

Análisis bibliométrico sobre Cultura organizacional en Economía de negocios de Web of Science, 1980-2018

Bibliometric analysis of Organizational culture in Business economics of Web of Science, 1980-2018

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Palabras clave: análisis bibliométrico; cultura organizacional; administración; Web of Science; VOSviewer

Keywords: bibliometric analysis; organizational culture; management; Web of Science; VOSviewer

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Resumen

Introducción: Este artículo tiene como objetivo proporcionar un análisis de la información de las publicaciones de investigación científica relacionadas con Cultura organizacional disponibles en la Web of Science. Para ello, se realizó un análisis bibliométrico de las publicaciones de la base de datos de Web of Science Core Collection sobre Cultura organizacional en la categoría de Administración en el área de investigación de Economía de negocios.

Método: Los datos obtenidos en una búsqueda en la base de datos de Web of Science Core Collection se sometieron a un análisis bibliométrico utilizando el software VOSviewer. El período analizado fue desde 1980 hasta el 18 de octubre de 2018, fecha en que se descargaron los datos bibliográficos.

Resultados: En esta sección se muestra el análisis de los datos de las publicaciones sobre Cultura organizacional. Las tablas y los mapas de red, los 25 autores más productivos y citados, las revistas que publicaron más artículos, las 40 publicaciones más citadas y las referencias más citadas, son algunos datos obtenidos en el análisis.

Discusión o Conclusión: Nuestros resultados del análisis bibliométrico mostraron que la Cultura organizacional se mantiene como un tema de investigación de interés y proporciona una síntesis sobre la investigación de la cultura organizacional para los nuevos investigadores.

Abstract

Introduction: This article aims to provide an analysis of the information on scientific research publications of Organizational culture available in the Web of Science. For this, a bibliometric

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analysis of the publications of the Web of Science Core Collection database on Organizational culture in the category of Management in the research area of Business economics was done.

Method: The data obtained from a search of the Web of Science Core Collection database were subjected to a bibliometric analysis using VOSviewer software. The period analyzed was from 1980 to October 18, 2018, the date on which the bibliographic data was downloaded.

Results: In this section is showed the analysis of the data of the publications on Organizational Culture. Tables and network maps, top 25 most productive and cited authors, journals that more articles published, 40 publications most cited and main references most co-cited, is some information obtained in the analysis.

Discussion or Conclusion: Our results of the bibliometric analysis showed that Organizational culture is maintained as an interest research subject and it provides a synthesis about of organizational culture research for new researchers.

Introduction

Organizational Culture (OC) has been subject of different research since the early 20th century (Nukic & Huemann, 2016). For decades researchers and business professionals have been interested in this subject, especially within American businesses (de-la-Garza-Carranza, Guzman-Soria, & Mueller, 2011; Pietersen, 2017). Of 1980 to date, more than six thousand scientific research publications on OC in the Web of Science (WoS) database have been published. Currently, OC research presents an increase in the production of publications, in the last three years, the number of publications has increased, as shown by the WoS data.

Web of Science identify publications on Organizational Culture, and it classifies on different research areas (Business economics, Psychology, Social Sciences Other Topics, Health Care Sciences Services, Education Educational Research, Engineering and other). Business economics is the most crucial area of research of OC; it concentrates about forty percent of these publications.

Despite full of publications of Organizational culture topic, Chatman & O'Reilly (2016) believe that everything related to research in OC is not yet solved and that new researchers have the mission to continue with the research in several aspects that remain unclear.

The aim of this article, through of bibliometric analysis, is to provide useful information on scientific research publications of Organizational culture in the category of Management in the research area of Business economics available in the Web of Science, for researchers interested in the subject.

Organizational Culture (OC). Is defined in different ways (Ertosun & Adiguzel, 2018). For example: how a group of persons learns over a period of time to solves its problems of survival in an external environment and its problems of internal integration (Schein, 1990). For Schneider, Ehrhart, & Macey (2013) is defined as basic assumptions about the world and values that guide life in organizations.

Analysis of the recent research works and publications proves the multiplication of some scientific works dedicated to the problem of OC (Shymko, 2018). The research of the OC has been profoundly explored based on different definitions of the construct using different types of measurements and from different theories (Chatman & O'Reilly, 2016).

