The most influential countries in advertising: A bibliometric analysis between 1992 and 2016

Abstract

The aim of this study is to identify the most influential and productive countries in advertising research between 1992 and 2016. This paper also presents a general perspective analyzing the research developed in several supranational regions. The methodology used is based on bibliometric indicators and the data was found on the Web of Science. The results show that the USA is the leading country, followed by Canada, Netherlands, UK and Australia. The regional analysis shows that North America and Western Europe are the most relevant regions, contrary to Latin America and Africa who are the less influential regions.

Keywords: Advertising, Bibliometrics, countries, Web of Science.

Introduction

Advertising is an art that is part of our lives every day, most of the companies or organizations have used it to promote their products or services. How advertising is doing has changed through the time, using new strategies or ways to capture clients' attention and persuade them to get what they are offering.

There are a lot of definitions of what advertising is. Richard & Curran (2002) search for a definition of the concept, the study and resumes a lot of definitions presented by previous authors obtained from different marketing and advertising textbooks published between the years 1969 and 2000. Some of those definitions are very simple and others are very extensive, but all of them points to a similar concept. The American Marketing Association during the last years has also presented an advertising definition, but in 2017 changed it compared to a previous one presented in 2014 (AMA, 2017), they define advertising as "the placement of announcements and persuasive messages in time or space purchased in any of the mass media by business firms, nonprofit organizations, government agencies, and individuals who seek to inform and/ or persuade members of a particular target market or audience about their products, services, organizations, or ideas", this new emphasize that messages have to be persuasive and in time or spaces used has to be paid. Even this is the most recent definition presented by the American Marketing Association, it is possible it would change in the future due to modern technologies and innovative ways to promote in different medias.

From an academic perspective, advertising has been studied by different disciplines and research areas. Under the business view, there is a lot of literature available; Gwinner & Eaton (1999) analyze how sponsorship can help in create a brand image; Nelson (2002) test how effective is the placement in video games; Tucker (2011) search for different factors that makes online advertising more effective, and also analyze its impact in the consumers' purchase intention; Okazaky & Taylor (2013) studied how social networks need to be used as mechanism to advertise; Danaher & Dagger (2013), analyze the advertising's effectiveness using several medias at the same time studying a company that uses ten medias simultaneously; Buil et al. (2013) analyze how important the advertising and sales offers are in the creation of brand equity. Advertising also is studied by economics, Assmus et al. (1984) uses econometric models to analyze the effect of advertising on sales; Seldon et al (2000) analyze the possibility to create economies of scale for advertise; Gallet (2007); realize a meta-analysis of elasticities for the demand of alcohol; being the advertising budget one of the main variables that affects the model; Matsumura & Sunada (2013), analyze advertising budget in a mixed oligopoly. Psychology research also studies the advertising; Alwitt & Michell (1985) study the psychological process are activated when someone is exposed to advertising, and analyze its effects in the behavior and decision making. Another research areas studies the advertising as a concept or their effects; like communications (Nelson, 1974), medicine (Saffer & Chaloupka, 2000; Andreyeva et al., 2011), law (Chou et al., 2008), among others. Not necessarily, researches use only one discipline to analyze the advertising, they can mix the knowledge and models with professionals from other research areas.

It is very important to organize all the material published to track the old and latest content available and understand the latest trends in advertising, and how this field has been studied for previous authors, so the new ones can use their publications as references. Also, understand what kind of journal are publishing advertising research content or the leading institutions or countries in this field; so new researchers can know where to get the best information for their own investigations or establish relations between them to create more content. Bibliometrics allows to investigators classify the available research and evaluate a publication's quality (Valenzuela et al. 2017a). Bibliometrics is the research field that studies quantitatively the bibliographic material (Broadus, 1987). Bibliometrics has become very popular because of the development of computers and internet (Merigó et al., 2016). Bibliometrics studies has been realized in different research fields like corporate social responsibility (De Bakker, 2005), accounting (Merigó and Yang, 2017), economics (Bonilla et al., 2015), technology (Thongpapnl, 2012), management (Podsakoff et al., 2008), tourism (Palmer et al., 2005), innovation (Merigó et al., 2016),

health (Almeida-Filho et al., 2003), entrepreneurship (Landstrom et al. 2012), among others. Also, bibliometric research studies can be applied only to classify the content published by a specific journal (Ramos & Ruiz-Navarro, 2005).

Some bibliometrics studies applied on advertising research can be found in the literature. Pasadeos (1998), analyze the most relevant authors in advertising research between the years 1982-1985 and 1992-1995. Kim & McMillan (2008) analyze the publications about online advertising, Marcos Recio et al. (2012) use bibliometric indicators to classify the doctoral thesis about advertising realized in different universities from Spain, among others.

