

INTERNATIONALIZATION ECOSYSTEMS: IN SEARCH OF A NEW THEORETICAL FRAMEWORK

JOÃO FLORÊNCIO DA COSTA JÚNIOR

UNIVERSIDADE FEDERAL DO RIO GRANDE DO NORTE (UFRN)

DINARA LESLYE MACEDO CALAZANS

UNIVERSIDADE FEDERAL DO RIO GRANDE DO NORTE (UFRN)

AFRÂNIO GALDINO DE ARAÚJO

UNIVERSIDADE FEDERAL DO RIO GRANDE DO NORTE (UFRN)

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INTRODUCTION

Internationalization is conceptually presented in the specialised literature as the process of increasing involvement in international markets, which can take place in many different forms such as foreign direct investment (FDI), joint ventures, IPOs, technology exchange and exports (Zahoor, Al-Tabbaa, Khan & Wood, 2020; Wentrup, Nakamura & Ström, 2020; Johanson & Vahlne, 2009, 1990, 1977). As such, it is a phenomenon that encompasses different types of organizations, businesses from small and medium enterprises (SMEs) to multinational enterprises (MNEs), universities, technology centres, government agencies and even several representatives from civil society, embracing local and international actors in a complex, multifaceted and ever-evolving ecosystem (Costa, Cavalcanti, Fernandes & Araújo, 2022; Luo, 2021; Johnson, Dahl & Mariussen, 2019; Sekliuckiene, Sedziniauskiene & Viburys, 2016; Distefano, Gambillara & Di Minin, 2016; Covi, 2016). Trade liberalization, digital business models and other significant technological innovations, easy access to FDI, the growing pressure for business process outsourcing (BPOs) on a global scale, easy flow of communication and social media, and several other factors have led to the stage in which internationalization is a key driver for business growth and competitiveness (Henn et al., 2022).

The expansion of the internationalization phenomenon leads to the notion of a global business ecosystem – a network of organizations located in different regions of the world, some forming large clusters, all interdependently connected in the process of producing and delivering products, technologies and services to a global market creating global value (Luo, 2021; Johnson, Dahl & Mariussen, 2019). Such ecosystems are known to increase competitiveness through networking with domestic and international partners, knowledge sharing and intercultural development, which leads to higher levels of entrepreneurial activity and innovation within and without regional, national and international organizations (Henn et al., 2022; Tekin, Ramandani & Dana, 2021; Odei & Stejskal, 2020).

Moore (1993) introduced the term ecosystem into the business literature, referring to the agglomeration of organizations with coevolved capabilities, creating innovation and value through competition and cooperation (Hemmer et al., 2019). The concept was then perfected to encompass what was perceived as their key purpose and results, taking into account that every ecosystem is uniquely different, such as innovation ecosystems, knowledge ecosystems, platform ecosystems and entrepreneurial ecosystems (Tippmann et al., 2023, Van Schijndel, 2019; Schafer & Henn, 2018).

Thus, understanding the mechanisms through which different types of business ecosystems function and thrive and how to optimize and replicate them are vital for socio-economic development, drawing the interest of policy-makers, academics, practitioners and a broad range of other stakeholders not only from large corporations, but also from SMEs. Competition and cooperation occur not only amongst different companies, but from whole ecosystems, including cities and nation states, focusing on raising financial capital, FDI, infrastructure development, place branding, protection of gastronomy, tourism of experiences or traditions, and attraction of cultural events in order to create geographical hubs of innovation, entrepreneurial activity, technology development and business internationalization (Roig, Sun-Wang & Manfredi-Sánchez, 2020; Wentrup, Nakamura & Ström, 2020; Van Schijndel, 2019; Bradley, Durufle, Hellman & Wilson, (2019).

Further in this context, digital technology plays a key role, as it allows for the entrepreneurial activity to be extended to distant geographic markets, being characterized by intangible flows of data and information, access to free products and services, marginal cost reductions, instant access to knowledge worldwide, joint development operations beyond

domestic boundaries, and considerable resources availability for the development of digital infrastructure, which places great pressure on international business theorists and some long-held assumptions about the global business environment (Kolagar, Reim, Parida & Sjödin, 2022; Wentrup, Nakamura & Ström, 2020; Nambisan, Zahra & Luo, 2019; Knight & Liesch, 2016).

The global economy demands global and regional business ecosystems, which may represent further challenges to the global south and other emerging markets (Buyukbalci & Dulger, 2022; Wentrup, Nakamura & Ström, 2020; Ray, Kathuria & Kumar, 2020) that, in spite of being perceived as highly entrepreneurial, face severe limitations due to their informal economy, infrastructure restrictions, weak institutions, lack of complementary assets, and the often reduced collaboration between university and industry (Henn et al., 2022; Corsi, Feranita, Hughes & Wilson, 2022).

Even though several studies focus on the correlation between internationalization, internationalization support and overall company performance as alerted by Theodoraki & Catanzaro (2021), there remains, nonetheless, considerable gaps in the specialised literature that deals with business ecosystems, specifically focusing on internationalization and how different entrepreneurial ecosystems surpass geographic boundaries linking with other relevant ecosystems through global networking beyond those connecting companies to product markets only (Rong, Kang & Williamson, 2022; Hult, Gonzalez-Perez & Lagerström, 2020; Schafer & Henn, 2018; Sørensen & Hu, 2014).

Given not only the relevance but the considerable longitudinal cut of the conceptual works related to internationalization in its many forms (e.g. Luo, 2021; Hult, Gonzales-Perez & Lagerström; 2020; Santangelo & Meyer, 2017; Knight & Liesch, 2016; Axinn & Matthyssens, 2002; Johanson & Vahlne, 1990; Williamson, 1981; Dunning, 1977), it stands to reason that the idea of an ecosystem analysis focused on internationalization may deserve further attention from academia and practitioners alike, as it may have the potential to make an scholarly impact in academic research, as long as it may be clear, compelling and contributes towards new theoretical perspectives in internationalization (Wickert et al., 2021).

Thus, the present work, through a systematic literature review (Denyer & Tranfield, 2009) and thematic analysis (Guest, MacQueen, & Namey, 2012; Boyatzis, 1998), aims to study the concept of internationalization ecosystems to assess the feasibility of a new theoretical framework (Gerring, 2001) to explain their nature, uniqueness and dynamics, in order to integrate an ecosystemic perspective into the modern International Business (IB) theories.

THEORETICAL FRAMEWORK

With ontological roots that traces back to the Biological Sciences, the concept of ecosystems refers primarily to biotic (living organisms) and abiotic (physical environment) factors, their dynamics and interdependence, which was adapted to the idea of business environment in order study and explain the co-effect and co-evolution of organizations and their external environment, that is, how different actors, both institutions and individuals, in a non-centrally organized economic community, but rather through informal arrangements, co-exist, thrive, innovate, cooperate and compete (Hewett et al., 2022; Velt, Torkkeli & Saarenketo, 2018; Rasmussen & Petersen, 2017; Moore, 1993).

The business ecosystem concept spreads beyond the traditional idea of clusters, marketing ecosystems, business networks or even global value chains; including other players who are not usually taken into account in these traditional views, characterised by the nonlinearity of relationships in value-creating transactions, such as social networks, local communities, the judiciary, regulatory authorities, research institutions, civil society representatives and other meta-organizations, consisted of legally autonomous entities (Cha,

Kotabe & Wu, 2023; Hewett et al., 2022; Rong et al., 2018; Parente, Geleilate & Rong, 2018; Zalan, 2018).

