Industrial Marketing Research. A Bibliometric Analysis (1990-2015)

Introduction

Marketing has become a phenomenon that has changed company core philosophies and modified core strategies into generating value for clients, increasingly demanded in both the consumer market and in the industrial sector. However, what differentiates massive consumer marketing from the marketing developed to exchange of goods and services between organizations? The answer lies in Business-to-Business (B2B) marketing, a concept that addresses commercial relations between industrial customers and was defined by Raymond (1991) as "the marketing of goods and services to commercial businesses, governments and other institutions that are non-profit, for use of property and services that these organizations, in turn, produce to resell to other industrial customers".

Even though the development of marketing in the B2B sector originated thousands of years ago when organizations began to emerge (LaPlaca, 1997; 2009), the incorporation of marketing theory dates back to the 1890s and more so the most relevant contributions to this discipline were achieved in the course of the last thirty years (Hadjikhani & LaPlaca, 2013). Even though, marketing has been well present in the business world since the beginning of time, it took several centuries before trade relations between companies became a focus of interest within the scientific research arena (Carratu, 1987; Sheth, Gardner, & Garrett, 1988). Despite the significant progress together with the theoretical development of Industrial Marketing, it still shows a low representation of scientific research in Marketing, (LaPlaca and Katrichis, 2009).

The contributions to behavioral science in B2B has transformed the way we think about B2B Marketing, allowing us to apply the theory of Marketing to an increasing variety of purchasing situations between organizations (Hadjikhani & LaPlaca, 2013). From this evolution, the need to measure progress in the theoretical development of this sub-discipline has arisen, considering its

path through the review of various contributions from scientific journals, authors and universities. This paper presents these contributions by means of rankings transforming them into pivotal tools for both organizations and for the professionals that work in the field of Marketing as a whole.

The main aim of this study is to provide an overview of the productivity and the influence that bring the most important countries and universities to Industrial Marketing Research. The object is to develop rankings on relevant performance within the field through the implementation of a Bibliometric methodology. This study explores the analysis of Marketing B2B obtained from Web of Science (WoS) during the periods 1990 till 2015.

It is worth mentioning that the main limitation of the study lies within the process of classifying the information since the source originates from WoS. Moreover, in order to provide a comprehensive scenario, other factors could have potentially been considered such as the editor's commitment to leading journals as well as to partnerships and conferences. The aim of this study is to examine the current information found in WoS, related to B2B Marketing research, although critical information has been omitted due to the fact that it is not included in this specific database.

Theoretical Framework

The statistical analysis on the scientific literature can be traced back to almost 50 years ago before the term bibliometric was even introduced (Glänzel, 2003). Research conducted by Pritchard (1969) explains extensively the application of mathematics and statistics to books as well other media methods and subsequently introduces the term bibliometric. Further authors address it as the discipline that studies the quantitative bibliometric materials or, as the quantitative study of the physical units published or bibliographic units (Broadus, 1987).

This type of analysis is often applied in literature in order to present a wider range picture of the research field which has increased significantly over the past years due to the rapid spread of computers and internet (Bonilla, Merigó and Torres-Abad, 2015). Note that JBIM recently published a bibliometric study of the publications of the journal in order to celebrate the 30th anniversary (Valenzuela-Fernandez et al. 2017). This paper focused on the publications of JBIM. In our paper, we are looking to the general field of B2B by analyzing all the publications of B2B in any journal.

Obviously, JBIM is one of the leading journals in B2B and therefore, some of its publications also appear in our study. But the results and interpretations strongly differ to those of Valenzuela-Fernandez et al. (2017).

Bibliometric studies are useful for many purposes; it incorporates an overview of a certain research field as well as the analysis of main investigators (Bjork, 2014; Cancino et al. 2017). It maps an overview of a determined research field according to a wide range of indicators. There are numerous techniques applied to classify the material within a bibliometric analysis (Laengle et al. 2017). The most common approach incorporates the total number of elements or the total number of citations (Cancino, Merigó, and Coronado, 2017). An alternative and certainly valuable indicator is the h-index (Hirsch, 2005). The strength of the h-index lies upon the evaluation of two substitution measurements; the total number of research conducted (determined as the number of publications) and quality (determined as the number of citations in publications) on a single number (Sharma *et al.* 2013). Henceforth, it is a suitable indicator for measuring the quality of influence within a group of articles.

One of the main advantages of bibliometric analysis is that it allows a specific field of research to be studied taking into account the papers, journals, authors, institutions and countries. Consequently, it is possible to develop an overview on the state in which a technique in certain fields of research is performing by examining their work and investigation as well as the most influential places where the research has been conducted (Zurita *et al.* 2016). In brief, it is possible to build a global picture or map of a certain field of research.