A lot of authors from all over the world publish advertising research content. The aim of this paper is to develop a country analysis of the most influential and productive ones based in bibliometrics indicators, these can be used to compare the academic research development between countries (Pritchard, 1981). It starts with a general overview of the most relevant countries in the last twenty-five years. Then, the results are divided in periods of five years each to analyze the evolution of each country through the time. Third, an analyze for countries grouped in supranational regions is conducted. Fourth, a graphical analysis of the bibliographic material is presented. The last section describes the main findings and conclusions.

Method

This study uses data obtained from the Web of Science (WoS), owned by Thomson and Reuters, which includes more than 15,000 journals and 50,000,000 publications from more than 100 research areas in 4 different collections. The database was created using some filters, to adjust the results according the objective of this study. The first filter used was just extract data from the Web of Science Core Collection, which includes the most prestigious academic publications since 1975. Web of Science divides the data in a lot of categories; due this research follows a business perspective, as a second filter, the database must be registered as "Business" in the Web of Science Categories. This research analyzes the publications from the last twenty-five years, according to this, the data selected includes only papers published between 1992 and 2016.

There are three journals that focus on advertising content; Journal of Advertising, Journal of Advertising Research and International Journal of Advertising. These journals were included in the search filters. Due the different areas that study and analyze the advertising, it was decided to include the concept "marketing communication". So, the data is conditioned to papers who references publications from those journals or includes the concept in their topics. In the same way, every variation of the concept "advertising" must be considered in the data; this can be done using the filter "advertis*". Also, the

database only includes the following document types: Articles, reviews, letter and notes. In a first attempt, the database obtained included publications from categories not totally related to advertising, or some just named the concept in their text but not as a relevant or important part of their objective. To limit the database for only papers related to the field, the results or the most important marketing journals from a previous bibliometric presented by Valenzuela et al. (2017b) are included as a filter. The final database includes 4,449 publications. This search was carried out in April 2017.

The database is analyzed and the results are presented in rankings, which every country's position on them depends on a several bibliometric indicators. The most important indicators used are the total number of publications (TP), which also shows how productive is the country in this field; total number of citations, which indicates how many times the country's publications have been cited; and the h-index (Hirsch, 2005), this indicator allows to measure the relevance and influence of a country's academic research activity combining the total of publications and the total cites received. For example, if a country has a h-index of 15, it means that country has 15 publications with a minimum of 15 cites each, but not 16 publications with a minimum of 16 cites each. The h-index is the principal indicator used in this study to indicate the position of a country in the rankings. Other indicators are used which are explained in the next sections.

The methodology considers the analyze of the most relevant countries, based in their current political definition, in advertising research for the last twenty-five years, a quinquennial analysis and, a supranational regional analysis, where all the countries are grouped in nine regions: North America, Latin America, Western Europe, Eastern Europe, Africa, Middle East, Central-South-Southeast Asia, East Asia and Oceania. Also, the study uses the VOSviewer software to visualize the results with their main connections (Van Eck and Waltman, 2010).

Results

This section presents the results of the bibliometric analysis. First, presents an overview of the leading countries. Then, these results are presented divided in periods of five years each, to examine each country's relevance through the years. Third, the regional analysis is presented. Finally, we present the results obtained from the VOS Viewer software.

Leading countries in advertising research (1992-2016)

Different countries have developed academic research in advertising. Table 1 presents the 30 most relevant countries in advertising research. The countries are ranked according to their h-index although the number of studies, citations and the

ratio citations/publications, which indicates the average cites per publication, are also included. Also, the analysis includes the number of articles with more than 250, 100 and 50 citations, and the productivity and cites per person.

INSERT TABLE 1 HERE

The results points to USA as a leader in terms of productivity and relevance, with the highest TP and H-index; 2926 publications and a H-index of 114. In the next positions appears Canada, Netherlands, UK and Australia with h-Index very similar between them, but very different compared with USA. The huge difference between USA and the other countries, can be explained by the total of prestigious universities and institutions, which conduct to having more funds and opportunities for researchers. All these countries, except for UK, have publications cited more than 200 times; like South Korea, Belgium, France, Singapore, Turkey, Denmark and Italy do. Considering the cites per paper ratio, Turkey presents the highest. In per capita terms, New Zealand presents better results. Chile is the only Latin American country who appears in the rank, being at the bottom of it, in the position number 29, with an h-Index of 4.

Temporal analysis of the leading countries

Another way to analyse which countries are the most relevant in advertising research is examine their position in the ranking for periods of five years each; doing this we can conclude their relevance through the time. The table 2 resumes the 25 most relevant countries in five periods of five years each; these are, 1992-1996, 1997-2001, 2002-2006, 2007-2011, 2012-2016; except for the first period, where only 22 countries realized academic advertising research.

