A BIBLIOMETRIC ANALYSIS OF A FOUR-CONSTRUCT FRAMEWORK: INTERNATIONALIZATION, BUSINESS STRATEGIES, DIGITAL TECHNOLOGIES (AI, BLOCKCHAIN, CLOUD-COMPUTING) AND DIGITAL TRANSFORMATION

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Abstract
In the dynamic business landscape of 2023, the rapid adoption of digital tools and technologies, including ChatGPT 4 and advanced AI software, is reshaping companies' operations and strategies. This article focuses on the profound impact of these advancements on internationalization efforts. Integrating AI applications empowers businesses to enhance efficiency, optimize decision-making, and drive innovation, particularly in the context of global expansion. Cloud computing is pivotal in offering scalable infrastructure and adaptability to changing market conditions. Additionally, blockchain technology ensures secure and transparent cross-border transactions, bolstering businesses' confidence in international markets. Through real-world case studies and research insights, this article highlights the transformative influence of AI, cloud computing, and blockchain on business strategies, emphasizing their potential to drive operational excellence, foster innovation, and facilitate global expansion. It provides valuable guidance for navigating the digital transformation era and seizing international opportunities. This research employs an extensive literature review to examine the intersection of internationalization, business strategies, digital technologies (AI, blockchain, cloud computing), and digital transformation. Additionally, a bibliometric analysis utilizing VOSviewer is conducted to visualize and analyze the co-occurrence of keywords related to these four concepts, providing insights into research trends and relationships within the field.

Keywords
AI; blockchain; business strategies; cloud computing; cross-border transactions; digital technologies; digital transformation; digitalization; global expansion; internationalization.

Introduction

Extant literature documents on internationalization and cross-border development of businesses reveal that it has become imperative for organizations that aim to accelerate the internationalization of companies (Vătămănescu et al., 2019) to adopt a digitalization strategy (Gupta, 2018; Gobble, 2018). Recent studies have shown that the adoption of positive external incentives of digitalization tools, such as the Internet of Things (IoT), cloud computing and data analytics-powered artificial intelligence(AI) (Nandi et al., 2020; Iansiti & Lakhani, 2020; Chaudhuri, Subramanian, & Dora, 2022), have a great potential to help firms in going beyond national borders and adopting a

global open position (Colombo, Vătămănescu, Alexandru, & Gazzola, 2018; Griffith & Hoppner, 2013; Vătămănescu et al., 2017, 2019, 2020a, 2020b, 2022).

The present research proposal on business internationalization examines a new chapter regarding the role of digitalization adoption and digital transformation in this process. This study aims to understand how firms could cultivate digital innovation and transformation regard to changing the business model (BM) from a traditional perspective to a strategic point of view by using digital resources to penetrate new markets (Andrade Rojas, Ramirez Solis, & JianJun, 2018; Păduraru et al., 2016; Vătămănescu et al., 2019).

The literature findings on internationalization describe it as a movement of enterprises towards other countries, driven by competitive advantages and economic objectives or as the process of increasing involvement in international operations (Mathews & Zander, 2007; Oviatt & McDougall, 2005). This rationale implies an unilinear sequential process of rising participation in international operations. To extend this understanding, internationalization is defined as the process of adapting firm operations (e.g., strategy, resource) to international environments.

Internationalization through digitalization may take the form of cooperating with prospective allies as a part of a deliberate managerial strategy that helps companies to reduce excess capacity through combining digital resources or complementary skills and to facilitate the development of new international markets by providing products and services to a more significant number of customers across the globe, increasing in the same time the scale, scope and the speed of trade. At the global level, trends such as increased liberalization of trade, intensification of and changes in regional economic integration, technological developments in information and digital transformation, and rising international expansion are factors that contribute to the globalization of the business environment.

Digital transformation is defined as a change process involved in employing digital technologies or developing new digital business models that create and appropriate more value for a firm (Fitzgerald et al., 2013; Hapenciuc, Pînzaru, Vătămănescu & Stanciu, 2015; Kane et al., 2015; Vătămănescu et al., 2018a; Verhoef et al., 2021). Recent studies have found that digital transformation actions include applying digital technologies to promote internal and external collaborations (Singh & Hess, 2017; Vătămănescu et al., 2018b), renewing business models (BMs) (Hess et al., 2016; Westerman et al., 2011) and changing the organizational culture for improved performance (Li et al., 2017; Vial, 2019; Warner & Wager, 2019). A digital transformation strategy outlines the steps a firm will take to leverage best emerging technologies, including changes to BM, innovations to products and services, and the development of new value chains to meet the organization's long-term goals. Moreover, to apply digital transformation in the existing business model, companies establish goals, prepare the digital transformation strategy, and develop a plan on how the organization should cope with these changes and challenges.

