



A bibliometric analysis of born global firms

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ARTICLE INFO

Keywords:

Born global
Bibliometric analysis
Co-citations
Intellectual structure

ABSTRACT

This study aims to review the scientific research on born global firms' phenomena to date. Based on a bibliometric analysis of 453 scientific papers on born global firms from the Thompson Reuters's Web of Science™ Core Collection database for the period 1994–2016, the authors discuss the results from the following perspectives: *general results, number of publications per year, the articles that other authors cite most, most eminent authors, journals with the highest citation per article, institutions with the highest citation per document, and countries with the highest productivity*. This analysis provides networks of co-cited references, journals, and first authors, and their respective clusters, revealing their rankings in terms of contributions to the born global firms' literature. The results of the analysis can be used to enhance our understanding of born global firms' research and support further research in this area.

1. Introduction

Recognition of born global firms (BGs) as important and distinctive organizations across the global economy has been growing in recent years (Autio, Sapienza, & Almeida, 2000; Cavusgil & Knight, 2009; Dow, 2017; Knight & Cavusgil, 1996; McDougall & Oviatt, 2000; McDougall, Shane, & Oviatt, 1994; Oviatt & McDougall, 2005a). BGs are typically young, entrepreneurial, small- and medium-sized enterprises (SMEs) characterized by limited resources. Despite this constraint, they undertake international business from an early stage in their development (Cavusgil & Knight, 2009; Knight & Cavusgil, 2004; Weerawardena, Mort, Liesch, & Knight, 2007). The emergence of BGs contributes to national economic development, and they often act as key players in ecosystems that support large multinational enterprises (Zander, McDougall-Covin, & Rose, 2015), foster innovation and technology (Baum, Schwens, & Kabst, 2011), support industrial growth (Cannone & Ughetto, 2014), have significantly higher job growth rates (Choquette, Rask, Sala, & Schröder, 2017) and play a fundamental role in the economic development of emerging countries (Borini, Cahen, & Oliveira Jr., 2017; Lamotte & Colovic, 2015). The development of BGs challenges traditional stage theory (e.g., Johanson & Vahlne, 1977, 1990), changing the way that the role of SMEs in the global market is recognized (Knight & Cavusgil, 1996; Oviatt & McDougall, 2005a).

Many excellent theoretical surveys focusing on international entrepreneurship including BGs have been published (e.g., Aspelund, Madsen, & Moen, 2007; De Clercq, Sapienza, Yavuz, & Zhou, 2012; Jones, Coviello, & Tang, 2011; Keupp & Gassmann, 2009; Knight & Liesch, 2016; Laufs & Schwens, 2014; Rialp, Rialp, & Knight, 2005;

Zander et al., 2015). However, there is a lack of quantitative, bibliometrically based surveys exclusively focused on BGs. Existing surveys offer an in-depth perspective, although they are subjected to bias by the researchers and often lack a comprehensive picture based on systematic, chronological, and synthesizing studies (Tranfield, Denyer, & Smart, 2003).

Notwithstanding the fragmentation of the theories and concepts surrounding BGs, this study investigates and demonstrates how research on BGs develops over time. Further, it scrutinizes the most frequently occurring themes in the literature to identify potential weaknesses and gaps in scientific research into the subject.

The research includes a bibliometric analysis based on 453 pieces of research on BGs published from 1994 to the end of 2016, retrieved from the Web of Science™ (WoS) Core Collection (CC). The WoS CC is composed of six databases provided by Thomson Reuters with a view to getting a better overall picture of BGs research, and it includes: Science Citation Index Expanded (1970–present), Social Sciences Citation Index (1970–present), Arts & Humanities Citation Index (1975–present), Conference Proceedings Citation Index-Science (1990–present), Conference Proceedings Citation Index-Social Science & Humanities (1990–present), and Emerging Sources Citation Index (2015–present). The study period begins in 1994 because the earliest article on BGs in the WoS dates from the same year.

The results include a general perspective, number of publications per year, articles most cited by other authors, most eminent authors, journals with the highest citation per article, institutions with the highest citation per document, and countries with the highest productivity. This analysis provides networks of co-cited references,

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<https://doi.org/10.1016/j.jbusres.2017.12.054>

Received 22 November 2016; Received in revised form 27 December 2017; Accepted 29 December 2017

Available online 30 January 2018

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journals, and first authors, and their respective clusters, revealing their rankings regarding contributions to the BGs literature.

In the following section, a brief review of the BGs literature is presented, followed by a description of the study method and a brief overview of the bibliometric methods. Next, results of the bibliometric analysis are presented. The paper ends with the conclusions, limitations, and main implications of this research.

2. Literature review

The literature on BGs includes many different definitions of the same phenomenon. The term ‘Born Globals’ was introduced in a study of exporting firms in Australia that uncovered a surprisingly large number of firms undertaking economic cross-border transactions either at or near their inception (McKinsey & Company, 1993; Rennie, 1993). In other studies (Knight & Cavusgil, 1996), BGs were exemplified as being either “small, [usually] technology-oriented companies that operate in international markets from the earliest days of their establishment” or firms that internationalize early and rapidly (Madsen & Servais, 1997). Oviatt and McDougall (1994) conceptualized ‘International New Ventures’ (INVs) phenomenon as “a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries”. Contrary to the Knight and Cavusgil’s (2004) definition, which emphasizes BGs’ young age and the firm as the unit of analysis and early internationalization, Oviatt and McDougall’s (1994) definition is much wider and includes various ventures at different stages of their development.

Other notions define ‘Start-ups’ as firms that, from their inception, engage in international business (McDougall, 1989). ‘Global Start-ups’ are described as INVs that coordinate many organizational activities across many countries (Jolly, Alahuhta, & Jeannet, 1992; Mamis, 1989; Oviatt, McDougall, & Loper, 1995; Tanev, 2017). ‘Instant Internationals’ refers to small technology firms achieving global diversity in the formative stages of their business development (Hordes, Clancy, & Baddaley, 1995; Preece, Miles, & Baetz, 1999). ‘Instant Exporters’ is used to convey unplanned rapid internationalization (McAuley, 1999). ‘Borderless Firms’ are defined either as the result of geographically dispersed resources and capabilities (da Rocha, Simões, de Mello, & Carneiro, 2017) or simply as ‘International Ventures’—firms that carried out activities at dedicated sites abroad and started activities within 1 year after founding (Kuemmerle, 2002). Rialp et al. (2005) connected the Knight and Cavusgil (1996) definition with the McDougall et al. (1994) definition and referred to such businesses collectively as ‘early internationalizing firms’. One of the most relevant definitions is the term ‘Born Global’ to mean business organizations which, either from or near their founding, seek sustainable international business performance from the application of knowledge-based resources to the sale of outputs in multiple countries (Knight & Cavusgil, 2004). For brevity’s sake, the most commonly used labels of INVs and BGs will be interchangeably used throughout this research.

It is worth noting that very different definitions have been used to distinguish between BGs and other internationalizers (Rasmussen & Madsen, 2002). In fact, researchers have pointed to several distinct variables, including the time lag between the foundation of a firm and its export debut (Jones & Coviello, 2005); the percentage of sales that a firm exports, foreign market scope, and scale of internationalization (Kuivalainen, Sundqvist, & Servais, 2007); home market potential, product, and export market receptivity (Gabrielsson, Kirpalani, Dimitratos, Solberg, & Zucchella, 2008); the speed of a firm’s subsequent international growth and development (Oviatt & McDougall, 2005a); and export intensity achieved by the firm at a certain point in time (Autio et al., 2000). However, the literature has emanated from different countries and settings, leading to different definitions and conclusions (Gabrielsson et al., 2008). Rennie (1993) and McKinsey and Company (1993) define BGs as firms that are able to export as much as

75% of their sales as little as two years after inception. On the other hand, Knight and Cavusgil (1996) find that BGs export at least 25% of their production within a few years of their formation. Zahra, Ireland, and Hitt (2000) suggest that BGs export only 5% of their sales and are not more than six years old. Other studies argue an average export of 70% within the first 3 years of operation (Chetty & Campbell-Hunt, 2004; Moen & Servais, 2002). Madsen, Rasmussen, and Servais (2000) define BGs as firms having a high share of foreign sales (almost 70%). Moen (2002) defines BGs as firms “having export sales higher than 25% and an establishment date post 1990”. A widely accepted definition proposed by Knight and Cavusgil (2004) suggests that BGs export at least 25% of their sales within 3 years from inception.