INSERT TABLE 2 HERE

In the first period, 1992-1996, USA is the most influential and productive country, with a TP of 503 and a h-Index of 75. Canada and UK are the second and third most relevant and productive countries respectively, but both are significantly below from USA's productive level. All the other countries of the period present less than 10 publications

Between 1997 and 2001, USA, Canada and UK are again the most relevant countries. USA reduces the total of publications in the period, while Canada's and UK's increases, but the differences between them are still very considerably. South Korea and Belgium, both with 8 publications each, present good results in the period with an h-Index of 7 each; which means that 7 of their papers have received at least 7 cites. In comparison with the first period, China presents better result with an increase on its total publications. There are still a lot of countries with less than 10 papers, being nineteen to be exact.

The results for the third period, 2002-2006, presents again to USA and Canada as the most relevant countries with h-Index of 74 and 23 respectively; and, both increased the amount of publications compared to the previous period. As the third most influential countries appears Australia increasing substantially their results in this period. Fourteen countries present less than 10 publications.

In the fourth period, 2007-2011, like the previous periods, USA leads the ranking with an h-Index of 57 and 697 papers. Although the USA's total publications increase, its h-Index do not get higher than the previous period this can be explained because these papers have been less exposed to researchers in terms of the amount of time that there have been available for them for citing. The second and third position are now taken by Netherlands and UK, both with a huge increase in the amount of their total publications in this period. Only six countries have less than 10 publications.

Finally, between 2012 and 2016, USA leads again; and Netherlands and Australia are in the second and third position respectively. UK presents almost the same amount of publications than the previous period but with a lower h-Index. In this period, three countries have less than 10 publications.

This analyse allows to determine countries like China and Belgium as possible future important countries in developing academic advertising research. Both increased each period the amount of publications and having good results in terms of their h-Index.

Analysis of supranational regions

In this section, we present the results for the nine regions mentioned before. We start with a general overview of the regions and then we analyse them based in their total publications per year. The table 3, resumes the TP, TC, TC/TP ratio, H-index indicators for the nine regions, it also includes the total publications with a minimum of 250, 100 and 50 cites. North America is the most influential and productive region, this can be explained because of the great amount of publications of USA and Canada. Western Europe is also a very relevant region in advertising research, it includes more than 20 of the countries who have published advertising research content; but it still has a great difference with North America in terms of publications, cites, cites per paper ratio and H-index. Oceania and East Asia are the third and fourth most relevant regions respectively. Africa, Latin America and Eastern Europe are the less influential and productive regions, which can be explained, this represents an opportunity its academics to develop and innovate with new advertising research; these three regions are the only ones who do not have papers with more than 100 cites.

INSERT TABLE 3 HERE

The productivity levels of each regions are very different between them. Figure 1 and Figure 2 presents the productivity per year for the most and less productive regions respectively. Figure 1 shows graphically what we proposed before, USA is the most productive region, publishing every year more papers than the other ones. Oceania and East Asia presents similar productivity level almost every year; being East Asia more productive in the last period.

INSERT FIGURE 1 HERE

Figure 2 shows that the total papers per year for the less productive regions for the first ten years are very similar between them. All these regions have years where they have not published anything, Africa and Latin American have not published in 16 and 11 years respectively. Central-South-South East Asia begin to increase its productivity since 2005, being 2014 its best year with 11 publications. Middle East also presents an increase in its publication in the last ten years, but in 2010 had a crucial decreasing, publishing only one paper. Eastern Europe and Africa presents an increasing in the last two years, it is expected its productivity increasing will get higher in the next years.

INSERT FIGURE 2 HERE

Graphical analysis of advertising research with VOSviewer

The previous sections provide some general results regarding the leading countries in advertising research. However, it is also interesting to see the bibliographic material mapped from a general point of view to identify the leading publication and citation connections in terms of co-authorship, bibliographic coupling and citation using the VOS viewer software (Van Eck and Waltman, 2010). Table 4 summarizes the total of connections for each analysis for the thirty most productive countries.

The co-authorship analysis considers the total of papers that investigators from a country have published with author from another country. This analyse helps to evaluate the authors' collaborative behaviour. Figure 3 present the map for the co-authorship analysis, it was elaborated considering every country that have published advertising research content and one hundred co-authorship links. A country is more connected with another in co-authorship terms, if they are closer in the map; also, the size of a country in the map depends in the total co-authorship links it has, more links represent a bigger size. USA, England (part of the UK in the previous analysis) and Australia are the most connected countries, with 638, 151 and 145 co-authorship links respectively. The total links of USA are expected because of the big difference in terms of productivity with

other countries. Except for USA and Taiwan, every country from the list have realized articles with authors from another country.