Literature review

International expansion is widely recognized in the literature as a critical strategic decision for firms, involving substantial investments and significant implications for firm performance (Vătămănescu et al., 2014, 2015, 2016a, 2016b, 2017, 2019, 2020a, 2020b, 2022; Song, Makhija, & Kim, 2015). The academic literature presents various models of business internationalization, which are extensively explored in the case of both small and medium-sized enterprises (SMEs) and multinational corporations. For example, Perlmutter (1969) classified multinational corporations into three categories based on their managerial mindsets: ethnocentric (focused on the home country), polycentric (focused on the host country), and geocentric (focused on the global perspective) (Vătămănescu et al., 2017). Considering their unique internationalization contexts and existing relational capital, these approaches can also apply to SMEs expanding into foreign markets. In all cases, the relationships between branches and the flow of information are crucial factors.

Resource availability, particularly knowledge and learning, plays a pivotal role in business internationalization (Autio, Sapienza, & Almeida, 2000; Casillas, Moreno, Acedo, Gallego, & Ramos, 2009), especially in business-to-business (B2B) settings (Karlsen, Silseth, Benito, & Welch, 2003; Lindsay, Rod, & Ashill, 2017). Internationalizing SMEs requires various knowledge forms (Johanson & Vahlne, 1977). To comprehend internationalization knowledge, managers must possess the ability to identify and pursue multiple international opportunities (Eriksson, Lindstrand, & Sharma, 2004).

Business internationalization is driven by the imperative of competitiveness in a globalized market (Vătămănescu et al., 2017). According to Porter, competitiveness is the driving force behind the market economy and the essence of a firm's success or failure (Porter, 1990). In the literature, competitiveness is viewed as the capacity to enter new markets, target new customers, and establish business networks (Hilmersson, 2014; Sandberg, 2014). Moreover, competitiveness is crucial for the survival and adaptability of businesses across different sizes and sectors (Sandberg, 2014; Song et al., 2015).

Building upon this notion, firms seeking international operations and competitive strategies in new markets must acquire both general and specialized knowledge about the characteristics of the global context (Flecher, Harris, & Richey, 2013). The resource-based view in management literature has been employed to examine the impact of growth strategies on firm performance (Lieberman & Dhawan, 2005). Diversification growth strategies involve extending resources into new markets. To ensure the success and prosperity of organizations within the global landscape, managers are challenged to embrace a global mindset (Cohen, 2010) and consider an international perspective in their management practices.

While researchers and managers have explored various strategies in the internationalization process, there is limited insight in the literature regarding how firms can cultivate digital innovation and transformation in relation to internationalization or globalization processes. Thus, in the context of how digitalization could improve internationalization, this study examines the differences between digitalization and digitization. In his research, Gobble (2018) defines

digitization as converting atoms to bits - replacing paper with electronic files, pictures with JPEG images, and music with MP3s. Digitalization is the transformation of all those bits into value. Digitization may deliver some savings, most commonly through efficiency gains and reduced error rates. However, it doesn't change how the company does business—how it thinks about, creates, and delivers value.

Ross (2017) distinguished two steps in the transformation: becoming digitized and becoming digital. The first step takes place at the operational level and involves standardizing business processes and optimizing operations by implementing technologies and software. The second step involves purely digital technologies to articulate, target, and personalize alternative offers to define a new value proposition. It is, therefore, by taking the opportunity to redefine its business model and activities, a company becomes digital (Aagaard et al., 2019; Kraus et al., 2019; Ross et al., 2017).

In Guppa's (2018) opinion, digital transformation is no longer news; it's a necessity. Despite the widespread threat of disruption, many large companies in traditional industries have succeeded at digitizing their businesses in truly transformative ways.
Companies invest in digitalization because they expect to harvest its benefits. A significant amount of research has been done on the subject of creating business value through digitalization investment (Benitez-Amado, Llorens-Montes, & Fernandez-Perez, 2015).

According to Carey, Charan, Lamarre, Smaje, and Zemmel, digital transformation is the CEO's job because he can make the fundamental changes required for a successful transformation. The motivation comes from the fact that a business model reinvention requires different functions across the organization to work together in new ways, and that can only happen by making large-scale investments and large-scale changes that start from the top down. Moreover, the top management is responsible for designing the digital transformation strategy. Rather, digital transformation is a journey; a journey needs a map - in this case, a clear roadmap driven by a digital strategy.

