



Thirty-five years of strategic management research. A country analysis using bibliometric techniques for the 1987-2021 period

Treinta y cinco años de investigación en gestión estratégica. Un análisis de países utilizando técnicas bibliométricas para el período 1987-2021

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ABSTRACT

As a significant field of study, thirty-five years of *strategic management* research has accumulated a substantial amount of knowledge. This bibliometric study explores whether the unlimited flow of knowledge and the globalization of education & research in this time period, could drive away (or deter) the identification and specific interest of research in phenomena of national importance. Using bibliometric techniques and visualization of similarities (VOS) procedures of citation and co-citation analyses, this Paper explores research trends at the country level over 35 years using data from the Web of Science database. The aims are to identify: 1) the most visible and prominent actors at the country, regional, and global-level; 2) the evolution of the subjects of research into *strategic management* at the country, global, and supra-regional level; and 3) the evolution of journals publishing *strategic management* research articles by location. Findings suggest that common research subjects coexist at higher levels of aggregation, establishing the “paradigm” or general agreement about the field’s boundaries. Additionally, findings show that at the country level, rather than following a global trend, there is an enduring diversification of research agendas that bow to national and supranational factors from geographically close places.

Keywords: Strategic Management, Bibliometrics, Country Analysis, VOS Network Analysis.

RESUMEN

Como un campo de estudio importante, treinta y cinco años de investigación en gestión estratégica han acumulado una cantidad sustancial de conocimiento. Este estudio bibliométrico explora si el flujo ilimitado de conocimiento y la globalización de la educación y la investigación en este período de tiempo, podría alejar (o disuadir) la identificación y el interés específico de investigación de fenómenos de importancia nacional. Utilizando técnicas bibliométricas y procedimientos de visualización de similitudes (VOS) de análisis de citas y co-citas, este documento explora las tendencias de investigación a nivel de país durante 35 años utilizando datos de la base de datos Web of Science. Los objetivos se centran en identificar: 1) los actores más visibles y destacados a nivel nacional, regional y mundial; 2) la evolución de los temas de investigación de la gestión estratégica a nivel país, global y suprarregional; y 3) la evolución de las revistas que publican artículos de investigación de gestión estratégica por ubicación. Los hallazgos sugieren que los temas de investigación comunes coexisten en niveles superiores de agregación, estableciendo el “paradigma” o acuerdo general sobre los límites de campo de estudio. Además, los hallazgos muestran que, a nivel de países, existe una diversificación persistente de agendas de investigación, que se inclinan a estudiar eventos nacionales y supranacionales de lugares geográficamente cercanos, en vez de seguir una tendencia global.

Palabras clave: Gestión Estratégica, Bibliometría, Análisis de País; Análisis de red VOS.

1. INTRODUCTION

In the last thirty-five years, the number of publications on *strategic management* research has risen to —what is now regarded as— significant levels; leading it to become a research topic that acquires meaning whilst achieving stability (Ramos-Rodríguez & Ruiz-Navarro, 2004). By means of a proper knowledge structure, with distinctive and identifiable ways of diffusion and influence, knowledge in *strategic management* research has flourished, as well as the globalization of management education (Bruner & Iannarelli, 2011). Yet, based on the similar demands of scientific rigor and practical utility that build *strategic management* research, this considerable progress may impose directional and development trends on *knowledge production* over time (Bruner & Iannarelli, 2011).

Despite how accepted practices from the academic & practitioner perspectives have qualified said investigations as ‘relevant’ for the scientific community (Daft & Lewin, 2008), there are certain collaterals that can lead to uncovering essential knowledge gaps in the field. For instance, studies that have addressed the globalization of management research and educational issues show how the impact of some institutions on profiling can be considered a “hot topic” in the study. In addition, De Meyer (2012) shows that the drivers for globalization, in education management & research, are not an issue related to internal strategic choices within business schools, but rather are subject to the pressures that are imposed by outside institutions such as: accreditation organizations, alumni, and recruiters, among others. This leads to a sizable gap between what these institutions require and where research needs to concentrate on (Bruner & Iannarelli, 2011; Reed, 2002). Although global trends support similar perspectives regarding research topics, there are some associated problems. For instance, the “*world is flat*” view proposes that a web-enabled arena has powered collaborative research work without geographical or temporal limits to address relevant global aspects, thus overcoming language and cultural barriers (Friedman, 2005). However, Ghemawat (2008, p. 396) highlights two concerns associated with cross-border business and management research —attributed to institutional pressures— that can generate bias on investigation outcomes: 1) preference for documenting generalizable global “*one-size-fits-all*” theories and hypotheses, and 2) a US-dominated editorial control of the top journals, which steers research towards home-related markets.

With regard to the aforementioned, this research henceforth seeks to explore whether the unlimited flow of knowledge, and the globalization of education & research in strategic management, has driven away (or deterred) the identification and specific interest of research in phenomena of local importance. Thus, through the application of bibliometric techniques, this study aims to provide an overview of strategic management research by answering the following research questions:

- RQ1. What are the most visible and prominent country, supra-regional, and global-level actors in strategic management research in the WoS during the last thirty-five years?
 RQ2. How has the national, supra-regional, and global research subjects in strategic management in the WoS evolved during the last thirty-five years?

RQ3. How has been the evolution of publications in journals by location —considering the research outcomes in strategy— in the WoS during the last thirty-five years?

Consequently, this document is organized in the following manner: Section 2 presents the different bibliometric analysis perspectives and bibliometric methods used in preparing this study; Section 3 presents the results grouped into three sub-themes, each answering a research question; Section 4 discusses the main findings and conclusions of this work; and Section 5 explains the limitations of the study while offering future suggestions for research.

2. CONTEXTUAL FRAMEWORK

Different bibliometric studies have used different levels of analysis in management research. This can be seen from authors (Cancino *et al.*, 2017), Journals (Schriber, 2016; Valenzuela-Fernández *et al.*, 2017), Universities (Andrade-Valbuena *et al.*, 2019) and countries (Valenzuela-Fernández *et al.*, 2018). These analyses help evaluate the influence & relevance of academic products in the scientific community. Additionally, similar efforts using bibliometric techniques have been used to analyze topics of investigation in *strategic management* research, which include mergers & acquisitions (Ferreira *et al.*, 2014), dynamic capabilities (Vogel & Güttel, 2013), competitive intelligence (Calof & Wright, 2008), and specific subjects/concepts such as Entrepreneurial Orientation (Andrade-Valbuena *et al.*, 2019) or New Product Development (Andrade-Valbuena & Merigó, 2018).

When discussing the intellectual structure of strategic management research, different authors have addressed this through bibliometrics by analyzing the *Strategic Management Journal* publications. For instance, applying citation and co-citation analyses, Ramos-Rodríguez and Ruiz-Navarro (2004) discovered that there has been a rising trend in replacing books for Papers as a source of academic publications —in terms of *strategy*— and the prominence of the Resource-Based View theory of the firm as a foundation for upcoming developments. Nerur *et al.* (2008) complements their findings by utilizing authors as the units of analysis, and by tracing the evolution of the intellectual structure of the *strategic management* field during the 1980-2000 period. Other works of Furrer *et al.* (2008) integrate the results from other well-known journals (*Strategic Management Journal*, *Academy of Management Journal*, *Academy of Management Review* and *Administrative Science Quarterly*) by studying the relationships between the sub-fields of *strategic management*. These show the more important lines & topics of research, and a trend involving the integration between the different academic influences on the field of *strategic management*. In contrast, Guerras-Martin *et al.* (2014) discuss the existence of two pendulums that reflect the tensions between the focus on *internal firm factors* and *external environmental attributes* respectively, as well as between a more macro-level analysis which leads to different research focuses over time.

2.1. Bibliometric Techniques

Bibliometrics is one of the most widely used quantitative methods that has been used as a technique to comprehensively

explain the mobility and interaction of knowledge (Aman, 2018; Zhang *et al.*, 2018). By collecting relevant information found in databases such as Journals, citations, authors, institutions, countries, and keywords, valuable insights that help us understand the growth in research in a specific field—and the importance of the topics that are addressed—can be obtained (Van Raan, 2005).

Furthermore, bibliometric techniques have become powerful tools that allow for the creation of quantitative and comparative studies in both scientific and technological publications. This in great part is due to the techniques' main objectives being the quantification of citations and the analysis of content (Basurto-Flores *et al.*, 2017). In this regard, citation analysis can be a general indicator of the use and utility of a resource by citing the Journals, articles, institutions, web pages, and specific research groups that have been widely used to assess the impact that the writings generate in the literature (Tomaszewski, 2018).