INSERT FIGURE 3 HERE

Figure 4 presents bibliographic coupling of countries that publish advertising consider every country and one hundred bibliographic coupling links. Two countries have a bibliographic coupling connection when an article from each country have both cited a third one (Kessler, 1963) It happens when you compare the exact references between two articles (Van Eck & Waltman, 2014). The results are like the previous analysis, USA is the country with the most connections, having the bigger size in the map; also, is very close to a lot of countries in it. England is the second most connected country. Again, the USA difference in productivity explain its connections. Norway, Denmark, India, Finland, Wales (part of the UK in the previous analysis), Japan, Chile and Ireland present less than 1000 bibliographic coupling links, being the last two the countries with less total connections.

INSERT FIGURE 4 HERE

The last graphical analysis is the citation analysis; for countries, it represents the sum of cites that a country makes to another one and vice versa. The relation between two countries in the map depends in the total time they cite each other. Figure 5 presents the map for this analysis, which was made considering every country that have published advertising content and the one hundred citation links. The size of a country in the map depends on its total connections. Again, USA, England and Australia are the most connected countries; their higher citation links compared to the other countries can be explained by the prestige of their universities, being its publications more relevant for researchers.

Conclusions

This study presents a general overview of the leading countries in advertising research between the last twenty-five years (1992-2016). The database used contained 4449 publications, it was obtained in the Web of Science, following some special filters. The data was analysed using bibliometrics indicators and presented in ranking, which each position was determined by the h-Index.

First, the analysis focused in the 30 most relevant countries. USA is the most relevant and productive country with an h-index of 5 and 2926 publications; this can be explained for the total of prestigious universities it has, 35 of its publications have been cited more than 200 times; also, each of its publications present an average of 27,93 cites. In per capita terms, USA has 9,09 papers per million persons. Canada and Netherlands are the second and third most influent countries in advertising research with a h-Index of 41 and 38 respectively, presenting a big difference with the leader. Based in their productivity, UK and Australia are the second and third most productive countries with 307 and 289 publications respectively. Turkey is the country with the highest cites per paper ratio, with 30,53 cites, next is Singapore with 28,78 cites per paper. Only 12 countries present articles with more than 200 cites, USA leads with 35 papers, and then there is Canada with 4. In terms of publications per million of persons, New Zealand leads with a ratio of 21,44 papers per million of persons, it is followed by Australia and Singapore. The cites per million of persons, New Zealand also leads, but now it is followed by Singapore and Netherlands. The per capita indicators help to compare the productivity per country, Canada, for example, presents more than three times the total publications of Belgium, but in per capita terms, they present very similar ratios. Most of the countries from the 30 most relevant are from Western Europe, being Netherlands, UK, Germany, Belgium, France and Spain the most relevant. Chile is the only Latin American country and South Africa the only African.

Then, the data is divided in periods of five years; 1992-1996, 1997-2001, 2002-2006, 2007-2011, 2012-2016. The results show that USA leads in every period. The next positions are disputed by Canada, UK, Australia and Netherlands, all these countries have a great position in every period. In the quinquennial analysis, it can be observed that China and Belgium increase in every period their productivity and they are becoming in very relevant countries in advertising research, it is possible that in the future these countries can be competing for being one of the most influent ones.

Third, a supranational regions analysis is presented. The countries were grouped in nine regions. North America is the most relevant with an h-Index of 115 and has 24 articles with more than 200 cites; this can be explained for the productivity of USA and Canada. Western Europe is the second most influent region, with a h-Index of 57. Africa, Latin America and Eastern Europe are the less relevant and productive regions; with only 15, 22 and 28 publications respectively. Except from one article from Africa, none of their publications presents more than 50 cites. Dividing the regions in the most and less influential ones to analyse their productivity per year, we can conclude that every year USA have published more content than the other regions; and that East Asia and Oceania have similar productivity almost every year, being the first one more productive in the last years. All the less productive regions present similar productivity in the first ten years, and, they have periods with no publications.

Fourth, using the VOSviewer software, a graphical analysis was conducted. The co-authorship analysis shows that USA, England and Australia are the more connected countries, this means that they are the countries that have published advertising research content collaboratively with other countries. The bibliographic coupling analysis, present to USA, Australia and Netherlands are the most connected countries; the 30 most productive countries presents an average of 4990,34 bibliographic coupling; and 8 of them present less than 1000 links. From the citation analysis, it can be concluded USA leads but also Australia, Netherlands, England and Canada have a great amount of connections based in their productivity level.

There are some limitations in this study. First, the database only considers publications written in English, this can represent a problem for researchers from non-English speaking countries, that conduct into not publish their investigations. In the same way, more advertising research literature are not included in the database, because this only consider a certain group of journals. Also, the data obtained can change if other filters are included or these ones are modified, this can change the results and the general conclusions. Further research can be done, refreshing the data and comparing the results from next years with the ones presented here; also new researchers can use this article to get relevant sources and references for their own advertising research investigations.