However, there are different time frames used in the literature, spanning from 2 to 15 years. Some scholars have used a 6-year threshold to identify ‘new firms’ (McDougall, Oviatt, & Shrader, 2003; Zahra et al., 2000). Kuivalainen et al. (2007) indicate different types of BGs, including firms that either can export only to close markets or are genuine BGs operating in distant markets and multiple regions.

A notable feature of the literature on BGs is that the empirical research has tended to be far more abundant than have the efforts to develop theories (Rialp et al., 2005). Furthermore, theories on BGs remain underdeveloped and fragmented (De Clercq et al., 2012; Jones et al., 2011), with a few exceptions (Coombs, Sadrieh, & Annavarjula, 2009).

Scholars apply many theories to different aspects of BGs (McDougall et al., 1994). Such theories include monopolistic advantage theory (Hymer, 1976), product cycle theory (Vernon, 1966), stage theory of internationalization (Bilkey & Tesar, 1977), oligopolistic reaction theory (Knickerbocker, 1973) and internalization theory (Buckley & Casson, 1976), network theory (Granovetter, 1973, 1985), and effectuation theory (Sarasvathy, 2001).

However, most of the theories lack coherence and legibility. Moreover, studies typically have not been built on one another (e.g., Jones & Dimitratos, 2004; Laufs & Schwens, 2014).

At the firm level, many studies have highlighted the role of organizational resources and competences (e.g., Moen & Servais, 2002; Sapienza, Autio, George, & Zahra, 2006). However, little is known about the characteristics of BGs in their later life, and empirical literature is lacking (Cavusgil & Knight, 2015; Johanson & Martín, 2015).

Fernhaber, McDougall, and Oviatt (2007) reported that BG studies tend to focus on high-technology industries and the role of innovative product characteristics and industry structure in internationalization (e.g., Baum et al., 2011; Laanti, Gabrielsson, & Gabrielsson, 2007; Paul & Gupta, 2014; Preece et al., 1999; Terjesen, O’Gorman, & Acs, 2008), with a few studies of either low- and medium-technology sectors (Andersson, Evers, & Kuivalainen, 2014; Evers, 2010) or service sectors (Sakata et al., 2013). Contrary to the rich empirical research from well-developed economies (e.g., Aspelund et al., 2007; Crick & Spence, 2005; Moen & Servais, 2002; Spence & Crick, 2006), studies from emerging economies are far less abundant (Glaister, Liu, Sahadev, & Gomes, 2014; Khavul, Pérez-Nordtvedt, & Wood, 2010; Lamotte & Colovic, 2015; Nowiński & Rialp, 2013; Wood et al., 2011; Yamakawa, Peng, & Deeds, 2008).

Notwithstanding the growth of research on BGs, no definition of success, concerning quality and efficiency, exists. Nor is there a consensus regarding which indicators exert the greatest influence on their key success factors (Coviello, 2015). Much past research has neglected the effects of variables related to organizational environment and context, and resources, capabilities, and strategies that impact performance and long-term survivorship (Knight & Liesch, 2016).

The variety of BGs’ perspectives drawing on theories and frameworks from various domains, the inconsistency of definitions, and the range of criteria to be taken into account make research on BGs broader in scope, heterogeneous, and inconclusive (Keupp & Gassmann, 2009).

3. Method

Bibliometric analysis employs a quantitative approach for the description, evaluation, and monitoring of published research (Garfield, Sher, & Torpie, 1964; Small, 1973). It has the potential to introduce a systematic, transparent, and reproducible review process and, thus, improve the quality of review (Bellis, 2009). Performance analysis and science mapping are two prime bibliometric techniques. Performance analysis seeks to evaluate the research and publication performance of individuals and institutions. Science mapping aims to reveal the structure and dynamics of scientific fields (Cobo, López-Herrera, Herrera-Viedma, & Herrera, 2011; Klavans & Boyack, 2006).

Bibliometric analysis applies statistical methods to examine bibliographical data from an objective and quantitative perspective to organize information in a specific area of scholarly interest (Bellis, 2009; Merigó, Cancino, Coronado, & Urbano, 2016). It allows evaluation of the scientific quality and influence of developments in knowledge in a specific subject (van Leeuwen, 2006; van Raan, 2003).

The basic bibliometric studies utilize a citation analysis of a research field. Different aspects of a research field can be analyzed, depending on the selected unit of analysis. The most common units of analysis comprise authors, journals, documents, cited references, institutions, and countries. Citation analysis is based on the assumption that authors cite works that they consider important. Thus, citations are supposed to be a measure of influence (van Raan, 1996, 2003). More fine-grained bibliometric indicators include quantity, which measures productivity in terms of the number of publications; and quality, which defines the impact of a publication in relation to the number of citations that publication receives (Leeuwen, Visser, Moed, Nederhof, & Raan, 2003).

Although simple citation counting is easy to implement and has served as a formal scientific evaluation tool for decades, it does not take into account the linking structure of citing works. In contrast to citation, co-citation analysis is defined as the frequency with which two documents are cited together (Marshakova, 1973; Small, 1973). Two units are strongly co-cited if they share a plethora of similar cited references. Therefore, the number of identical citing items defines the strength of co-citation between the two cited papers (Small, 1973). The type of co-citation analysis depends on the units of analysis.

Co-citation analysis of authors might contribute to better understanding of the intellectual structure in the sciences and “in other areas to the extent that those areas rely on serial publications” (White & Griffith, 1981, p. 163). Furthermore, important authors are identified and connected through citation records (White & McCain, 1998). Document co-citation analysis connects specific published documents (Leydesdorff, 2005; McCain, 1990). Journal co-citation analysis concerns related scientific journals (McCain, 1991). Accordingly, cited documents create the intellectual structure of a research field (Ding, Chowdhury, & Foo, 1999; McCain, 1986). To obtain clusters and respective networks of references, the methodological guidelines proposed by van Eck and Waltman (2009, 2014) and Waltman, van Eck, and Noyons (2010) were used.

The WoS CC provides a unique feature of citation counts, which allows the relative importance of articles out of a large pool to be qualified through the use of an objective measure of influence. In this study, the authors searched for all articles with the words “born-global”, “born global”, “born globals”, “international new venture”, “international new ventures”, “rapid internationalization”, “new global business”, “new global businesses”, “fast internationalizers”, and “early internationalizers” as the query to search the following fields within a record: Title, Abstract, Author Keywords, and Keywords Plus®. Because of the nature of collecting papers by query, the corpus included papers that are not relevant to our strict criteria. Accordingly, it was necessary to analyze Title, Abstract, and Keywords fields of retrieved documents. In consequence, a collection of 453 papers published between 1994 and 2016 was obtained (Dzikowski, 2017). This set was then fixed as the basis for all future analysis performed in the Bibexcel (Persson, Danell,

& Schneider, 2009). The number of citations of a unit of analysis (articles, authors, journals, institutions, countries) equals the total number of citations the unit of analysis has received in Web of Science. Furthermore, the number of citations of a unit of cited references, including documents, journals, and first authors, refers to the total number of citations the unit of analysis has received in the cited references' collection. The clusters, respective networks of references, and bibliometric maps were constructed using the software VOSviewer.

4. Results

This section presents the following results of the bibliometric analysis: the general results, showing a summary of the quantitative results; the number of publications per year, which shows the chronological distribution of publications; the articles that other authors cite the most, the most eminent authors, the journals with the highest citation per article, the institutions with the highest citation per document, and the countries with the highest productivity. Moreover, this analysis provides networks of co-cited references, journals, and first authors, and their respective clusters. The scope of this analysis covers all documents, languages, and countries available, because the aim of this study is to gain an overall perspective of developments in research on BGs.