Methodology

It is of utmost importance to determine the methods and tools that will be implemented when wanting to analyze information. In order to be as informative and neutral with the information investigated as possible, the search process applied during this study has been based on the results extracted from the WoS databases belonging to Thomson and Reuters. This paper focused on the Web of Science Core Collection, which considers several sub databases, including the Conference Proceedings Citation Index. Scientific research have been included in WoS, it is a well-

known database and incorporates all the information with more than 15,000 journals and 50 million documents. The information has been classified in 251 categories or topics and 151 areas of investigation. It is noted that there are other databases that have been considered for this study, including SCOPUS and Google Scholar, and also some software (Van Eck and Waltman, 2010). However, for the purpose of this investigation, the study solely focuses on the WoS database. There are different ways to classify the material for a bibliometric analysis. The most common indicator is the total number of articles or the total number of citations. Another useful indicator is the h-index (Hirsch, 2005), which combines the articles with cited quotes and the number of studies that have received one or more citations. This study works with several indicators to provide a comprehensive view of the sets of articles. One of these indicators categorizes the information. Conversely, the others are also included in the analysis so that the reader can have a general idea on who is conducting the investigation through a set of different indicators (Merigó et al. 2015a; 2016). It should be noted that the general assumption is that the number of articles show that productivity and the number of citations reflect an influence upon a group of articles (Merigó et al. 2015b).

When performing a bibliometric analysis, several limitations may arise due to the specific nature of the research conducted. Firstly, the database always provides a unit for each journal, author, university or country involved in the article. Nonetheless, some studies may have an author, while others may have three or four. Additionally, the unit given in the first case has the same value as in the second. Nevertheless, today WoS is not taking this matter into consideration. A second limitation emphasizes upon the value of magazines and that its publication in the above section of newspapers differs from publications in the middle range of newspapers. A third limitation is that numerous studies can potentially obtain a better bibliometric evaluation, due to the type of research and citations received as well as other related work. Similarly, many essential studies can receive quotes due to the simple fact that not so many scientists are working on this topic or research field. Ultimately, multiple and important problems within scientific research cannot be evaluated with bibliometric measurements; including participation in international journals and conferences.

Results

The results of this study provide six important insights on B2B marketing research:

(1) The analysis emerging from the most influential and productive countries working on B2B Marketing, take into consideration the exclusivity of working with the Web of Science (WoS) database.

(2) The Examination of over five-year and three-year periods of countries that have been publishing on Marketing B2B from 1990 till 2015.

(3) The study of cross and self-citations among the most important countries (4). A study on the most influential as well as productive universities that have worked on investigations related to B2B.

(4) The analysis of five-year and three-year periods of the universities that have published the moss on Marketing B2B from 1990 till 2015.

(5) The study of cross and self-citation among the most influential universities.

(6) The study developing VOS graphics, taking into consideration both variables.

Most influential countries in Marketing B2B research between 1990-2015

It is of utmost importance to assess the progress attained within the investigation of Industrial Marketing, the power to understand and analyze the influence each country has on the development of scientific literature in this particular discipline. According to information provided by the Web of Science, the term countries indicate the number of publications made by institutions that belong to a particular country. It is worth mentioning that authors from other countries can publish articles under the name of a country while working in institutions that are found in that country. Table I presents a ranking of the 30 most productive and influential countries in this field, which was ordained under the criteria of the h-index in the first instance, after considering the total number of publications.

Insert Table I about here

As observed in Table I, the United States is clearly the most productive and influential country in the world. The number of publications in this country substantially exceeds the runner up, the United Kingdom, in terms of number of citations. From the total number of publications considered for this ranking, the US has made more than 30% of publications.

Analysis of five-year and three-year periods of the most influential countries in Marketing B2B dated from 1990 till 2015

In order to analyze the evolution in scientific contribution to the study on B2B Marketing, the following tables show the contribution of the most important countries in this field of research from 1990 till 2015, separated into five-year periods and three-year periods. Each period is made up of 20 countries and was re-ordered according to the total number of publications, in order to provide a clearer scenario with respect to progress in productivity of the countries that are listed, see Table II.

Insert Table II about here

Insert Table III about here

As reflected throughout Table III, the US and UK have maintained their leadership over the past years, and the difference between the number of publications in the first place and other countries has decreased over time, which shows that the interest in B2B Marketing as a focus of scientific research has increased globally. Generally, the total number of publications by the countries considered in each five-year period increased significantly from 281 publications in the first half of the five-year period, to 1089 in the last three years, that is to say, almost 4 times the productivity.

Cross-analysis and self-citation among the most important countries on Marketing B2B

The following Table IV shows the cross-citation as well as self-citation among countries with the highest number of publications, providing greater perspective on the role that the top ranked countries have in the framework of research in Marketing B2B.

Insert Table IV about here

The most influential universities in Marketing B2B from 1990 till 2015

Universities as a whole play a key role in the generation, propulsion and dissemination of knowledge. For this reason, it is important to focus on the following analysis of this variable to know the progress in scientific research on B2B Marketing and account for how the most important universities worldwide have increased their interest in this discipline and have contributed to its theoretical development over time.

Subsequently, this analysis focuses on the most influential institutions. Table V shows the ranking of the 30 universities with the highest number of citations in Marketing B2B, sorted according to their H-index and considering other variables such as total number of publications, number of total citations and the number of average citations per publication.

Insert Table V about here

The analysis in five-year periods and three-year periods of the most influential universities in B2B Marketing from 1990 till 2015

In order to analyze the evolution in the scientific contribution to the study of B2B Marketing, the following tables show the contribution of the most important countries in this field of research during the period from 1990 till 2015, separated into five-year periods (Table VI) and three-year periods (Table VII). Each period is made up of 20 countries and has been ordered according to the total number of publications, in order to provide a clearer scenario with respect to progress in productivity in the countries in the listings

Insert Table VI about here

Insert Table VII about here

The previous tables indicate the evolution of over five-year periods and three-year periods of publications from notorious universities. In relation to the previous ranking, we see that the majority come from the US and UK, which is consistent with the fact that they are the most influential countries in this area. Listings vary over time; however, you can highlight the universities of Michigan, Georgia and Manchester for outstanding contributions and its impact is reflected in the overall ranking. The following Table VIII summarizes the frequency with which the most important universities have with cross citations and auto-citations.