Additionally, bibliometric analysis is constructed by using purely quantitative approaches on citations, which are a reliable and valid indicator of scientific interactions, thus providing a representative and informative perspective of the data (Podsakoff *et al.*, 2008). Therefore, they are used to determine the relevance and impact of any actor at different levels of analysis, such as authors, institutions, countries, and the structure of the field (Small, 1980; Xi *et al.*, 2015). Furthermore, the use of bibliometric techniques can reduce the tendency of authors to translate their perceptions into their writings, allowing for a more systematic and objective approach (Sassmannshausen, 2018).

2.2. Data Collection

This study first focuses on determining the scopes and boundaries of the search parameters of the existing literature. Thus, to establish the delimitation of this exploration of *strategic management* research, the investigation not only includes SMJ (as suggested in previous systematic revisions), but also incorporates other Journals as sources of publications (e.g., Koseoglu, 2016; Ramos-Rodríguez & Ruiz-Navarro, 2004). Although SMJ represents a solid foundation to get a general overview of the field (Ronda-Pupo & Guerras-Martin, 2010), its use as the only source of information may lead to a biased perspective on strategic management research. Hence, by considering the increasing number of new & specialized Journals in the network, and the existence of *strategy* as a subject in the scope of publications in other widely respected journals, this investigation's search results were followingly complemented and validated by three different experts. This ensures that no relevant work was omitted, as the three experts (whom have each a minimum of seven years researching and teaching in field-related courses) collected more than 30 articles with an H-Index above 7, found in the WoS database in *Business & Management* research. The results include the following journals: *Advances in Strategic Management: A Research Annual*; *Business Strategy and the Environment*; *Global Strategy Journal*; *International Journal of Strategic Property Management*; *Journal of Family Business Strategy*; *Journal of Strategic Information Systems*; *Strategic Entrepreneurship Journal*; *Strategic Management Journal*; *Strategic Organization*; and *Technology Analysis & Strategic Management* (see Table 5). As suggested by the experts, the decision

to include these journals ensures content validity to the corpus of analyzed research.

The next phase is to identify the keywords in this literature search. With the experts' recommendations, whilst considering the inclusion of most of the Papers related to *strategic management*, the following keywords were obtained: "strategy*" OR "SWOT" OR "competitive advantage*". Wildcards (truncations) are automatically included in the search in their plural or singular variations of each word. All data utilized in this study is available in the *Core Collection of the Web of Science* (WoS) database, which is currently owned by Clarivate. Consequently, the selected journals are indexed in the WoS; the reason this database was chosen is due to the wide recognition that Journals indexed in the WoS represent the academic and scientific community, which—incidentally—characterizes a key quality criterion in a revision process when exploring a specific field of knowledge (Torraco, 2005). To highlight, at the moment this investigation was developed, the WoS covers approximately 151 areas of research, grouping more than 12,000 journals, 50 million articles, and other scientific publication products (such as notes and investigations). Moreover, this database gathers Journals—that are forums of publications—of different specialized fields such as *strategy* (Nerur *et al.*, 2016), thus enhancing the reliability and pertinence of the results.

A primary topic search was undertaken in the *Business and Management* category on the WoS, delimiting the language to English written documents. This type of search looks for records—including specific words in the title and/or abstract—the author/s, and suggested keywords within each document. By applying citations and co-citations to articles published in the *Strategic Management Journal* (SMJ), Ramos-Rodríguez and Ruiz-Navarro (2004), and Nerur *et al.* (2008) found that the trend in using articles as the source of publications was gaining more and more acceptance in place of books—which had the strongest influence on strategic management up until the year 2000—. Hence, this study follows Merigó *et al.*'s (2015) procedure, which only considers articles (91,944), letters (232), reviews (4,128), and notes (165). From these, a total of 96,496 publications were included in the database to be analyzed, with each document averaging 27 citations per Paper for the 1987-2021 period—as seen in Figure 1—.

2.3. Data Analysis

Two main complementary perspectives are used in this study to analyze the information at the country level: a bibliometric analysis based on the procedures proposed by Merigó *et al.* (2015), and a network analysis based on the Visualization of Similarities technique supported on the VOS-Viewer software (version 1.6.6), developed by Van Eck and Waltman (2010).

In the bibliometric analysis, the number of publications and the number of citations that a scientific work receives are among the most usual dimensions addressed to capture academic productivity (Trieschmann *et al.*, 2000). Since each indicator gets a different *dimension of productivity* and *impact of academic research*, choosing between one or the other can misrepresent the field (Laengle *et al.*, 2017). In this sense, Hirsh (2005) proposes an arrangement where both indicators are merged into one single measurement unit: the H-Index, which can show a

broader perspective of the data that the number of publications and citations cannot do by themselves. Hence, this measurement summarizes the number of studies that have received at least the same number of citations (Hirsh, 2005). Based on the bibliometric procedure proposed by Merigó *et al.* (2015), the investigation considered single and composed indicators to present different results from the same variable. Therefore, the number of citations, publications, H-Index, and thresholds—ranking the number of documents above a number of citations—are the bibliometric measurements that fit the most to the objectives of this investigation (Laengle *et al.*, 2018; Martínez-López *et al.*, 2018).

The Visualization of Similarities technique, supported on the VOS-Viewer software, allows for the analysis of different actors (nodes) and their relationships (links between nodes) through a mapping and clustering network exploration. The distance between two nodes in such maps represent the strength of the relation between them (Van Eck & Waltman, 2010). The size of the nodes in the network, represent the most prominent countries regarding citations, co-authorship or bibliographic-coupled variables, depending on the type of analysis that is performed.

There are three different approaches to measure: citations, co-authorship relations, and bibliographic coupling. Citation analysis seeks to identify the relevance of actors based on the number of times they are cited (Voeth *et al.*, 2006). Whereas co-authorship relations and bibliographic coupling provide information on the internal structure of the field, quantifying the similarity of the content of the analyzed publications (Kraus *et al.*, 2012) and the number of times they both/all cite the same reference (Van Eck & Waltman, 2010). Such analyses restrict both, examining the distance and clustering among countries. Moreover, an essential feature of this method is that it uses a fractional counting technique that assigns the same proportion of the authorship to each author, this reduces the multiple affiliation effect.

3. RESULTS

To answer the proposed research questions, the results are grouped to find: 1) the most visible and prominent actors at a country, regional, and global-level (RQ1), 2) the country, global, and supra-regional evolution of subjects of research into *strategic management* (RQ2), and 3) the evolution of publications in strategy journals by location (RQ3). The product of the network analysis is based on the number of citations, co-citations, and bibliographic couplings present in the global production of academic research into *strategic management* and the subjects of study. These results are presented in the following manner: 1) The first three 10-year periods, 2) One last 5-year period. This is done to visualize the evolution of the collaborative structure of the leading countries and research content over time.

3.1. Results based on the evolution of publications on strategy by countries - 1987 to 2021

3.1.1. ANALYSIS OF SUPRA-NATIONAL REGIONS

As suggested by Zacca-González *et al.* (2014), and to appreciate the evolution of publications, this study considers eight re-

gions of supra-national territories: Africa, Eastern Europe, Latin America, Middle East, Oceania, East Asia, Western Europe, and North America.

Many regions have conducted important research into strategic management throughout the world. Figure 1 shows the annual number of articles on *strategic management* research published by each supra-national territory in thirty-five years of academic production (1987-2021). Since 1987, the most productive region has been North America, which led the field until 2016 when Western Europe became a relevant producer, thus breaking the North American hegemony in number of academic publications. Similarly, East Asia also surpassed the number of papers published when compared North America in 2021, making the region also a highly productive group. This reveals important trends in the regions, which raises expectations as the number of papers published, and the impact that said scientific production, will have in the future.

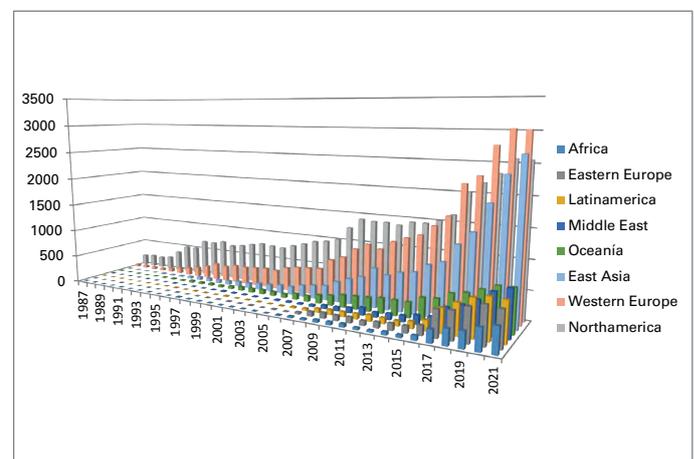


Figure 1
Annual number of articles in strategy research published by each supranational region (1987-2021)

Source: Own elaboration.