4.1. General results

The study identifies 330 articles, 100 proceeding papers, 18 reviews, 5 editorial materials, 2 meeting abstracts, and 3 corrections (some documents are included in two different categories). This constituted a total of 453 documents by 741 authors affiliated with 434 institutions in 53 countries and published in 183 source titles, including 99 journals, citing 13,842 references (see Table 1).

4.2. Number of publications per year

The growing pattern of BGs research between 1994 and 2016, and the chronological distribution, shows three stages in the publication trend (see Fig. 1). The early days comprise the period from 1994 to 2000. In subsequent years, 2001–2006, publications were scarce. The number of publications increases considerably from 2007 onwards. Notwithstanding decreases in research output from one year to the next, the accumulative effect is observed, and the trend is upward. The figure for 2016 draws on data representing a full year.

4.3. Most cited documents

This study reveals the top ranking of documents in terms of the highest number of citations documents have received in Web of Science. The sample presents an average citation rate of 27 citations. However, 29.6% of the documents have never been cited, and 31.8% have been cited between one and ten times (see Table 2). Hence, the analysis includes documents with at least 100 citations.

The article “Toward a Theory of International New Ventures” (Oviatt & McDougall, 1994) is the most cited article in the collection, with 1155 citations. This study introduces the framework that defines four

Table 1
Summary of general results.

Criteria	Quantity
Documents	453
Authors	741
Source titles (journals)	183 (99)
Countries	53
Institutions	434
Cited references	13,842

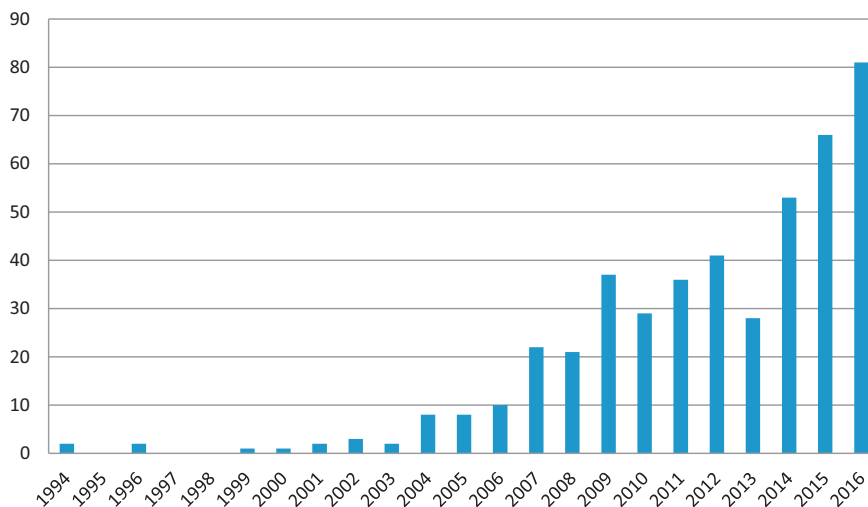


Fig. 1. Number of publications per year.

necessary and sufficient elements for the existence of INVs: organizational formation through internalization of some transactions, strong reliance on alternative governance structures to access resources, establishment of foreign location advantages, and control over unique resources. Knight and Cavusgil are the authors of the second most-cited document “*Innovation, Organizational Capabilities, and the Born-Global Firm*”, accounting for 641 citations, and the fourth most-cited article in the collection “*The Born Global Firm: A Challenge to Traditional Internationalization Theory*”, accounting for 451 citations. In one study, Knight and Cavusgil (2004) explain why BGs internationalize early and what drives their performance. The second paper introduces the entrepreneurial perspective (Knight & Cavusgil, 1996). The third most-cited paper, “*Explaining the Formation of International New Ventures - The Limits of Theories from International-Business Research*”, applies

traditional economic theories to explain the process of the formation of INVs (McDougall et al., 1994). The fifth most cited article, “*The phenomenon of Early Internationalizing Firms: What do We Know after a Decade (1993–2003) of Scientific Inquiry?*”, sheds light on the emergent field of international entrepreneurship (Rialp et al., 2005).

4.4. Most eminent authors

The study identifies the top ranking influential authors (see Table 3). The number of documents published by each author in the collection and the number of citations each author possesses describe the impact of the most productive authors. Approximately 78% of the authors in the sample have produced one paper, and 15.8% of the authors have published two or three documents. Furthermore, 91.3% of

Table 2
Top cited documents in the BGs' collection.

Rank	Document	Citations
1.	Toward a Theory of International New Ventures (Oviatt & McDougall, 1994)	1115
2.	Innovation, Organizational Capabilities, and the Born-Global Firm (Knight & Cavusgil, 2004)	641
3.	Explaining the Formation of International New Ventures - The Limits of Theories from International-Business Research (McDougall et al., 1994)	482
4.	The Born Global Firm: A Challenge to Traditional Internationalization Theory (Knight & Cavusgil, 1996)	451
5.	The Phenomenon of Early Internationalizing Firms: What do We Know after a Decade (1993–2003) of Scientific Inquiry? (Rialp et al., 2005)	344
6.	Internationalisation: Conceptualising an Entrepreneurial Process of Behaviour in Time (Jones & Coviello, 2005)	312
7.	Internationalization and the Performance of Born-Global SMEs: The Mediating Role of Social Networks (Zhou et al., 2007)	287
8.	The Network Dynamics of International New Ventures (Coviello, 2006)	280
9.	A Theory of International New Ventures: A Decade of Research (Zahra, 2005)	267
10.	Venture Capitalist Governance and Value Added in Four Countries (Sapienza, Manigart, & Vermeir, 1996)	255
11.	Conceptualizing Accelerated Internationalization in the Born Global Firm: A Dynamic Capabilities Perspective (Weerawardena et al., 2007)	198
12.	Born Global or Gradual Global? Examining the Export Behavior of Small and Medium-Sized Enterprises (Moen & Servais, 2002)	197
13.	A Strategic Approach to Internationalization: A Traditional Versus a “Born-Global” Approach (Chetty & Campbell-Hunt, 2004)	192
14.	International Entrepreneurship Research (1998–2009): a Domain Ontology and Thematic Analysis (Jones et al., 2011)	178
15.	The Past and the Future of International Entrepreneurship: A Review and Suggestions for Developing the Field (Keupp & Gassmann, 2009)	164
16.	Creative Tension: The Significance of Ben Oviatt's and Patricia McDougall's Article ‘Toward a Theory of International New Ventures’ (Autio, 2005)	141
17.	The International Entrepreneurial Dynamics of Accelerated Internationalisation (Mathews & Zander, 2007)	137
18.	The Born Globals – a New Generation of Small European Exporters (Moen, 2002)	135
19.	How Smaller Born-global Firms Use Networks and Alliances to Overcome Constraints to Rapid Internationalization (Freeman et al., 2006)	135
20.	Firms' Degree of Born-Globalness, International Entrepreneurial Orientation and Export Performance (Kuivalainen et al., 2007)	132
21.	Networking Capability and International Entrepreneurship – How Networks Function in Australian Born Global Firms (Mort & Weerawardena, 2006)	129
22.	Born Globals: propositions to help advance the theory (Gabrielsson et al., 2008)	127
23.	An Inquiry into Born-Global Firms in Europe and the USA (Knight et al., 2004)	116
24.	Rapid internationalisation among entrepreneurial firms in Australia, Canada, Ireland and New Zealand: An extension to the network approach (Loane & Bell, 2006)	114
25.	The internationalization of entrepreneurship (Oviatt & McDougall, 2005b)	109
26.	Collaboration and Performance in Foreign Markets: The Case of Young High-Technology Manufacturing Firms (Shrader, 2001)	109
27.	The survival of international new ventures (Mudambi & Zahra, 2007)	107
28.	Born global or born regional? Evidence from an exploratory study in the Costa Rican software industry (Lopez, Kundu, & Ciravegna, 2009)	102
29.	The competitive advantage of early and rapidly internationalising SMEs in the biotechnology industry: A knowledge-based view (Gassmann & Keupp, 2007)	102
30.	Assets and Actions: Firm-Specific Factors in the Internationalization of U.S. Internet Firms (Kotha, Rindova, and Rothaermel, 2001)	100

Table 3
Top cited authors in the BGs' collection.

