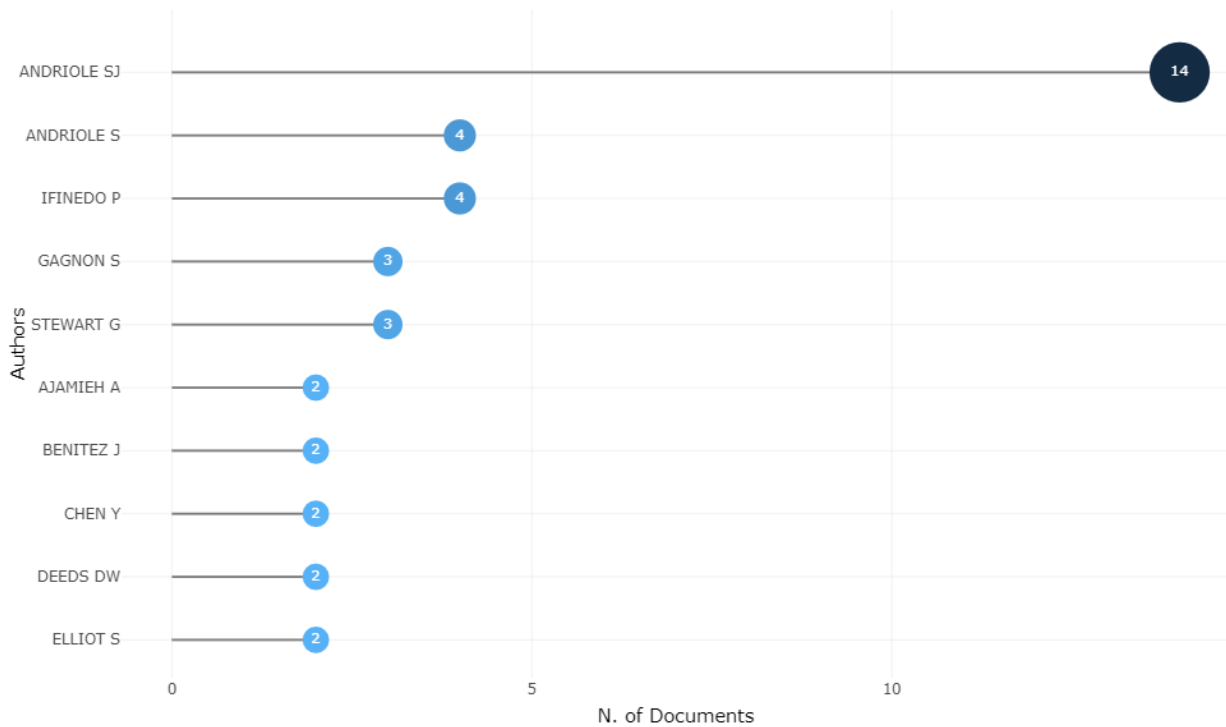
Figure 5: Most Relevant Authors

Figure 5 clarifies how much productivity counts when looking at an author's worth of business technology. A revealing example of influence is in high h-indexes: Andriole SJ has 6 points, whereas others have less than half this number. Their pair is formed by Ajamieh A. and Benitez J, followed by Chen Y, which comes after Ifinedo P., Johnson M, Liu L., Sanders NR, and Stewart G. In contrast, in the end, there is Valentini E, whose productivity score equals two. This index is thus derived from the assessment of an author's involvement in research work, which shows a more detailed understanding than just one figure on its own about quality and quantity.
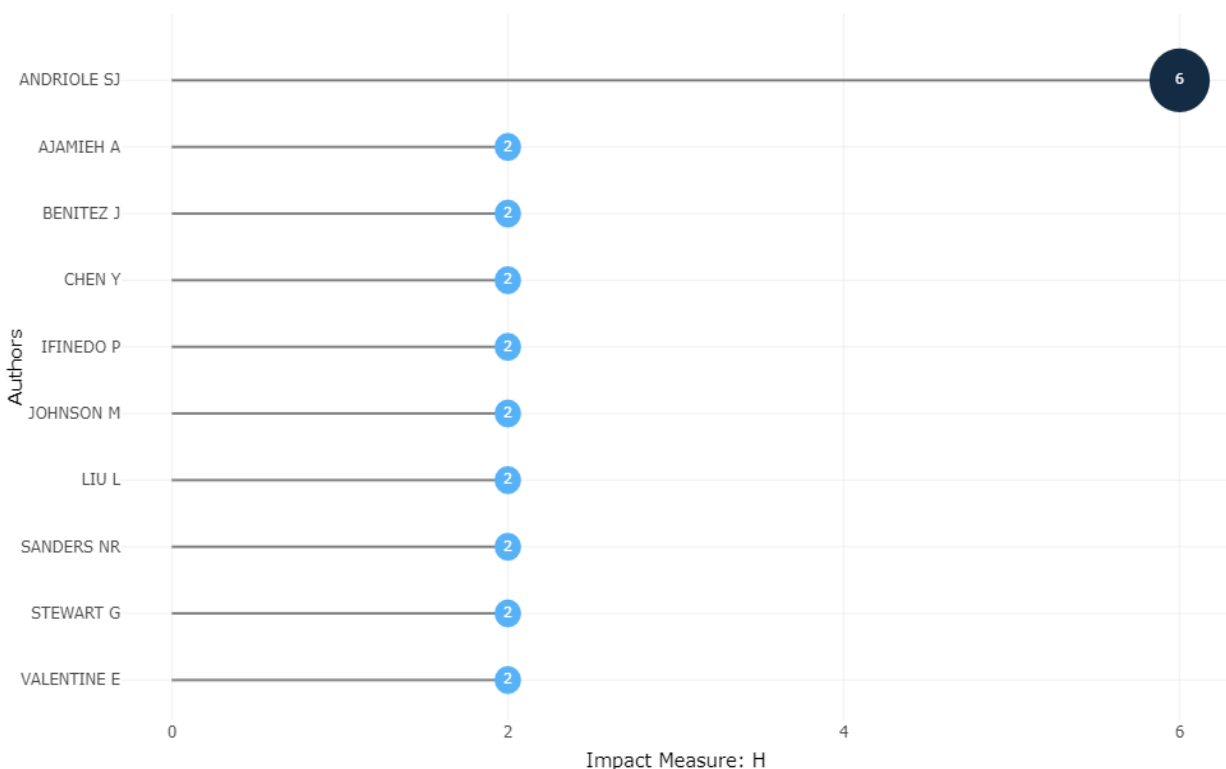

Figure 6: Author Impact

3.1.4 Country-Wise Contribution

A distinctive distribution of business technology contributions across several countries can be observed from the analysis of the information shown in Table 2. The USA tops scientific production at 90 publications while also emerging as a frequently cited country with 516 citations, pointing towards its tremendous influence in this sector. Australia is followed closely by 24 publications and 41 citations. Canada comes at number two regarding citations, having 451 from 19 research outputs that it had published, marking high-quality work produced by it; this is closely followed by The UK's publication count (16) along with 210 citations. However, it is surprising that China, with 19 documents like those of Canada, gets 83 citations, which could indicate a difference in the quality or the extent –size- of reach of their research output. Other contributors in this field include Indonesia and Germany, with 14 and 13 publications showing an increased interest in business technology studies.

Regarding citations, we find that some Western Countries, such as the USA, Canada, and the UK, lead despite having fewer publications than other nations (in some cases, even those with multiple times more publication outputs). This observation means that these countries may produce more substantive research or use methods widely accepted in academic circles concerning their historical background studies or