Organizational culture is a crucial aspect of any successful business or organization (Kasemsap, Styron, & Styron, 2017). The OC affects the employees and organizational processes and plays a significant role in companies and, it can bring a competitive advantage to the organization (Ertosun & Adiguzel, 2018). OC can influence the performance and effectiveness of a company and it can be a factor in the success of an organization. (Warrick, 2017). OC is indicative of the typical way of orienting organization members towards common goals (Calciolari, Prenestini, & Lega, 2018).

To increase the effectiveness of the organization, the OC can be used as a critical element to promote long-term effectiveness and that the change efforts of the global culture can manifest not only in results such as the return on investment, assets, or sales, but also in customer satisfaction (Gillespie, Denison, Haaland, Smerek, & Neale, 2008). The personality of the CEO affects the culture of the organization; this culture subsequently affects a broad set of organizational results, such as financial performance, reputation recommendations of reputation analysts and employee attitudes (O'Reilly, Doerr, & Chatman, 2018).

Although researchers have studied for some time the relationship between OC and financial performance, it is not yet clear how this relationship is (Chatman, Caldwell, O'Reilly, & Doerr, 2014). OC can be a powerful force that clearly shows what is essential and coordinates the efforts of members without the cost of the inefficiencies of close supervision within an organization

(Chatman & Cha, 2003). Culture can be studied as a part of the process of adaptation of organizations, and that the specific cultural feature can be useful to predict effectiveness and performance (Denison & Mishra, 1995). To determine whether the culture or performance has a causal priority, or, if there is a reciprocal relationship, a longitudinal study was conducted concluding that the culture "comes first" (Boyce, Nieminen, Gillespie, Ryan, & Denison, 2015).

Nowadays, publications on OC is increasing, the consensus on the concept of the construct is diverse, and the impact it causes on the results of the companies remains in discussion.

Bibliometric analysis. Is the quantitative study of bibliographic material, and it can show a general picture of a research field (Merigo & Yang, 2017). Bibliometric analysis is a valuable research tool that can systematically represent the nature of specific scientific disciplines by highlighting critical research points and identifying research trends (Zhang *et al.*, 2016).

Some research has used Bibliometric analysis as a method to indicate trends in different areas, for example: Lopez-Fernandez, Serrano-Bedia, & Perez-Perez (2016) applied bibliometric indicators in an in-depth and systematic review of the theme of entrepreneurship in family businesses, identifying the most productive authors; through their co-citations and through co-word analysis, identified research trends in the subject. Podsakoff, MacKenzie, Podsakoff, & Bachrach (2008) used bibliometric techniques to examine 30 research journals in the field of administration, using the number of citations as a basis to determine the impact of research in a defined period of years.

Bibliometrics methods and visualization networks to analyze the publications of the Journal of Uncertainty, Fuzziness and Knowledge-Based Systems in the period 1993-2016 was presented by Wang *et al.* (2018) including a general overview of publications, authors, institutions and countries, which were the most relevant function of the number of citations. They also used the VOSviewer software for visualization of different connections between authors, journals and countries.

Ozkose & Gencer (2017) used the bibliometric mapping to analyze in depth Management Information Systems field. The expert opinion defined a sample of 24 journals, this journals of the sample were most important in the area, the bibliometric technique of co-occurrence analysis allowed to establish the most cited terms and keywords through the VOSviewer software that were represented in density maps for natural interpretation.

Mascarenhas, Marques, Galvao, & Santos (2017) based on a bibliometric study using the VOS viewer software to analyze the topic of the Entrepreneurial University based on research published in the WoS from 1900 to the present, they determined the research opportunities for the area. Pecha & Vanecek (2015) conducted a bibliometric analysis of the research publications on the physiology field in the Czech Republic and Hungary. For this, they used the VOS viewer software and compared the directions of the research and topics of internal research in the area to the world trends.

A bibliometric study of publications in different databases in the last 70 years by Olczyk (2016) explained the state of the art of the international competitiveness in the discipline of economics. He used in its analysis, bibliometric indicators such as network citation analysis, key-routes main path, and term co-occurrence analysis.

Through of bibliometric citation and co-citation analysis, as well as content analysis of the literature, this article exposes the current situation of the publications on OC research and provide answers to the following question: What are the leading publications, authors and journals in the OC research in Business economics? How publications, authors and journal are a relationship in the OC research in Business economics?