Rank	Authors	Documents	Citations	Average citation per document
1.	McDougall, P	5	1819	363.8
2.	Oviatt, B	5	1819	363.8
3.	Knight, G	9	1819	202.1
4.	Cavusgil, S	7	1354	193.4
5.	Jones, M	4	622	155.5
6.	Zahra, S	4	475	118.8
7.	Moen, O	4	415	103.8
8.	Sapienza, H	3	311	103.7
9.	Rialp, A	4	372	93.0
10.	Mort, G	4	355	88.8
11.	Weerawardena, J	4	355	88.8
12.	Chetty, S	3	232	77.3
13.	Coviello, N	3	226	75.3
14.	Zhou, L	8	556	69.5
15.	Servais, P	8	543	67.9
16.	Liesch, P	4	227	56.8
17.	Kuivalainen, O	5	258	51.6
18.	Freeman, S	8	397	49.6
19.	Puumalainen, K	4	193	48.3
20.	Madsen, T	6	284	47.3
21.	Musteen, M	3	132	44.0
22.	Gabrielsson, M	8	324	40.5
23.	Bell, J	3	117	39.0
24.	Loane, S	5	179	35.8
25.	Solberg, C	4	139	34.8
26.	Melen, S.	3	104	34.7
27.	Dimitratos, P	6	190	31.7
28.	Ciravegna, N	5	158	31.6
29.	Nummela, N	4	115	28.8
30.	Gabrielsson, P	6	167	27.8

the authors have received less than 100 citations. Hence, the analysis includes authors with at least three papers and 100 citations. According to the data, Patricia McDougall and Benjamin Oviatt are the most influential authors, with 363.8 citations per article, followed by Tamer Cavusgil, Gary Knight, and Nicole Coviello. In contrast, Sami Saarenketo is the author who has published the most (10 documents), and Gary Knight has published nine documents. The subsequent authors, including Lianxi Zhou, Per Servais, Susan Freeman, and Mika Gabrielsson have published eight documents each; however, works by those authors are less cited.

4.5. Most influential journals

This study identifies 330 articles published in 99 peer-reviewed journals. The number of articles published by each journal in the collection and the number of citations each journal possesses describe the impact of the most productive journals in the BGs collection (see Table 4).

One and between two and three articles have been published by 64.6% and 15.2% of journals, respectively. Furthermore, 78.8% of journals have received less than 54 citations. Thus, the analysis includes journals with at least three papers and 50 citations.

The data reveal that the *Journal of International Business Studies* is the most influential journal, with 161.9 citations per article. The *Journal of Business Venturing* (146.3 citations per article) and the *Journal of International Marketing* (66.4 citations per article) are the two subsequent most-cited journals. Conversely, journals with the highest number of articles include the *International Business Review*, with 38 articles; the *Journal of World Business*, with 32 articles; and the *Journal of International Business Studies*, with 22 articles.

4.6. Most influential institutions

The study comprises 434 institutions from 53 countries. The number

Table 4
Top journals in the BGs' collection.

Rank	Journal	Articles	Citations	Average citation per article
1.	Journal of International Business Studies	22	3562	161.9
2.	Journal of Business Venturing	8	1170	146.3
3.	Journal of International Marketing	14	929	66.4
4.	Journal of World Business	32	1317	41.2
5.	International Marketing Review	21	835	39.8
6.	Industrial Marketing Management	3	115	38.3
7.	European Journal of Marketing	3	98	32.7
8.	Entrepreneurship Theory and Practice	6	192	32.0
9.	International Business Review	38	1132	29.8
10.	European Management Journal	4	105	26.3
11.	Entrepreneurship and Regional Development	5	124	24.8
12.	Technovation	3	56	18.7
13.	Journal of Small Business Management	6	94	15.7
14.	Management Decision	4	56	14.0
15.	International Small Business Journal	6	74	12.3
16.	Journal of Business Research	7	86	12.3
17.	Small Business Economics	5	54	10.8
18.	Management International Review	17	109	6.4

of documents published by each institution in the collection and the number of citations each institution possesses describe the impact of the most productive institutions in the BGs' collection. One or two papers have been produced by 80.6% of the institutions in the sample, and more than five documents are possessed by 5.1% of institutions. Furthermore, 87.6% of institutions have received less than 100 citations. Thus, the analysis includes institutions with at least three papers and 50 citations (see Table 5).

Michigan State University (The United States) is the most influential institution, with the highest number of citations per document: 322 citations per document. Florida State University (The United States), with 265 citations per document, and Georgia State University (The United States), with 210.4 citations per document, are ranked 2 and 3, respectively. Institutions with the highest number of documents include Lappeenranta University of Technology (Finland), with 12 documents, and the University of Glasgow (The United Kingdom), with 11 documents. However, the works of those institutions are less cited.

4.7. Most influential countries

The number of documents published by each country in the collection and the number of citations each country possesses describe the impact of the most productive countries in the analyzed research area (see Table 6). Less than ten papers have been produced by 70.4% of the countries in the sample, and less than 200 citations are possessed by 70.4% of countries. Thus, the analysis includes countries with at least ten papers and 200 citations. The United States is the most influential country within BGs, with 77.7 citations per document. The subsequent places are occupied by New Zealand, with 56.7 citations per document, and Norway, with 50.5 citations per document. Conversely, countries with the highest number of documents consist of the United States, with 77 documents, the United Kingdom, with 77 documents, and China, with 46 documents. The United States is first place in the ranking, with the largest quantity of documents and total citations.

Table 5
Top institutions in the BGs' collection.

Rank	Institutions	Country	Documents	Citations	Average citation per document
1.	Michigan State University	The United States	4	1288	322.0
2.	Florida State University	The United States	5	1325	265.0
3.	Georgia State University	The United States	10	2104	210.4
4.	The University of Auckland	New Zealand	4	614	153.5
5.	Autonomous University of Barcelona	Spain	3	363	121.0
6.	Griffith University	Australia	3	344	114.7
7.	Norwegian University of Science and Technology	Norway	4	415	103.8
8.	Wilfrid Laurier University	Canada	3	226	75.3
9.	Helsinki School of Economics	Finland	3	218	72.7
10.	The University of Queensland	Australia	6	379	63.2
11.	University of Glasgow	The United Kingdom	11	674	61.3
12.	University of Southern Denmark	Denmark	6	347	57.8
13.	University of Minnesota	The United States	5	264	52.8
14.	University of Pavia	Italy	3	156	52.0
15.	Concordia University	Canada	3	152	50.7
16.	University of Otago	New Zealand	5	238	47.6
17.	Monash University	Australia	8	367	45.9
18.	Florida International University	The United States	3	132	44.0
19.	University of Reading	The United Kingdom	3	121	40.3
20.	Macquarie University	Australia	4	158	39.5
21.	San Diego State University	The United States	4	152	38.5
22.	Indiana University	The United States	7	264	37.7
23.	University of Seville	Spain	3	111	37.0
24.	University of Sheffield	The United Kingdom	3	102	34.0
25.	Lappeenranta University of Technology	Finland	12	407	33.9
26.	University of Texas at Arlington	The United States	6	193	32.2
27.	La Trobe University	Australia	3	95	31.7
28.	Ulster University	The United Kingdom	6	179	29.8
29.	Brock University	Canada	7	195	27.9
30.	University of Adelaide	Australia	5	130	26.0

Table 6
Top countries in the BGs' collection.

Rank	Country	Documents	Citations	Average citation per document
1.	The United States	77	5986	77.7
2.	New Zealand	16	907	56.7
3.	Norway	11	555	50.5
4.	Australia	38	1127	29.7
5.	The United Kingdom	77	2078	27.0
6.	Canada	40	1007	25.2
7.	Netherlands	13	316	24.3
8.	Italy	16	378	23.6
9.	Spain	28	644	23.0
10.	Finland	38	866	22.8
11.	Denmark	22	470	21.4
12.	China	46	880	19.1
13.	Sweden	29	493	17.0
14.	Germany	24	203	8.5

4.8. Most-cited references

To better understand the theoretical foundations of 453 documents included in the sample, a co-citation analysis, with cited references as the unit of analysis, was performed. The initial sample of 453 documents was reduced to documents with at least 40 citations, resulting in 78 documents quoted 6040 times.