broader spread of results achieved through these methods. Such countries as Nigeria, Korea, and Egypt come below halfway down in terms of citation rates, implying that they need to be fastened to be faster in their contribution to the field over time. However, they also represent a positive move towards quality research in business technology. This information reveals that business tech research maintains vast variability amongst nations driven by differences in contribution levels and outcome magnitude.

Table 2: Top 10 Countries Regarding Productivity and Citations

Country's Scientific Production		Most Cited Countries	
Country	Frequency	Country	Total citations
USA	90	USA	516
Australia	24	Canada	451
Canada	19	UK	210
China	19	France	83
UK	16	Australia	41
Indonesia	14	Netherlands	27
Germany	13	Germany	24
Italy	6	Nigeria	22
Nigeria	6	Korea	19
Portugal	6	Egypt	18

3.1.5 Documents

Figure 7 demonstrates the top 10 most cited documents acknowledged mainly in business technology. Each document has received substantial attention, with over thirty citations exceeding in all cases, indicating its high impact and the foundational part played in laying a basis for this field. The Journal of Operations Management published this particular top-ranked document authored by Sanders (2007). It has 369 references, which set standards for conducting research in such an area. For academic purposes, this is a central reference point among others interested in this type of undertaking.

Ifinedo (2011b; 2011a) also made significant contributions following Sanders's work by publishing articles in Internet Research and International Journal on Information Technology & Decision Making, obtaining 178 and 167 citations respectively. Other notable works include Decter et al. (2007), who published his paper in 2007, receiving one 142 references, while Johnson et al. (2007) had 99 citations. This indicates how comprehensive ranging research has been engineered within this realm. There are multiple writers like Bendoly & Kaefer (2004), Benitez et al. (2018), Carter et al. (2011) and Valentine & Stewart (2013) who each registered enormous numbers in terms of citations, implying that it has a diverse body of influential scholars in its ranks.