This paper contributes to the debate on whether digital transformation applications directly affect firm internationalization by exploring the role of different digitalization strategies. In general, digitalization impacts the internationalization processes of firms in terms of accessibility of resources, skills, and competence acquisition, as well as in terms of the potential for learning and knowledge development in foreign markets (Coviello et al., 2017).

To describe how digitalization could help internationalization that fit our purpose, the distinction between doing commerce by using digitalization (to expand product selling on international markets through digital tools such as websites, e-commerce, and social media, which are used to carry out transactions as well as marketing and promotion activities) and expanding business on other markets using digital tools as a resource, should be clear. By business internationalization using digital tools, we mean sharing the resources and information through the use of cloud computing and/or software applications or technologies such as blockchain, AI enabling firms to accelerate the internationalization and implement faster processes in the new divisions of the company on external markets or improve the functions with suppliers, customers, and business partners along the supply chain on global market (Bianchi and Mathews 2016; Marinagi, Trivellas, & Sakas 2014, Chen, 2017).

To understand the connection of these concepts with internationalization, it is crucial to introduce the definitions of cloud computing, AI, and blockchain. By grasping the essence of these technologies, we can appreciate their profound impact on internationalization strategies and the opportunities they present for businesses in the digital age.

Cloud computing is the delivery of computing services—including servers, storage, databases, networking, software, analytics, and intelligence—over the Internet ("the cloud") to offer faster innovation, flexible resources, and economies of scale (Brynjolfsson & McAfee, 2017).

Blockchain is a distributed ledger (open ledger) that is open and can record transactions between two parties efficiently and in a way that can be verified and is permanent. As quoted from the book Blockchain Revolution (D. Tapscoot and A. Tapscoot, 2018), blockchain is a digital ledger of uninterrupted financial transactions that can be programmed to record financial transactions and everything of value. Blockchain is a technological breakthrough that creates trust through consensus by ensuring that all parties authorized to access the blockchain agree with any additions they make so that the data is guaranteed valid.

Computer science defines AI research as the study of "intelligent agents": any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals. Kaplan and Haenlein define AI as "a system's ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation" (Kaplan & Haenlein, 2021). Colloquially, the term "artificial intelligence" is applied when a machine mimics "cognitive" functions that humans associate with other human minds, such as "learning" and "problem-solving." Artificial intelligence investigates how a human brain thinks and how people learn and decide as they try to solve a problem. It imitates the results of this study with smart software. Artificial intelligence does not act upon the programmer's mind; it learns, understands, and judges itself. (Koç, 2020).

Cloud computing can be instrumental in changing how employees work together because it is a technology that provides a shared and open information infrastructure with high accessibility (Iyer & Henderson 2010; Saya, Pee, & Kankanhalli 2010). It makes it easier to share data and documents and streamline workflow (Li & Mao 2012), enabling coordination and encouraging collaboration. This is especially important given today's global economy and often geographically distributed collaborative environment. As innovations across temporal, spatial, and organizational boundaries become increasingly important and popular (Griffith, Sawyer, & Neale 2003; Lee & Cole 2003), cloud computing can significantly improve information and knowledge sharing and facilitate collaborations between organizational members both within and across organizations.

From a theoretical point of view, by integrating blockchain technologies into the value chain and managing a massive amount of data, firms are likely to seize new opportunities with innovative ways to become sustainable by reducing resources, reducing operating costs, improving trust and interactions, among ecosystem stakeholders and monitoring the entire logistic chain of a product or service and to be

instantaneously active on a global scale. Distributed ledger (aka "blockchain") technologies provide firms with storage and transmission of information that is transparent and secure and operates without third parties based on code (Herve et al., 2020).

Artificial intelligence can now be applied to optimize production and distribution, improve managerial decisions for market entry, target new customers more effectively, select relevant partners, supplement advertising strategies, make better pricing decisions, and make demand predictions (Kraus et al., 2019; Aagaard et al., 2019; Watson et al., 2018).

Methodology

This study adopts a bibliometric approach to offer a comprehensive view of the research topic of the interrelationships between internationalization, business strategies, digital technologies (AI, blockchain, cloud computing), and digital transformation. Bibliometric analysis, a statistical methodology coined by Hulme in 1922 (Hulme, 2015), allows for the quantitative assessment of published literature, measuring the influence and significance of scholarly works within the academic community. By employing this method, the research aims to provide a comprehensive perspective on the research topic and its relevance in the field of internationalization.

The data was sourced from the Web of Science (WoS) Core Collection in June 2023. WoS is widely recognized as a leading platform for scientific citation search and analytical information (Li et al., 2017). The retrieval period spanned from 1975 to 2023, and the Advanced search function was utilized as the retrieval model. The default values offered by WoS were applied for all other retrieval parameters except for selecting articles with English titles and abstracts, as English was the sole language used. Only articles were chosen as the document type for inclusion in the analysis.