Insert Table VIII about here

Country and most influential universities mapping through the application of VOS viewer software

The VOS Viewer software (Van Eck and Waltman, 2010) is a program for the construction and visualization of bibliometric networks in terms of bibliographic coupling, co - citation and co - authorship. Bibliographic coupling (Bibliographic Coupling) occurs when two different articles cite a third common study in their reference lists (Kessler, 1963). Throughout this study, bibliographic coupling between the countries that have made greater number of influential publications on B2B Marketing during the past 26 years have been analyzed, such as in the case of universities who have excelled in specific work. Figure 1 shows the bibliographic coupling between countries using VOS viewer.

Insert Figure 1 about here

Consistent with what has been previously presented by means of global and five-year rankings, the United States has the largest network of bibliographic coupling, which is consistent with previous results, since it is the most productive and influential country in scientific research on Marketing B2B since its inception.

Figure 2 takes us back to the item of the universities that have had the greatest impact on the field, using the same tool.

Insert Figure 2 about here

It can be observed that in accordance to the list of Universities shown above, the University of Michigan, whose H-index is the highest in the ranking as well as Georgia State University, has the highest number of publications are highlighted.

Conclusions

This article provides an overview of bibliometric research conducted between the periods starting in 1990 till 2015 in B2B Marketing. The focus of this study is to determine the most productive and influential universities in relation to this matter for the scientific community, through a ranking compiled from information found on the Web of Science (WoS).

The results show a robust surge in B2B Marketing research since its inception, which is aligned with the growth of scientific marketing as a whole. This study presents an analysis of the thirty countries and its most influential universities within the field studied, taking into consideration upon a series of indicators that provide a more comprehensive picture regarding the relevant performers within research development in Industrial Marketing.

From both rankings, the presence of the US as the birthplace of a significant number of publications of impact can be highlighted, which has maintained its hegemony for the first five-year period presented in the study. This is consistent with the most influential University, the Michigan State University and the Georgia State University; both North American Universities, both have presented

not only high productivity but also great importance in this field of research. Some other countries that perform very well in this field and according to their population size are UK, Australia, Finland, Sweden, Denmark, Norway and New Zealand. It is also worth noting that most of the countries on the list are developed countries. Note that China and India obtain remarkable results in absolute numbers if considering the wealth of the countries.

Through the analysis of the five-year and three-year periods, the results demonstrate a substantial increase in the interest that the scientific community has shown in Marketing B2B, a work that has been incorporated by more countries and universities as major performers that were not involved in the early stages. Still, in theoretical terms, B2B Marketing still requires extensive development and scope

This article seeks to provide a general notion regarding the developments in research of B2B Marketing. Taking into account other variables that were not previously considered such as universities and countries in which the transcendental contributions to this field have taken place, giving a closer look, which gives rise to further discussions and studies with more detail to the history of this science in the future.

Note that in the bibliometric and scientometric literature, there are many other indicators that could be used in order to quantify and evaluate the results (Alonso et al. 2009). The assumption of the work is that the indicators used are representative enough to provide a complete picture considering different perspectives, so the each reader may focus on the specific issues that are more interesting according to their interests. Note that the main focus of the article is to consider productivity and influence which are usually recognized as the most significant variables for measuring academic research (Merigó et al. 2015b).

References

1. Alonso, S., Cabrerizo, F. J., Herrera-Viedma, E., and Herrera, F. (2009). "H-index: A review focused on its variants, computation, and standarization for different scientific fields", *Journal of Informetrics*, 3, 273–289.
2. Bjork, S. O. (2014), "Time series citation data: The Nobel Prize in economics", *Scientometrics*, Vol.98 No. 1, pp. 185-196.

3. Bonilla, C., Merigó, J. M., and Torres-Abad, C. (2015), "Economics in Latin America: A bibliometric analysis", *Scientometrics*, Vol. 105 No. 2, pp. 1239-1252.

4. Broadus, R. N. (1987), "Early approaches to bibliometrics". *Journal of the American Society for Information Science*, Vol. 38 No. 2, pp.127-129.

5. Cancino, C., Merigó, J. M., and Coronado, F. (2017). "Leading universities in innovation research", *Journal of Innovation & Knowledge*, Vol. 2, pp. 106-124.

6. Cancino, C., Merigó, J. M., Coronado, F., Dessouky, Y. and Dessouky, M. (2017). "Forty years of Computers & Industrial Engineering: A bibliometric analysis", *Computers & Industrial Engineering*, Vol. 113, pp. 614-629.

7. Carratu, V. (1987), "Commercial counterfeiting", in Murphy, J. (Ed.), *Branding: A key marketing tool*, Macmillan Press Limited, London.

8. Glänzel, W. (2003), "Bibliometrics as a research field", Course Handouts, pp. 1-115.

9. Hadjikhani, A. and LaPlaca, P. (2013), "Development of B2B marketing theory", *Industrial Marketing Management*, Vol. 42 No. 3, pp. 294-305.

10. Hirsch, J. E. (2005), "An index to quantify an individual's scientific research output", *Proceedings of the National Academy of Sciences the United States of America*, Vol.102 No. 46, pp. 16569-16572.