The ecosystem notion is accepted by several authors as an appropriate paradigm to understand dynamics of business development and different levels of interactions in a market economy (e.g. Cha, Kotabe & Wu, 2023; Rong, Kang & Williamson, 2022). However, it can be perceived from several different perspectives, such as entrepreneurial ecosystem (e. g. Ferreira, Fernandes & Veiga, 2023; Theodoraki & Catanzaro, 2021; Schafer & Henn, 2018); innovation ecosystem (e.g. Tippmann et al., 2023; Gawel, 2021; Odei & Stejskal, 2020; Prokopenko, Emerenko & Omelyanenko, 2014); digital ecosystem (e.g. Nambisan, Zahra & Luo, 2019; Yonatan, 2017) and several other standpoints focused on the dynamics and functions of a complex, multifaceted and interdependent multi-system that span across different industries, geographies and cultures (Tippmann et al., 2023; Moore, 1993).

Ecosystems are constantly evolving, varying considerably amongst nations and industries, due to the different relationships amongst its institutions, the level of competitiveness, the type of infrastructure, the businesses' life cycles, and also cultural specificities (Parente, Geleilate & Rong, 2018; Moore, 1993). Notwithstanding the importance given in the IB literature to international networking formation and configuration for the internationalization process, there remain several knowledge gaps when it comes to international ecosystem interdependence, specifically with digital businesses (Kolagar, Reim, Parida & Sjödin, 2022; Parente, Geleilate & Rong, 2018, Knight and Liesch, 2016).

Entrepreneurial Ecosystem

In order to understand economic, cultural and social developments in entrepreneurship, the concept of entrepreneurial ecosystem was rapidly adopted in the specialised literature (Ratten, 2021; Audretsch & Belitski, 2017). The concept encompasses the dynamic entrepreneurial interactions amongst different layers of factual or potential actors, organizations, institutions and formal as well as informal business processes co-existing and evolving simultaneously in a given region (Gawel, 2021; Stolze & Sailer, 2021; Ratten, 2021; Schafer & Henn, 2018) focused on the creation, growth and scale of new businesses, diversifying economic bases and promoting economic, technological and social development (Zahra & Hashai, 2022) on micro, meso and macro level (Ferreira, Fernandes & Veiga, 2023).

The entrepreneurial studies have been progressing rapidly varying considerably in scope, but with a single purpose to understand what actors and processes truly constitute an entrepreneurial ecosystem. Amongst the key areas of interest in the studies on entrepreneurial ecosystem, internationalization is already being explored on its own or related to other phenomena (Ferreira, Fernandes & Veiga, 2023; Theodoraki & Catanzaro; 2021). The internationalization entrepreneurial perspective opens a new perspective regarding entrepreneurial ecosystems, bringing the concept of global culture within its cannon, which leads to higher opportunity recognition and network embeddedness (Ferreira, Fernandes & Veiga, 2023; Henn et al., 2022). The internationalization perspective on entrepreneurial ecosystem may involve studies on *born globals*, large multinational organizations (MNEs) and cross-border platforms; however, a systematic approach on entrepreneurial internationalization is still vague within the extant literature, especially regarding internationalization support ecosystems (ISE) and other forms of transnational bridges between entrepreneurial ecosystems (Hemmert et al., 2022; Theodoraki & Catanzaro, 2021; Van Schijndel, 2019).

In the specialised literature, entrepreneurial ecosystems are perceived as evolving several domains, or expertise areas, that are necessary to the development, growth and scaling of new business: i) policy (legislations and government incentives); ii) culture (a pro-entrepreneurial view amongst citizens and civil society); iii) human capital (including entrepreneurial talent and specialised labour formation); iv) finance (access to different forms

of financing, including angel investors, venture capital funds and private equity); v) markets (ecosystem orchestration, networks and partnerships at different levels); vi) entrepreneurial support structure (the overall business infrastructure and professional support available including entrepreneurial connectors); vii) entrepreneurial discovery process - EDP (the acquisition of more complete and accurate knowledge through joint interactions; and viii) local context (the specificities that turn each ecosystem unique) (Ferreira, Fernandes & Veiga, 2023; Tekin, Ramandani & Dana, 2021; Fakhreldin, 2021; De Cock, Andries & Clarysse, 2021; Hemmert et al., 2019; Johnson, Dahl & Mariussen, 2019; Audretsch & Belitski, 2017).

Innovation Ecosystem

The concept of innovation ecosystem is closely linked with entrepreneurship, as entrepreneurs are a fundamental element of innovative economic systems (Ratten, 2021; Prokopenko, Emerenko & Omelyanenko, 2014). Innovation ecosystems can be perceived as collaborative arrangement for the open creation, dissemination and utilisation of knowledge and technology amongst closely linked actors, including organizations, businesses, research centres, policymakers and, to a considerable extent, other civil society representatives (Tippmann et al., 2023; Costa, 2022; Gawel, 2021; Sekliuckiene, Sedziniauskiene & Viburys, 2016).

Alike entrepreneurial ecosystems, innovation ecosystems present several different interdependent domains studied in the specialized literature: i) Science & technology (involves the outputs of higher educational institutions – HEIs); ii) venture capital (concerning financial resources and business competencies within the ecosystem); iii) innovative infrastructure (including business incubators, accelerators, technology parks, innovation centres as well as the services provided by different business to support innovative organizations); iv) innovation demand (beyond the consumer market, also involving technology-oriented organizations and intellectual property); v) legislative and legal framework (the legal conditions to improve innovation through ecosystems participants); vi) human capital (innovation oriented managers, executives and engineers with competence to operate in an ecosystem with a large number of collaborations) (Costa, 2022; Roig, Sun-Wang & Manfredi-Sánchez, 2020; Ray, Kathuria & Kumar, 2020; Odei & Stejskal, 2020; Rasmussen & Petersen, 2017; Prokopenko, Emerenko & Omelyanenko, 2014).

Innovation systems have been scrutinised in the specialised literature, specially the arrangements amongst key players that is known as the triple helix – TH framework (Etzkowitz et al., 2019; Champenois & Etzkowitz, 2018; Sørensen & Hu, 2014). The TH framework emphasizes the importance of innovation as economic development engine, increasing the demand on universities, industries and government representatives to work synergistically in order to bring measurable economic, social and technological results on a global scale given that successful international entrepreneurship require multiple relationships (Baier-Fuentes, Guerrero & Amorós, 2021; Sørensen & Hu, 2014).

The core element on the TH framework is a series of trans-institutional agreements as well as the promotion of a mindset focused on knowledge-based collaboration amongst universities, industries and government, not centred on boundaries between producers and users of knowledge, but rather on strategies to increase synergy and facilitate institutional cooperation towards open innovation (Ferrer-Serrano, Latorre-Martinez & Fuentelsaz, 2021; Etzkowitz et al., 2019; Champenois & Etzkowitz, 2018; Sørensen & Hu, 2014).

Further to the concept of triple helix and alike the entrepreneurial and business ecosystem perspectives, authors agree that it is necessary to think of a model to include a fourth helix – civil society – which is conceived as an essential player, given that an open innovation culture is born within civil society, directly influencing the traditional interplay between

university, industry and government in knowledge based economies (Ikram, Su, Fiaz & Rehman, 2018; Distefano, Gambillara & Di Minin, 2016).

As with the concept of entrepreneurial ecosystems, innovations ecosystems tend to grow into the international sphere, given that achieving domestic innovation with domestic partners seems more unreliable, as it is important to consider networking with ever-heterogeneous sources of technical, managerial and tacit knowledge, promoting technology exchange from a global level; innovation seems to be improved through cross-border collaborations and partnerships between the scientific community, public institutions, the private sector and civil society; thus, the TH model and its variants are essential to understand the dynamics and formation of internationalization ecosystems (Costa, 2022; Odei & Stejskal, 2020; Roig, Sun-Wang & Manfredi-Sánchez, 2020; Ray, Kathuria & Kumar, 2020).