Method

The bibliographic search was conducted in the Web of Science Core Collection database. This database has been widely used in academic research (Caputo, Marzi, Pellegrini, & Rialti, 2018; Castillo-Vergara, Alvarez-Marin, & Placencio-Hidalgo, 2018; Caya & Neto, 2018; Mascarenhas *et al.*, 2017; Merigo & Yang, 2017; Wang *et al.*, 2018). Web of Science Core Collection database includes the Citation Indexes: Science Citation Index Expanded (SCI-EXPANDED), Social Sciences Citation Index (SSCI), Arts & Humanities Citation Index (A & HCI), Book Citation Index-Science (BKCIS), Book Citation Index- Social Sciences & Humanities (BKCI-SSH), Emerging Sources Citation Index (ESCI).

First, the term “Organizational Culture” was used in a type of search by topic in WoS. The type of search by topic include the following fields to search for a record of the database: title, abstract, keywords of author and keywords plus. The search refined by research area (Business and Economics) and category of WoS (Management). The search was realized on October 18, 2018, and the range of time from 1980 to October 2018.

The second step was made from the data obtained in the search. A detailed analysis of the information provided by the WoS was made. The publications by year, publications and citations of the principal authors and journals, as well as the most cited articles over the years, were included in tables to facilitate the understanding of the topic.

For the analysis of the data obtained of the search was used the VOSviewer software. VOSviewer is a program that was developed for constructing and viewing bibliometric maps. VOSviewer can, for example, be used to construct maps of authors or journals based on co-citation data or to construct maps of keywords based on co-occurrence data (van Eck & Waltman, 2010). VOSviewer software has been used to construct networks of scientific publications, scientific journals, researchers, research organizations, countries, keywords, or terms. Items in these networks can be connected by co-authorship, co-occurrence, citation, bibliographic coupling, or co-citation links (Caputo *et al.*, 2018; Mascarenhas *et al.*, 2017; Merigo & Yang, 2017; Ortiz-de-Urbina-Criado, Najera-Sanchez, & Mora-Valentin, 2018). For this work, the indicators of citation and co-citation were used to show the relationship between authors, journals and references of the publications obtained from WoS.

Analysis of Results

Of the search in the WoS, 1936 scientific research publications were obtained, Table 1 shows the distribution of the publications by type of document. Articles are the most important type of document within of the publications; it represents 89.5% of the total of publications of the database in OC in the category of Management in Business Economic research area.

Table 1. Publications of WoS on OC Management Category of Business economics

Research area, (1980-2018)

Document Type	TP	Document Type	TP
Article	1734	Book	14
Book Chapter	147	Correction	3
Review	113	Correction Addition	1
Proceedings Paper	45	Meeting Abstract	1
Book Review	38	Note	1
Editorial Material	31	Reprint	1

TP: Total Publications

In the other hand, the amount of publications on OC in the WoS from 1994 to the present day is shown in Table 2. In this table, a column specifies the number of total of publications on OC by year in WoS, another column indicates the number of publications on OC in the Management category of Business Economic research area. Although publications of OC is extensive: Over the years, the publications on OC in Management category of Business economics have obtained, in certain years (1995, 1996, 1999, 2003, 2011), more than 40% of the total of publications of the WoS. In annual average, the publications in OC, in the mentioned category and research area, are approximately 33% of the total of publications of the WoS on the subject. The distribution of publications generated over time shows the growing trend of publications on OC. Evolution of the research in the area of OC is shown in Figure 1.

The total of publications of the WoS on OC increased steadily from 1994 to 2001, it relapses and then in 2002, it recovered and continued with a growth trend until 2012. In 2013, there was a decrease in the number of publications that continued in 2014. In the last three years (2015, 2016 and 2017) there was a significant increase in publications (more than 50%) compared to 2012, which was the year most productive in publications.

Table 2. Total publications on OC in Web of Science (1980-2018)

Year	T/P WoS	T/P Category Management	%	Year	T/P WoS	T/P Category Management	%
1995	47	19	40.43	2007	177	44	24.86
1996	63	26	41.27	2008	234	78	33.33
1997	58	21	36.21	2009	272	97	35.66
1998	69	26	37.68	2010	326	111	34.05
1999	76	32	42.11	2011	340	147	43.24
2000	105	35	33.33	2012	355	125	35.21
2001	75	28	37.33	2013	350	86	24.57
2002	104	36	34.62	2014	316	94	29.75
2003	134	57	42.54	2015	567	150	26.46
2004	128	29	22.66	2016	623	171	27.45
2005	133	38	28.57	2017	688	201	29.22
2006	173	54	31.21	2018	497	134	26.96