Internationalization, business strategies, digital technologies, and digital transformation were the primary concepts searched for in the Title field. The results showed that the first publications appeared in the WoS in 2003 for all these three constructs, in the research area of International Relations and in the last five years, gathering more than 80,91% of all-time WoS indexed articles dealing with this subject and in 2022 for these constructs gathering more than 28% of all-time WoS indexed articles dealing with this subject; the starting year for the rest of the constructs was 1975 whereas each construct displayed a higher density of publications - 46% (mean of percentages of the latest articles out of the total) on the topic during the period 2019-2023.

Considering the notable concentration of papers within the past five years, it can be inferred that the mentioned concepts have gained increasing significance. This suggests the value of thoroughly examining a comprehensive model that integrates all these concepts (see Table 1).

Table 1. A synopsis of the published articles indexed in WoS
(Source: Authors' own research results)

Construct	No. of articles indexed in WoS	Year of first indexation in WoS	No. of articles published in journals indexed in WoS during 2019-2023	Percent of the latest articles out of the total
Internationalization	27480	1975	11686	42.57%
Business Strategies	170263	1975	67912	39.92%
Digital Technologies	211984	1975	93165	43,93%
Digital Transformation	34658	1975	20031	57,80%

The data extracted from the Web of Science (WoS) comprised a wide range of valuable information, including author details, article titles, abstracts, publication sources, subjects, publication years, and references. This extensive dataset, exported as plain text files, provided a comprehensive foundation for conducting the analysis. The study employed the bibliometric software VOSviewer (Visualization of Similarities) developed by van Eck and Waltman (2023) to explore and visually represent the co-occurrence of the examined constructs (keywords), as well as the citation and co-citation patterns among sources and authors, alongside the countries of the most prominent authors and the bibliometric coupling.

As elucidated by Chen et al. (2001), co-citation analysis explores the interconnection of ideas between different research contributions. It occurs when two documents are cited by a common third document, reflecting their shared intellectual associations. This semantic similarity measure based on citation relationships helps gauge the frequency with which two papers are co-cited by other works. A higher number of co-citations suggests a stronger resemblance between the documents, indicating a higher level of interconnectedness.

Furthermore, the study also investigates bibliographic coupling, as Kessler (1963) highlighted, which emerges when two studies reference the same third publication. This phenomenon primarily focuses on the overlap observed in the reference lists of two documents, revealing the shared body of literature that influenced both works.

By employing these methodological approaches and leveraging the rich bibliographic data, this study aims to provide a comprehensive analysis and visualization of the interrelationships and patterns within the research domain, shedding light on the intricate connections between internationalization, business strategies, digital technologies (AI, blockchain, cloud computing), and digital transformation.

Results and discussion

A co-citation analysis was conducted to identify the key sources commonly cited by the articles in our dataset. In this analysis, the cited sources were treated as the unit of analysis, and a co-citation link was established when two items were both cited by the same document (Van Eck & Waltman, 2023, p. 27). The analysis findings, including the most frequently co-cited sources (i.e., journals), are summarized in *Table 2* and visualized in Figure 1.

Table 2. Prominent co-cited sources
(Source: Authors' own research results)

Source	Citations	Total link strength
Acad Manage J	147	6969
Acad Manage Rev	115	5187
Entrep Theory Pract	101	5064
Glob Strateg J	89	4650
Harvard Bus Rev	113	4194
Ind Market Manag	160	4558
Int Bus Rev	184	7777
Int Market Rev	136	5666
J Bus Res	216	7984
J Bus Venturing	81	4010
J Int Bus Stud	740	25462
J Int Entrep	79	3505
J Int Manag	77	3245
J Int Marketing	84	3679
J Manage	95	4903
J World Bus	162	6966
Manage Int Rev	95	4245
Mis Quart	87	3647
Organ Sci	73	3799
Strategic Manage J	271	11552