11. Kessler, M. M. (1963). "Bibliographic coupling between scientific papers", *American Documentation*, Vol. 14, pp. 10–25.

12. Laengle, S., Merigó, J. M., Miranda, J., Slowinski, R., Bomze, I., Borgonovo, E., Dyson, R. G., Oliveira, J. F. and Teunter, R. (2017). "Forty years of the European Journal of Operational Research: A bibliometric overview", *European Journal of Operational Research*, Vol. 262 No 3, pp. 803–816.

13. LaPlaca, P. J. (1997), "Contributions to marketing theory and practice from industrial marketing management", *Journal of Business Research*, Vol. 38 No 3, pp. 179-198.

14. LaPlaca, P. J. (2009), "Improving B2B marketing process", *Industrial Marketing Management*, Vol. 38 No 3, pp. 237-238.

15. LaPlaca, P. J., and Katrichis, J. M. (2009), "Relative presence of business-to-business research in the marketing literature", *Journal of Business-to-Business Marketing*, Vol. 16 No 1–2, pp. 1–22.

16. Merigó, J. M., Rocafort, A. and Aznar-Alarcón, J. P. (2016), "A bibliometric overview of business & economics research", *Journal of Business Economics and Management*, Vol. 17 No 3, pp.397-413.

17. Merigó, J. M., Gil-Lafuente, A. M., and Yager, R. R. (2015), "An overview of fuzzy research with bibliometric indicators", *Applied Soft Computing*, Vol. 27, pp. 420-433.

18. Merigó, J. M., Mas-Tur, A., Roig-Tierno, N., and Ribeiro-Soriano., D. (2015), "A bibliometric overview of the Journal of Business Research between 1973 and 2014", *Journal of Business Research*, Vol, 68 No 12, pp.2645-2653.

19. Pritchard, A. (1969), "Statistical bibliography or bibliometrics?", *Journal of Documentation*, Vol. 25, pp. 348-349.

20. Raymond, E. (1991), *Industrial marketing cases and concepts*, 4º Edición. Prentice Hall College Div.

21. Sharma, B., Boet, S., Grantcharov, T., Shin, E., Barrowman, N. J., and Bould, M. D. (2013), "The h-index outperforms other bibliometrics in the assessment of research performance in general surgery: a province-wide study", *Surgery*, Vol 153 No 4, pp. 493-501.

22. Sheth, J. N., Gardner, D. M., and Garrett, D. E. (1988), *Marketing theory: Evolution and evaluation*. John Wiley & Sons, Inc, New York.

23. Valenzuela, L., Merigó, J. M., Johnston, W., Nicolás, C. & Jaramillo, F. (2017). "Thirty years of the Journal of Business & Industrial Marketing: A bibliometric analysis", *Journal of Business & Industrial Marketing*, Vol. 32 No 1, pp. 1-18.

24. Van Eck, N. J., and Waltman, L. (2010), "Software survey: VOSviewer, a computer program for bibliometric mapping", *Scientometrics*, Vol. 84 No 2, pp. 523-538.

25. Zurita, G., Merigó, J. M., and Lobos-Ossandón, V. (2016), "A bibliometric analysis of highly cited articles in educational research", *Proceedings of the World Congress on Engineering 2016, Vol I, WCE 2016*, June-July, London, U.K.

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Table I

The 30 most influential countries in Marketing Research B2B.

R	Country	H	TP	TC	TC/TP	TP/Pop	TP/GDP
1	USA	76	1598	30234	18,92	4,90	28,04
2	UK	40	597	8387	14,05	9,18	14,93
3	Australia	34	256	3946	15,41	10,67	4,92
4	Germany	32	173	4183	24,18	2,11	4,12
5	Finland	27	251	3211	12,79	41,83	5,84
6	Sweden	26	179	3165	17,68	17,90	3,51
7	Canada	26	163	2680	16,44	4,53	3,88
8	Netherlands	26	138	2388	17,30	8,12	3,07
9	France	24	134	2262	16,88	2,00	3,53
10	China	24	170	1963	11,55	0,12	21,25
11	Denmark	20	87	1758	20,21	14,50	1,61
12	South Korea	19	79	865	10,95	1,55	2,82
13	Taiwan	18	151	1153	7,64	6,57	6,86
14	Belgium	18	40	866	21,65	3,64	0,98
15	Spain	17	101	950	9,41	2,20	3,74
16	Switzerland	17	72	849	11,79	9,00	0,91
17	Italy	16	87	754	8,67	1,45	2,81
18	Norway	15	83	961	11,58	16,60	1,19
19	New Zealand	15	65	926	14,25	13,00	1,71
20	Turkey	14	29	418	14,41	0,36	2,64
21	Singapore	13	34	729	21,44	5,67	0,64
22	Greece	12	40	644	16,10	4,00	2,22
23	Ireland	12	37	335	9,05	7,40	0,59
24	Portugal	12	32	330	10,31	3,20	1,60
25	Austria	11	30	577	19,23	3,33	0,68
26	Cyprus	9	14	205	14,64	14,00	0,61
27	India	8	31	379	12,23	0,02	15,50
28	Israel	7	16	186	11,63	1,78	0,43
29	Slovenia	7	21	148	7,05	10,50	1,00
30	South Africa	6	17	197	11,59	0,30	3,40

Abbreviations: R = Rank; TP = Total publications; %TP/Total = Percentage of publications of the total in art; TC = Total citations; H = H-index; TC/TP = Citations per paper; TP/Pop = Total publications per million inhabitants; TP/GDP = TP/(Gross Domestic Product per capita/1000).