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Tables

Table 1: Leading countries in advertising research (1992-2016)

R	Country	TP	TC	H	TC/TP	>200	>100	>50	Población	TP/Pop	TC/Pop
1	USA	2926	81.722	114	27,93	35	156	459	321.853.000	9,09	253,91
2	Canada	231	5.905	41	25,56	4	10	32	35.749.600	6,46	165,18
3	Netherlands	190	4.333	38	22,81	1	7	26	16.920.400	11,23	256,08
4	UK	307	4.764	35	15,52	0	5	16	64.596.752	4,75	73,75
5	Australia	289	4.589	34	15,88	2	2	17	23.901.500	12,09	192,00
6	South Korea	149	2.835	28	19,03	1	4	11	51.465.228	2,90	55,09
7	China	179	2.148	23	12,00	0	1	7	1.372.160.000	0,13	1,57
8	New Zealand	99	1.662	23	16,79	0	2	6	4.617.340	21,44	359,95
9	Germany	137	1.660	22	12,12	0	1	6	81.083.600	1,69	20,47
10	Belgium	72	1.817	22	25,24	1	5	9	11.250.659	6,40	161,50
11	France	108	1.911	21	17,69	1	3	10	67.063.000	1,61	28,50
12	Spain	83	1.336	20	16,10	0	1	5	46.439.864	1,79	28,77
13	Taiwan	119	1.325	19	11,13	0	0	4	23.461.708	5,07	56,48
14	Singapore	63	1.813	18	28,78	1	2	8	5.469.700	11,52	331,46
15	Austria	39	509	13	13,05	0	0	1	8.602.112	4,53	59,17
16	Israel	37	893	13	24,14	1	1	2	8.412.000	4,40	106,16
17	Switzerland	30	376	12	12,53	0	0	1	8.256.000	3,63	45,54
18	Sweden	37	387	11	10,46	0	0	1	9.804.082	3,77	39,47
19	Turkey	34	1.038	11	30,53	1	2	6	77.695.904	0,44	13,36
20	Denmark	25	656	11	26,24	1	1	4	5.678.348	4,40	115,53
21	Norway	27	297	10	11,00	0	0	1	5.189.435	5,20	57,23
22	Italy	23	356	10	15,48	1	1	1	60.719.928	0,38	5,86
23	Finland	19	169	8	8,89	0	0	0	5.487.664	3,46	30,80
24	Greece	18	148	8	8,22	0	0	0	10.846.979	1,66	13,64
25	Japan	13	185	8	14,23	0	0	0	126.865.000	0,10	1,46
26	Portugal	8	70	8	8,75	0	0	0	10.374.822	0,77	6,75
27	India	19	164	6	8,63	0	0	0	1.277.340.000	0,01	0,13
28	Ireland	12	132	6	11,00	0	0	0	4.609.600	2,60	28,64
29	Chile	11	68	4	6,18	0	0	0	18.006.407	0,61	3,78
30	South Africa	11	62	4	5,64	0	0	0	54.956.900	0,20	1,13

R= Rank; TP = Total of papers; TC = Total of Cites, H = H-index; TC/TP = Cites per paper ratio; ≥250, ≥100, ≥50 = Number of articles with more than 250, 100 and 50 cites; TP = Total papers of the country in WoS; Pop = Population; TP/Pop, TC/Pop = Papers and cites divided by population.

Table 2: Leading countries in advertising research between 1992-1996, 1997-2001, 2002-2006, 2007-2011, 2012-2016