Therefore, the Triple and Quadruple Helix concept may also be perceived as an internationalization model, given that it is not only about regional collaborations, but open innovation that may occur on a global scale (Sørensen & Hu, 2014) The internationalization pattern of the helix system, however, is not clear in the literature, as there is no sufficient knowledge body explaining its internationalization process, it may take an incremental path, different to each helix in each region or there might be common strategies for ecosystem internationalization, involving further collaboration amongst the helixes, the model is wide open, and demand significant new studies (Civera, Meoli & Vismara, 2019; Rasmussen & Petersen, 2017; Distefano, Gambillara & Di Minin, 2016; Thurner, Gershman & Roud, 2015).

Digital Platforms and Ecosystem - DPEs

Digital transition and digitization are key driving forces behind globalization and business internationalization, providing businesses innovative ways to enter foreign countries, as more actors are participating in transborder transactions from SMEs to MNEs, including new breeds of micro-multinational companies (Brouthers, Chen, Li, Shaheer, 2022; Luo, 2021; Nambisan, Zahra & Luo, 2019; Sooreea, Damodar, Sharma & Sooreea-Bheemul, 2018), through new and successful platform-based business models that embraces several value chains into a global digital ecosystem (Hewett et al., 2022; Rong, Kang & Williamson, 2022; Ratten, 2021). Such digital ecosystems rely on flexible specialization and large-scale collaboration across organizational, geographical and cultural borders, extending the concept of entrepreneurial ecosystems beyond its geographical limitations through digital conceptualization, being truly open to worldwide participation whilst transforming traditional International Business theories (Ratten, 2021; Nambisan, Zahra & Luo, 2019; Zalan, 2018; Knight & Liesch, 2016).

Digital Platform Ecosystems (DPEs) – encompassing technology platforms, digital transition and servitization, digitization, new and disruptive business models, as well as new strategies for collaboration, knowledge and technology exchange and open innovation – is a pervasive phenomenon that influence the dynamics of any form of business ecosystem, make them more fluid, lively, disruptive and rather unpredictable, affecting directly the phenomenon of internationalization, as new liabilities may emerge, especially the difficulties of integrating ecosystems on an end-to-end manner, which may lead to new levels of competitive advantage (Kolagar et al., 2022; Ciasullo, Montera, Mercuri, Mugova, 2022; Costa, 2022; Yonatany, 2017; Nambisan, Zahra & Luo, 2019; Rong et al., 2018).

Internationalization Ecosystem

The dynamics and processes of business ecosystems in foreign markets are already being studied by IB researchers, focusing on the need for renewal of internationalization strategies (Ray, Kathuria & Kumar, 2020; Parente, Rong, Geleilate & Misati, 2019). However, classic theories seem to have an adaptative or reactive perspective about internationalization,

focused on whether firms should internationalize based on a resource centred perspective that fails to fully address ecosystems dynamics such as demand creation, institutional and cognitive proximity, digital ecosystems, disruptive business models, international market uncertainty, value appropriation, post-entry business ecosystem functioning, and ecosystems integration (Ray, Kathuria & Kumar, 2020; Nambisan, Zahra & Luo, 2019; Knight & Liesch, 2016; Rong, Wu, Shi & Guo, 2015; Axin & Matthyssens, 2002; Williamson, 1981; Dunning, 1977). IB theory also is somewhat elusive when focusing on key aspects and players of the internationalization process within local and global ecosystems, especially new types of ecosystem contributors across convoluted value chains (Rong, Kang & Williamson, 2022; Knight & Liesch, 2016; Johanson & Kao, 2010; Johanson & Vahlne, 2009).

The studies on start-ups, for instance, are focused on the understanding that those organizations tend to cluster at specific geographic locations, with few significant studies being carried out about global ecosystems, even though empirical evidence suggests that globally connected start-up ecosystems have a predisposition to grow faster, presenting a key competitive advantage, especially when high levels of global connectivity is developed early, enabling the ecosystem to access knowledge, financial and human capital on a global scale (Hemmert et al., 2019; Van Schijndel, 2019).

When focusing on born globals, “young, entrepreneurial start-ups that initiate international business soon after their inception” (Cavusgil & Knight, 2015, p. 3), and the entry internationalization process, studies focused on the combination of uncertain market conditions, technology, entrepreneurial dispositions from individuals and markets in multiple countries, but without a clear focus on entrepreneurial elements, especially in the post-internationalization process (Baier-Fuentes, Guerrero & Amorós, 2021; Fakhreldin, 2021; Velt, Torkkeli & Saarenketo, 2018; Simba, 2015; Thurner, Gershman & Roud, 2015).

The IB, entrepreneurship and innovation literature have already presented the idea of the internationalization process as a sub-ecosystem, which supports the internationalization process whilst reinforce the ecosystem broad functioning, being labelled internationalization support ecosystems, it involves public and private actors, organized at regional level but geared towards international integration through effective internationalization strategies (Theodoraki & Catanzaro, 2021; Luo, 2021; Johnson, Dahl & Mariussen, 2019; Audretsch & Belitski 2017). However, studies on internationalization ecosystems are still incipient, with no in-depth knowledge about the influence of such design on the internationalization process, poor dimensioning of international networking configuration and the usual challenges presented to understand some of the most complex actors and processes such as start-ups, born globals, early internationalization and liability of ecosystem integration (Yonatany, 2017; Rasmussen & Petersen, 2017; Knight & Liesch, 2016; Rong et al., 2015).

METHODOLOGY

The work was divided into two stages: A Systematic Literature Review (Denyer & Tranfield, 2009) and a Thematic Analysis (Guest, MacQueen, & Namey, 2012; Boyatzis, 1998) designed to achieve a theoretical saturation capable of “linking similar concepts and processes in different stances, experiences, contexts and events” (Morse, 2018, p. 1398), providing collective insights and shared knowledge through theoretical synthesis in a pragmatism way (Van Aken, 2004).

The SLR was carried out to identify in the current literature the different types of research and approaches taken to understand internationalization from an ecosystemic perspective, in order to determine its dynamics, actors and specificities. A search by topic was conducted on Science Direct, Scopus and Web of Science on June, 2022 and then again on January, 2023. Details about the research protocol can be seen on Table 1.

Table 1

Research Protocol

Protocol	Details
Database	Science Direct; Scopus; Web of Science
Search criteria	Article title, Abstract and Keywords
Keywords	Internationalization AND Ecosystem / Internationalization AND "Triple Helix" / Internationalization AND "Quadruple Helix"
Subject Area	Business Management and Accounting (Scopus and Science Direct); Economics, Econometrics and Finance (Scopus and Science Direct); Management (Web of Science); Economics (Web of Science)
Document Type	Peer Reviewed Articles
Year	Open
Language	Any
Number of articles (excluding duplicates)	134
Qualitative selection criteria	Articles focusing on internationalization and ecosystems, exploring, directly or indirectly, the internationalization conditions, drivers, strategies, operations or theoretical foundations .
Number of articles (excluding duplicate articles)	67

The Thematic Analysis was carried out through the development of *a priori* categories based on the data collected on the literature review (Bardin, 2011), following an adaptation of the protocol presented by Guest MacQueen, & Namey (2012) as well as Boyatzis (1998), starting with a) the familiarization of the authors with the data; b) preliminary assignment of codes to the data to describe the content; c) searching for patterns or themes in the material; d) review of themes; e) definition of themes; and f) the final development of the research report.