The most frequently quoted references include [Oviatt and McDougall \(1994\)](#) (284 citations), [Johanson and Vahlne \(1977\)](#) (239 citations), [Knight and Cavusgil \(2004\)](#) (206 citations), [Autio et al. \(2000\)](#) (188 citations) and [Knight and Cavusgil \(1996\)](#) (172 citations)—(see [Table 7](#)).

Based on these 78 contributions, the authors performed a co-citation analysis. The co-citation analysis served to build the respective network and to group the 78 most-cited references into five clusters, where cluster 1 stands for the internationalization process, cluster 2 identifies

an entrepreneurial approach, cluster 3 stands for the new venture internationalization, cluster 4 illustrates the network view, and cluster 5 reveals an organizational capabilities approach. Each cluster includes both BGs' studies (underlined) and studies from other disciplines that have had a profound impact on the development of BGs research. For the sake of brevity, the most-cited references in each cluster are presented (see [Fig. 2](#)).

[Knight and Cavusgil \(1996\)](#) and [Madsen and Servais \(1997\)](#) believe that BGs are becoming increasingly widespread, and the growing relevance of such early and rapidly internationalizing firms is critically challenging traditional international theory. However, discussion of a new type of small firm that can compete globally from inception was first introduced by [Rennie \(1993\)](#). This work introduces BGs as firms that can export as much as 75% of their sales as little as two years after inception. On the other hand, [Knight and Cavusgil \(1996\)](#) find that BGs export at least 25% of their production within a few years of their formation. [Moen and Servais \(2002\)](#) and [Moen \(2002\)](#) try to reveal not only the differences between the performance of different BGs but also the particular behaviors and factors determining such performances in comparison with counterparts, whether exporting or not.

In traditional international studies, the export development process of firms tends to proceed in stages, and firm size is relatively unimportant for export behavior. [Bilkey and Tesar \(1977\)](#) explore the meaningfulness of a “stages” model for examining export behavior in SME manufacturing firms. [Johanson and Wiedersheim-Paul \(1975\)](#) show the whole gradual internationalization process of firms from a small domestic market and introduce the concept of psychic distance, which is defined as the factors either preventing or disturbing the flow of information between firm and market. However, the most traditional way of describing the process of internationalization is the Uppsala internationalization model ([Johanson & Vahlne, 1977](#)). The Uppsala model encompasses various steps that describe the firm's level of internationalization and explains not only why firms generally initiate internationalization processes later in their development but also why such processes generally proceed slowly once initiated ([Johanson &](#)

Table 7

Clusters resulting from the most-cited references (number of citations in parenthesis).

Cluster 1 – Internationalization process (1400)
Johanson & Vahlne, 1977 (239)
Knight & Cavusgil, 1996 (172)
Madsen & Servais, 1997 (159)
Johanson & Vahlne, 1990 (132)
Rennie, 1993 (114)
Johanson & Wiedersheim-Paul, 1975 (95)
Bell, 1995 (81)
Moen & Servais, 2002 (76)
Andersen, 1993 (65)
Bell, McNaughton, Young, & Crick, 2003 (63)
Moen, 2002 (58)
Bell, McNaughton, & Young, 2001 (52)
Bilkey & Tesar, 1977 (49)
Cavusgil, 1980 (45)
Cluster 2 – Entrepreneurial approach (1440)
Rialp et al., 2005 (136)
Oviatt & McDougall, 2005a (120)
Jones & Coviello, 2005 (109)
Johanson & Vahlne, 2009 (98)
Weerawardena et al., 2007 (91)
Coviello, 2006 (84)
Chetty & Campbell-Hunt, 2004 (81)
Jones et al., 2011 (64)
Gabrielsson et al., 2008 (62)
Freeman et al., 2006 (59)
Kuivalainen et al., 2007 (57)
Knight et al., 2004 (55)
Mudambi & Zahra, 2007 (54)
Zhou et al., 2007 (54)
Keupp & Gassmann, 2009 (53)
Zucchella, Palamara, & Denicolai, 2007 (51)
Fan & Phan, 2007 (46)
Knight & Cavusgil, 2005 (44)
Mathews & Zander, 2007 (42)
Gabrielsson & Kirpalani, 2004 (40)
Mort & Weerawardena, 2006 (40)
Cluster 3 – New venture internationalization (1079)
McDougall et al., 1994 (130)
McDougall & Oviatt, 2000 (112)
Pla-Barber & Escrivá-Estevé, 2006 (76)
Oviatt & McDougall, 1997 (75)
Bloodgood, Sapienza, & Almeida, 1996 (66)
McDougall et al., 2003 (60)
Reuber & Fischer, 1997 (56)
Coviello & Jones, 2004 (53)
Shrader et al., 2000 (51)
Burgel & Murray, 2000 (50)
Jolly et al., 1992 (50)
Preece et al., 1999 (48)
McDougall & Oviatt, 1996 (47)
Zahra & George, 2002 (43)
Coviello & McAuley, 1999 (41)
Westhead, Wright, & Ucbasaran, 2001 (41)
McDougall, 1989 (40)
Shane & Venkataraman, 2000 (40)
Cluster 4 – Network View (739)
Eisenhardt, 1989 (79)
Coviello & Munro, 1997 (78)
Sharma & Blomstermo, 2003 (78)
Coviello & Munro, 1995 (63)
Johanson & Vahlne, 2003 (63)
Jones, 1999 (57)
Autio, 2005 (54)
Andersson & Wictor, 2003 (53)
Crick & Spence, 2005 (52)
Crick & Jones, 2000 (45)
Miles & Huberman, 1994 (43)
Yli-Renko et al., 2002 (42)
Ellis, 2000 (32)
Cluster 5 – Organizational Capabilities (1414)
Oviatt & McDougall, 1994 (284)
Knight & Cavusgil, 2004 (206)
Autio et al., 2000 (188)
Zahra et al., 2000 (121)
Zahra, 2005 (108)

Table 7 (continued)

Sapienza et al., 2006 (90)
Barney, 1991 (78)
Eriksson et al., 1997 (61)
Teece, Pisano, & Shuen, 1997 (61)
Lu & Beamish, 2001 (58)
Penrose, 1959 (55)
Zaheer, 1995 (52)
Cohen & Levinthal, 1990 (52)

Vahlne, 1977, 1990); however, it does not consider specific situations, phases, firms, or foreign markets (Andersen, 1993).

Studies in the second cluster reveal the differentiating characteristics of BGs by integrating the international business and entrepreneurship literature. According to [Rialp et al. \(2005\)](#), the lack of conceptualization regarding BGs makes it difficult to do valid comparative research. Two major issues are the time lag between the founding of a firm and the beginning of its international operations ([Jones & Coviello, 2005](#)), and the speed of a firm's subsequent international growth and development ([Oviatt & McDougall, 2005a](#)). Several streams of research have emerged that look at the patterns and processes of BG internationalization to develop alternative views. BGs are not seen as venture forms but as a strategic option for a firm ([Chetty & Campbell-Hunt, 2004](#); [Mudambi & Zahra, 2007](#)). Drawing on the dynamic capabilities view of competitive strategy, a conceptual model of BGs' internationalization is presented to explain the accelerated internationalization of BGs. It is argued that the speed, scope, and extent of internationalization are influenced by four dynamic capabilities: a market-focused learning capability, a marketing capability, an internally focused learning capability, and a networking capability ([Weerawardena et al., 2007](#)). [Knight, Madsen, and Servais \(2004\)](#) provide evidence for the role of marketing, and marketing competence in particular, in the implementation of market orientation. Market-focused learning capability, characterized by a deep knowledge of the market and existing products, and focus on customers allows BGs to concentrate on performing particular activities well. [Gabrielsson et al. \(2008\)](#) demonstrate that the context of the BGs varies greatly with regard to the home market potential, product, and export market receptivity. Furthermore, they believe that the founder and its global vision at inception are the key factors, and they define three different phases of BGs' development: introductory, growth, and break out. [Freeman, Edwards, and Schroder \(2006\)](#) explain how BGs achieve rapid growth internationally through alliances with suppliers, distributors, and joint-venture partners and how these relationships change over time to meet the changing needs of the partners. [Kuivalainen et al. \(2007\)](#) show differences between different types of BGs, e.g., those that export only to close markets and those that are genuine BGs operating in distant markets and multiple regions. [Keupp and Gassmann \(2009\)](#) provide support for the knowledge-based view as a conceptual foundation for BGs. By analyzing the BGs in the biotechnology sector, researchers support findings indicating that utilizing channels provided by MNCs is a means for SMEs to achieve early and rapid internationalization. [Gabrielsson and Kirpalani \(2004\)](#) demonstrate how BGs must utilize large channels provided by MNC, networks, and the Internet to receive substantial revenues and cash flow rapidly. [Zhou, Wu, and Luo \(2007\)](#) argue that home-based social networks and managerial ties play both direct and mediating roles in internationalization. [Knight and Cavusgil \(2005\)](#) develop a taxonomy to better understand BGs; their study describes each firm grouping with regard to its basic orientations and the generic strategies that it applies, as well as associated international performance outcomes. The contribution of [Jones et al. \(2011\)](#) highlights BGs' inconsistencies and complexity in the light of the international entrepreneurship domain.