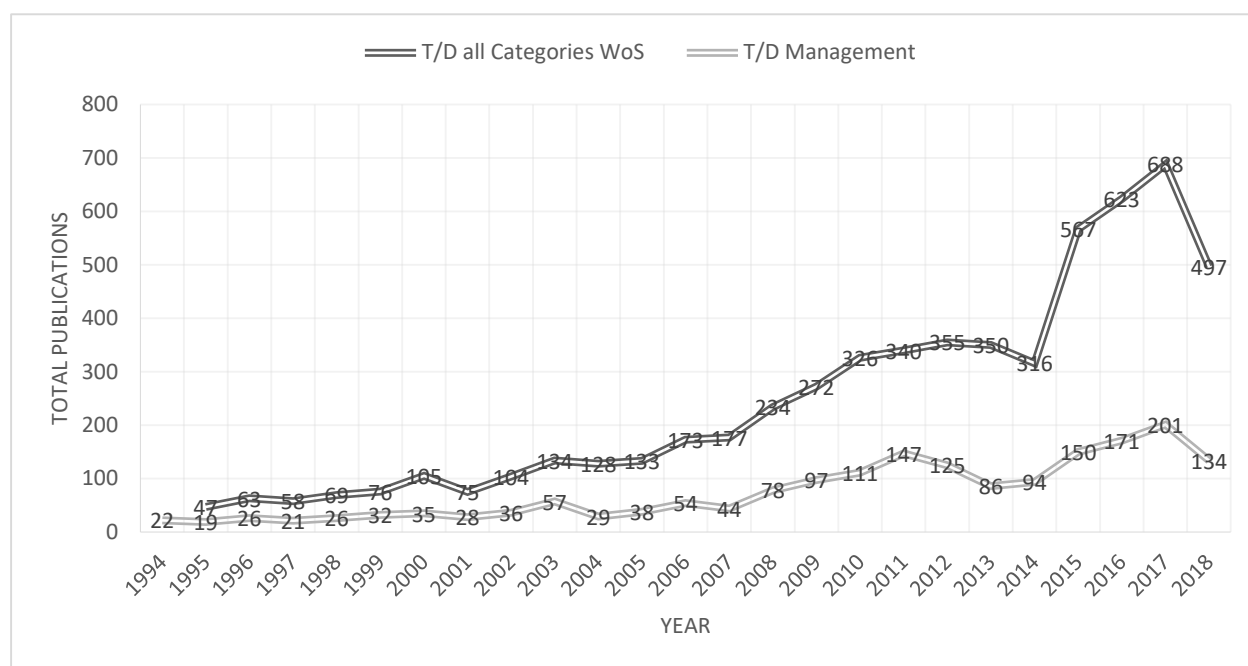


Figure 1. Evolution of Scientific Research in the Field of Organizational culture (1980-2018)

The term “Organizational Culture” was used in a type of search by topic in WoS. Here, 6338 scientific research publications were identified. Next, for a refined search in the area of research Business economics in the Management category, 1936 publications were obtained of WoS database. For these publications, 3819 authors were obtained and, 407 journals were identified. Finally, the number total of cited references in these publications is equivalent to 82597 references. Bibliometric analysis indicated the most productive authors on OC in the Management category of Business Economics research area. Ogbona, Harris, and Denison are the authors with most publications in this category. In another hand, if productivity is based on the measurement of citations of authors have in WoS, Chatman, Cadwell, and Oreily would take the places 1, 2, 3, in the area of research (Table 3).

Table 3. Top 30 authors, number of publications and citations in the WoS on OC in
Management category of Business economics