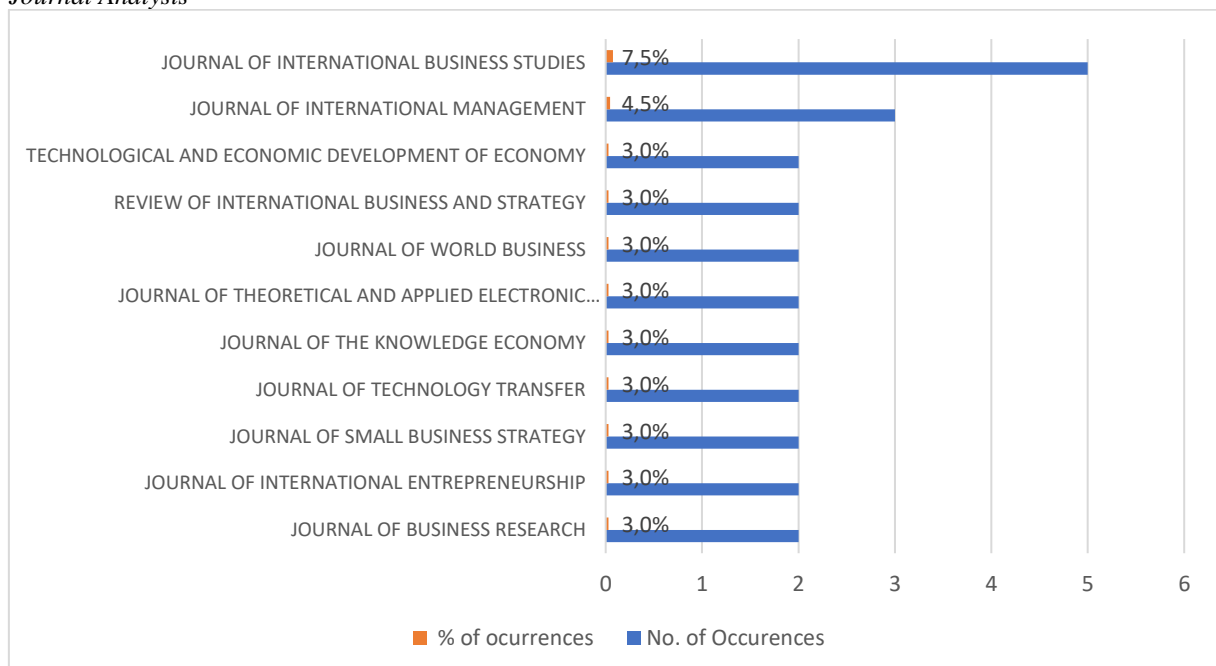
RESULTS AND DISCUSSIONS

Subsequent to the literature review, the results are presented in the following themes:

Journals, authors and publication date analysis

The 67 articles analysed were found in a total of 52 different journals. Details about the journals with largest number of articles analysed can be seen on Figure 1.

Figure 1
Journal Analysis

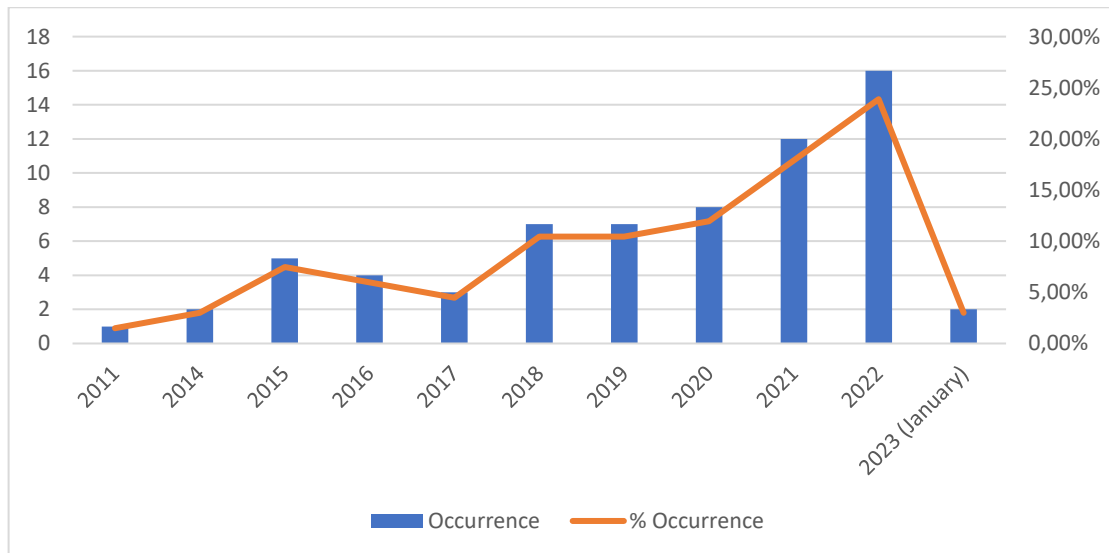


It was noticed that there are a large variety of periodicals (52 in total) with relevant articles fitting the research criteria. Few periodicals presented a considerable number of relevant articles, except for the *Journal of International Business Studies*, with five articles or 7,5% of the total and *The Journal of International Management*, with three articles, or 4,5% of the total. An explanation for this scenario may derive from the fact that, albeit internationalization is a largely explored theme from many different angles across a considerable timespan (e.g. Ferreira, Fernandes & Veiga, 2023; Costa, 2022; Luo, 2021; Hult, Gonzales-Perez & Lagerström; 2020; Santangelo & Meyer, 2017; Knight & Liesch, 2016; Johanson & Kao, 2010; Johanson & Vahlne, 2009, 1990, 1977; Axinn & Matthysens, 2002; Oviatt & McDougall, 1994; Williamson 1981; Dunning, 1977); internationalization ecosystem seems to be still an incipient topic, since the majority of articles studied dealing with that thematic focus primarily on entrepreneurial ecosystems (e.g. Zahra & Hashai, 2022; Gawel, 2021; Stolze & Sailer, 2021; Ratten, 2021; Theodoraki & Catanzaro, 2021); business ecosystems (e.g. Tippmann et al., 2023; Rong, Kang & Williamson, 2022; Hult, Gonzales-Perez & Lagerström, 2020; Nambisan, Zahra & Luo, 2019), innovation ecosystems (e.g. Roig, Sun-Wang & Manfredi-Sánchez, 2020; Prokopenko, Emerenko & Omelyanenko, 2014), and to a lesser, albeit growing extent, platform ecosystems (Tippmann et al., 2023, Cha, Kotabe & Wu, 2023; Nambisan, Zahra & Luo, 2019). Internationalization, however, is seen as an essential element in any of those studies, which gives merit to a research focused on internationalization ecosystems.

In total, 175 authors appeared in the 67 articles analysed, an average of 2,6 authors per article. However, only 9 authors, or 5% of the total had more than one publication (based on the current research protocol). All other authors appear only once in the research.

Figure 2 displays the publication years since 2011, presenting a considerable growth curve, especially between the years of 2018 and 2022.

Figure 2
Publication years



Based on Figure 2, it seems that there is a possibility that internationalization ecosystem related themes, despite their incipience in scientific literature, are growing in relevance, showing the contours of a new conceptual framework or theory (Tatarinov, Ambos & Tschang, 2022; Rong, Kang & Williamson, 2022; Theodoraki & Catanzaro, 2021; Nambisan, Zahra & Luo, 2019; Velt, Torkkeli & Saarenketo, 2018).

Research Objectives Analysis

Following a thematic analysis, Table 2 presents the categories based on the different objectives found in the selected articles; the subthemes related to the main category analysed as well as the percentage of articles with objectives within those categories.