Another essential dimension of the academic publication measurements is said publications' impact during the last thirty-five years of research. In this regard, Table 1 shows the total number of papers published in *strategic management* research (TPS), the total number of citations received by these academic products (TCS), the H-Index based on strategy investigations (THS), and four citation thresholds: 500, 250, 100 and 50, at a supra-national territory level categorization (this classification shows the citation structure in the field between 1987 and 2021).

As observed, the most influential region has been North America, with an H-index value of 595; this means that 595 papers published in *strategic management* research have received at least 595 citations. Another important aspect of Table 1 is the relative closeness of Western Europe and Oceania in the number of citations received per published Paper. Similar patterns are followed by Africa, Eastern Europe and Latin America. This highlights that although the quantity in articles published is dissimilar between these regions, the impact they have on the field is comparable.

Table 1
Strategy research citation structure in the WoS by each supranational region (1987-2021)

REGIONS	TPS	TCS	THS ^a	TCS/TPS	>500	>250	>100	>50
North America	37583	2676866	595	71.23	798	2186	6159	11052
Western Europe	29385	1106026	355	37.64	201	612	2363	5373
East Asia	17283	439595	221	25.44	58	172	859	2123
Oceania	6711	221285	182	32.97	26	102	434	1087
Middle East	4083	69861	104	17.11	3	18	116	331
Latin America	4088	45194	86	11.06	4	16	70	187
Eastern Europe	3822	46279	85	12.11	5	14	65	164
Africa	2149	23119	61	10.76	1	5	28	78

Abbreviations: TPS and TCS = Total number of publications and citations, based on strategy research only. THS is the H-Index based on strategy investigations. ≥ 500 , ≥ 250 , ≥ 100 and ≥ 50 is the number of papers that have reached that number of citations.

^a The list is ordered top down considering the THS-index as the first classification item. The second classification item is the TPS, the third classification item is the TCS.

Source: Own elaboration.

3.1.2. LEADING COUNTRIES IN STRATEGIC MANAGEMENT RESEARCH

This section centers the analysis on countries based on their geopolitical definition. In this sense, some changes throughout this period are considered (such as those that affected the old Soviet Union in the 90s), assigning authorship of research to its actual geopolitical reference. Moreover, by assigning authorship of the Papers to the nationality of the institution rather than the authors' nationality—at the time of this research—the investigation can avoid the issue where some researchers in one country may have different nationalities.

Table 2 presents the Top 50 most influential countries in *strategic management* research in thirty-five years of academic investigation (between 1987-2021). The degree of influence is based on three criteria: 1) the H-index, which measurement for this research is based on publications on *strategy*. Furthermore, this index is an essential bibliometric instrument that is widely accepted for quantifying the impact of academic products based on individual results (Alonso *et al.*, 2009; Hirsch, 2005); 2) The total number of papers published in *strategic management* research; and 3) the total number of citations received by each product. These bibliometric techniques allocate one unit to each country, represented in its authorship. Although this assignation can signify some divergence caused by the dissimilar presence of institutions in the same paper, the number of researchers by country can minimize this effect. Therefore, marginal deviations are expected for this kind of assignation.

As seen, the most prominent and productive country in *strategic management* research is the USA. This is expected due to specific characteristics and milestones in the history of this field, as highlighted by Nerur *et al.* (2008) which states: Firstly, That the preeminent influence of publications of classic works such as Chandler (1962), Ansoff (1965), and Porter (1980; 1985) (among others), have been crucial. And these are affiliated to research institutions and organizations located in

the US. Secondly, the launching of the *Strategic Management Journal* (SMJ) in USA, which is the most specialized journal worldwide in this field. Thirdly, The introduction of the *strategy* division of the *Academy of Management Journal* (AMJ), as well as the inclusion of *strategy* as the scope of publication among other distinguished journals located in said country. Finally, the presence of US universities that are highly respected throughout the world. This historical evidence is confirmed in the citation structure as demonstrated by the different citation thresholds in Table 2—which shows that the US has come to be seen as a leader of the field—, thus building foundations for the construction of future knowledge—including in other fields— such as biology or physics.

Note that Canada also shows remarkable outcomes related to the number of citations per published Paper. This highlights the importance of its academic production to *strategic management* research. Regardless, four other very important countries—in this topic— that must be mentioned are the UK, the Netherlands, France, and China.

In the course of this investigation, interesting results arose when contrasting the number of publications and citations received, after applying control by country population (as evidenced in the last three columns in Table 2). This analysis per capita takes on added relevance in the case of highly productive countries whose results—because of their size—are not significant on a global scale. In this sense, there are five influential countries in the field: Liechtenstein, Finland, Denmark, New Zealand, and Singapore. Special note must be taken when considering the difference in population when compared to powerhouses such as the US and China. Although small, these countries have high production, which further demonstrates the remarkable results that prove the relevance of *strategic management* research in said countries.

In this regard, the case of the Netherlands is highly noteworthy if the number of citations received per capita is being considered, which places this nation in the Top 5 most prominent countries in *strategic management* research.

Table 2
Most influential countries in strategy research (1987-2021)

R	COUNTRY	TPS	TCS	THS ^a	TCS/TPS	>500	>250	>100	>50	Pop. (2021) ^b	(TPS/Pop) X 100.000	(TCS/Pop) X 100.000
1	USA	33719	2473335	582	73.35	749	2032	5697	10130	329484.12	102.34	750.67
2	UK	13311	541599	268	40.69	83	301	1159	2678	67215.29	198.04	805.77
3	Canada	5493	317491	246	57.80	76	242	746	1434	38005.24	144.53	835.39
4	Netherlands	3636	182412	191	50.17	45	126	415	875	17441.14	208.47	1045.87
5	France	3745	158252	180	42.26	45	110	344	677	67391.58	55.57	234.82
6	China	8282	213900	177	25.83	32	88	416	1039	1419060.50	5.84	15.07
7	Australia	5695	188930	170	33.17	22	89	374	927	25687.04	221.71	735.51
8	Germany	4437	150234	160	33.86	19	68	340	793	83240.52	53.30	180.48
9	Spain	4835	146797	155	30.36	20	71	293	721	47351.57	102.11	310.02
10	Italy	3731	102424	131	27.45	8	38	210	534	59544.02	62.66	172.01
11	Sweden	2251	84716	131	37.63	20	55	184	401	10353.44	217.42	818.24
12	Switzerland	1478	66705	126	45.13	12	40	173	327	8636.90	171.13	772.33
13	Finland	1999	64824	117	32.43	4	25	149	344	5530.72	361.44	1172.07
14	Denmark	1666	64333	116	38.62	11	34	149	323	5831.40	285.69	1103.22
15	Belgium	1171	59081	114	50.45	16	37	130	291	11556.00	101.33	511.26
16	South Korea	2400	70430	112	29.35	9	31	144	317	51780.58	46.35	136.02
17	Singapore	1300	55968	111	43.05	6	24	139	310	5685.81	228.64	984.35
18	Taiwan	2881	72173	109	25.05	6	20	138	387	23886.05	120.61	302.16
19	Norway	1166	39055	97	33.49	5	21	93	189	5379.48	216.75	726.00
20	New Zealand	1245	38199	88	30.68	4	15	69	190	5084.30	244.87	751.31
21	Israel	728	27833	84	38.23	5	15	76	145	9216.90	78.99	301.98
22	Austria	912	30547	83	33.49	3	15	65	149	8917.20	102.27	342.56
23	India	3166	38706	79	12.23	1	9	49	165	1380004.39	2.29	2.80
24	Japan	931	27928	78	30.00	7	15	57	115	125836.02	7.40	22.19
25	Ireland	720	20718	73	28.78	3	10	43	108	4994.72	144.15	414.80
26	Portugal	1190	26026	69	21.87	5	6	44	116	10305.56	115.47	252.54
27	Turkey	1002	19847	66	19.81	0	4	35	108	84339.07	11.88	23.53
28	Greece	636	18577	65	29.21	3	6	32	98	10715.55	59.35	173.36
29	Brazil	2311	20463	57	8.85	3	5	27	71	212559.41	10.87	9.63
30	North Ireland	226	9648	53	42.69	1	5	24	58	1895.51	119.23	508.99
31	Malaysia	1196	15680	51	13.11	2	3	17	55	32366.00	36.95	48.45
32	Cyprus	236	9716	47	41.17	1	7	25	47	1207.36	195.47	804.73
33	South Africa	1092	11411	46	10.45	0	3	15	41	59308.69	18.41	19.24
34	U. Arab. Emirates	666	8931	45	13.41	0	1	13	35	9890.40	67.34	90.30
35	Chile	418	8122	43	19.43	0	4	15	40	19116.21	21.87	42.49
36	Mexico	454	6827	42	15.04	0	3	11	35	128932.75	3.52	5.30
37	Iran	783	8665	40	11.07	1	3	11	29	83992.95	9.32	10.32
38	Russia	625	7152	39	11.44	0	1	15	32	144104.08	4.34	4.96
39	Thailand	456	5760	36	12.63	1	1	5	20	69799.98	6.53	8.25
40	Slovenia	249	7022	36	28.20	3	4	10	25	2100.13	118.56	334.36
41	Saudi Arabia	397	4588	34	11.56	0	0	5	16	34813.87	11.40	13.18
42	Poland	690	5277	33	7.65	0	0	3	13	37950.80	18.18	13.90
43	Lithuania	340	4130	30	12.15	0	0	3	15	2794.70	121.66	147.78
44	Colombia	448	4622	29	10.32	1	3	6	11	50882.88	8.80	9.08
45	Lebanon	137	2962	28	21.62	0	0	5	18	6825.44	20.07	43.40
46	Liechtenstein	62	2731	28	44.05	0	0	7	16	38.35	1616.69	7121.25
47	Romania	461	3362	25	7.29	1	1	1	4	19705.30	23.39	17.06
48	Argentina	132	2004	23	15.18	0	0	2	12	45376.76	2.91	4.42
49	Czech Republic	310	2102	21	6.78	0	0	1	2	10561.63	29.35	19.90
50	Hungary	178	2277	20	12.79	0	1	5	8	9749.76	18.26	23.35