From 309 to 34, citation numbers show that these top articles are distributed relatively evenly, implying ongoing interest and acknowledgment regarding top-rated content. In effect, there would be a need for future studies as indicated by the findings from this pattern suggesting that these are core components of business technology that remain of interest across time horizons, signifying intense academic behavior has been attracted towards them on an ongoing basis while making a significant contribution towards building continuously growing dynamic research environment. A successful academia characterized by diversity encouraging growth plus innovation when it comes to research in business technology is depicted by this analysis.
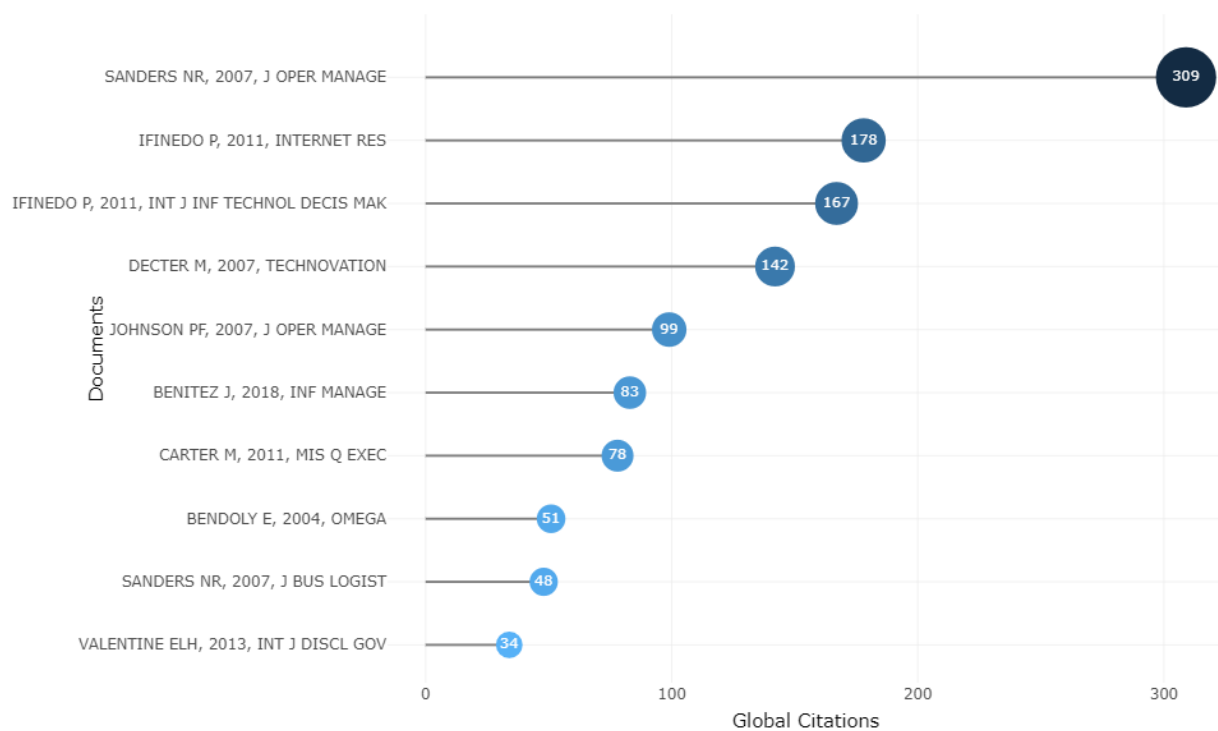

Figure 7: Most Cited Documents

3.1.6 Keywords

Investigating the frequency of term occurrence in articles on business technology gives us valuable insights. The term that is used most often is "business technology" (23 times), while "electronic commerce" (22 times) comes next. It shows these are essential areas in literature and form the basis of the subject. A tree map on the graph represents term frequencies visually; by proxy, it shows how relevant each term is in academic conversations.

Interestingly, these terms suggest interdisciplinary approaches to studying business technology. For example, "technology" appears 13 times, and "information technology" appears 12 times, underscoring its techno-centric orientation. Moreover, words such as "internet" (9 times) and "information systems" (11 times) indicate an emphasis on digital framework. Others, such as "e-business" (7 times) and digital transformation (6 times), further reiterate the changes seen in the

current digital-age operation environments. Furthermore, more specialized issues around "industrial management," "strategic revenue growth," or "innovation" are increasingly being seen alongside this broader theme, as evidenced by their respective frequencies. Significantly, these terms reflect the heterogeneity and dynamism characterizing research in this field, ranging from technological advances to strategic business management.