R	1992-1996				1997-2001				2002-2006				2007-2011				2012-2016			
	Country	TP	TC	H	Country	TP	TC	H	Country	TP	TC	H	Country	TP	TC	H	Country	TP	TC	H
1	USA	503	20701	75	USA	478	21829	78	USA	510	20124	74	USA	697	14970	57	USA	738	4095	24
2	Canada	20	999	13	Canada	21	741	16	Canada	39	1845	23	Netherlands	64	1559	25	Netherlands	88	726	13
3	UK	13	545	10	UK	30	850	15	Australia	40	1068	20	UK	114	1730	24	Australia	136	551	12
4	Australia	6	130	6	Netherlands	16	1097	14	UK	34	975	17	Australia	89	2312	24	UK	116	664	12
5	New Zealand	8	194	5	Australia	18	528	11	New Zealand	20	607	15	Canada	82	2035	23	China	84	382	10
6	Belgium	3	302	3	China	14	347	10	China	32	629	14	Germany	45	1084	19	Canada	69	285	10
7	Norway	3	33	3	South Korea	8	700	7	South Korea	17	832	14	South Korea	44	871	19	Belgium	35	314	10
8	South Korea	3	100	2	Belgium	8	589	7	Netherlands	20	886	13	China	47	748	17	Germany	79	340	9
9	Denmark	2	271	2	France	7	166	6	Singapore	14	467	11	France	34	1045	16	South Korea	77	332	9
10	Singapore	2	107	2	New Zealand	7	163	5	Taiwan	15	381	10	Spain	32	576	16	Spain	40	302	9
11	France	2	80	2	Israel	5	530	5	Spain	10	428	10	Taiwan	45	606	14	France	54	258	8
12	Netherlands	2	65	2	Germany	4	30	4	France	11	362	9	New Zealand	33	545	14	Taiwan	54	219	8
13	China	2	42	1	Singapore	5	179	3	Germany	9	206	8	Singapore	24	963	11	Austria	21	164	7
14	Taiwan	2	27	1	Taiwan	3	92	3	Belgium	8	301	6	Belgium	18	311	11	New Zealand	31	153	6
15	Ireland	1	36	1	Chile	3	22	2	Israel	6	134	6	Israel	14	158	9	Singapore	18	97	6
16	Spain	1	30	1	Turkey	2	122	2	Norway	6	111	6	Austria	13	150	9	Israel	12	71	6
17	Sweden	1	19	1	Ireland	2	47	2	Denmark	5	97	4	Switzerland	13	204	8	Turkey	22	81	5
18	India	1	18	1	Switzerland	2	46	2	Austria	4	152	4	Denmark	10	147	7	Sweden	19	51	5
19	Portugal	1	18	1	Denmark	2	12	2	Sweden	4	99	4	Italy	8	145	7	Italy	14	177	5
20	Kuwait	1	13	1	Cameroon	1	88	1	Switzerland	3	81	3	Sweden	12	173	6	India	13	34	4
21	Saudi Arabia	1	13	1	Sweden	1	45	1	India	3	77	3	Norway	9	110	5	Finland	11	64	4
22	Japan	1	4	1	Austria	1	43	1	Turkey	2	215	2	Turkey	8	620	5	Norway	9	43	4
23					Finland	1	19	1	Japan	2	45	2	Greece	7	84	5	Greece	9	29	4
24					Greece	1	12	1	Slovenia	2	45	2	Japan	6	92	4	Switzerland	12	45	3
25					South Africa	1	9	1	Finland	2	28	2	Finland	5	58	4	Denmark	6	21	3

Table 3: Leading regions in advertising research (1992-2016)

Regions	TP	TC	H	TC/TP	>250	>100	>50
North America	3050	84244	115	27,62	24	158	471
Western Europe	985	16654	57	16,91	3	20	74
Oceania	375	6111	40	16,30	1	4	23
East Asia	447	6381	36	14,28	1	5	22
Central-South-Southeast Asia	97	2130	23	21,96	1	2	8
Middle East	80	2016	19	25,20	2	3	8
Eastern Europe	29	249	9	8,59	0	0	0
Latin America	22	96	6	4,36	0	0	0
Africa	15	153	5	10,20	0	0	1

Table 4: Co-authorship links, bibliographic coupling links, citation links for the most productive countries in advertising research

Rank	Country	Co-Authorship Links	Bibliographic Coupling Links	Citation Links
1	USA	638	16512	49436.64
2	Australia	145	3155	10265.53
3	England	151	2872	11302.71
4	Canada	139	2560	8874.06
5	Netherlands	96	3008	7536.86
6	China	125	1661	7615.22
7	South Korea	120	1999	7474.10
8	Germany	71	1825	6521.26
9	Taiwan	28	1269	4531.23
10	France	68	1514	5074.29
11	New Zealand	55	1447	4323.34
12	Spain	40	1216	3854.99
13	Belgium	28	1340	3010.33
14	Singapore	53	853	2949.48
15	Austria	26	584	2273.19
16	Israel	21	350	1520.03
17	Sweden	12	522	1207.13
18	Turkey	28	567	1614.18
19	Switzerland	21	318	1301.23
20	Scotland	15	248	1185.98
21	Italy	14	206	1050.43
22	Norway	12	186	936.39
23	Denmark	10	146	796.26
24	India	14	211	746.17
25	Finland	6	115	762.57
26	Greece	8	237	1065.25
27	Japan	11	139	576.66
28	Wales	11	174	963.53
29	Ireland	6	106	470.95
30	Chile	5	127	470.08