The third cluster is opened by the paper published by [McDougall et al. \(1994\)](#). This work argues that firms that are international from

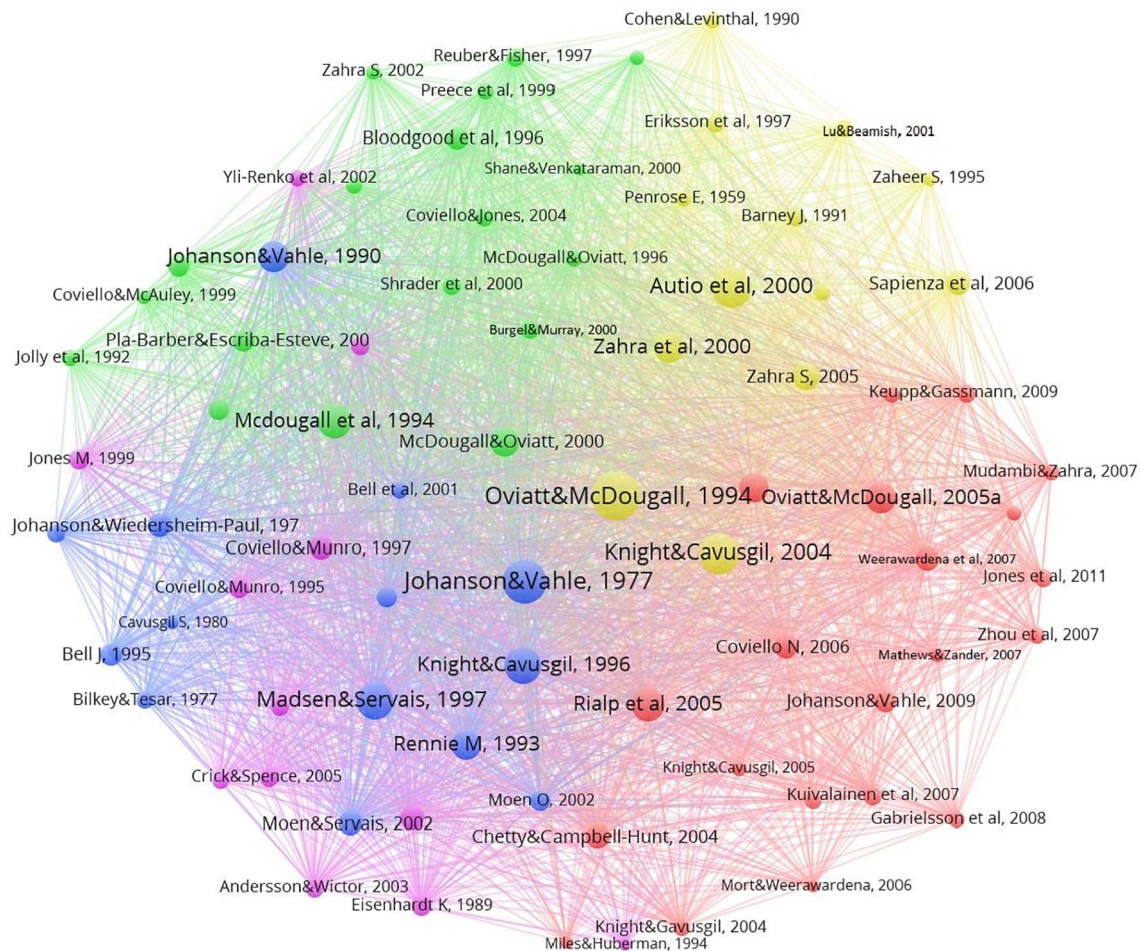


Fig. 2. Network of co-cited documents.

birth are typically founded by a team of individuals with international experience. [Oviatt and McDougall \(1997\)](#) explore the significant challenge to existing internationalization process theory. Both papers appear at odds over the likely speed and outcomes of the internationalization processes. In other works, the international expansion process is seen as a holistic process established in cross-border activities and that can sometimes challenge incumbents ([Jolly et al., 1992](#)). In addition, [Reuber and Fischer \(1997\)](#) explore the role of the management team's international experience as an important mechanism to acquire the requisite knowledge and resources. [McDougall and Oviatt \(2000\)](#) introduce international entrepreneurship as a combination of innovative, proactive, and risk-seeking behavior that crosses national borders and aims to create value in entrepreneurial firms such as BGs. In accordance with the research of [McDougall et al. \(2003\)](#), INVs compete on the basis of differentiation, product innovation, quality, service, and marketing and are more likely to operate in industries characterized by a high degree of global integration. [Shrader, Oviatt, and McDougall \(2000\)](#) indicate the significance of international entrepreneurship experience, trade-off among strategic international risk factors, and a foundation in advanced technology. Other findings suggest that resources necessary to pursue international sales have an important impact on both foreign market intensity and diversity, but that firms utilizing strategic alliances have been no more active internationally than have those not using strategic alliances ([Preece et al., 1999](#)). [Coviello and Jones \(2004\)](#) provide insight into the methodologies and call for more effort in establishing and reporting equivalence in cross-national studies.

The fourth cluster corresponds to a network view that has been

applied to explain BGs' internationalization and superior performance. Sharma and Blomstermo (2003) show that BGs tend to acquire international market knowledge before their first foreign market entry. The choice of foreign market entry mode is based on founders' existing knowledge and knowledge supplied by network ties (Sharma & Blomstermo, 2003). Several studies indicate that the internationalization process reflects an accelerated version of the Uppsala model and is facilitated by a set of formal (e.g., business contacts) and informal (e.g., family) network relationships that influence foreign market selection and mode of entry, product development, and market diversification activities (Coviello & Munro, 1995, 1997). Networking plays a significant role in anticipating and reacting to both internal and external environmental factors and affects the way in which opportunity recognition and exploitation take place (Crick & Spence, 2005). Other works suggest that internal and external social capital influence the acquisition and creation of knowledge and that knowledge is a key resource driving international growth and international exchange (Ellis, 2000; Yli-Renko, Autio, & Tontti, 2002).