Figure 8: Word Tree

3.1.7 Trend Topics

The illustration in Figure 9 shows how business technology topics have changed over several years. Within the graph, the vertical axis depicts the frequency of terms, while time is represented on the horizontal axis by years of publication. At the first points in this timeline, terms such as "information technology" and "e-business" were central focusing points. However, later on, there was a distinct move to broader topics. For instance, by 2011, terms including "information systems", "industrial management", and "electronic commerce" became dominant, showing that research interests had expanded across different dimensions of corporate governance and digital infrastructure. By 2015, other terms such as "technology" or "profitability" were added, revealing an emerging interest in finance and technology's effects on corporate practices.

From around 2017 until now, however, the shift has been more pronounced, and it has become more current in matters such as "digital transformation" and "business technology". This switch indicates that businesses are more reliant on what technology has to offer when it comes to modern-day strategies in business as a good excuse, given that it brings notions of innovation and digital integration into today's organizational policies. Moving ahead, such words as 'business' and 'digital transformation' testify to the ongoing process of digitization that characterizes contemporary forms while underlining the strategic importance of mastering relevant skills.

Moving from the early 200s until the present reflects the transition from traditional basing on just essential tech-wise businesses towards newer other areas, widening what can be referred to as deep levels as far as studies under business technology are concerned. This implies that this is the first time anyone stands still in this field because rapid technological growth dictates every step these companies take about their preferences and how best they would like things done, looking at where we stand today and prospects for tomorrow.
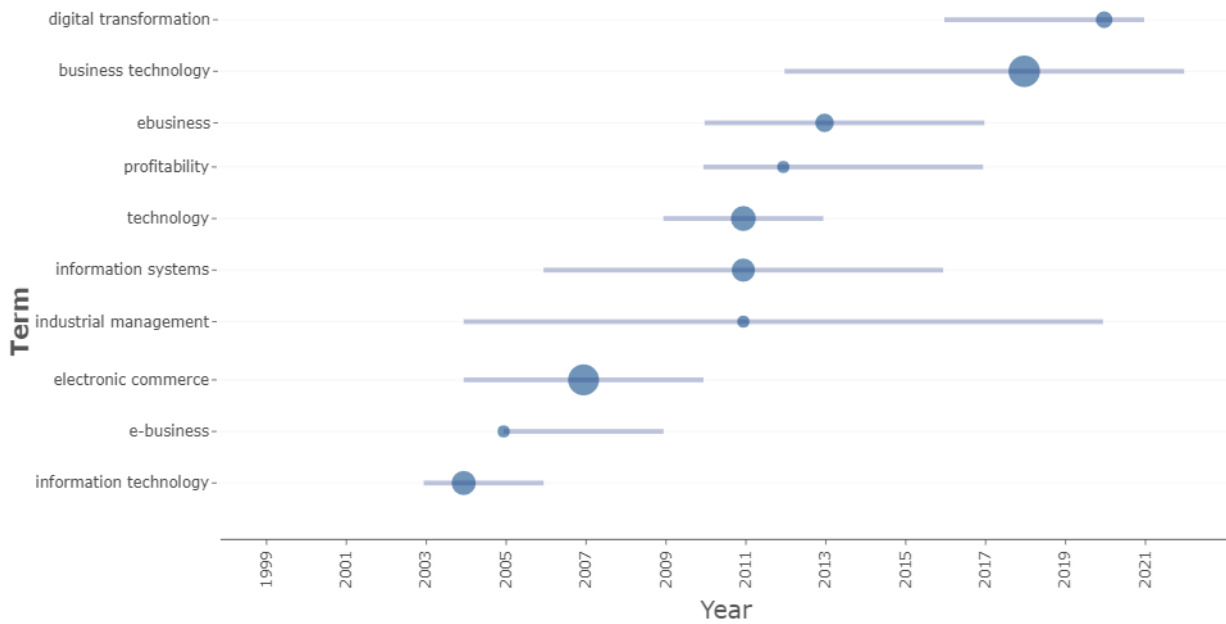
Figure 9: Trend topics

3.2 Data visualisation

Over the past few years, much of the focus on scholarly research has centered on business technology. This section discusses the critical progressive themes observed concerning this scholarly domain. Network analysis entails quantifying parameters such as emerging clusters, frequency of occurrences, and relationships among different analytical units as a means of data visualization. In creating these links among documents, authors or keywords form inter-connected web-like structures. These serve as the connecting points between network nodes, while statistical measures taken from maps provide different measures concerning the entire network. Therefore, network analysis in scientific mapping helps identify three distinct knowledge structures distinctively, namely conceptual, intellectual, and social.