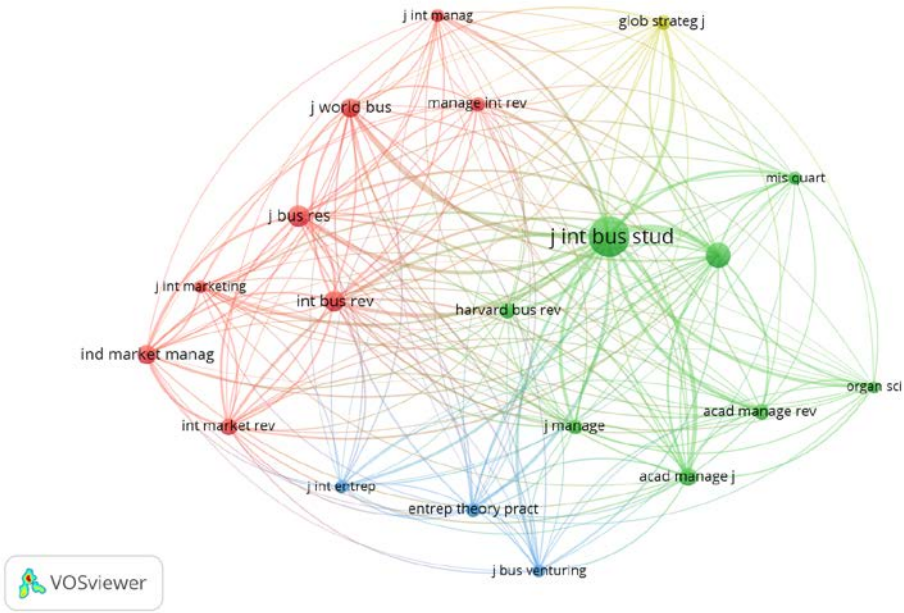

Figure 1. Prominent co-cited sources and their clusters
(Source: Authors' own research results)

The most influential authors in the selected articles who were co-cited were established by choosing cited authors as a unit of analysis. A synopsis of the most prominent co-cited authors is illustrated in *Table 3* and *Figure 2*.

Table 3. Prominent co-cited authors
(Source: Authors' own research results)

Author	Citations	Total link strength
Brouthers, Keith D.	10	3
Kotabe, Masaaki	9	7
Kuivalainen, Olli	45	18
Li, Sali	64	16
Neubert, Michael	45	0
Saarenketo, Sami	45	18
Stallkamp, Maximilian	105	20
Torkkeli, Lasse	45	18
Vadana, Ioan-Iustin	45	18

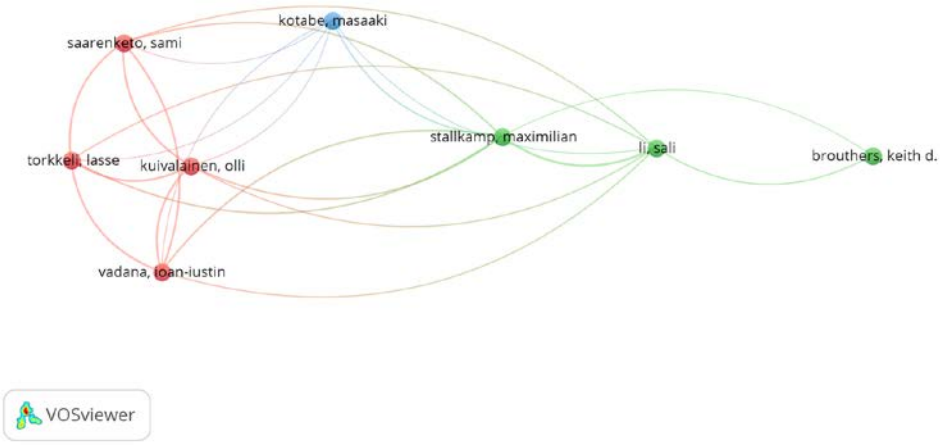

Figure 2. Prominent co-cited authors and their clusters
(Source: Authors' own research results)

In what concerns the countries of the main co-cited authors, Figure 3 and Table 4 are descriptive of the distribution. As shown below, most co-cited authors come from the US, Canada, and China, followed by Italy and the UK. Consequently, it results in the researchers and / or research teams keenly interested in the underlying relationships among the targeted constructs being residents of the aforementioned regions.

Table 4. Countries of the co-cited authors
(Source: Authors' own research results)

Country	Citations	Total link strength
Australia	46	13
Canada	253	73
England	147	49
Finland	106	31
France	103	15
Germany	63	19
Italy	156	10
China	214	28
Portugal	47	9
Spain	69	5
USA	416	86