The latter part of the cluster analysis relates to organizational capabilities. Oviatt and McDougall (1994) apply a theoretical approach that explains why new international ventures are an important phenomenon and propose four conditions—secrecy, inimitability, licensing, and use of network governance structures—to limit the ability to reproduce and move knowledge required for sustainable competitive advantage. Autio et al. (2000) define the ability to internationalize early and succeed in foreign markets as a function of the internal capabilities of the firm. Furthermore, they suggest that a critical determinant of exceptional international performance is knowledge about

international markets and operations and the efficiency with which such knowledge is acquired. Knight and Cavusgil (2004) argue that global technological competence is a function of international entrepreneurial orientation and that performance in international markets depends on global technological competence, unique products' development, quality focus, and leveraging foreign distributor competence. Zahra et al. (2000) recognize two main constraints to learning and capability development: resource allocations to foreign market activities and accumulated experience from foreign markets. When BGs investigate new and unknown territories, they need to develop and accumulate capabilities such as learning, cultural adaptability, and receptivity to change (Sapienza et al., 2006). Eriksson, Johanson, Majkgård, and Sharma (1997) suggest that shortfalls in market knowledge related to language, laws and rules, and lack of business knowledge require different amounts of time to overcome and have dissimilar effects on the perceived cost of internationalization. Other studies address the problem of a liability of foreignness (Lu & Beamish, 2001; Zaheer, 1995). In his review of the article by Oviatt and McDougall (1994), Zahra (2005) employs an important theoretical foundation for the entrepreneurial activities required for internationalization.

4.9. Most cited first authors

The primary decision in author co-citation analysis is the choice of the authors to be mapped. After processing the cited references' data retrieved from our 453 documents, we obtained a sample of 6930 cited authors (first author only). Thereafter, this set was reduced to authors with at least 70 citations, leading to a set consisting of 61 authors, who were quoted 9881 times. Based on these 61 contributions, co-citation analysis was implemented, and the relevant network, including 4 clusters, was portrayed (see Fig. 3). The most frequently-cited authors are Johanson, J (770 citations), Knight, G (639 citations), Oviatt, B (570 citations), Zahra, S (505 citations), and McDougall, P (433 citations)—(see Table 8).

Each cluster includes both founders of BGs (underlined> and researchers from other disciplines whose contribution has had a profound impact on the development of BGs' research.

Cluster 1 reveals authors from international entrepreneurship (e.g., Benjamin Oviatt, Patricia McDougall), marketing (e.g., Nicole Coviello), entrepreneurship (e.g., Scott Shane, Helena Yli-Renko), international business (e.g., Pavlos Dimitratos), and internationalization of SMEs and management (e.g., Rebecca Reuber).

Cluster 2 comprises not only authors representing international business (e.g., Gary Knight, Tage Koed Madsen, Jim Bell, Sylvie Chetty, Mika Gabrielsson), SME internationalization (e.g., Alex Rialp), international marketing (e.g., Øystein Moen), and international entrepreneurship (e.g., David Crick, Reijo Luostarinen, Sharon Loane) but also scholars who provide significant concepts and instruments originating from other domains, such as building theories from case study research (e.g., Eisenhardt).

Cluster 3 encompasses researchers representing the following domains: international marketing (e.g., Lianxi Zhou), strategic management (e.g., Michael Porter, Michael Hitt), dynamic capabilities (e.g., Jay Weerawardena), international business (e.g., Mike Peng, Jane Lu, Ram Mudambi), comparative governance (e.g., Bruce Kogut), innovation (e.g., Kevin Grand), and organizational behavior (e.g., Philip Podsakoff).

The last cluster has received the lowest number of citations (1376), but this group includes Jan Johanson, the father of the Uppsala Model. Moreover, this cluster includes authors from international business (e.g., Tamer Cavusgil).

4.10. Most-cited journals

After processing the cited references' data retrieved from our 453 documents, we obtained a sample of 1440 distinctive cited journals. We decided to establish the cut-off point at 100 citations, meaning that we perform co-citation analysis of the top 34 journals. As a result, we obtained a network with 4 clusters (see Fig. 4). The most frequently-cited

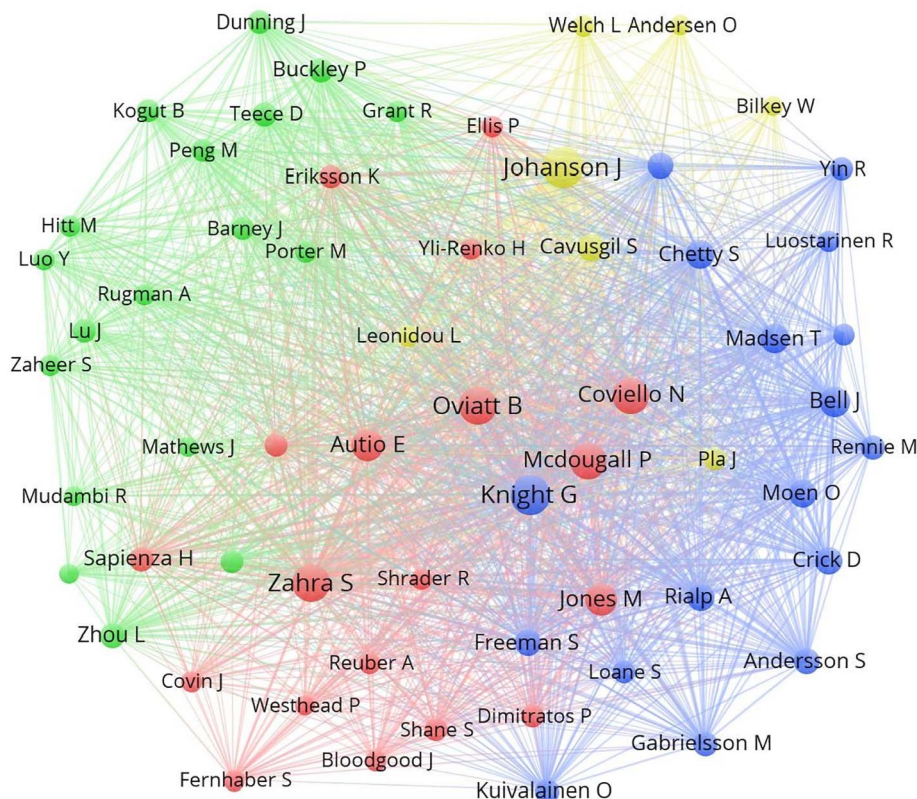


Fig. 3. Network of co-cited first authors.

Table 8

Clusters resulting from the most cited first authors (number of citations in parenthesis).

Cluster 1 (3593)	Cluster 2(3100)	Cluster 3 (1812)	Cluster 4 (1376)
Oviatt, B (570)	Knight, G (639)	Zhou, L (135)	Johanson, J (770)
Zahra, S (505)	Bell, J (254)	Buckley, P (132)	Cavusgil, S (186)
McDougall, P (433)	Madsen, T (235)	Teece, D (126)	Pla, J (102)
Coviello, N (406)	Chetty, S (203)	Barney, J (122)	Leonidou, L (88)
Autio, E (282)	Rialp, A (196)	Dunning, J (122)	Welch, L (81)
Jones, M (277)	Moen, O (178)	Kogut, B (111)	Andersen, O (79)
Sapienza, H (132)	Eisenhardt, K (177)	Porter, M (108)	Bilkey, W (70)
Eriksson, K (107)	Andersson, S (157)	Rugman, A (106)	
Shane, S (101)	Crick, D (151)	Weerawardena, J (106)	
Dimitratos, P (86)	Freeman, S (151)	Hitt, M (92)	
Ellis, P (86)	Gabrielsson, M (150)	Lu, J (92)	
Prashantham, S (86)	Rennie, M (128)	Luo, Y (92)	
Covin, J (85)	Kuivalainen, R (119)	Peng, M (92)	
Bloodgood, J (76)	Yin, R (117)	Zaheer, S (87)	
Shrader, R (74)	Sharma, D (86)	Mudambi, R (76)	
Fernhaber, S (73)	Loane, S (80)	Grant, R (72)	
Yli-Renko, H (72)	Luostarinen, R (79)	Mathews, J (71)	
Reuber, A (71)		Podsakoff, P (70)	
Westhead, P (71)			

journals are the *Journal of International Business Studies* (3306 citations), the *International Business Review* (1503 citations), the *Strategic Management Journal* (1318 citations), the *Journal of Business Venturing* (1203 citations), the *Academy of Management Journal* (1124 citations) and the *Journal of International Marketing* (889 citations)—(see Table 9).