3.2.1 Conceptual Structure

A network analysis using keyword co-occurrence was used to map out the conceptual structure of the Business technology domain. A Bibliometric package employed multiple correspondence analysis (MCA) to facilitate numerical and graphical examination of multivariate nominal data. This network depicted in Figure 10 was constructed by Louvain's clustering algorithm, which adopted Keyword Plus as its unit of analysis. These words are algorithmically extracted from titles and references, giving a detailed picture of what a document is all about.

In Figure 10, we have worked out one of these networks where different clusters were identified, each with a distinct color mark for better understanding amongst others through relatedness in concepts by vertices disconnection between them shows the strong relationship peripherally. At the same time, node dimensions correlate using scaling frequency, measured by size. One grouping contains words like 'corporation' or 'supply chain,' with high betweenness centrality and PageRank scores, signifying their authoritative place within the structure. Another one involves terms like 'services' or 'data processing' and displays higher connectivity and centrality. However, a separate cluster encompassing terms such as 'innovation' or 'business processes' indicates a more focused area of concern for business technology. As such, this review provides a multiple perspective on changing thematic territory within business technology studies by emphasizing major, rising, and connected issues and themes.
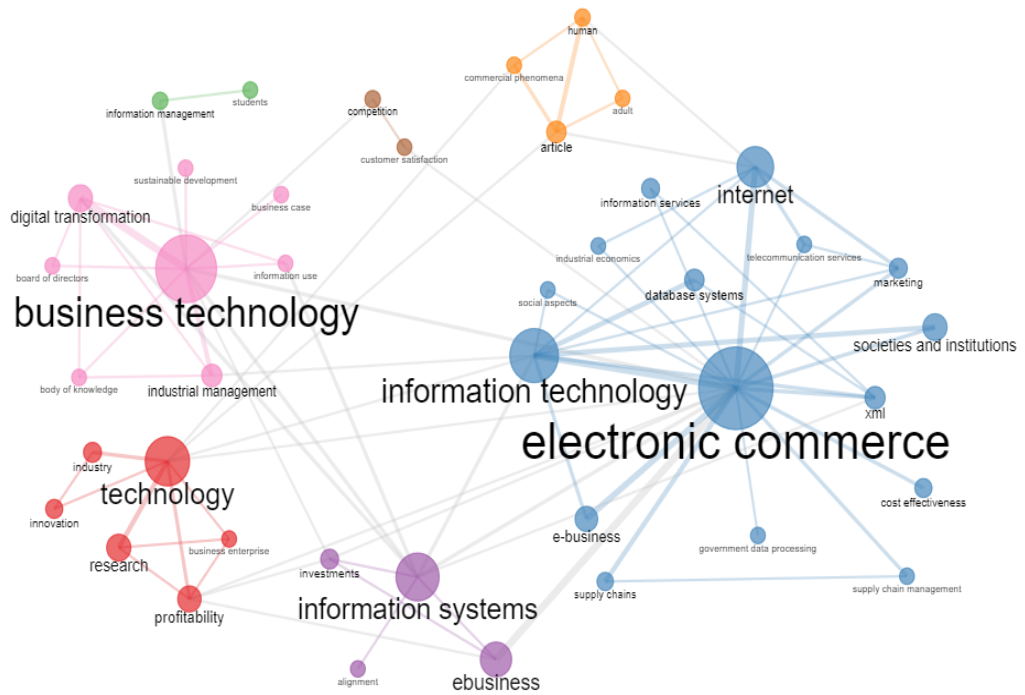
Figure 2: Co-Occurrence Network

3.2.2 Thematic Map and Evolution

A thematic map derived using the co-citation technique in the business technology domain showed most typological themes in circles positioned on a two-dimensional axis. Four quadrants can be identified, bearing in mind centrality and density as its coordinates. For instance, "business technology" appears to occupy the upper right-hand corner of the graph due to its high centrality and density, making it a "motor theme." This implies that this theme is a core elucidation for students plenteously discussed. The lower right quadrant displays the theme "profitability" on lesser centrality but substantial density, indicating that it is a "basic theme" albeit less developed, yet plays a significant role.