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Table II
The 20 most influential countries sorted by five-year periods for the period between 1990 and 2009.

		1990-1994				1995-1999					2000-2004					2005-2009			
R	Country	TP	TC	H	TC/TP	Country	TP	TC	H	TC/TP	Country	TP	TC	H	TC/TP	Country	TP	TC	H	TC/TP
1	USA	207	2665	22	12,87	USA	214	4732	36	22,11	USA	297	12622	59	42,50	USA	387	7482	40	19,33
2	UK	21	158	9	7,52	UK	37	1073	17	29,00	UK	78	2508	28	32,15	UK	154	2776	28	18,03
3	Canada	18	284	9	15,78	Canada	20	546	15	27,30	Australia	38	1187	21	31,24	Australia	81	1515	21	18,70
7	Australia	5	56	3	11,20	Australia	15	505	8	33,67	Netherlands	26	677	15	26,04	Finland	53	1176	20	22,19
6	Netherlands	3	68	3	22,67	Netherlands	7	178	6	25,43	Sweden	22	1073	16	48,77	Germany	47	1896	23	40,34
5	Belgium	2	81	2	40,50	Germany	7	190	5	27,14	Germany	21	1346	16	64,10	Canada	46	797	16	17,33
4	South Africa	2	26	2	13,00	France	7	169	5	24,14	Canada	20	741	14	37,05	Netherlands	45	1104	20	24,53
5	Israel	2	18	2	9,00	Finland	6	193	4	32,17	Finland	15	715	11	47,67	Taiwan	44	638	15	14,50
6	India	2	8	2	4,00	China	5	278	5	55,60	Denmark	13	855	11	65,77	China	42	889	17	21,17
7	Austria	2	7	2	3,50	Sweden	4	176	4	44,00	Norway	13	472	11	36,31	France	41	1132	19	27,61
8	Sweden	2	577	1	288,50	Singapore	4	85	3	21,25	China	13	361	11	27,77	Sweden	39	796	16	20,41
9	Germany	2	40	1	20,00	Belgium	3	70	3	23,33	France	12	493	9	41,08	South Korea	35	541	16	15,46
10	Taiwan	2	16	1	8,00	New Zealand	3	11	3	3,67	Spain	11	208	8	18,91	Spain	32	486	12	15,19
11	France	2	3	1	1,50	Italy	3	30	2	10,00	Singapore	7	454	5	64,86	Italy	28	438	13	15,64
12	Ireland	1	50	1	50,00	Norway	2	85	2	42,50	Austria	6	301	6	50,17	Denmark	27	463	14	17,15
13	Cameroon	1	18	1	18,00	South Korea	2	69	2	34,50	Belgium	6	190	5	31,67	New Zealand	19	374	11	19,68
14	Italy	1	8	1	8,00	Taiwan	2	44	2	22,00	Greece	5	117	5	23,40	Greece	17	333	8	19,59
15	Hong Kong	1	7	1	7,00	Turkey	2	38	2	19,00	Ireland	5	82	5	16,40	Norway	17	192	8	11,29
16	Portugal	1	6	1	6,00	Austria	2	14	2	7,00	New Zealand	4	234	4	58,50	Switzerland	15	270	9	18,00
17	Norway	1	4	1	4,00	Israel	2	4	2	2,00	India	4	193	3	48,25	Belgium	12	397	9	33,08
18	Spain	1	2	1	2,00	India	2	10	1	5,00	Turkey	3	118	3	39,33	Turkey	9	175	7	19,44
19	Chile	1	2	1	2,00	Denmark	1	180	1	180,00	Italy	3	40	3	13,33	Ireland	9	109	7	12,11
20	Poland	1	1	1	1,00	Greece	1	51	1	51,00	South Africa	2	115	2	57,50	Portugal	9	148	6	16,44

Abbreviations: R = Rank; TP = Total publications; %TP/Total = Percentage of publications of the total in art; TC = Total citations; TC/TP = Citations per paper, H = H-index.

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Table III
The 20 most influential countries ordered by three-year periods between 2010 and 2015.

R	Country	2010-2012				Country	2013-2015			
		TP	TC	H	TC/TP		TP	TC	H	TC/TP
1	USA	255	2359	23	9,25	USA	238	375	8	1,58
2	UK	154	1571	19	10,20	UK	153	301	8	1,97
3	Finland	58	812	15	14,00	Finland	119	315	10	2,65
4	Germany	56	632	14	11,29	Sweden	71	154	7	2,17
5	Australia	55	567	13	10,31	China	64	71	5	1,11
6	Taiwan	52	352	11	6,77	Australia	62	116	6	1,87
7	China	45	357	10	7,93	Taiwan	49	70	4	1,43
8	Sweden	41	389	12	9,49	France	41	106	6	2,59
9	Netherlands	33	307	11	9,30	Germany	40	80	5	2,00
10	Switzerland	32	399	12	12,47	Italy	33	60	5	1,82
11	France	31	359	11	11,58	Canada	29	82	5	2,83
12	Spain	31	201	9	6,48	Norway	28	55	5	1,96
13	Canada	30	230	9	7,67	Spain	26	53	5	2,04
14	New Zealand	22	257	9	11,68	Netherlands	24	54	5	2,25
15	Denmark	22	211	9	9,59	Denmark	24	49	4	2,04
16	Norway	22	153	9	6,95	Switzerland	22	83	5	3,77
17	South Korea	20	180	7	9,00	South Korea	20	30	2	1,50
18	Italy	19	178	9	9,37	New Zealand	17	50	5	2,94
19	Brazil	11	60	4	5,45	Brazil	15	15	2	1,00
20	Slovenia	11	52	3	4,73	Ireland	14	17	2	1,21

Abbreviations: R = Rank; TP = Total publications; %TP/Total = Percentage of publications of the total in art; TC = Total citations; TC/TP = Citations per paper, H = H-index.