Figure 1: Most influent regions' productivity per year in advertising research (1990-2016)
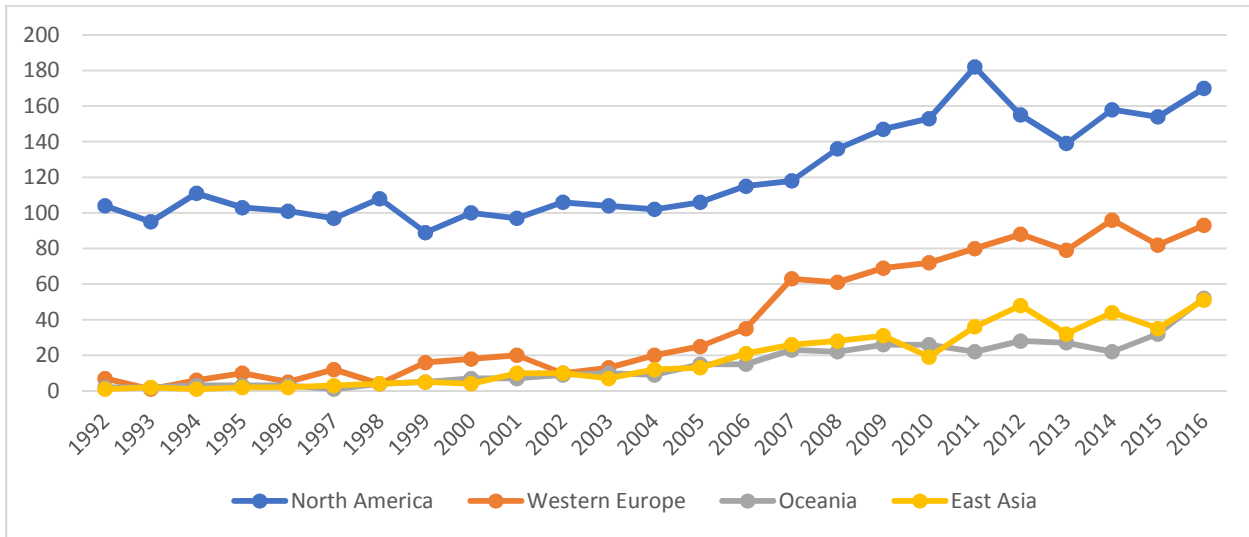

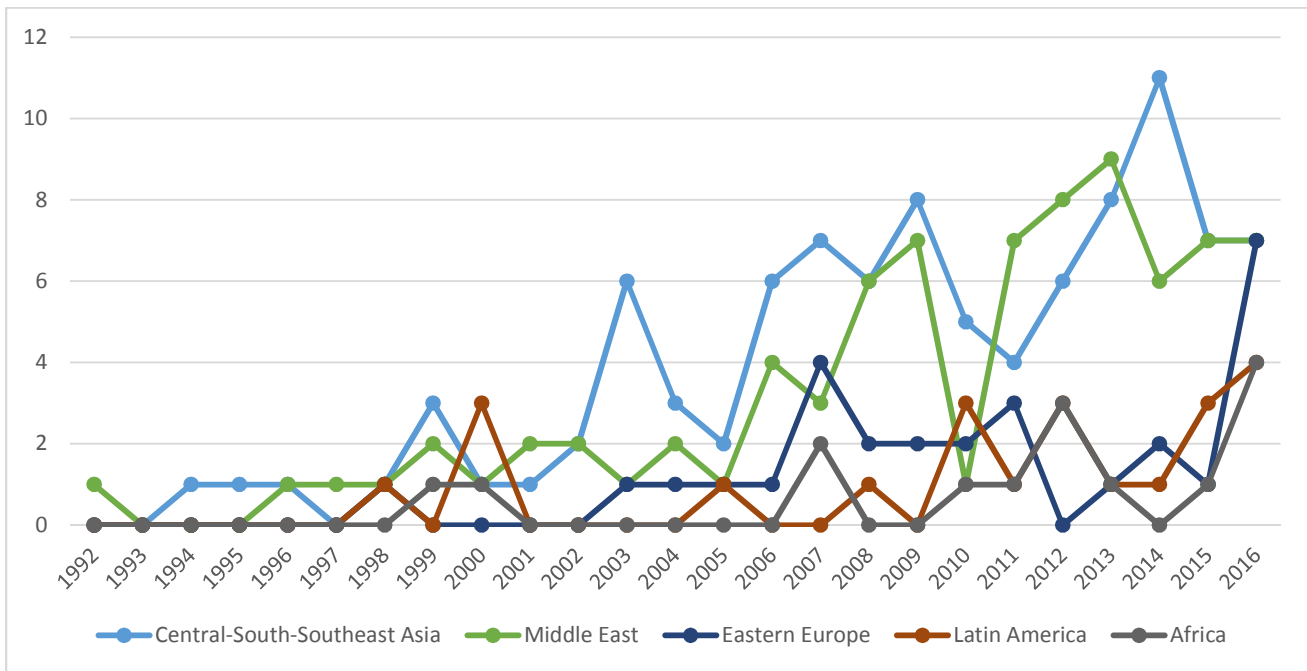Figure 2: Less influent regions' productivity per year in advertising research (1990-2016)