The forms of the themes underwent substantial changes as time went by. For example, from 1985 to 2007, themes regarding "electronic commerce" and "public administration data processing" were more distinct. On the other hand, between 2008 and 2011, the scene shifted to "supply chains" and "information systems"; this denotes the increased complexity and interdependence within the area. However, starting in 2012, we have witnessed the domination of "business technology" and "technology"; this highlights more about digital transformation and strategic technological integration. Particularly in the most recent period (2019-2024), one may consider "business technology" while noting new concepts such as digital transformation and profitability, indicating sustained use of technology in running businesses, especially concerning money issues.
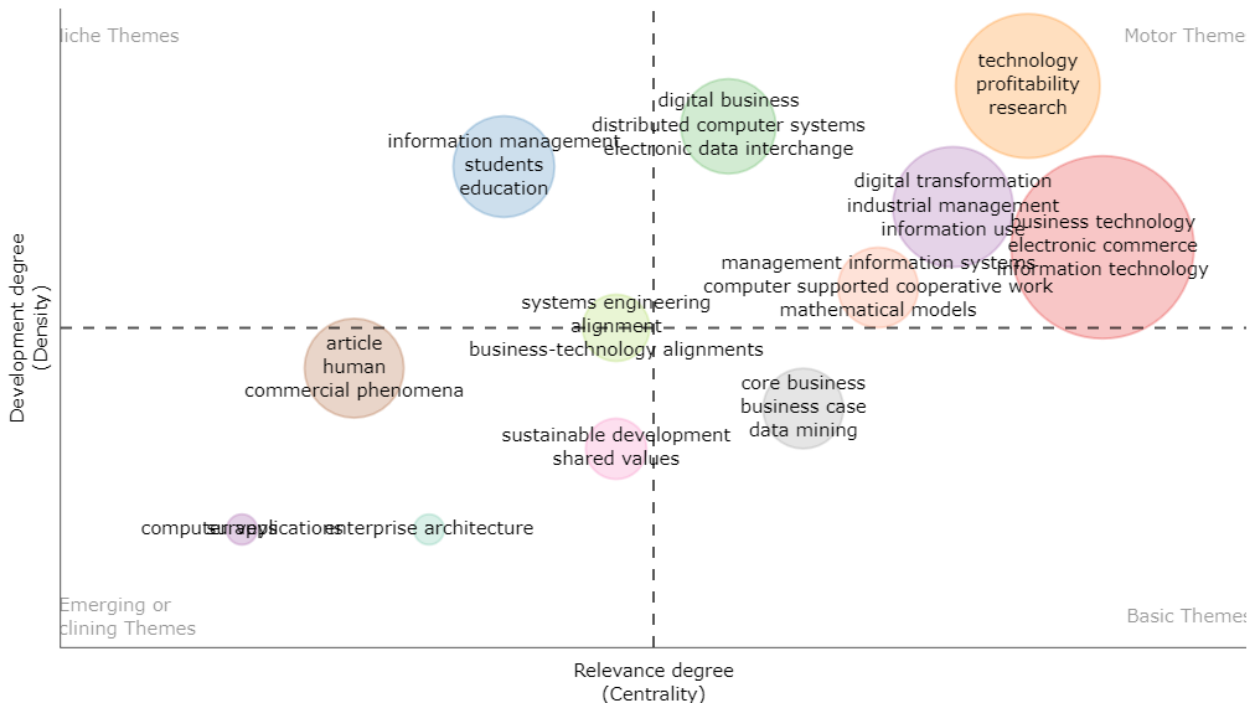
Figure 11: Thematic Map

From the thematic map and its evolution process, 'business technology' has remained central, showing consistent evolution and extending its links with themes like digital transformation, information systems, and profitability. The moving trend depicts this area as highly dynamic, requiring integrated studies to investigate these relationships and emerging trends. Such a study underlines that advancing technology significantly influences how management is conducted within the confines of the business technology domain, thereby reflecting the importance of growth and the application of digital technologies in everyday management practices.
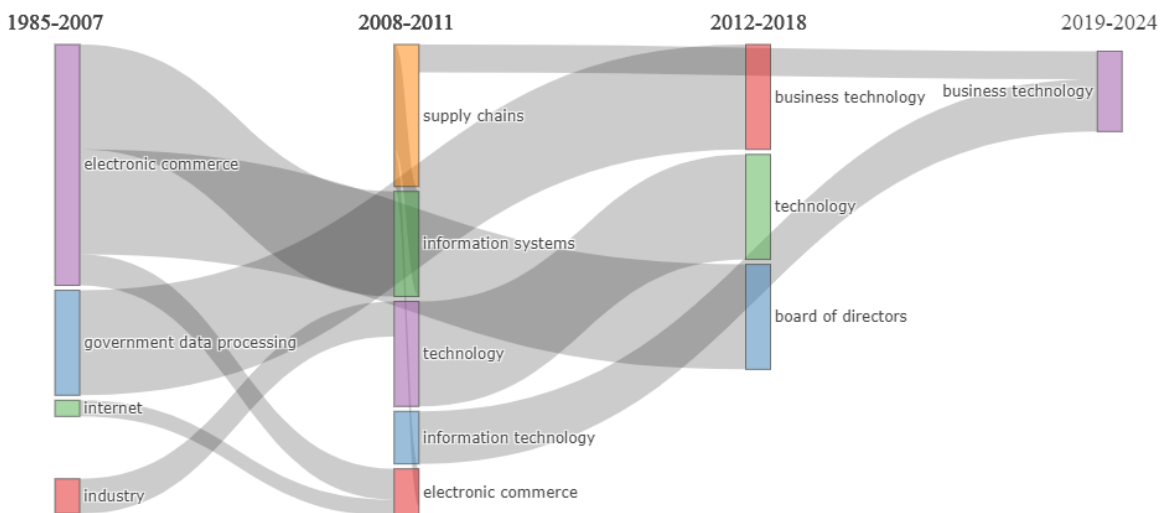