The Management cluster encompasses managerially relevant journals (9030 citations), including strategic management (*Strategic Management Journal*), management theory (*Academy of Management*, *Academy of Management Review*, *Journal of Management Studies*), organization theory (*Organization Science*, *Administrative Science Quarterly*), and management practice (*Harvard Business Review*, *Management Science*).

The Small Business & Entrepreneurship cluster (4068 citations) includes journals that publish research on entrepreneurship (*Entrepreneurship Theory and Practice*, *Journal of International Entrepreneurship*), new venture creation (*Journal of Business*

Venturing) and small- and medium-size firms (*Small Business Economics Journal*).

The Marketing cluster (3328 citations) provides journals that concentrate on the subject of both marketing and business research, including international marketing (*Journal of International Marketing*, *International Marketing Review*, *European Journal of Marketing*) and marketing research (*Journal of Marketing Research*).

The International Business cluster (2909 citations) provides journals focused on internationalization, including marketing (*Advances in International Marketing*), management (*Management International Review*, *Journal of International Management*, *International Studies of Management & Organization*, and *The Academy of Management Executive Journal*).

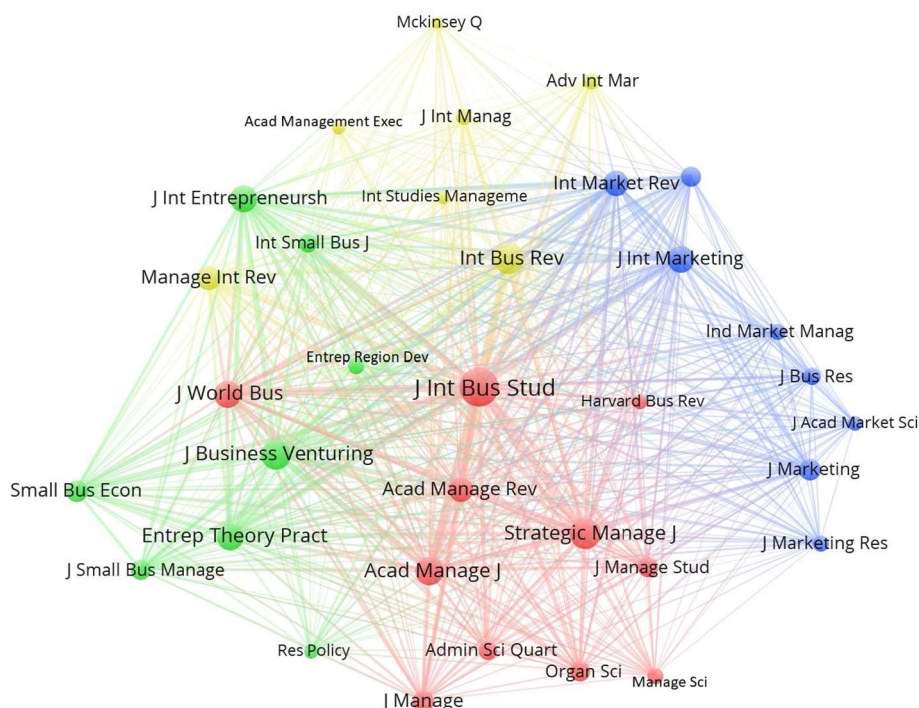
**Fig. 4.** Network of co-cited journals.

Table 9
Clusters resulting from the most-cited journals (number of citations in parenthesis).

Cluster 1 - Management (9030)
Journal of International Business Studies (3306)
Strategic Management (1318)
Academy of Management (1124)
Journal of World Business (784)
Academy of Management Review (721)
Organization Science (378)
Journal of Management Studies (346)
Administrative Science Quarterly (300)
Management Science (183)
Harvard Business Review (167)
Cluster 2 - Small Business & Entrepreneurship (4068)
Journal of Business Venturing (1203)
Journal of International Entrepreneurship (811)
Entrepreneurship Theory and Practice (779)
Small Business Economics Journal (345)
Journal of Small Business Management (294)
International Small Business Journal (291)
Research Policy (177)
Entrepreneurship & Regional Development (168)
Cluster 3 - Marketing (3328)
Journal of International Marketing (889)
International Marketing Review (863)
Journal of Marketing (432)
European Journal of Marketing (383)
Journal of Business Research (261)
Industrial Marketing Management (188)
Journal of Marketing Research (181)
Journal of the Academy of Marketing Science (131)
Cluster 4 - International Business (2909)
International Business Review (1503)
Management International Review (601)
Advances in International Marketing (261)
Journal of International Management (208)
McKinsey Quarterly (123)
International Studies of Management & Organization (107)
The Academy of Management Executive (106)

5. Conclusions

By employing a bibliometric analysis, this study has investigated and revealed the development of BGs' research between 1994 and 2016. It has evaluated the research and publication performance of individuals, journals, institutions, and countries. In an attempt to better understand the structure and dynamics of the BGs field, the study's authors developed and analyzed co-citation networks of cited references, first authors, and journals. This study brings insights from a review of the literature and summarizes the research available to date.

The chronological distribution of publications indicated three different stages with the growing pattern. The results of the citation analysis suggest that there is a strong correlation among the articles most cited and the most eminent authors. The article most cited, "Toward a Theory of International New Ventures", was written by the most productive authors: Oviatt and McDougall. The second most cited article "Innovation, organizational capabilities, and the born-global firm" was prepared by the highly productive authors Knight & Cavusgil. Further, those documents that are cited most often frequently identify which concepts dominate the research.

This study identified the most eminent authors by analyzing the number of documents published in the subject, as well as the number of citations per author. The authors with the highest number of publications on BGs are Sami Saarenketo, Gary Knight, Lianxi Zhou, Per Servais, Susan Freeman, and Mika Gabrielsson. The authors with the highest average citation per document are Patricia McDougall, Benjamin Oviatt, Gary Knight, and Tamer Cavusgil.

The journals with the highest citation per article are the *Journal of International Business Studies*, the *Journal of Business Venturing*, and the *Journal of International Marketing*. This may suggest that these journals not only accept more articles but represent the most eminent authors.

The most influential institutions are in the United States, New Zealand, Norway, and Australia, the same country affiliations of the main authors described above.

The study also analyzed the impact of the most influential countries. The countries with the highest average citation per document are The United States, New Zealand, and Norway. The United States is first in the ranking in regard to the quantity of documents, total citations, and average citation per document.

Regarding cited references, the analysis quantitatively confirmed the existence of core reference clusters that have their roots in international studies (e.g., stage theory, new venture internationalization, international marketing), entrepreneurship literature, network theory, and organizational capabilities. Author co-citation analysis allowed the identification of four clusters of "invisible colleges." Not surprisingly, it identified scholars who first introduced the BGs' concept (Oviatt, Knight, McDougall, Coviello), but it also provides insight into the significant contribution made by researchers from other disciplines. The most relevant clusters of journals highlighted the dominance of Anglo-American journals and the influence of the English language. The knowledge is fragmented, however, due to the division among journals representing management, business, entrepreneurship, and marketing. Given this, the results of this study can be beneficial for researchers conducting BGs-related studies in terms of understanding what articles, scholars (e.g., McDougall, Oviatt, and Knight), institutions (e.g., Michigan State University), countries (e.g., The United States), journals (e.g., *Journal of International Business Studies*) have a dominant influence on the BGs' research.

6. Limitations and research opportunities

This study is restricted to the use of only one database as a source of data collection. Although it is the most recognized, it includes only a part of the total data available. Some journals are still not in the database (e.g., *Journal of International Entrepreneurship*) and some have not been there since 1994 (e.g., *International Business Review*). Therefore, caution should be exercised when generalizing results. Another drawback is the nature of bibliometric approach, which does not allow the capture of context and intention for scholarly citation. Thus, bibliometric analysis cannot comprehensively account for the complex nature of citing behavior. Another limitation is that the resolution of the applied methods depends on the thresholds defined in the course of data reduction and factor extraction. Although this study broadly varied the thresholds without observing significant changes in the network structures, the final solutions depend partly on the technical decisions that were made.

The next step for this research is to consider conducting a qualitative analysis to bring a more in-depth discussion of the achieved results. Alternatively, the extended research can include other databases (Scopus or Google Scholar).

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