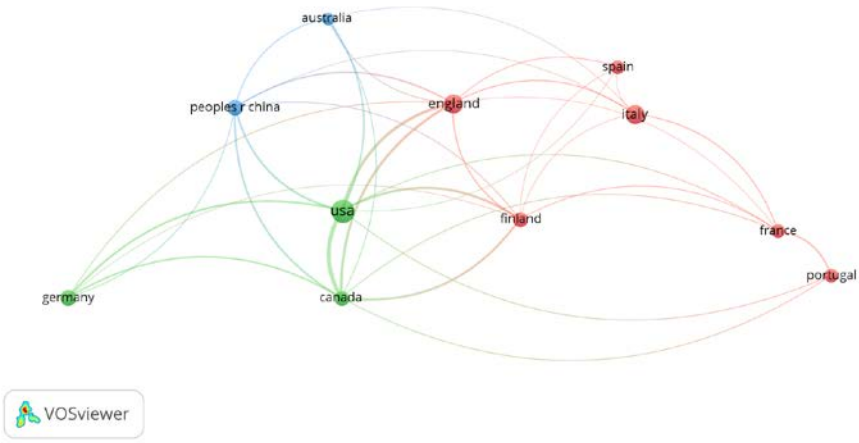

Figure 3. Countries of the co-cited authors
(Source: Authors' own research results)

Moving to the citation analysis (i.e., A citation link is a link between two items where one item cites the other, as posited by Van Eck & Waltman, 2023 p. 27), the most prominent authors cited are displayed in Table 5 and Figure 4.

Table 5. Most prominent authors retrieved from the citation analysis

Document	Citations	Total link strength
Nambisan (2019)	142	72
Stallkamp (2021)	99	98
Monaghan (2020)	85	72
Shaheer (2020)	63	114
Vadana (2020)	35	83
Cahen (2020)	27	82
Herve (2020a)	14	100
Bergamaschi (2021)	12	69
Herve (2020b)	11	107
Kromidha (2021)	10	53

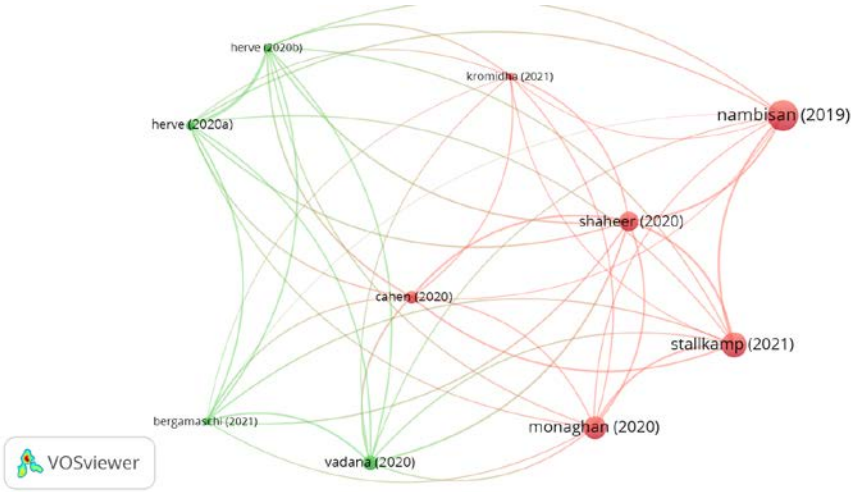

Figure 4. Prominent cited authors
(Source: Authors' own research results)

Regarding bibliographic coupling (i.e., 'A bibliographic coupling link is a link between two items that both cite the same document,' as stated by Van Eck & Waltman, 2023 p. 27), the most recurring cited authors are mentioned in *Table 6*.

Table 5. Recurrent cited authors based on bibliographic coupling
(Source: Authors' own research results)

Document	Citations	Total link strength
Shaheer (2020)	63	171
Herve (2020b)	11	148
Stallkamp (2021)	99	138
Vadana (2020)	35	133
Cahen (2020)	27	131
Stallkamp (2022)	6	128
Herve (2020a)	14	126
Vadana (2019)	9	116
Nambisan (2019)	142	114
Monaghan (2020)	85	112
Tippmann (2022)	5	99
Bergamaschi (2021)	12	96
Oliva (2022)	6	95
Kromidha (2021)	10	84
Ipsmiller (2022)	7	70
Tatarinov (2022)	5	69

Using the keywords' co-occurrence can positively represent the research hotspots in the discipline domains, offering additional support for scientific and academic study in the process. In this respect, to identify the relevant articles integrating the main envisaged constructs, the following search was performed in WoS: ((((AB=(internationalization)) AND AB=(strategies)) AND AB=(technology))) AND AB=(digital transformation). It should be mentioned here that the initial search, which included the more specific terms "business strategies" and "digital technologies," did not retrieve any results. Consequently, intending to broaden the search, the newly searched terms were the more generic ones, respectively "strategies" (instead of "business strategies") and "technology" (instead of "digital technologies"). The analyzed section was the abstract, as it would have been highly unlikely to find all the concepts in the titles or keywords, whereas searching for the terms in the body of the papers would have led to too vague results.