Figure 3: Thematic Evolution

3.3 Bibliographic Coupling and Keywords Analysis

Cluster 1 Red: This cluster emphasizes the integration of business technology with digital transformation and industrial management. The core themes of business technology, digital

transformation, and industrial management indicate a strong focus on how technological advancements drive efficiency and innovation in industrial settings. Future studies could explore the impact of digital transformation on operational efficiency across various industrial sectors. Additionally, research could investigate how the adoption of business technology influences competitive advantage and industrial management practices, providing insights into the evolving landscape of industrial operations.

Cluster 2 Green: Centered on the role of technology and innovation within SMEs (Small and Medium-sized Enterprises), this cluster highlights the importance of technological advancements in fostering innovation and supporting the growth of small businesses. The core themes of technology, innovation, and SMEs underscore the need to understand how technological innovations can be leveraged to enhance SME performance. Future research could examine the barriers and enablers of technological innovation in SMEs, focusing on specific interventions that can drive growth and sustainability in small businesses.

Cluster 3 Blue: This cluster explores the interconnectedness of information technology, electronic commerce, and the internet. The core themes of information technology, electronic commerce, and the internet reflect the growing reliance on digital platforms for commercial activities and information dissemination. Future research could investigate the evolution of e-commerce platforms and their impact on global trade, as well as the role of information technology in enhancing cybersecurity and data protection within electronic commerce.
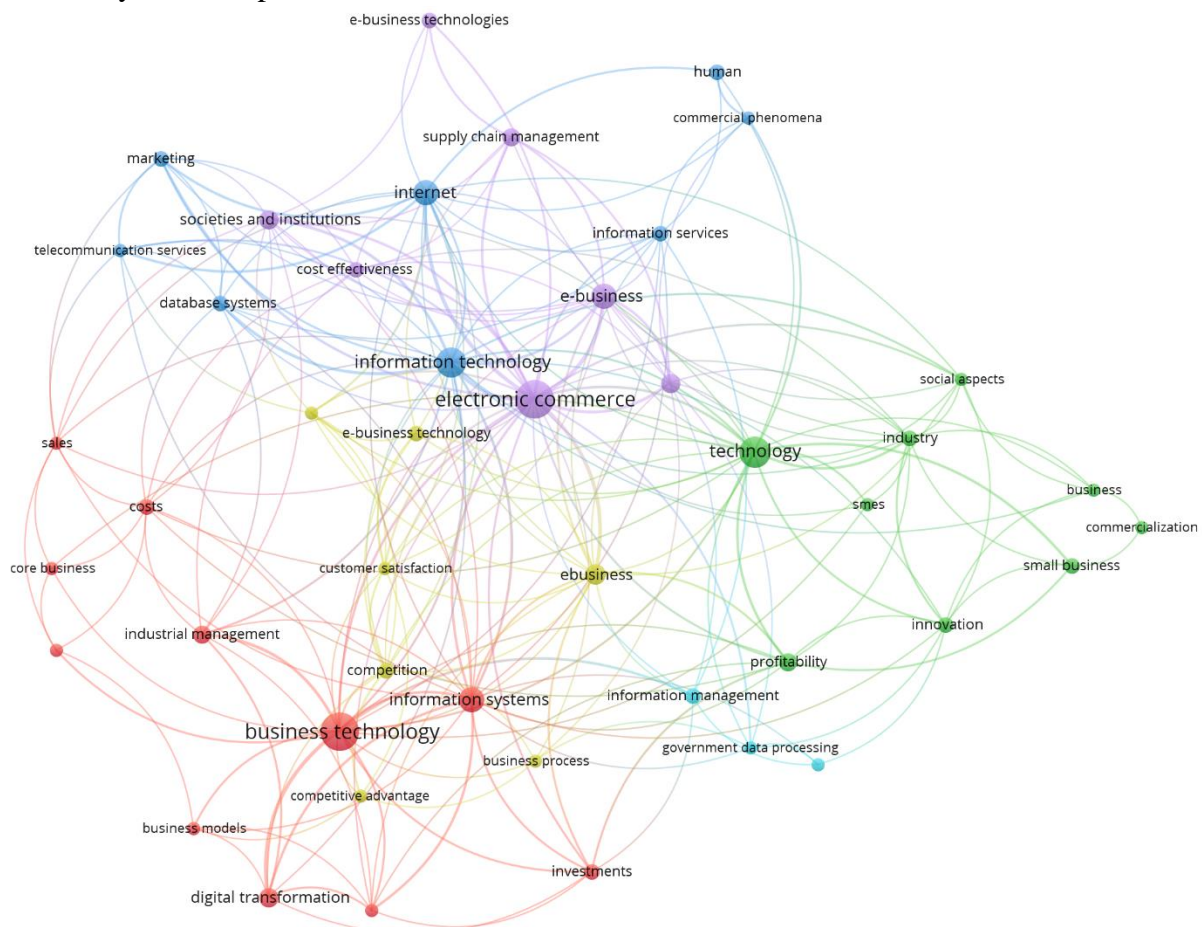