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Table IV
Citing articles between countries.

Country	USA	UK	Australia	Finland	Sweden	Germany	China	Canada	Taiwan	Netherlands	France	Spain	Denmark	Italy	Norway
USA	6140	1137	669	271	371	700	362	650	193	437	342	153	216	93	106
UK	1865	1175	396	324	398	365	185	305	96	288	258	74	217	101	151
Australia	918	323	361	118	122	159	78	131	46	110	97	42	93	25	56
Finland	485	293	182	367	238	180	28	94	34	126	153	19	121	62	74
Sweden	436	233	115	178	270	135	24	72	22	69	88	21	55	49	72
Germany	855	259	153	85	101	373	61	128	22	152	78	22	68	30	27
China	1335	359	213	103	112	150	429	125	120	126	73	63	60	33	40
Canada	775	193	95	57	69	93	48	189	27	58	57	16	45	24	30
Taiwan	1175	324	268	88	106	182	161	153	202	134	93	80	79	41	32

Netherlands	653	212	102	69	89	141	48	91	17	186	52	24	53	14	36
France	419	187	84	77	109	116	27	53	20	68	97	18	57	37	32
Spain	890	283	192	83	50	154	83	137	77	129	79	177	59	30	16
Denmark	267	105	60	50	73	77	23	43	7	41	31	6	78	20	22
Italy	388	188	72	95	93	103	18	55	18	75	59	27	68	60	27
Norway	185	80	46	48	74	46	14	32	10	40	29	9	15	17	59

Table V
Ranking of the 30 Most Influential Universities in Marketing B2B.

R	Name university	H	TP	TC	TC/TP	ARWU	QS
1	Michigan State University	24	70	2366	33,80	101-150	149
2	Georgia State University	20	93	1846	19,85	-	751-800
3	University of Manchester	20	88	1194	13,57	38	34
4	Emory University	19	27	1166	43,19	101-150	147
5	University of New South Wales	17	36	1244	34,56	101-150	45
6	Lancaster University	16	63	835	13,25	301-400	135
7	University of North Carolina	16	59	929	15,75	33	80
8	Penn State University	16	48	1125	23,44	85	93
9	University of Bath	16	36	843	23,42	-	160
10	Erasmus University Rotterdam	16	33	802	24,30	73	147
11	University of Miami	16	30	776	25,87	151-200	252
12	University of Tennessee Knoxville	16	25	838	33,52	201-300	451-460
13	Cranfield University	15	36	991	27,53	-	-
14	Helsinki Sch Econ	15	29	708	24,41	-	-
15	Temple University	14	39	779	19,97	301-400	651-700
16	City University of Hong Kong	14	36	411	11,42	201-300	49
17	Stockholm School of Economics	14	33	1209	36,64	401-500	-
18	Florida State University	14	33	882	26,73	201-300	431-440
19	Copenhagen Business School	14	31	986	31,81	-	-
20	University of Minnesota Twin Cities	14	23	884	38,43	34	163
21	McMaster University	14	23	589	25,61	66	140
22	University of Mannheim	14	18	1008	56,00	-	388
23	Aalto University	13	51	807	15,82	401-500	137
24	University of Warwick	13	38	476	12,53	101-150	57
25	University of Houston	13	22	512	23,27	201-300	601-650
26	University of Pennsylvania	13	21	795	37,86	17	19
27	Cardiff University	12	32	461	14,41	99	137
28	University of Leeds	12	30	452	15,07	101-150	101
29	Uppsala University	12	28	959	34,25	63	112
30	Bocconi University	12	25	378	15,12	-	-

Abbreviations: R = Rank; TP = Total publications; %TP/Total = Percentage of publications of the total in art; TC = Total citations; TC/TP = Citations per paper, H = H-index.

Table VI
Evolution in Five-Year Periods in the most influential universities for the period between 1990 and 2009.