Table 2

Objectives: Thematic Categories

Objectives	Thematic Categories	Subthemes	%
Influence of different factors or players on the entrepreneurial and/ or internationalization ecosystem		Networking, supply chain and knowledge sharing	60%
		Entrepreneurial and/or local ecosystems internationalization	
		Tangible and intangible resources	
		Digital transition, digitalization and platforms	
		U-I Dynamics, TH model and academic entrepreneurship	
Theoretical/ conceptual model or framework development in entrepreneurial and/or internationalization ecosystem		Business incubators and accelerators	37%
		Internationalization performance, scaling or technologies	
		Marketing ecosystem orchestration, sharing economy and strategic resources for internationalization	
		Barriers, challenges and liabilities within internationalization ecosystems	
		Entrepreneurial process and internationalization	
Government and public policy		U-I Dynamics, TH model and academic entrepreneurship	4,5%
		Evaluation of theoretical models and their evolution	
		Cluster policies	
		Mergers & Acquisitions policies	
		Cross-border venture capital investment	

The first category reflects the search for understanding the different factors, players or phenomena within and without the business ecosystems that are related directly or indirectly with internationalization. The studies may have focused on isolated players on entire ecosystems, but they are predominantly case studies (see Table 3) It is important to notice that objectives related to entrepreneurial ecosystem are the most predominant within the current research. It seems that a framework for internationalization ecosystem has to be grounded into an international entrepreneurial perspective, drawing the relevant empirical and theoretical elements (see Table 4).

Networking and knowledge sharing are fundamental aspects of that category, including university-industry dynamics as well as the triple and quadruple helix perspective, which were placed into distinct subcategories only to distinguish the more academic oriented elements of networking, since they are fundamentally intertwined (Baier-Fuentes, Guerrero & Amorós, 2021; Santoro et al., 2021; Ikram et al, 2018; Roigas, Mohnen & Varblane, 2018; Distefano, Gambillara & Di Minin, 2016; Sørensen & Hu, 2014; Sharif & Baark, 2011).

It is relevant to notice the profound relevance of the digital economy at the very core of that category. Several forms of internationalization and advanced entrepreneurial ecosystem perspectives are related to the digital economy scenario (Hewett et al., 2022; Rong, Kang & Williamson, 2022; Ratten, 2021), which implies that no framework on internationalization ecosystem can be complete or even useful without considering the digital aspects of modern economy and ecosystems (Kolagar et al., 2022; et al., 2022; Costa, 2022; Nambisan, Zahra & Luo, 2019; Rong et al., 2018).

The second category of objectives encompasses theoretical and conceptual works focused on different aspects of internationalization. That category is quite prominent, given that RSL and bibliographic analysis were the technical procedure most used in the articles analysed (see Table 3). However, those works were not devoid of practical applicability, as it is shown in subcategories focusing on Internationalization performance and scaling, marketing orchestration, barriers to internationalization, the entrepreneurial process and networking, which may point out to a pattern of well-developed pragmatic managerial works, balancing

rigour and relevance in relation to managerial knowledge as recommended by Wickert et al., (2021).

Research Methods Analysis

The research methodologies were analysed and grouped into three categories: research type, method and technical procedure. Further details can be seen on Table 3:

Table 3

Research nature and instruments

Research type	Total	Research Methods	Total	Technical Procedures	Total
Descriptive	51%	Quali-Quanti	15%	Bibliographic and Documental Research	22%
Explanatory	6%	Qualitative	66%	Case Study	22%
Exploratory	34%	Quantitative	19%	Multicase Study	12%
Exploratory & Descriptive	9%			Regression Analysis	7%
				Surveys	6%
				In-depth interviews and other qualitative Methods	4%
				Systematic Literature Review	3%
				Panel data	3%

One key aspect observed is the considerable number of descriptive researches, over 50% of all studies. Considering Saunders, Lewis & Thornhill, (2016), descriptive research is known to be rather useful to identify characteristics, trends, patterns and categories of persons, events or situations, especially when there is not a robust amount of knowledge about the research topic or problem, which leads to the belief that studies focused on internationalization ecosystem, being still in the cradle, demand an overall understanding of the phenomena, before it is possible to establish cause and effect relations or developing a robust theoretical/conceptual perspective. That observation is reinforced by the fact that 66% of the studies were of qualitative nature, focused on gaining insight about persons or phenomena in order to make sense of reality, developing explanatory models and theories by which the theoretical foundations of the current study object may be constructed or re-examined.

Ferreira, Fernandes & Veiga (2023) argue that given that entrepreneurial ecosystems are an evolutive phenomenon that encompass concepts from different streams of business literature and are further convoluted due to the presence of multiple stakeholders with fluid roles, the theme is very relevant, however, most studies remain conceptual, with few empirical studies and even fewer studies with quantitative methodologies. Taking into account that internationalization ecosystem is a concept still in formation, but has considerable epistemological ties with entrepreneurial ecosystem, it is likely that it will be faced by the same challenges, demanding the same approaches to further investigate its nature in order to build robust and impactful research (Wickert et al., 2021).

Those impressions are further reinforced when analysing the major technical procedures found in the selected works. 22% were bibliographical and documental and, most importantly, close to 35% were predominantly single or multiple case studies. Despite the visible lack of studies focusing on internationalization ecosystems, there are considerable conceptual studies as well as empirical ones, albeit isolated and focused on describing different angles of the internationalization ecosystem phenomenon. These studies may compose a robust conceptual/empirical basis for the development of a framework on internationalization ecosystem as they already have identified several main variables, components, themes and issues within and around the topic.

Key Theoretical Background

It was possible to identify seven key Theoretical background categories in the works analysed. The identification of the categories followed the thematic analysis and content approach presented by Guest, MacQueen, & Namey (2012); Bardin (2011) and Boyatzis, (1998), also observing other relevant SLR and theoretical works analysed in the current studies (e.g. Tippmann et al., 2023; Hewett et al., 2022; Brouthers, Chen & Shaheer, 2022; Zahoor et al., 2020; Hult, Gonzalez-Perez & Lagerström, 2020; Nambisan, Zahra & Luo, 2019; Santangelo & Meyer, 2017). Each category found is composed by a vast conceptual framework that is conceptually and empirically interconnected, mapping the theory landscape (Higgs & Trede, 2010; Denyer & Tranfield, 2009). Tables 4 presents the key theoretical themes alongside their subthemes and frequency found in the studied articles.

Table 4
Theoretical Themes and Subthemes

Key Theoretical Background	Conceptual Framework	%	
Internationalization Business Theory, Strategy and Operations	Internationalization performance Business growth Scaling ecosystems Cross border strategy Marketing ecosystem orquestration International relationship marketing Entry modes Family business	Uppsala model Born globals Eclectic paradigm Collaborative internationalization Global governance Reverse-internalization theory International production network (IPM) Global supply chain/network (GSN) theories	67%
Entrepreneurial Ecosystems	Small open economies acquisitions Local support ecosystems Economic resilience Geographic entrepreneurship Entrepreneurship theory Institutional entrepreneurial activity Academic entrepreneurship/ spin-offs Technology-based university spin-offs (T-USOS) Entrepreneurship policy	Higher education institutions' third mission Mixed embeddedness theory Sports entrepreneurship Returnee entrepreneurship Entrepreneurial discovery process (EDP) Support systems International/ transnational entrepreneurship Local collective entrepreneurship	37%
Innovation: Strategy and Operations	Triple Helix University - Industry collaboration/ cooperation Network theory Open innovation Innovation networks Innovation ecosystems	Interorganizational network Lean start-ups Quadruple Helix National Innovative Systems Design Theory Research technology organizations (RTOs)	33%
Digital Ecosystems, platforms and transition	Digital entrepreneurial ecosystems Digital (platform) ecosystems Digital Internationalization 4.0 Technologies Digital transformation Omnichannel strategy Digital solutions Digital servitization	Digital Firms Digital economy e-commerce and e-marketing Digitization Digital entrepreneurship Digital business models Blockchain fundamentals Social networks	22%
Knowledge Management	Hayek's knowledge economy approach Sharing economy Knowledge transfer Knowledge sourcing strategy	Transnational learning Knowledge spillover Absorptive capacity Rapid knowledge development model	16%