Abbreviations: TPS and TCS = Total number of publications and citations, based on strategy research only. THS is the H-Index passed on strategy investigations. ≥ 500 , ≥ 250 , ≥ 100 and ≥ 50 is the number of papers that have reached that number of citations. Pop: Population in thousands of people.

^a The list is ordered top down considering the THS-index as the first classification item. The second classification item is the TPS, the third classification item is the TCS.

^b According to World Bank (2021) database.

Source: Own elaboration.

3.1.3. TEMPORAL ANALYSIS OF THE LEADING COUNTRIES

A critical analysis based on the country rankings is employed to observe their evolution over time. For example, Table 3 shows the most influential countries in *strategic management* research by quinquennials.

On average, the H-Index based on *strategic management* research is 37, meaning that 37 papers received at least 37 citations each five years. It is also important to mention the increasing production of published Papers, which raises from 1,627 in the first quinquennial to 52,633 in the last five years, representing an average increase in production of 184% every five years. This increase in productivity is leveraged by the similarly growing number of Journals that are specialized in the field, and others that have included *strategy* in the scope of their publications.

The data clearly demonstrates the leadership of the US during these thirty-five years, as its productivity and number of citations received in each period are outstanding. However, it must be noted that the gap in terms of the H-index between other countries has decreased over time (from 116 in the first quinquennial to 22 in the last quinquennial, particularly for the runner-up country). In this case, Denmark, China, and the Netherlands have had a growing impact on *strategic management* research over the time period, raising themselves in the rankings over the seven quinquennials not only in their H-index, but also in the increasing number of Papers published and citations received. This highlights the cumulative levels of specialization in *strategy*. In lieu, Israel and Japan are losing relevance in the field, which shows that their investigative interests and efforts are being directed towards other disciplines.

With respect to the number of citations per Paper received, Canada, France, the Netherlands, the UK, and Belgium are relevant countries, ranking in the Top 10 in this index in almost all the quinquennials.

Table 3 collects the evolution of influence rankings by quinquennials. Considering the first two periods: 1987-1991 and 1992-1996, the US comes out as the most prominent and prolific in the field. With an academic production that comprises 65% of all the Top 30 countries combined, the US also received almost 75% of citations during the decade. Yet, Spain, France, Sweden, and Canada have received more than 100 citations per Paper in these two time periods, which is more than what was received by the US per Paper. This shows the considerable commonalities of its works with other investigations.

The second two-stages of research correspond to the 1997-2001 and 2002-2006 time periods (see Table 3). Based on the number of citations received per Paper, the relevance of this decade in the construction of knowledge learning in the field must be highlighted. This period shows an increasing relevance of countries such as the UK, Canada, the Netherlands, and France in the academic discussion on the subject. In both quinquennials, Belgium received the most significant number of citations per Paper, which shows the relatively broad acceptance of its academic production, putting it within the Top 4 in this index worldwide (as displayed in Table 2).

The third two-stages of research correspond to the 2007-2011 and 2012-2016 time periods. Table 3 shows that, overall, results are relatively comparable to the previous decades, taking into account that in the latter, there are more Journals indexed in the WoS database. Thus, the volume of academic production published here is even more remarkable, which corroborates with the general assumption that *strategic management* research is increasing worldwide.

Furthermore, some trends are consolidated in this period, such as the relevance that certain countries besides the US are gaining in the field. Note: from 2012-2016, 75% and 73% of the number of Papers and the number of citations received—respectively—were received by countries other than the US. This is an opposite scenario to the previous situation, and it is evidenced in the first five years of *strategic management* research. Additionally, the Top 5 countries receiving the most citations per Paper in the last quinquennial are Switzerland, the UK, the Netherlands, Austria, and Canada, which heralds a wide—and varied—range of new prominent actors representing different themes and specialties in *strategic management* research. Yet even with all these advancements, the US is still by far the most prominent and prolific country in the field. However, these results showcase the degree of maturity and consolidation of the area, as more groups get involved.

In the last period (2017-2021), a consolidation stage from the top three influential actors in the field can be observed. This group is led by the US, which published almost 19% of all the top 30 countries combined and gathered almost 22% of all the citations received in this quinquennial. Furthermore, the US, UK, China, Italy, and Germany—together—concentrate almost half of the published Papers (48%) and citations received (52%) worldwide in this quinquennial. Interestingly, despite this time period being subject to the COVID-19 global pandemic, the trends in publication and citations (as evidenced in the three previous decades) remain.

Table 3
Most influential countries in strategy research by quinquennials, Periods 1987-1991 and 2017-2021