R	1990-1994 University Name	TP	TC	TC/TP	H	1995-1999 University name	TP	TC	TC/TP	H	2000-2004 University name	TP	TC	TC/TP	H	2005-2009 University name	TP	TC	TC/TP	H
1	Michigan State University	7	86	12,29	5	University of North Carolina	9	168	18,67	6	Michigan State University	13	1071	82,38	12	Michigan State University	22	626	28,45	15
2	University of Pennsylvania	6	248	41,33	6	Michigan State University	8	546	68,25	8	Georgia State University	12	781	65,08	10	University of Manchester	20	459	22,95	13
3	University of North Carolina	6	37	6,17	4	Baylor University	8	84	10,50	6	University of Minnesota Twin Cities	10	576	57,60	9	Georgia State University	19	335	17,63	8
4	Jacksonville State Univ	6	34	5,67	3	University of Quebec	7	136	19,43	6	Temple University	10	550	55,00	9	Temple University	17	195	11,47	10
5	McMaster University	5	135	27,00	4	University of Montreal	7	133	19,00	6	Penn State University	10	505	50,50	10	Erasmus University Rotterdam	16	545	34,06	13
6	University of Toledo	4	19	4,75	2	Old Dominion University	7	79	11,29	5	Emory University	10	779	77,90	10	Bocconi University	16	302	18,88	11
7	University of North Carolina Charlotte	4	20	5,00	3	Georgia State University	7	412	58,86	6	University of Tennessee Knoxville	9	512	56,89	9	University of North Carolina	15	214	14,27	9
8	University of Massachusetts Lowell	4	40	10,00	3	University of Southern California	6	152	25,33	5	University of North Carolina	9	478	53,11	9	University of New South Wales	15	324	21,60	10
9	University of Manchester	4	33	8,25	4	University of Miami	6	206	34,33	6	University of Manchester	9	257	28,56	7	Helsinki Sch Econ	15	418	27,87	12
10	University of Kentucky	4	20	5,00	3	McMaster University	6	221	36,83	5	University of Bath	9	269	29,89	7	University of Leeds	13	276	21,23	9
11	U. of Hawaii Manoa	4	19	4,75	3	Massachusetts Institute of Technology Mit	6	236	39,33	6	Colorado State University	9	184	20,44	7	Monash University	13	255	19,62	9
12	University of Central Florida	4	39	9,75	3	University of Warwick	5	136	27,20	5	University of Miami	8	332	41,50	6	Cranfield University	13	333	25,62	10
13	San Diego State University	4	41	10,25	2	Penn State University	5	165	33,00	5	Ohio State University	8	887	110,88	7	University of Bath	12	248	20,67	8
14	Penn State University	4	163	40,75	3	U. of Wisconsin Madison	4	202	50,50	4	Florida State University	8	521	65,13	7	Lancaster University	12	300	25,00	10
15	Harvard University	4	87	21,75	3	Texas Christian University	4	440	110,00	4	Copenhagen Business School	8	758	94,75	8	Emlyon Business School	12	305	25,42	11
16	Florida Atlantic University	4	28	7,00	3	Purdue University	4	184	46,00	4	University of Notre Dame	7	210	30,00	4	Yonsei University	11	210	19,09	9
17	Drexel University	4	16	4,00	2	Karlsruhe Institute of Technology	4	161	40,25	4	U. of Mannheim	7	581	83,00	7	Eindhoven U. of Technology	11	314	28,55	7
18	Bryant Coll	4	50	12,50	3	Iowa State University	4	50	12,50	3	University of Illinois Urbana Champaign	7	283	40,43	6	University of Warwick	10	112	11,20	6
19	Baruch College Cuny	4	9	2,25	2	Florida State University	4	83	20,75	4	University of Strathclyde	6	144	24,00	6	University of Southern Denmark	10	114	11,40	6
20	Wilfrid Laurier University	3	33	11,00	2	Cleveland State U.University	4	45	11,25	4	University of Pennsylvania	6	375	62,50	6	Stockholm School of Economics	10	279	27,90	10

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Table VII
Evolution in three-year periods of the most influential universities for the period between 2010 and 2015.

2010-2012					2013-2015				
University name	TP	TC	TC/TP	H	University name	TP	TC	TC/TP	H
University of Manchester	30	385	12,83	13	Aalto University	28	123	4,39	7
Georgia State University	26	271	10,42	10	Georgia State University	26	60	2,31	5
Lancaster University	23	404	17,57	11	University of Oulu	22	44	2,00	4
University of Birmingham	13	149	11,46	7	University of Manchester	22	50	2,27	4
Hanken Sch Econ	13	265	20,38	9	Lancaster University	22	51	2,32	3
University of Warwick	12	129	10,75	7	Hanken Sch Econ	21	127	6,05	7
University of Strathclyde	12	97	8,08	6	University of Turku	17	58	3,41	4
Michigan State University	12	117	9,75	6	City University of Hong Kong	14	19	1,36	2
University of Oulu	11	93	8,45	7	University of North Carolina	13	24	1,85	3
University of Arizona	11	313	28,45	7	Stockholm Sch. of Eco.	13	12	0,92	2
Penn State University	11	122	11,09	6	Lappeenranta U. of Tech.	13	24	1,85	2
Linkoping University	11	124	11,27	7	Kedge Business School	13	56	4,31	5
National Taiwan Univ.	10	60	6,00	6	Bi Norwegian Business School	13	27	2,08	4
HK. Polytechnic University	10	111	11,10	6	University of London	12	23	1,92	3
University of Lugano	9	177	19,67	9	Linkoping University	12	51	4,25	4
Aalto University	9	92	10,22	6	Uppsala University	11	28	2,55	4
University of North Carolina	8	33	4,13	4	University of Southern Denmark	11	35	3,18	4
U. of Massachusetts Amherst	8	73	9,13	5	Univ Vaasa	11	74	6,73	5
Oklahoma State U. Stillwater	8	71	8,88	5	Catholic U. of the Sacred Heart	11	19	1,73	3
Monash University	8	82	10,25	5	Cranfield University	10	13	1,30	2
Copenhagen Business School	8	89	11,13	5	Penn State University	9	22	2,44	4
Cleveland State University	8	24	3,00	3	Monash University	9	21	2,33	2
Xi An Jiaotong University	7	101	14,43	5	Kennesaw State University	9	4	0,44	1
Victoria U. Wellington	7	42	6,00	5	University of Sydney	8	29	3,63	3
University of Turku	7	150	21,43	5	University of Nottingham	8	33	4,13	4
University of Otago	7	112	16,00	5	University of Georgia	8	14	1,75	2
University of Ljubljana	7	51	7,29	3	University of Eastern Finland	8	27	3,38	2
University of Bath	7	101	14,43	6	University of Auckland	8	28	3,50	3