Of the 799 keywords from the 113 retrieved results, only 105 met the threshold (i.e., appeared at least three times). As previously indicated, the VOSviewer program processed and constructed the keyword co-occurrence network (Figure 5). The size of the nodes and words in the figure that follows represents the importance of the information they contain. The weight is proportional to the size of both the node and word frequencies. The length of the path separating two nodes is directly proportional to the quality of the connection between them; hence, a shorter path often reflects a more robust connection. If there is a line connecting two keywords, it indicates that those keywords have appeared together at some point. The thicker the line, the more times the two keywords have occurred together (an illustration of such relationships is presented in Table 7 and Figure 5).

Table 6. Keywords, occurrences, and total link strength
(Source: Authors' own research results)

Keyword	Occurrences	Total link strength
internationalization	56	174
innovation	31	109
strategy	26	74
performance	22	86
digitalization	21	82
digital transformation	18	48
internet	17	65
impact	16	44
strategies	16	54
firms	15	77
knowledge	15	47
capabilities	14	61
entrepreneurship	13	54
firm	13	41
smes	13	60

model	12	55
technology	12	60
future	11	47
business models	10	47
information	9	49

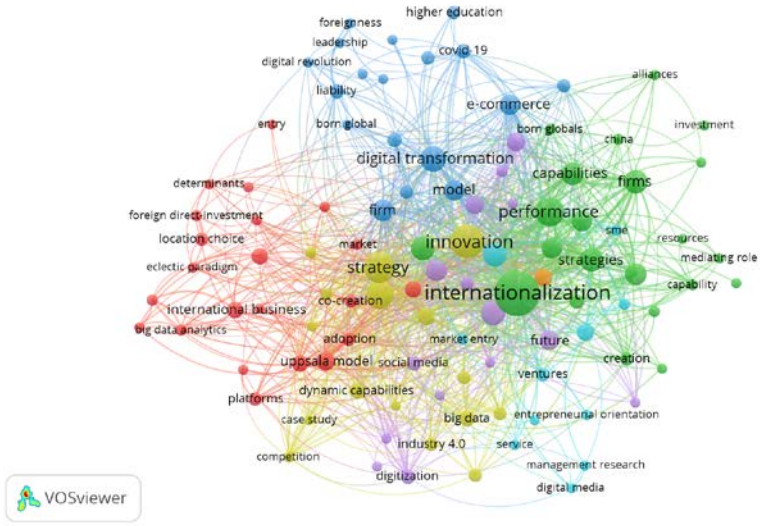

Figure 5. Keywords' co-occurrence network of WoS publications - by VOSviewer
(Source: Authors' own research results)

The nodes that all share the same color have been reorganized into a cluster with them. Here, the retrieved keywords were organized by VOSviewer into seven different clusters (please see Figure 6).

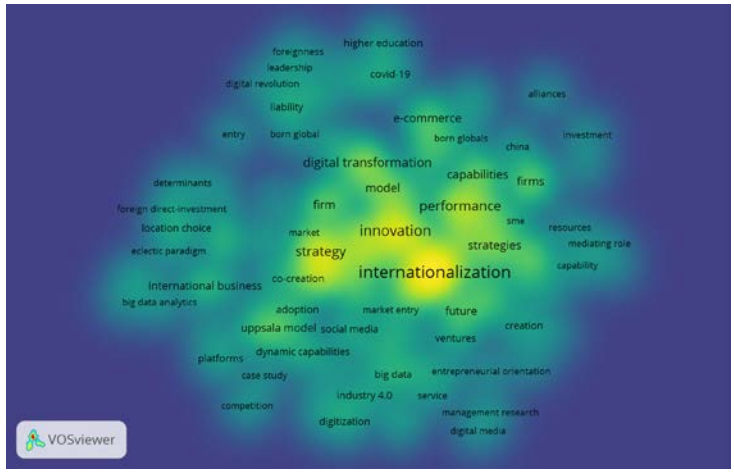

Figure 6. Density visualization and keyword clusters of WoS publications
(Source: Authors' own research results)

As seen above, the first cluster (highlighted in green in Figure 5) gravitates around the triad internationalization – strategies– performance. The relevance of digital transformation is hereby backed up by the co-occurrences of technology, which also points to investment, the imperative to cope with research and development, and simultaneously get proper care with a view to knowledge and resources.