Organizational, Behaviour & Governance	Organizational design Social cognitive theory of motivation Imprinting Stakeholder theory	Regional governance Network approach theory Evolutionary theory Co-evolutionary theory	13%
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Given the internationalization orientation taken on this study, it is reasonable to expect that the key theoretical framework is about IB theories in their many forms. 67% of the articles addressed the theme directly, centring their analysis in the vast extant theoretical body on the phenomenon. It is interesting to notice that from classical thematic revisions about the Uppsala Model (e.g. Hult, Gonzalez-Perez & Lagerström, 2020) or the Eclectic Paradigm (e.g. Parente, Geleilate & Rong, 2018) also involving the challenges presented with born global organizations (e.g. Parente, Geleilate & Rong, 2018; Velt, Torkkeli & Saarenketo, 2018; Zalan, 2018), global supply chain and network theories (e.g. Luo, 2021; Simba, 2015), the role of scaling ecosystems (e.g. Tippmann et al., 2023) and the need for marketing ecosystem orchestration (e.g. Hewett et al., 2022); it is possible to perceive internationalization as an ever-evolving phenomenon, sometimes difficult to replicate, as it is influenced from individual and local characteristics, which demands constant studies to adapt the extant theoretical framework (e.g. Kolagar et al., 2022; Theodoraki & Catanzaro, 2021; Yonatan, 2017; Sekliuckiene, Sedziniauskiene & Viburys, 2016; Covi, 2016). A key element in the theoretical background is the fact that IB theories have not dived deeply into the internationalization ecosystem perspective yet, which opens a whole new venue of research opportunities.

Further to the IB theory, the most recurrent theoretical body presented in the literature review was related to entrepreneurial ecosystems, 37% of the studies focused on this theme (e.g. Ferreira, Fernandes & Mota Veiga, 2023; Henn et al., 2022; Tekin, Ramandani & Dana, 2021), from different perspectives such as entrepreneurship and innovation through T-Usos (e.g. Rodríguez-Gulías, Fernández-López, Rodeiro-Pazos, 2016), academic spin-offs (e.g. Civera, Meoli & Vismara, 2019), HEIs third mission (e.g. Stolze & Sailer, 2021), digital businesses (e.g. Ratten & Thompson, 2020), international cooperation (e.g. Tekin, Ramandani & Dana, 2021); SMEs internationalization (e.g. Fakhreldin, 2021), cluster strategy (e.g. Ikram et al., 2018) and Start-ups internationalization strategy (e.g. Gawel, 2021).

Entrepreneurship and entrepreneurial ecosystems are presented from diverse angles, from large organizations to SMEs in local and transnational collective entrepreneurial ecosystems. It is increasingly difficult to distinguish entrepreneurial ecosystems from internalization initiatives as well as innovation strategies, it seems that innovative cross-border initiatives are the core of entrepreneurial ecosystems (e.g. Henn et al., 2022; Theodoraki & Catanzaro, 2021; Sørensen & Hu, 2014), which indicates that any attempt to develop an internationalization ecosystem analysis or framework will have to embrace entrepreneurial ecosystems as one of its fundamental elements.

The TH model and its variants seems to be one of the most complete models to explain ecosystem dynamics towards innovation, involving RTOs, National Innovative Systems, different levels of cooperation and interorganizational networking. (e.g. Baier-Fuentes, Guerrero & Amorós, 2021; Distefano, Gambillara & Di Minin, 2016; Sørensen & Hu, 2014). The TH Model also presents a robust theoretical and pragmatic model to support internationalization, not just to bring producers close to consumers, as in other networking models, but also to increase inter-ecosystem cooperation, raising the internationalization concept beyond market relationship to open innovation ecosystems involving actors in academia, industry, government and civil society (e.g. Baier-Fuentes, Guerrero & Amorós, 2021; Van Schijndel, 2019). It seems that is not conceptually feasible to develop an internationalization ecosystem framework without taking into account the TH model and its variances.

Technology, specifically digital platforms, plays an essential role into the internationalization process of industries and whole entrepreneurial ecosystems (Ferreira, Fernandes & Veiga, 2023; Cha, Kotabe & Wu, 2023). Entrepreneurial ecosystems and innovation ecosystems are profoundly interlinked with digital technologies and platforms (Buyukbalci & Dulger, 2022; Nambisan, Zahra & Luo, 2019), and the internationalization process has become more dynamic and ubiquitous, due to new technologies, to a point in which it is hard to conceive internationalization as a distinct phenomenon from digital transition, digitization and digital platforms.

Another fundamental aspect regarding internationalization ecosystems which is interlinked with all other key theoretical background present is the emphasis on knowledge management, knowledge transfer and sourcing strategy as well as organization learning and networking (e.g. Ratten, 2021; Stolze & Sailer, 2021; Ferrer-Serrano, Latorre-Martinez & Fuentelsaz, 2021; Thurner, Gershman & Roud, 2015). Internationalization is presented as a learning process which can be optimized in an ecosystem that facilitates knowledge transfer and spillovers, both local and transnational, occurring mainly through successful networking.

Research Geography and Scope

Mapping the geography and scope of the studies analysed is vital for the literature review (Saunders, Lewis & Thornhill, 2016, Denyer & Tranfield, 2009). Table 5 presents the countries/regions in which the studies took place as well as the universe analysed within those regions.

Table 5
Research countries and universe analysis

Country/ Region	Universe of the Study	Citation
Argentina	Agtech sector	Lachman & Lópes (2022)
Asia	Start-ups in Tokyo, Seoul, Beijing, Suzhou (larger Shanghai area) and Chongqing (large industrial city in Southwest China)	Hemmert et al. (2019)
Australia	Sport businesses and organizations	Ratten (2021); Ratten & Thompson (2020)
Belgium	Digital Entrepreneurs	De Cock, Andries & Clarysse (2021)
Brazil	A Chinese manufacturer of medical devices	Pereira & Ogasavara (2022)
BRICs	National Innovation Systems	Distefano, Gambillara & Di Minin (2016)
China	Chinese textile companies	Ikram et al. (2018)
	Danish organizations in China	Sørensen & Hu (2014)
Czech Republic	Eurostat Community Innovation Survey (CIS) -2012 and 2014	Odei & Stejskal (2020)
Denmark	Health care and welfare solution companies	Rasmussen & Petersen (2017)
Egypt	Egyptian SMEs in the manufacturing sector	Fakhreldin (2021)
Estonia	Local Start-ups	Velt, Torkkeli & Saarenketo (2018)
European Union	25 EU countries' companies in the high-tech sector.	Gawel (2021)
	European SMEs' innovation ecosystem	Ferrer-Serrano, Latorre-Martinez & Fuentelsaz (2021)
	Tech Innovative firms in 15 European countries	Roigas, Mohnen & Varblane (2018)
Finland	SMEs in the region of Ostrobothnia.	Johnson, Dhal & Mariussen (2019)
France	Key public and private French internationalization support organizations.	Theodoraki & Catanzaro (2021)