R	Autor	TP	TC	R	Autor	TP	TC
1	Ogbonna, E	13	515	1	Chatman, J	5	2353
2	Harris, L	10	553	2	Caldwell, D	2	1475
3	Denison, D	7	1188	3	Oreilly, C	1	1445
4	Schultz, M	7	886	4	Denison, D	7	1188
5	Chatman, J	5	2353	5	Barney, J	1	1121
6	Hatch, M	5	891	6	Hatch, M	5	891
7	Schroeder, R	5	517	7	Schultz, M	7	886
8	Hofstede, G	5	427	8	Shenkar, O	4	863
9	Shenkar, O	4	863	9	Kunda, G	3	854
10	Cable, D	4	598	10	Mcsweeney, B	2	852
11	Weber, Y	4	445	11	Schein, E	3	788
12	Kunda, G	3	854	12	Lado, A	1	758
13	Schein, E	3	788	13	Wilson, M	1	758
14	Lubatkin, M	3	516	14	Barkema, H	2	686
15	Gordon, G	3	419	15	Vermeulen, F	2	686
16	Ravasi, D	3	404	16	De Long, D	1	622
17	Caldwell, D	2	1475	17	Fahey, L	1	622
18	Mcsweeney, B	2	852	18	Burnett, D	1	619
19	Barkema, H	2	686	19	Tett, R	1	619
20	Vermeulen, F	2	686	20	Cable, D	4	598
21	Kayworth, T	2	579	21	Kayworth, T	2	579
22	Leidner, D	2	579	22	Leidner, D	2	579
23	Barsade, S	2	562	23	Barsade, S	2	562
24	Jehn, K	2	536	24	Barley, S	1	555
25	Jarvenpaa, S	2	459	25	Harris, L	10	553
26	Fombrun, C	2	417	26	Mishra, A	1	548
27	Neale, M	2	407	27	Jehn, K	2	536
28	Oreilly, C	1	1445	28	Schroeder, R	5	517
29	Barney, J	1	1121	29	Lubatkin, M	3	516
30	Lado, A	1	758	30	Ogbonna, E	13	515

R: Ranking, **TP:** Total Publications, **TC:** Total Citation

Figure 2 shows the map network of citation between the authors based on the number of publications for the author in the database; where we can easily interpret the existing relationship in the publications of the authors. The type of color and the distance between the bubbles in the graph indicate the relationship among the authors. The bubbles of the same color reflect greater strength among the authors then they represent and the lines indicate that exist a relationship between the citations of the authors. The relatedness of the authors is determined based on the number of times they cite each other.

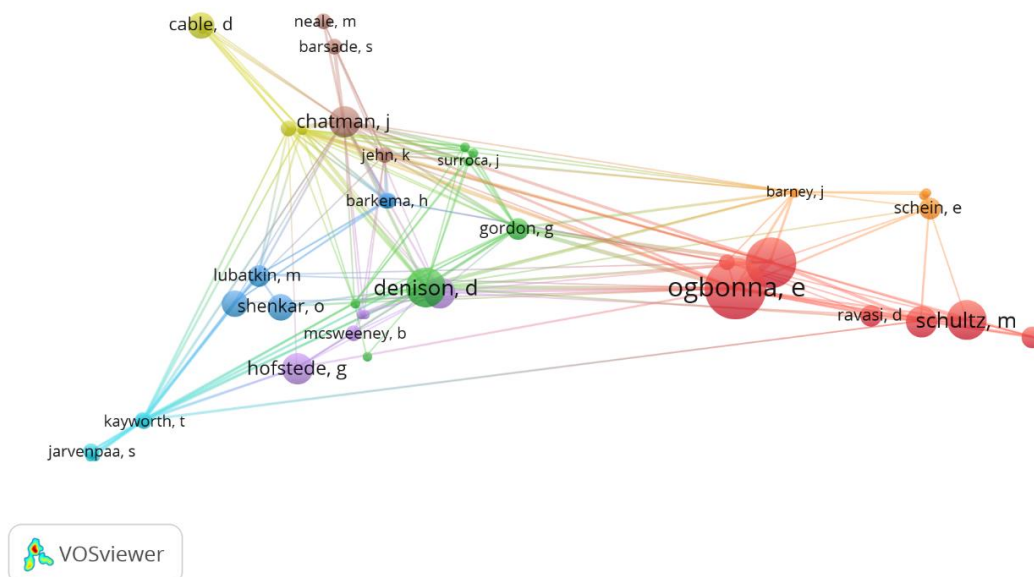


Figure 2. Network map, authors whit more publications in WoS in Organizational culture in Management category of Business economics research area

The network map of the citations between the authors is shown in Figure 3. Network map is based on the number of citations of the authors in the WoS in OC in the Management category in the Business economics research area. The lines show the connections that exist between the authors, as in the previous figure, the bubbles of the same color represent greater strength between the author's citations and the lines indicate that there is a citation between the authors that connects.