The second cluster (highlighted in blue in Figure 5) has a prominent focus on digital transformation. This cluster encompasses various interconnected items, including digital economy, globalization, leadership, e-commerce, evolution, and internationalization strategies. These items are closely linked within the context of digital transformation, as they represent key components and factors that shape the transformational processes in organizations. The presence of a digital economy highlights the significance of technological advancements and digital tools in driving economic growth and innovation. Globalization emphasizes the interconnectedness of markets and the need for organizations to adapt and expand their operations globally. Leadership plays a crucial role in guiding and facilitating successful digital transformation initiatives. E-commerce signifies the growing importance of online transactions and digital platforms in modern business practices. Evolution represents businesses' continuous evolution and adaptation in response to technological advancements and changing market dynamics. Lastly, internationalization strategies reflect the pursuit of expanding business operations beyond domestic borders and leveraging digital technologies to navigate international markets. Together, these items demonstrate the multifaceted nature of digital transformation and the diverse aspects that organizations need to consider when embarking on their transformational journeys.

The third cluster (highlighted in yellow in Figure 5) revolves around the key concept of digitalization. It encompasses secondary items such as industry 4.0, innovation, dynamic capabilities, strategy, technologies, and the internationalization process. This cluster highlights the transformative impact of digitalization on organizations, including its role in driving innovation, enabling agility, and facilitating international expansion. It emphasizes the interconnected nature of digital technologies and their influence on organizational strategies and capabilities.

The fourth cluster, highlighted in purple in Figure 5, is centered around the prominent concept of the internet. It encompasses secondary items such as business model innovation business model, digital innovation, digitization, future, global value chains, perspective, and value creation. This cluster signifies the significant impact of the internet on various aspects, including the evolution of business models, fostering innovation, and driving value creation in the digital era. It emphasizes the transformation of global value chains and highlights the necessity of embracing digital innovation and adapting business models to succeed in the dynamic digital landscape.

The fifth cluster, represented by the color red in Figure 5, centers around the key concept of international business. It is accompanied by secondary items such as big data analytics, artificial intelligence, international entrepreneurship, determinants, network effects, the Uppsala model, and platforms. This cluster highlights the significance of international business as a focal point, emphasizing the role of big data analytics, artificial intelligence, and other factors in driving international entrepreneurship. It explores the determinants and network effects that shape

international business strategies while also considering the Uppsala model's influence and the platforms' role in facilitating international business activities.

The sixth cluster, depicted in a light blue shade in Figure 5, revolves around the central concept of entrepreneurial orientation. It includes secondary items such as ventures, market-entry, management research, digital media, export performance, impact, SMEs, and services. This cluster highlights the significance of fostering an entrepreneurial mindset within organizations, driving innovative and proactive approaches. It explores various aspects, such as the creation of new ventures, strategies for entering new markets, the role of research in guiding management decisions, the influence of digital media on entrepreneurial activities, the impact of entrepreneurial orientation on export performance, and the vital role of SMEs in the service sector.

The seventh cluster, depicted in orange in Figure 5, centers around the concept of information. This cluster highlights the crucial role of information in the digital age and emphasizes the importance of effectively leveraging information resources to enhance performance, drive innovation, and improve strategies. It signifies the significance of information systems, data analysis, and knowledge dissemination in contemporary business contexts.

Conclusions

This bibliometric analysis focused on four key concepts: internationalization, business strategies, digital technologies, and digital transformation. By exploring the interrelationships and implications of these concepts, this analysis provides valuable insights into the dynamics of the digital landscape and its impact on organizational processes and strategies.

The study underscores the pivotal role of digital technologies, such as AI, blockchain, and cloud computing, in enabling and supporting digital transformation. These technologies offer opportunities to streamline processes, optimize decision-making, enhance collaboration, and confidently navigate international markets. Furthermore, the analysis reveals a close relationship between digital technologies and internationalization efforts. Digital tools allow organizations to expand beyond domestic borders, adapt to global market dynamics, and capitalize on international business opportunities.

Digital transformation has transformative effects on various aspects of organizations, including business models, strategies, innovation, and value creation. This emphasizes the need for businesses to continuously evolve and adapt to the digital landscape to thrive in today's dynamic environment.

The study also highlights the critical role of information and knowledge management in the digital age. Effective utilization of information resources, data analysis, and knowledge dissemination are essential for driving performance, fostering innovation, and making informed strategic decisions.

Fostering an entrepreneurial mindset within organizations is crucial, as the analysis emphasizes. Entrepreneurial orientation drives proactive approaches, market entry strategies, and the success of SMEs in internationalizations in the last years.

Recognizing the interconnectedness of markets, the study underscores the importance of organizations adapting to globalization. Digital technologies play a significant role in facilitating international business activities, exploring new markets, and leveraging platforms for growth.

The current endeavor's main limitation refers to presenting facts and figures without going deeper into content analysis. Therefore, future research on this topic should study the theoretical and empirical developments on the topic more in-depth, beyond bibliometric reports.

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