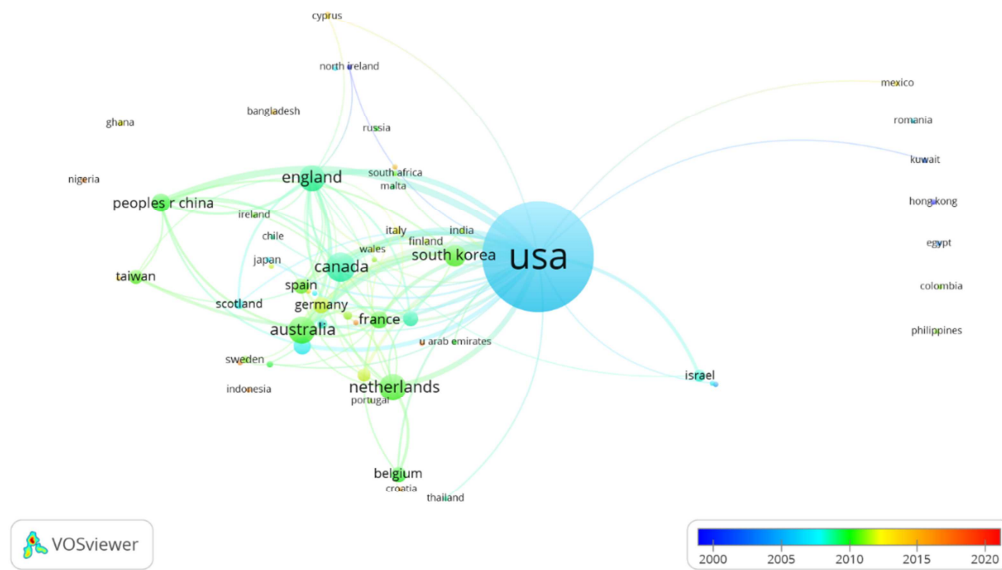Figure 3: Co-authorship of countries in advertising research

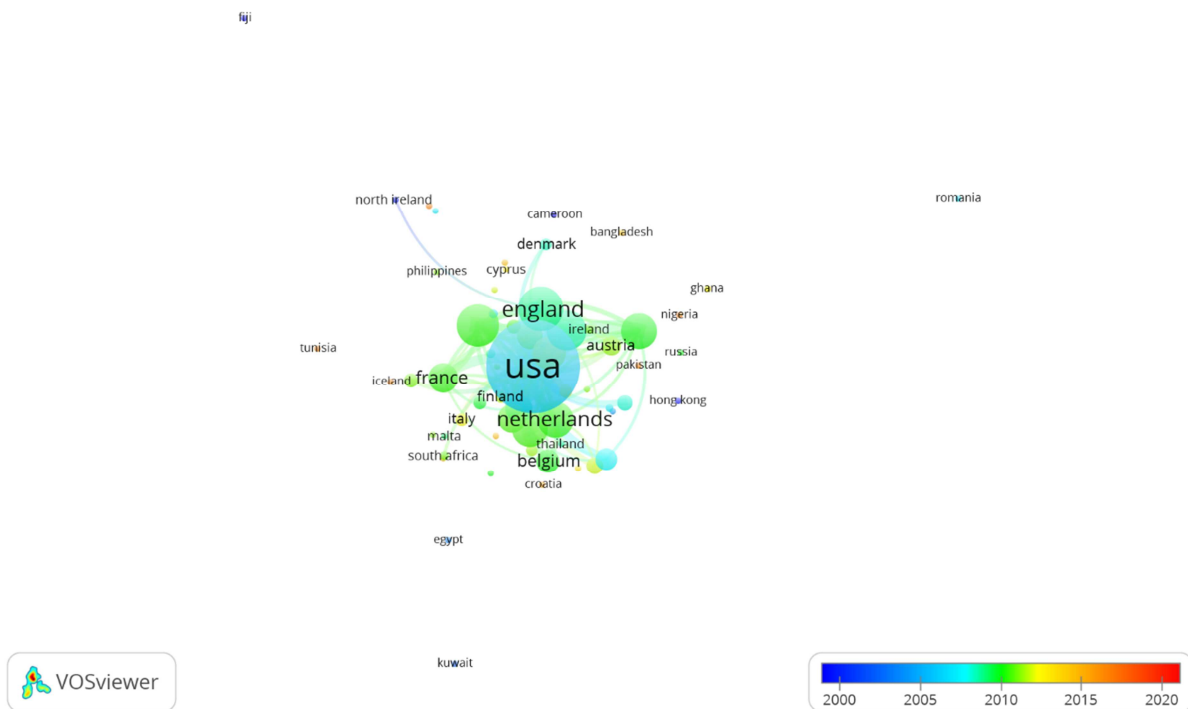Figure 4: Bibliographic coupling of countries in advertising research

Figure 5: Citation analysis of countries in advertising research