R	CTRY	1987-1991			1992-1996			1997-2001			2002-2006			2007-2011			2012-2016			2017-2021															
		TPS	TCS	THS	TPS	TCS	THS	TPS	TCS	THS	TPS	TCS	THS	TPS	TCS	THS	TPS	TCS	THS	TPS	TCS	THS													
1	USA	1139	106748	154	93.72	USA	2789	259756	243	93.14	USA	3329	314583	267	94.50	USA	4011	292321	239	72.88	USA	5992	211094	165	35.23	USA	7093	59930	68	8.45	USA	10228	123562	109	12.08
2	Canada	95	10408	38	109.56	UK	599	26558	77	44.34	UK	1006	58416	113	58.07	UK	1249	69801	124	55.89	UK	2140	70757	112	33.06	UK	3382	35684	63	10.55	UK	5360	69106	87	12.89
3	UK	168	7576	30	45.10	Canada	318	24397	70	76.72	Canada	378	31854	89	84.27	Canada	562	34818	101	61.95	Canada	1016	32445	84	31.93	Canada	1240	10799	44	8.71	China	5231	48159	71	9.21
4	France	29	5288	21	182.34	France	109	9567	45	87.77	Netherlands	218	13360	58	61.28	Netherlands	319	19699	75	61.75	Netherlands	688	23950	74	34.81	Netherlands	1017	9669	39	9.51	Italy	2211	26998	62	12.21
5	Israel	18	750	13	41.67	Netherlands	108	7976	35	73.85	France	163	13223	58	81.12	France	238	15405	70	64.73	China	821	23361	70	28.45	China	1900	12765	38	6.72	Germany	2159	25467	61	11.80
6	Australia	19	531	11	27.95	Singapore	34	746	34	21.94	China	179	11447	53	63.95	Australia	376	17554	69	46.69	Spain	931	20358	68	21.87	Germany	1363	11023	38	8.09	Australia	2722	28961	59	10.64
7	Germany	16	502	9	31.38	Australia	95	6654	30	70.04	Australia	229	8911	48	38.91	China	272	14725	68	54.14	Germany	657	19726	67	30.02	Spain	1450	8947	36	6.17	France	1935	21805	59	11.27
8	Netherlands	25	424	9	16.96	China	61	2960	23	48.52	Germany	110	6176	40	56.15	Spain	290	12625	57	43.53	Australia	886	21117	66	23.83	Australia	1546	10475	35	6.78	Canada	2012	22444	57	11.16
9	Japan	18	653	8	36.28	Israel	49	2753	22	56.18	Singapore	79	4664	35	59.04	Germany	215	10531	56	48.98	France	456	14693	58	32.22	Italy	939	6735	34	7.17	Netherlands	1373	19440	57	14.16
10	Spain	6	1130	6	188.33	Sweden	41	4038	18	98.49	Sweden	68	5143	33	75.63	Singapore	146	9003	50	61.66	Italy	402	11359	55	28.26	France	926	6354	32	6.86	Spain	2275	23581	55	10.37
11	Switzerland	11	1021	6	92.82	Italy	51	1527	18	29.94	Italy	89	3487	33	39.18	South Korea	149	10010	47	67.18	Switzerland	278	10709	54	38.52	Finland	624	5038	32	8.07	Sweden	1081	12708	52	11.76
12	South Korea	7	354	6	50.57	Belgium	25	2418	17	96.72	South Korea	70	5426	31	77.51	Italy	145	5386	44	37.14	Sweden	340	9739	49	28.64	Switzerland	470	4981	32	10.60	India	2605	18509	48	7.11
13	Sweden	6	115	5	19.17	Germany	63	939	17	14.90	Israel	73	2964	31	40.60	Taiwan	216	6446	43	29.84	Taiwan	791	12860	48	16.26	Sweden	656	4411	30	6.72	Finland	979	11681	45	11.93
14	New Zealand	9	126	4	14.00	South Korea	26	1249	16	48.04	Belgium	57	6054	30	106.21	Sweden	138	7128	43	51.65	Finland	301	8022	47	26.65	Denmark	471	3835	30	8.14	Switzerland	618	9488	44	15.35
15	Singapore	8	97	3	12.13	Japan	47	1659	15	35.30	Spain	69	3178	27	46.06	Denmark	98	6677	40	68.13	Denmark	242	6696	47	27.67	Taiwan	905	4673	27	5.16	Denmark	836	9726	42	11.63
16	South Africa	3	53	3	17.67	Taiwan	26	756	13	29.08	Japan	58	4747	26	81.84	Belgium	88	6608	39	75.09	Belgium	208	6861	44	32.99	Singapore	359	2518	25	7.01	South Korea	1166	9697	40	8.32
17	Finland	7	44	3	6.29	Switzerland	28	1124	12	40.14	Zealand	66	3701	25	56.08	Finland	99	4046	37	40.87	Singapore	230	6142	44	26.7	South Korea	688	3329	24	4.84	New Zealand	610	6306	39	10.34
18	Norway	4	39	3	9.75	Denmark	19	942	12	49.58	Denmark	51	3558	22	69.76	Zealand	92	4224	37	45.91	South Korea	348	6991	43	20.09	Norway	295	2410	24	8.17	Norway	606	7447	39	12.29
19	India	7	19	3	2.71	Spain	22	609	12	27.68	Taiwan	52	1153	21	22.17	Switzerland	94	4434	36	47.17	Norway	184	4943	39	26.86	Austria	271	2400	24	8.86	Taiwan	979	8879	37	9.07
20	Chile	3	194	2	64.67	Finland	25	522	12	20.88	Ireland	35	1156	19	33.03	Norway	73	3897	31	53.38	Japan	143	3476	30	24.31	Belgium	362	2742	23	7.57	Portugal	761	7094	36	9.32
21	China	3	152	2	50.67	New Zealand	42	959	11	22.83	Finland	44	2814	17	63.95	Israel	67	2478	28	36.99	Turkey	165	3146	30	19.07	New Zealand	304	1951	21	6.42	Austria	471	6592	35	14.00
22	Portugal	2	38	2	19.00	Austria	15	465	10	31.00	Norway	31	1452	16	46.84	Japan	97	2900	26	29.90	Israel	137	3277	29	23.92	India	416	1456	18	3.50	Singapore	468	5215	35	11.14
23	Italy	6	20	2	3.33	India	28	421	10	15.04	India	42	978	16	23.29	Greece	56	2330	26	41.61	India	155	3114	29	20.09	Portugal	292	1647	17	5.64	Malaysia	919	6830	34	7.43
24	Greece	2	17	2	8.50	Ireland	16	831	9	51.94	Switzerland	35	1798	14	51.37	Austria	54	2520	25	46.67	Portugal	131	3451	28	26.34	Ireland	172	1113	17	6.47	Belgium	477	5558	34	11.65
25	Austria	4	16	2	4.00	Norway	13	481	8	37.00	Austria	28	975	14	34.82	India	49	1243	21	25.37	New Zealand	166	3158	28	19.02	Japan	207	957	16	4.62	Brazil	1802	6559	32	3.64
26	Brazil	2	11	2	5.50	Brazil	11	224	5	20.36	Turkey	24	722	14	30.08	Turkey	48	1211	21	23.23	Austria	110	2559	27	23.26	Greece	158	922	16	5.84	Turkey	564	4420	32	7.84
27	Poland	2	4	2	2.00	Portugal	6	162	5	27.00	Greece	17	929	12	54.65	Portugal	37	1511	19	40.84	Ireland	101	101	27	1.00	Israel	166	1047	15	6.31	Pakistan	582	3957	30	6.80
28	Nigeria	3	235	1	78.33	Cyprus	4	933	4	233.25	Brazil	22	847	11	38.50	Ireland	40	1071	16	26.78	Greece	123	2205	25	17.93	Malaysia	236	791	14	3.35	U Arab Emirates	519	4193	30	8.08
29	Denmark	2	68	1	34.00	South Africa	10	59	4	5.90	Cyprus	13	615	10	47.31	Brazil	32	1355	14	42.34	Brazil	160	1934	25	12.09	Brazil	478	901	13	1.88	Ireland	385	3554	28	9.23
30	Saudi Arabia	3	23	1	7.67	Hungary	9	52	3	5.78	South Africa	22	451	10	20.50	South Africa	26	843	14	32.42	Malaysia	101	1737	22	17.20	Turkey	215	846	13	3.93	South Africa	699	3634	25	5.20

Source: Own elaboration.

3.1.4. NETWORK ANALYSIS OF THE GLOBAL ACADEMIC PRODUCTION

The previous analysis presents certain general results based on bibliometric techniques; however, it is also interesting to observe that the academic material can be mapped from a broader perspective to identify central and peripheral actors based on citation connections between countries.

Figure 2 shows a network based on citation analysis with a threshold of 100 citations, and 100 of the most representative citing links. Following the distinction of the WoS database, this software maps the United Kingdom of Great Britain and Northern Ireland based on its constituent countries: England, Scotland, Wales, and Northern Ireland. A similar case is viewed regarding China and Hong Kong. Additionally, this closeness between nodes within the network also follows geographical and/or cultural related trends.

The US is the most cited country and has the broadest network, followed by England, China, Canada, Spain, and Germany, which shows the interrelation that their areas of research share with other countries. Moreover, the centrality (position-wise) in the graph of the most representative countries based on citation analysis confirms the results of Table 2, which were obtained by bibliometric techniques, where the US and the UK are highlighted as central actors in *strategic management* research.

As can also be observed, most of the links accumulate in the middle of the graph, which also confirms the leadership of some countries on citation structure, as shown by the different thresholds at the level of supra-national and individual countries in Table 1 and Table 2, respectively. It is also important to mention that most of the links have been developed within countries that represent the Western European supra-national region, which reveals similar academic interests in *strategic management* research themes.