Figure 4: Cluster Visualization of Keywords

Cluster 4 Yellow: Focusing on the e-business domain, this cluster examines how e-business strategies relate to customer satisfaction and profitability. The core themes of e-business, customer

satisfaction, and profitability suggest a strong link between effective e-business strategies and positive financial outcomes. Future studies could explore the strategies employed by e-businesses to enhance customer satisfaction and their subsequent impact on profitability. Additionally, research could investigate the metrics for measuring customer satisfaction in the digital business environment, offering guidance for e-businesses aiming to optimize their operations.

Cluster 5 Purple: This cluster highlights the critical role of information systems and management in optimizing business processes. The core themes of information systems, information management, and business processes underscore the importance of efficient information handling in streamlining operations. Future research could examine the implementation of advanced information systems in various industries and their impact on business process optimization. Studies might also focus on the integration of information management practices in enhancing decision-making processes, thereby improving overall business efficiency.

Cluster 6 Orange: Examining the interplay between supply chain management, commercialization efforts, and the social aspects of business operations, this cluster suggests a holistic approach to managing supply chains with a focus on societal impacts. The core themes of supply chain management, commercialization, and social aspects highlight the need to balance operational efficiency with social responsibility. Future research could delve into sustainable supply chain practices and their effects on commercialization and social responsibility. Additionally, studies could explore the role of social factors in shaping supply chain strategies and outcomes, providing a comprehensive understanding of supply chain dynamics in a socially conscious business environment.

4. Conclusion

This research thoroughly examined scientific journals through advanced bibliometric analysis and graphical representation in business technology, defining their historical pathway. According to statistics retrieved through this method, consistent growth has been observed over time in terms of academic activities, as shown by an average rate of 1.82 co-authors per article, while international publication stands at 11.3%.

When looking at geography, it is evident that the US is the leading contributor, but other countries like Canada, Australia, and the UK also make significant contributions. However, further findings show that although America has published more than any other nation, it has enjoyed more citations, indicating that research quality cannot be based on publications' quantity without considering its acceptance and applicability within academic circles. Remarkably, though, despite having numerous papers, China's articles are less frequently cited than authors from other countries, suggesting there may be room for increased impact of their research.

Regarding the study's thematic focus, it uncovered a heterogeneous mosaic of research themes, including fundamental concepts 'information technology' and 'electronic commerce' as well as current issues: 'digital transformation' and 'profitability.' This thematic repositioning demonstrates that awareness has been rising over time regarding how diverse business technologies serve such areas as industry management or digital commerce, among others.

Moreover, some thematic clusters were identified within this study, such as 'Business Technology, Digital Transformation, Industrial Management,' which implies that technological innovations are crucial to efficiency and innovation in industries. In another cluster, attention revolves around 'Technology, Innovation, SMEs', affirming that technology greatly fosters innovations, particularly across small-scale businesses.

Despite the theoretical implications offered by this comprehensive research about business technology development, which traces back to its components, growth trajectory, and some essential areas, practically relevant findings apply directly to researchers in this field and educators or practitioners, offering a basis for further study. However, using the Scopus database limits the generalization of the entire study, thus leaving other databases that could have been exploited for further research.

Business technology is an expanding, complex, and interdisciplinary field. The transition of themes over time and the emergence of new clusters suggests that there is a need for integrated research that investigates such inter-relationships and new areas. For instance, future research might focus on developing solid indicators to gauge the impact of business technology across different sectors and its application in attaining long-term sustainability objectives. Previous studies have concentrated on traditional business technology metrics. Thus, future works could analyze how it strategically drives innovation and efficiency in diverse industrial/commercial setups.

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