India	Over 250 Indian IT firms	Ray, Kathuria & Kumar (2020)
Israel	Tel Aviv IT entrepreneurial ecosystem	Schafer & Henn (2018)
Italy	SMEs belonging to 11 agro-food consortia	Magni et al. (2022)
	Agri-food SME in Salerno	Ciasullo et al. (2022)
	SMEs within the service and the manufacturing industry	Santoro et al. (2021)
	38 accelerated start-ups from five Italian accelerators	Del Sarto, Isabelle & Di Minin (2020)
	508 Italian academic spinoffs	Civera, Meoli & Vismara (2019)
	Italian SMEs winemakers in the Pesaro-Urbino province	Musso & Francioni (2015)
Lithuania	5 SMEs in the ICT sector	Sekliuckiene, Sedziniauskiene & Viburys (2016)
México	Mexican Innovation and entrepreneurship ecosystem	Baier-Fuentes, Guerrero & Amorós (2021)
Morocco	Digital start-ups	Wentrup, Nakamura & Ström (2020)
Poland	Clusters	Kuberska & Mackiewicz (2022)
Portugal	120 SMEs manufacturing and service firms	Ferreira, Fernandes & Veiga (2023)
	26,154 firms belonging to all sectors of the manufacturing industry	Costa (2022)
Russia	Russian SMEs and Russian-German born-globals.	Turner, gershman & Roud (2015)
South America	35 business entrepreneurship experts from the capital cities of Costa Rica, Peru, Chile, and Argentina	Henn et al. (2022)
Spain	Barcelona's internationalization strategy	Roig, Sun-Wang & Manfredi-Sánchez (2020)
	469 university spin-offs and 469 non-USOs	Rodríguez-Gulías, Fernández-López & Rodeiro-Pazos (2016)
Sweden and Finland	26 industrial SMEs in the manufacturing industry	Kolagar et al. (2022)
Taiwan	6 IC design service companies	Siripitakchai, Miyazaki & Ho (2015)
Turkey	5 Digital economy ventures	Buyukbalci & Dulger (2022)
Turkey and Balkan countries	Entrepreneurship index scores of Turkey and Balkan countries	Tekin, Ramadani & Dana (2021)
Ukraine	National innovation ecosystem	Prokopenko, Eremenko & Omelyanenko (2014)
United Kingdom	The UK Climate Impacts Programme (UKCIP)	Corsi et al. (2022)
	Five biotechnology firms and three key science research institutions	Simba (2015)
United States	11 Polish Start-ups in the Silicon Valley	Bartlett & Mroczkowski (2019)
	Biotech companies in Northern California	Sooreea et al. (2018)
United States and China	Digital industries	Rong, Kang & Williamson (2022)
Worldwide	35 individuals from 16 countries on four continents associated with entrepreneurial ecosystems	Stolze & Sailer (2021)
	Cross-border investing on Europe, Israel, and Canada	Bradley et al. (2019)
	ARM ecosystem partners	Rong et al. (2015)

It is clear that the European Continent, more precisely the European Union member countries, compose the majority of the geography for internationalization ecosystem related studies. It is interesting to notice that the vast majority of the organizations studied they are either digital business or business undergoing a digital transition process (e.g. Rong, Kang & Williamson, 2022; Hewett et al., 2022; Brouthers, Chen, Li, Shaheer, 2022; Luo, 2021; Ratten, 2021; Nambisan, Zahra & Luo, 2019). There are a considerable variety of organization analysed, specifically SMEs, which reinforce the notion of early internationalization and *born globals* and its widespread importance for business development (e.g. Fakhreldin, 2021; Ferrer-Serrano, Latorre-Martinez & Fuentelsaz, 2021; Ray, Kathuria & Kumar, 2020; Johnson, Dhal & Mariussen, 2019, Zalan, 2018). Italy rises as the country with the largest number of studies encompassing start-ups as well as traditional agri-food businesses.

Emerging economies are also widely present in the studies, Argentina, Brazil, China, Mexico, Egypt, India, Morocco, Russia and Turkey are analysed for different types of organizations, including SMES, start-ups, MNEs and other relevant ecosystem actors, there are also studies focused on South America, BRICs and Eastern European countries.

Some of the studies focus closely on the concept of ecosystems in their research universe instead of in specific industries, mainly centred on national innovation systems (Ferrer-Serrano, Latorre-Martinez & Fuentelsaz, 2021; Distefano, Gambillara & Di Minin, 2016, 2016; Prokopenko, Eremenko & Omelyanenko, 2014); public and private internationalization support organizations (Magni et al., 2022; Corsi et al., 2022; Theodoraki & Catanzaro, 2021; Roig, Sun-Wang & Manfredi-Sánchez, 2020); entrepreneurial ecosystems (Henn et al., 2022; Stolze & Sailer, 2021; Baier-Fuentes, Guerrero & Amorós, 2021; Schafer & Henn, 2018); clusters and business ecosystem partnerships (Kuberska & Mackiewicz, 2022; Rong et al., 2015).

Results categories

The results found in each work were analysed vis-a-vis the objectives previously established, in order to identify the essential elements of each contribution and distinguish them from possible accidental or unplanned contributions (Wickert et al., 2021; (Saunders, Lewis & Thornhill, 2016). The current authors strived to place each work in a single category based on their main results. However, some of the works are placed in multiple categories when the contributions are clearly expressed and presented separately in the original work, that is, when it is possible to find different thematic categories (Guest, MacQueen, & Namey, 2012; Boyatzis, 1998). The five results categories found are presented in Table 6:

Table 6

Results Categories

Results Category	Key thematic areas	%
Internationalization ecosystem strategy, operations and performance optimization	Supporting agents and internationalization ecosystems	55%
	SMEs and / or family business internationalization model, strategy and ecosystems	
	Entrepreneurial and internationalization driven networking	
	Entrepreneurial ecosystem structuration, expansion and internationalization	
	International entrepreneurship collaboration/cooperation	
	Innovation ecosystems and internationalization expansion	
	Knowledge sharing and internationalization	
	Triple and Quadruple Helix internationalization dynamics	
	Business incubators and accelerators	
Academic spinoffs and university entrepreneurship		

Theoretical and conceptual contributions on internationalization ecosystems	Marketing Ecosystem Orchestration	33%
	Entry modes	
	Digital firms, platforms and ecosystems internationalization	
	Internationalization and international entrepreneurship process	
	Sharing economy and knowledge economy	
Effects of digital transition and technologies on internationalization ecosystems	OLI Advantages	9%
	Triple and Quadruple Helix internationalization theory	
	Digital servitization/Digitisation strategy	
	Digital Platforms and ecosystems internationalization	
Public policy impact on internationalization ecosystems	e-commerce	6%
	Digital entrepreneurship	
	Cluster performance and policy	
	Acquisitions	
	Cross-border VC investments	

The first category with more than 50% of the results analysed was the *Internationalization ecosystem strategy, operations and performance optimization*. That category encompasses the articles whose contribution are focused on practical and objective knowledge, focused on understanding or improving performance directly related to internationalization. The studies were carried out in different types of organizations and geographical locations, which points to the diversity of academic efforts aimed at improving internationalization operations and performance.