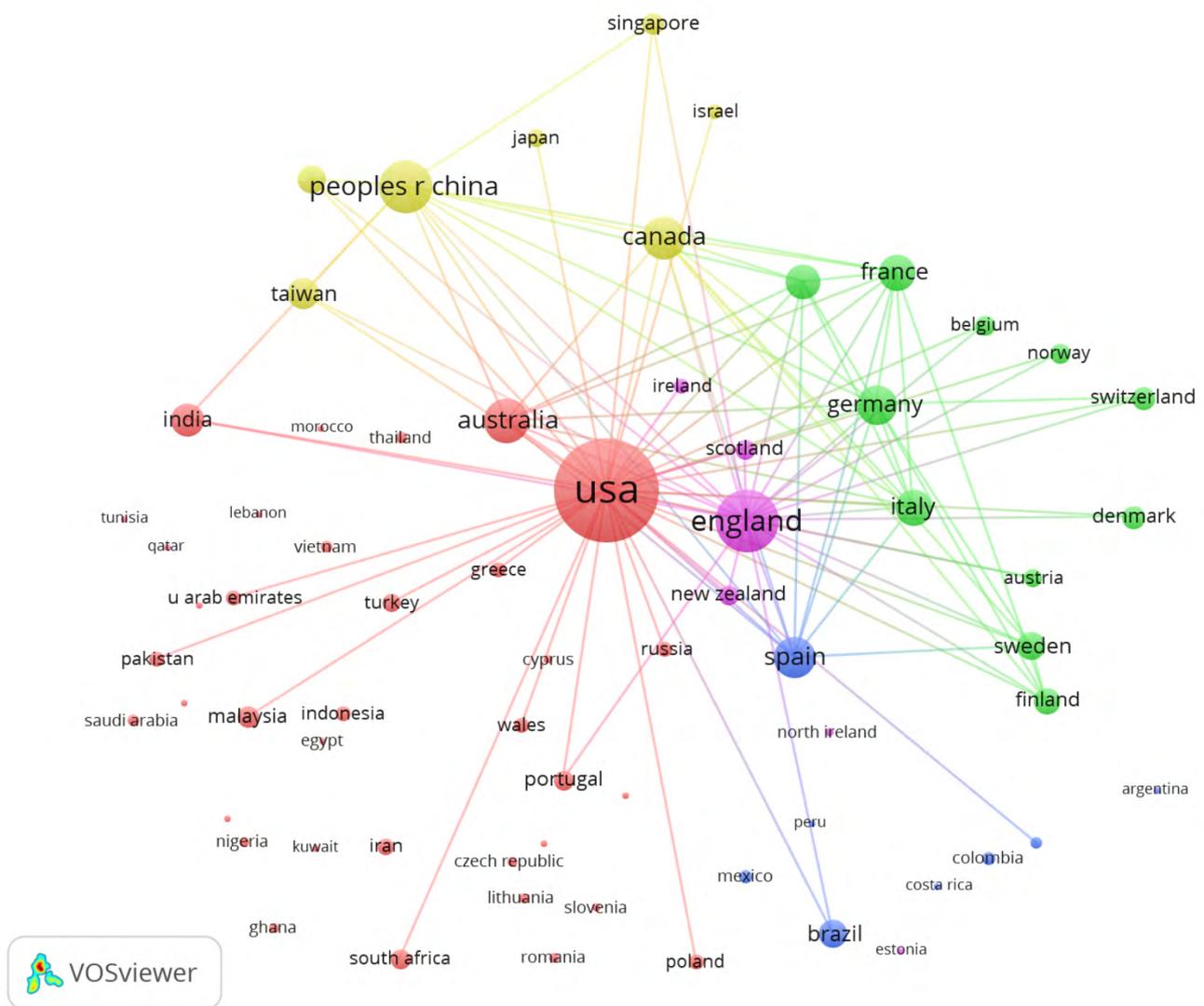


Figure 2
Bibliographic data Map, based on citation analysis from leading countries (1987–2021). Size variation-network visualization. Thresholds: 100 Countries and 50 citation links

Source: Own elaboration with VOS-Viewer software (Van Eck and Waltman, 2010).

A bibliographic data map, based on co-authorship and fractional counting analysis, with a threshold of 100 countries and 100 co-authorship links, is presented in Figure 3. In this regard, a co-authorship network reveals the most essential collaborative partnership between countries. Of these, five clusters are evident in the network (shown in five different colors on the map), representing the diversification of research direction/foci. Interestingly, some relations highlight *language variables* and *historical relations of support and collaboration*, as is the case of the yellow cluster group which gathers countries such as Spain, Portugal, and others from South America. In the same manner, the upper left cluster (in red) shows this reasoning with Muslim-majority nation-states, including Yemen, Pakistan, United Arab Emirates, and Palestine, among others.

Furthermore, primary cooperative relationships among institutions benefited by geographic situations are evident in other clusters. For instance, in the case of the blue cluster, countries such

as Belgium, Denmark, Norway, Sweden, and the Netherlands show that co-authoring countries, located close to each other, show social/historical and geographical affinity in the visualization.

On another matter, the links between nodes represent the cooperative relationships among nodes. The centrality of countries such as the US, England, China, and Australia—which gathers the greatest number of links— suggests also a remarkable degree of communication and cooperation between them with other countries in *strategic management* research. Moreover, the closeness of countries such as China, Singapore, and South Korea on the left side of the graph, and Canada with the US in the middle of the graph, also reveals similarities in their research preferences (even though they are collected in the same cluster). Interestingly France comprises a single cluster, but with an essential number of links. This highlights that although its collaboration networks are strong, its preferences in research are associated with particular themes related to *strategic management* research.

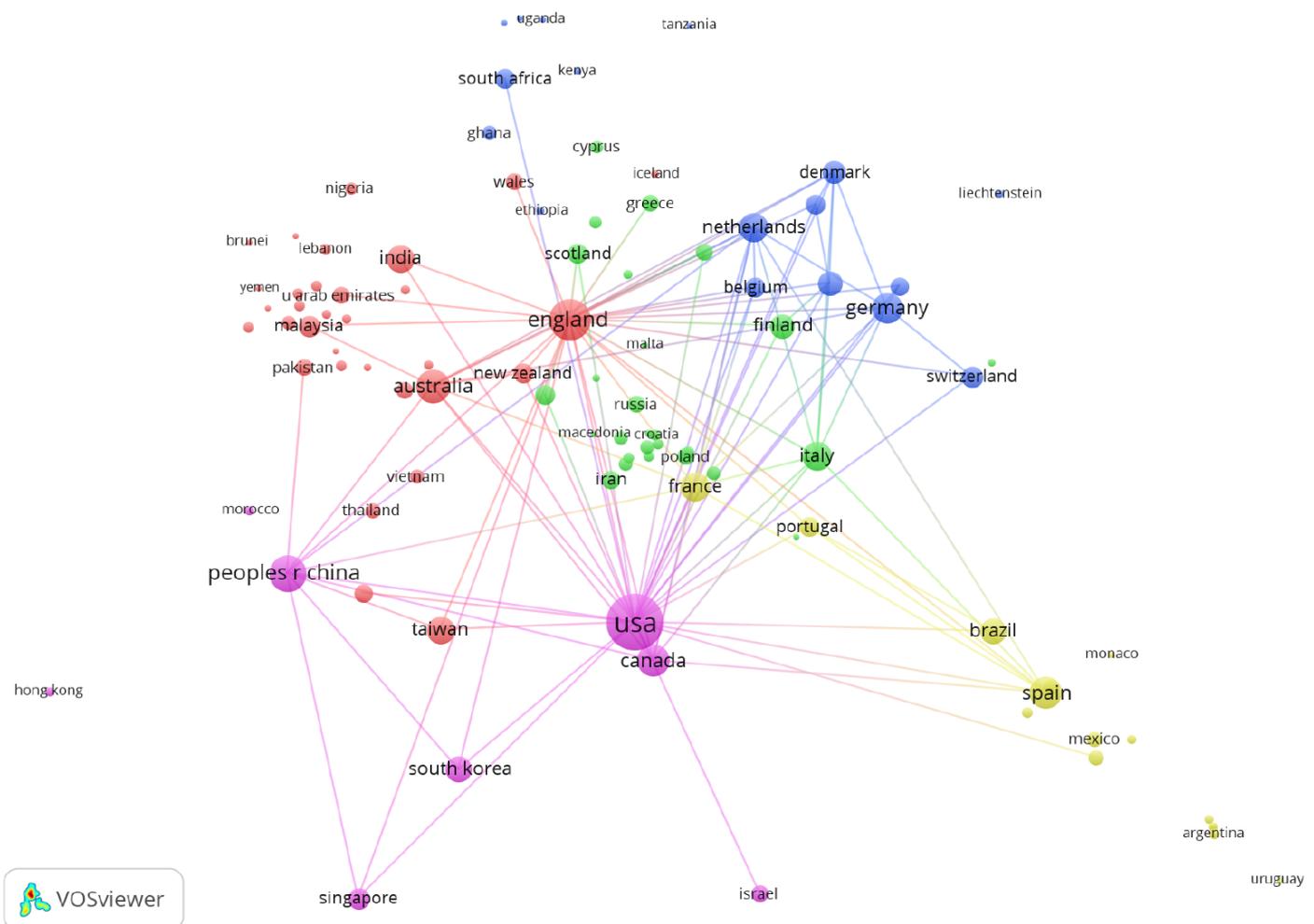


Figure 3
Bibliographic data Map, based on co-authorship analysis from leading countries (1987–2021).
Size variation-network visualization. Thresholds: 100 Countries and 50 co-authorship links
 Source: Own elaboration with VOS-Viewer software (Van Eck and Waltman, 2010).