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Texas Tech University	7	20	2,86	3	Newcastle University Uk	8	21	2,63	4
Radboud U. Nijmegen	7	48	6,86	4	Michigan State University	8	15	1,88	2

Abbreviations: TP = Total publications; %TP/Total = Percentage of publications of the total in art; TC = Total citations; TC/TP = Citations per paper

Table VIII
Who cites in the most influential universities in Marketing B2B.

University	Georgia State U.	U. of Manchester	Michigan State U.	Lancaster U.	U. of North Carolina	Aalto U.	Penn State U.	Temple U.	U. of Warwick	U. of New South Wales	U. of Bath	Cranfield U.	City U. of Hong Kong	Monash U.	Hanken Sch Econ
Georgia State U.	79	11	22	7	10	3	17	6	4	14	5	3	1	1	0
U. of Manchester	21	65	28	48	20	20	12	10	5	23	39	11	9	2	8
Michigan State U.	25	9	56	2	26	4	18	7	0	17	5	16	4	4	0
Lancaster U.	11	32	0	49	5	12	2	2	3	3	28	10	1	1	5
U. of North Carolina	13	6	42	4	33	4	15	12	1	5	2	6	3	4	0
Aalto U.	19	28	14	14	5	57	9	7	2	21	13	8	1	5	16
Penn State U.	9	4	14	1	9	1	36	1	1	8	2	2	1	2	1
Temple University	11	0	9	0	0	1	6	17	2	4	0	3	2	1	1
U.of Warwick	10	10	0	5	1	3	2	7	12	3	4	7	0	0	2
U. of New South W.	17	4	15	2	4	7	8	2	1	32	4	7	1	2	3
University Of Bath	0	12	0	7	4	5	4	8	5	4	27	7	0	4	3
Cranfield University	20	10	8	6	3	4	9	3	2	7	8	41	0	1	9
City U.of HK.	8	0	23	4	5	0	15	4	1	7	0	0	38	3	2
Monash U.	15	0	15	1	7	5	4	8	5	11	4	3	4	17	0
Hanken Sch Econ	9	17	0	9	0	14	0	0	4	11	6	12	0	2	36

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Figure 1
Bibliographic Coupling of Countries in relation to B2B Marketing between 1990 and 2015.
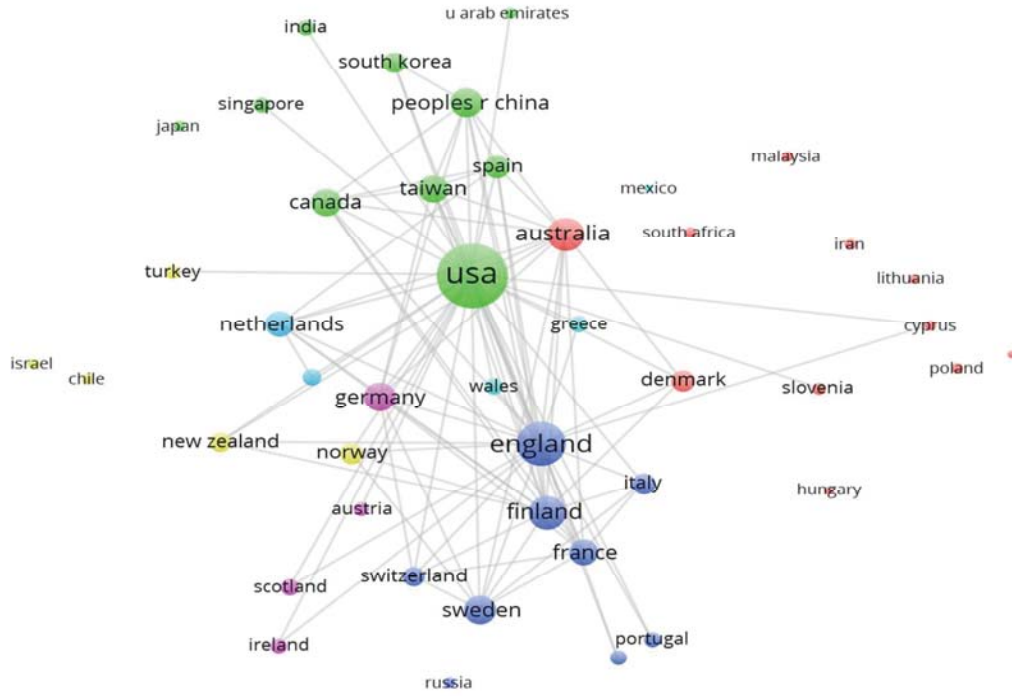
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Figure 2
Bibliographic Coupling of Universities in relation to B2B Marketing between 1990 and 2015.