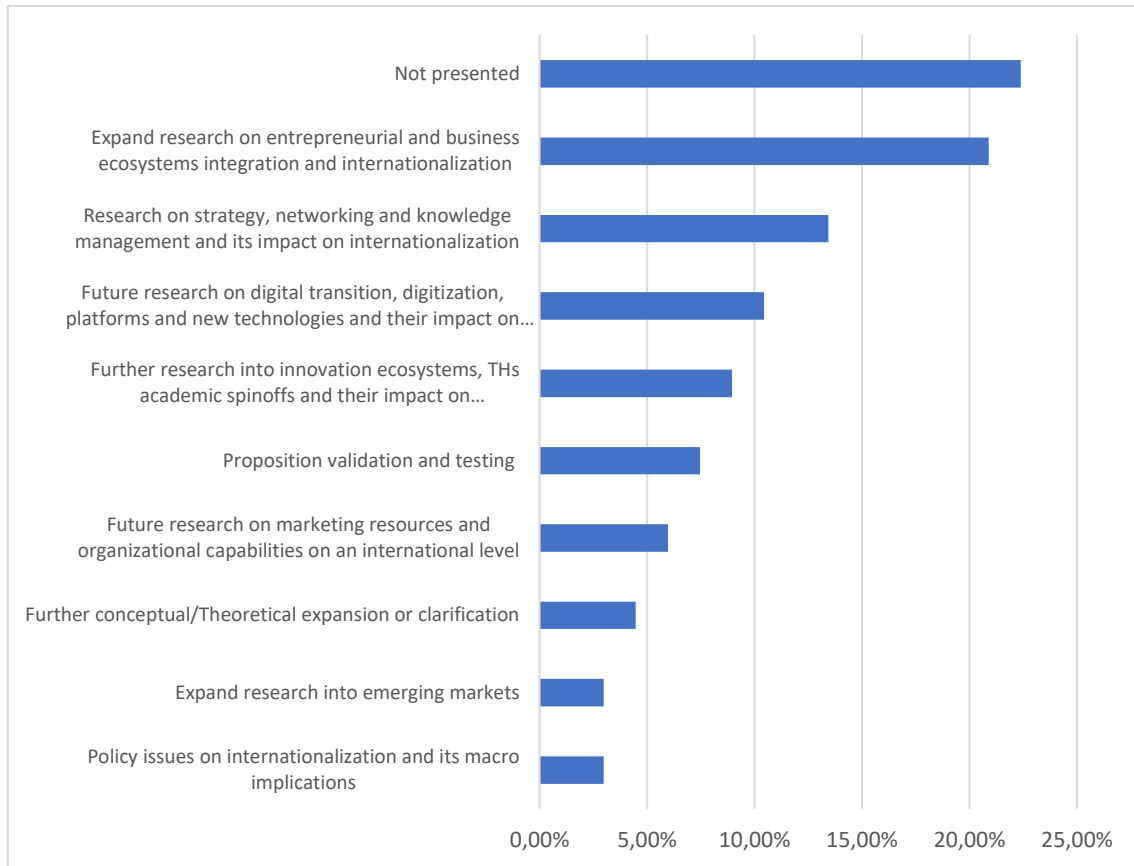
The second category with the largest number of occurrences was *Theoretical and conceptual contributions on internationalization ecosystems*, this category present results that add to the internationalization cannon from different perspectives as presented in the thematic areas. Both categories, however, point to a research body that could be fundamentally considered pragmatic, as they present practical and relevant results for different stakeholders of the internationalization ecosystem without ignoring the need for theoretical and methodological rigour (Wickert et al., 2021; Saunders, Lewis & Thornhill, 2016; Van Aken, 2004).

Recommendations Analysis

The analysis was focused on recommendations clearly presented in the works selected. The authors sought for recommendations beyond simple research expansion or the need for more data, which are rather common in most studies (Saunders, Lewis & Thornhill, 2016; Costa et al.2022), concentrating rather on areas and themes proposed by the studies. The suggestions were grouped into single categories, centred on the most important or urgent suggestions presented in each work. Details can be seen on Figure 3:

Figure 3

Further Research Categories



A point that most strikes the attention is that over 22% of the works analysed do not formally and openly present suggestions for future research; which confirm the common idea that suggestions are more likely to take place in exploratory work; if the research is designed as explanatory or descriptive, recommendations are less likely to take place (Saunders, Lewis & Thornhill, 2016).

The key suggestion presented in the works, with almost 21% of occurrence were the need to expand research on entrepreneurial and business ecosystems integration and, to a considerable extent, internationalization. The integration theme was considerably recurrent amongst several authors (e.g. Ferreira, Fernandes & Mota Veiga, 2023); Tippmann et al., 2023; Costa, 2022; Tekin, Ramadani & Dana, 2021; Stolze & Sailer, 2021; Fakhreldin, 2021; Ratten, 2021; Theodoraki & Catanzaro, 2021; Santoro et al., 2021). Furthermore, suggestion for further research on key factors that influence internationalization, specifically strategies, networking and knowledge management was also quite substantial with 13,5% (e.g. Magni et al., 2022; De Cock, Andries & Clarysse, 2021; Ferrer-Serrano, Latorre-Martinez & Fuentelsaz, 2021; Zahoor et al., 2020; Del Sarto, Isabelle & Di Minin, 2020; Parente, Geleilate & Rong, 2018) . Digital transition and technologies had a significant impact (10,5%), which leads to the belief that this is a wide field for future research on internationalization ecosystems (e.g. Kolagar et al., 2022; Brouthers, Chen and Shaheer, 2022; Rong, Kang & Williamson, 2022; Ciasullo et al., 2022; Ciasullo et al., 2022; Costa & Castro, 2021). Accordingly, innovations systems, specifically THs and academic spinoffs were also pointed as areas at which, further research should be aimed, totally 9% of the research suggestions (e.g. Odei & Stejskal, 2020; Civera, Meoli & Vismara, 2019; Roigas, Mohnen & Varblane, 2018) .

The research results confirm what had been already pointed in other sections of the current work, internationalization ecosystem is a multidisciplinary theme, involving complex problems, several layers of actors, intense economic, social and cultural dynamics and an ever-

evolving conceptual perspective. Thus, any theoretical framework arising from a systematic literature review has to take those points into account, integrating diverse phenomena, processes and actors.

CONCLUSION

Through a systematic literature review and thematic analysis proposed in the current research, it was noted that the extant theories do not explain the internationalization ecosystem phenomenon. There was a considerable conceptual body focused on IB theories in its many forms, including some relevant revisions from classical concepts such as the Uppsala Model or the Eclectic Paradigm or the current conceptual and practical challenges with born globals, scaling models, global supply chains and transnational networking. Despite being an ever-evolving theoretical and empirical phenomenon, internationalization is still open for new angles of interpretation, based on the constant socioeconomical, cultural and technological changes in the global arena. However, IB theories have not dived deeply into the internationalization ecosystem perspective yet, as it is perceived as a component of entrepreneurial ecosystems or innovation ecosystems, heavily influenced by digital technologies and platform ecosystems.

The studies analysed were mostly descriptive, with few empirical studies and even fewer studies with quantitative methodologies, reflecting the absence of robust amount of knowledge about the ecosystemic approach to internationalization; there is a need to build an overall understanding about the phenomenon, including reviews of traditional theoretical approaches in order to establish a substantial theoretical body to explain its nature, dynamics and perspectives.

On mapping the studies, it is noticed that the European Union members are the epicentre for internationalization ecosystem related studies, with a vast majority of organizations studied being classified as digital businesses or businesses undergoing digital transition. Emerging economies are also widely present in the studies, showing the overarching nature of the phenomenon.

It is possible to affirm that internationalization ecosystem is a multidisciplinary theme, involving complex problems, several layers of actors, intense economic, social and cultural dynamics and an ever-evolving conceptual perspective. Thus, an internationalization ecosystem framework should embrace four ecosystem concepts in order to draw from them the core elements necessary for its development: Business Ecosystems represented by traditional industries and clusters; Entrepreneurial Ecosystems, covering new ventures and disruptive business models; Innovation Ecosystems, integrating the TH concept and its variants; and Platform Ecosystems, involving the new digital business models on an international sphere. The core of the internationalization ecosystem is found on the integration of those four ecosystemic approaches, revealing a unique set of characteristics that may explain the internationalization phenomenon in its current fluid form.

The current work has presented conceptual contributions to the IB literature, for it argues that internationalization ecosystem, to be fully understood, has to be analysed as an ecosystem in itself and not as a sub-ecosystem or a secondary phenomenon, as it is mostly approached by other studies. On conceiving internationalization ecosystem on its own, it is possible to encourage the pursuit of studies on ecosystem integration and replication, which is still lacking in most IB literature, creating the basis for a new theory.

Future studies should focus on themes that did not appear on the current research, such as Export Promotion Programs as well as ecosystems internationalization and replication, which is a conceptual and practical challenge. Furthermore, new research should focus on the TH model and its variances, specially to analyse how the different helices working in an integrated manner towards internationalization would perform. Also, studies on conceivable

new helices, specifically related to internationalization, could reveal subtle details that may become international competitive advantage for different ecosystems.

Finally, the current work presents limitations that must be taken into account. As the studies' eligibility criteria for the SLR underwent a qualitative analysis stage, the choice of studies may not be free from the authors' biases. This, however, is a necessary risk, given the conceptual nature of the research. Another limitation may come from the heterogeneity of the works analysed, as there was not a single theoretical body or framework to support the analysis, it is possible that it presents a degree of vagueness at some level, which may be addressed in further details by future studies.

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