3.2. Results based on the evolution of subjects of research in strategic management, by countries. 1987-2021 period

3.2.1. TEMPORAL ANALYSIS OF THE CONTENT OF INVESTIGATIONS

To understand whether the focus of research in *strategic management* follows a general trend, or if there is an enduring diversification of research agendas due to national and supra-national factors, this study analyzes the content of the published articles. By analyzing the authors' keywords, a clear picture of the content under investigation in each publication can be ob-

tained. Exploring academic trends of particular territories by keyword analysis has been an effective and widely used way in scientometrics to find hot topics in different fields of examination (Chen *et al.*, 2016; Hu & Zhang, 2015; Lee & Jeong, 2008). In this sense, this investigation analyzes the global tendency of the top 20 most common keywords, measured by the number of co-occurrences in the documents. This type of analysis measures the connection of elements based on the number of articles that use those keywords together. Results in Table 4 show an overview of the global evolution of the top 20 keywords in research into *strategic management* by quinquennials, classified according to their number of co-occurrences.

Table 4
Global Evolution of Top 20 Keywords in research in strategy, by quinquennials. Period 1987-2021

	1987-1991		1992-1996		1997-2001		2002-2006		2007-2011		2012-2016		2017-2021	
R	Keyword	C-O	Keyword	C-O	Keyword	C-O	Keyword	C-O	Keyword	C-O	Keyword	C-O	Keyword	C-O
1	Strategic Information Systems	8	Strategy	71	Strategy	110	Innovation	197	Innovation	555	Innovation	832	innovation	1519
2	Decision Support Systems	7	Innovation	42	Innovation	91	Supply Chain Management	164	Supply Chain Management	382	China	483	sustainability	901
3	Planning	6	Strategic Planning	40	Manufacturing	49	Strategy	154	China	342	Performance	440	corporate social responsibility	793
4	Strategy	6	Competitive Advantage	37	Competitive Advantage	51	Performance	120	Performance	314	Strategy	390	strategy	765
5	Competitive Advantage	5	Manufacturing Strategy	30	Performance	49	Knowledge Management	97	Strategy	271	Corporate Social Responsibility	385	performance	742
6	Game Theory	5	Information Technology	27	Organizational Change	51	Competitive Advantage	83	Knowledge Management	239	Sustainability	347	China	663
7	Information Management	5	Strategic Management	26	Human Resource Management	43	Internet	84	Corporate Social Responsibility	230	Supply Chain Management	340	entrepreneurship	637
8	Marketing	5	Game Theory	23	Manufacturing Strategy	36	Resource-Based View	87	Trust	167	Entrepreneurship	307	social media	566
9	Optimization	5	Organizational Change	23	Learning	36	Electronic Commerce	61	Competitive Advantage	178	Knowledge Management	275	firm performance	555
10	Corporate Strategy	4	Performance	22	Technology	31	Firm Performance	70	Resource-Based View	170	Firm Performance	288	supply chain management	541
11	Decision Processes	4	Competitive Strategy	25	Information Technology	46	Information Technology	57	Human Resource Management	132	Competitive Advantage	234	smes	507
12	Management	4	Simulation	23	Management	31	Strategic Alliances	60	Competitive Strategy	126	Resource-Based View	223	sustainable development	505
13	Management Of Information Systems	4	Technology	20	Operations Strategy	35	E-Commerce	55	Market Orientation	123	Trust	225	competitive advantage	479
14	Strategic Planning	4	Implementation	19	Strategic Alliances	45	Entrepreneurship	67	Marketing Strategy	142	Internationalization	207	knowledge management	451
15	Decision Analysis	3	Organizational Learning	22	Strategic Planning	49	Trust	61	Outsourcing	127	Institutional Theory	199	case study	420
16	Developing Countries	3	Management	17	Competition	37	Human Resource Management	58	Corporate Strategy	118	Dynamic Capabilities	183	dynamic capabilities	416
17	Dynamic Programming	3	Manufacturing	17	International Marketing	30	Knowledge	52	Strategic Management	128	Case Study	217	covid-19	413
18	Economics	3	Agency Theory	16	R&D	30	Learning	55	Entrepreneurship	157	Corporate Governance	214	trust	406
19	Forecasting	3	Diversification	16	Technology Management	32	Competitive Strategy	57	Leadership	131	Social Capital	162	internationalization	400
20	Heuristics	3	Learning	17	Game Theory	40	Market Orientation	48	Globalization	118	Organizational Learning	166	India	372

R: Ranking considering the number of co-occurrences in keywords related to strategy research during the period.

C-O: Co-occurrences.

Source: Own elaboration.

The first set of analyses examined the 1987-1991 period. Results highlight the fact that the main emerging keywords are related to topics such as “Strategic Information Systems”, “Decision Support Systems”, “Planning”, and “Strategy”. This first five-year categorization shows that the co-occurrence of author keywords is relatively low, considering the recent genesis of *strategic management* research as a field. Results obtained from the 1992-1996 period show that the most common co-occurrence of author keywords are: “Strategy”, “Innovation”, “Strategic Planning” and “Competitive Advantage”. It can be seen from the data in Table 4 that research into “Innovation” appears in this period, identifying the moment in which science considers *innovation* to be relevant in *strategy*. The 1997-2001 period shows that the most influential keywords are “Strategy”, “Innovation”, “Manufacturing” and “Competitive Advantage”. The keywords “Strategy” and “Innovation” distanced themselves from other keywords, with a high number of co-occurrences: 110 and 91 co-occurrences respectively, showing the shared preponderance of both subjects. The results for the 2002-2006 period shows that “Innovation” and “Supply Chain Management” are the most relevant subjects of research in this timeframe, being even more related to research in *strategic management* than performance, which is a central subject in *strategy*. It must also be noted that “Internet”, “Electronic Commerce”, “E-Commerce” and “Market Orientation” appear within the 20 most used keywords, evidencing the connection between research and other fields in the business environment. The 2007-2011 period continues with “Innovation” as the most common keyword, but distances itself much more from the other keywords. Other common keywords are: “Supply Chain Management”, “Performance”, and “Strategy”. Additionally, “China” appears as one of the top 3 keywords. This period also integrates trending topics central to corporate social responsibility, such as sustainability and social capital. The 2012-2016 period highlights that the main emerging keywords are related to topics such as: “Innovation”, “Performance”, “Strategy” and “Corporate Social Responsibility”. “China” once again emerges as a high trending topic (ranking second). For the last period, between 2017- 2021, “Innovation” consolidates itself as a relevant aspect to consider in *strategic management* research. This is also apparent with aspects related to “Sustainability” and “Corporate social responsibility”.

To directly compare with the global research in *strategic management*, this investigation undertakes a content analysis of the published Papers, aggregated at a supra-national level. Results are shown in Table S1 (supplementary online material). In the first decade (1987-1996), North America is the supra-region with the most significant number of co-occurrences, influenced by the highest level of scientific production for this region in this period. The research focused on “Innovation” stands out in North America, Western Europe, East Asia, the Middle East, and Eastern Europe.

In the second decade (1997-2006), North America continues to be the supra-region with the highest number of keyword co-occurrences, closely followed by Western Europe, where “Innovation” comes as the leading emerging keyword. A closer inspection of the table shows that Africa and Eastern Europe did not show “innovation” within their top 20 keywords, distancing them from a global trend of research. “Internet” has the high-

est number of keyword co-occurrences, present only in North America and Western Europe, showing important technological realities relevant to these countries in this period. Keywords such as “Decision Support Systems” are among the most common in Latin America. In this period very few articles address the keywords “Information” and “Communication Technologies” (ICT) outside Oceania, East Asia, Western Europe, or North America. This shows that technological phenomena of interest were -and are- happening in certain supra-regions, even though they will be relevant later on.

In the third decade, 2007-2016, “Innovation” has the highest number of keyword co-occurrences in Western Europe. There is also a greater influence of Asia, strongly promoted by China, and issues related to sustainability in all regions.

In the last quinquennium (2017-2021), interests considering sustainability, and corporate social responsibility, as well as Covid-19, are topics that are researched in all the supra-regions. Despite each region presenting local interests of research, such as country names (i.e., Ghana, Russia, Brazil, Turkey, and Malaysia), case-studies do co-occur within the ranking. Furthermore, all the supra-regions show a trend towards “innovation” research being a hot topic of interest, placing it within their Top 20 keywords.

3.3. Results based on the evolution of publications in journals by location. Period 1987-2021

3.3.1. INDIVIDUAL JOURNAL ANALYSIS OF THE LEADING COUNTRIES

Important information related to countries and publishing institutions comes from cross-referencing these results with the individual analysis of leading Journals. This integrates the representation of the scientific vigilance of rigorosity in research to the overview of this field (Andrade-Valbuena & Merigó, 2018).

Table 5 categorizes the Top 10 Journals in *strategic management* research, according to its H-Index. This ranking considers the H-index as its first classification variable. In the case of a tie, the ranking assesses the total number of Papers, and secondly, the total number of citations received in *strategic management* research as decision variables. It is evident that the US is the leader in all the Top 10 Journals. Well-known names that concentrated their efforts in *strategy* were predictable, such as the *Strategic Management Journal*, the *Academy of Management Journal*, and the *Academy of Management Review*. Moreover, due to the nature of *strategic management* research, the inclusion of Journals specialized in different fields was expected - such as Marketing, Management, Operations and International Business. This confirms these journals as important forums for academic discussion that enhance knowledge flow, nurturing common areas of research. Results from the *Strategic Management Journal* and the *Academy of Management Journal* show the special interest that academic production by the US has gained in the field, gathering about 35% of all the publications and 42% of all the citations received. Moreover, the H-index confirms these publications’ relevance in strategic management research.

Table 5
Top 10 journals in Strategy research

R	JOURNAL	TPS	TCS	THS ^a	TCS/TPS	WoS Quartile in Category	Publisher Country
1	<i>Strategic Management Journal</i>	2763	477034	326	172.65	Q1	USA
2	<i>Academy of Management Journal</i>	730	184167	239	252.28	Q1	USA
3	<i>Academy of Management Review</i>	388	159877	182	412.05	Q1	USA
4	<i>Organization Science</i>	776	121419	181	156.47	Q1	USA
5	<i>Journal of Marketing</i>	481	112354	173	233.58	Q1	USA
6	<i>Journal of Management</i>	689	111133	162	161.30	Q1	USA
7	<i>Journal of International Business Studies</i>	751	89463	160	119.13	Q1	UK
8	<i>Management Science</i>	1299	100685	155	77.51	Q1	USA
9	<i>Journal of Management Studies</i>	854	77018	144	90.19	Q1	UK
10	<i>Journal of Operations Management</i>	428	61837	142	144.48	Q1	USA

The requirement to be considered in the ranking is to have at least 300 papers on strategy research, have received 30.000 citations, and a THS-index of 90.

^a The list is ordered top down considering the THS- index as the first classification item. The second classification item is the TPS, the third classification item is the TCS.

Source: Own elaboration.

3.3.2. TEMPORAL ANALYSIS OF JOURNALS IN WHICH THE SUPRAREGIONS PUBLISHED THE MOST

To better understand how publications in *strategic management* research have developed at the regional level, Table S2 (online supplementary material) show -in terms of productivity- the Top 20 most important journals in which the supra-regions published the most. Note that publications from supra-regions such as Africa, Eastern Europe and Latin America are increasing at a lower rate than those in the top 10 journals as time goes by. However, there is also an increasing preponderance of other local Journals that have appeared in each period, suggesting the relevance that homegrown Journals have as a means of publication for locally important results in research. This implies specialization of publication means with geographical preferences.

4. DISCUSSION AND CONCLUSIONS

This study aims to explore, through the application of bibliometric techniques, whether the unlimited flow of knowledge and the globalization of education & research in *strategic management*, could drive away (or deter) specific research interest in phenomena of local importance. By utilizing bibliometric techniques, the study looked for:

1. The most visible and prominent actors at the country, regional and global level.
2. The country, supra-regional, or global evolution of research subjects into *strategic management*.
3. The evolution of publications in *strategy* Journals by location.

Research demonstrates that since 1987, the most prominent and productive country in *strategic management* research is the USA. This was expected due to certain characteristics and milestones in the history of this field, as highlighted by Nerur *et al.* (2008). The US' leadership in *strategy* is unquestionable until 2012, moment

when Western Europe became a relevant producer, surpassing the number of academic publications from North America. East Asia has also increased its production in *strategic management* research over recent years, becoming the third most productive region. Concerning the level of influence, and taking into consideration the H-index, the relative closeness that Western Europe, East Asia, and Oceania have in relation to the number of citations received per published Paper is noticeable. This highlights the fact that although the quantity of articles published is dissimilar among these regions, the impact they have had on the field is comparable.

Moreover, the gap in terms of the H-index between different countries has narrowed over time. This shows that the increase in academic productivity has been accompanied by an accumulative number of specialized Journals, and others that have included *strategy* in the scope of their publications. This is an important finding because even though concerns associated with cross-border research linked to external pressures could be conceivable, the number of Journals providing a variety of forums for academic discussion of locally significant research results around the globe dismisses it.

Regarding the cluster analyses, relevant collaborative partnerships between countries was found. A significant identified result is that relationships are based primarily on geographical situations, showing that physical distances are still an important variable despite the growing trend of globalization in communications. Other collaborative relationships in clustered countries can also be related to language variables and the historical relations of support and collaboration, as in the case of countries such as Spain, Portugal, and certain nations from South America. Evidence has also surfaced regarding countries such as France, whom even though possesses strong collaborative research networks, also show preferences for research related to national themes in *strategic management* research. This situation exhibits that there is an enduring diversification of research agendas at the country level due to national and supra-national factors, rather than a simple following of global trends.

Considering the exploration of academic trends of territories under keyword analyses, an evolution of multidisciplinary topics of research throughout the period has been found. For instance, subjects such as *Innovation*, *Supply Chain Management*, *Sustainability*, *Information and Communication Technologies*, among others, show a wide variety of research interests and flow of knowledge between fields of investigation. Evidence has also been found that theorizes that there is a connection between research and the circumstances in which local business environments are changing, rather than a global concern focused on general contents. For instance, even though the 20 most-used keywords related to a technological context appear in every supra-national region throughout the period, (e.g. “Internet”, “E-Commerce”, “Information and Communication Technologies”, “Innovation”, etc.), their presence has an impact only when they can be perceived as identifiable local phenomena to be addressed scientifically. This shows that technological phenomena of interest have been occurring in some supra-regions, even though they would be relevant to others much later. This is also true when considering commercial situations, as is the case of China, who emerged as being the second most relevant trending topic in the last decade.

Despite the prior, there are still common keywords that appeared throughout the analyzed period (e.g., “performance”, “competitive advantage”, “planning”, etc.) which are central subjects of research in *strategic management*, and which establish the “paradigm” or general agreement regarding the boundaries of the field (Kuhn, 1962).

Lastly, evidence of collaborative work of the regions in some of the most influential Journals has been found, rather than isomorphic pressures. In the case of *Strategic Management Journal*, each region presented in the period was contained in this Journal, with the most important being the regions of North America, Western Europe, and East Asia. Another Journal, identified as influential for each region, is *Long Range Planning*, which leads the rankings in Western Europe, East Asia, and Oceania, whilst being one of the most important in the North American region. The results also show a growing relevance of the *European Journal of Operational Research* for the generation of *strategic management* research content. This Journal serves as a platform for collaborative work among authors from different regions.

This investigation enriches the overview provided in previous works by showing a longitudinal classification and mapping the intellectual structure from countries. Furthermore, this approach will be useful in research by others in academia as it identifies the evolution of links, research trends, and similar profiles in investigations among different levels of aggregation from the macro-environment.

5. LIMITATIONS AND FURTHER RESEARCH

This research is an exhaustive analysis of *strategic management* research using bibliometric techniques and Visualization of Similarities through coupling bibliographic links, mapping the intellectual structure of the strategy discipline, describing relationships and research topics, and identifying research networks in the discipline. However, there are certain limitations.

The first limitation is due to the restrictive use of the chosen database. For example, the Web of Science uses *total counting* when addressing the bibliographic material. In other words, its database assigns one publication unit to any co-authoring participant rather than a fractional unit according to the number of co-authors. Therefore, documents with many co-authors tend to have more significance in the analysis than those publications with a single author. To overcome this problem, the paper uses *fractional counting* in the mapping analysis with the VOS viewer. Since the results are very similar with full or fractional counting, the conclusion is that there is no significant deviation between the two counting methods.

A second limitation is that the current data does not consider the quality of a written and cited paper.

The previous point may lead to the third limitation, where a document could be favored by the research’s bibliometric study, or because specific research methods receive more citations. A publication can also have a low number of citations if there is a surplus of literature due to the high number produced by the academic world on that topic.

More studies are needed in this direction to achieve a broader view of this field’s situation. In this article, the contribution from the perspective of *strategic management* in the most influential regions and countries has been considered, and the publications and citations are observed from a broad perspective. However, future research should consider other issues such as the influence of the authors (co-citation of authors, and self-citations of authors), bibliographic coupling, ranking of institutions, who cites who from institutions, and ranking of journals in the *strategic management* research. Some authors have already examined these issues, but a more specific analysis of the journals on a strategy would be necessary.

6. SUPPLEMENTARY FILE

A supplementary file with additional material (Table S1 and Table S2) can be accessed at this URL: <http://www.ehu.es/cuadernosdegestion/documentos/Supplementary-File-21A1441.pdf>

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