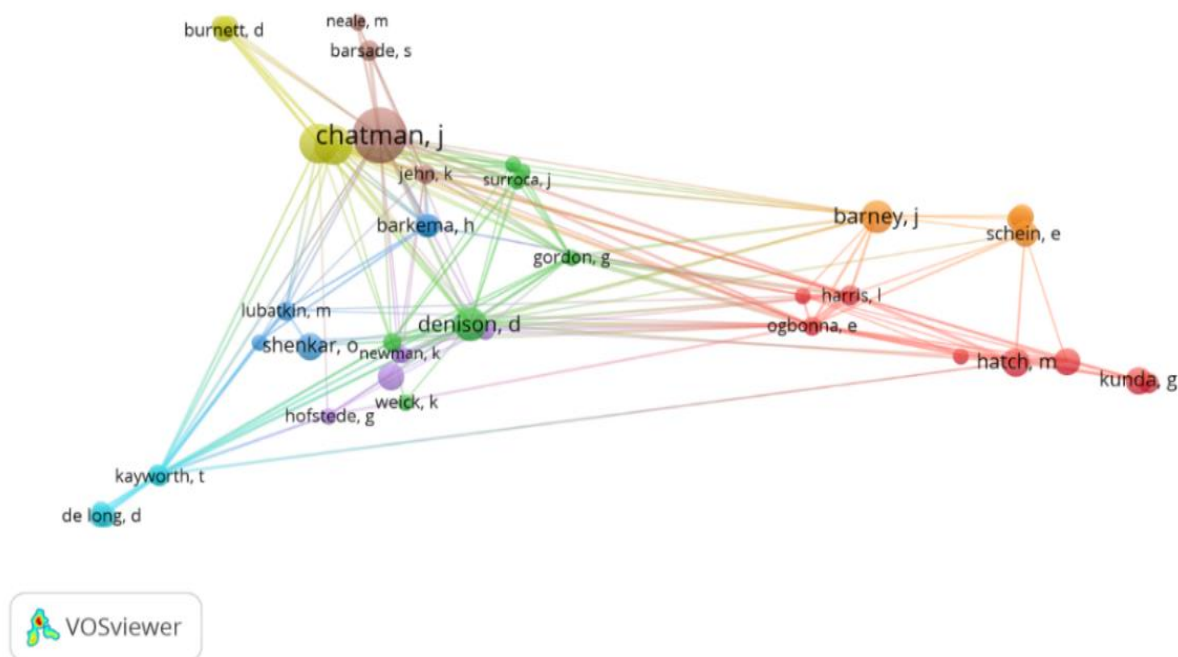


Figure 3. Network map of authors more cited in Web of Science in OC Research in the Management category of Business economics (1980-2018)

The analysis of the publications selected on OC in the Management category of Business economics research areas provided information for the elaboration of Table 4. These tables contain the 40 most cited publications in the WoS on the subject. Also in the table, we can find the ranking in which the publication is, its authors, the name and the date of the scientific journal where it was published. The number of citations that have the publications in the WoS and the number of average citations per year is critical information is easy to obtain from the tables.

Table 4. Most cited publications in the WoS on OC in Management Category of Business economics research area (1980-2018)

R	Title	Autor	Source	Y	TC	TC/Y
1	People and organizational culture - a profile comparison approach to assessing person-organization fit	Oreilly, CA; Chatman, J; Caldwell, DF	<i>Academy of Management J.</i>	1991	1445	51.6
2	Organizational culture - can it be a source of sustained competitive advantage	Barney, JB	<i>Academy of Management R.</i>	1986	1121	34
3	Hofstede's model of national cultural differences and their consequences: A triumph of faith - a failure of analysis	McSweeney, B	<i>Human Relations</i>	2002	779	45.8
4	Cultural distance revisited: Towards a more rigorous conceptualization and measurement of cultural differences	Shenkar, O	<i>Journal of International B.</i>	2001	775	43.1
5	Human-resource systems and sustained competitive advantage - a competence-based perspective	Lado, AA; Wilson, MC	<i>Academy of Management Review</i>	1994	758	30.3
6	Diagnosing cultural barriers to knowledge management	De Long, DW; Fahey, L	<i>Academy of Management E.</i>	2000	622	32.7
7	A personality trait-based interactionist model of job performance	Tett, RP; Burnett, DD	<i>Journal of Applied Psychology</i>	2003	619	38.7
8	The antecedents of deinstitutionalization	Oliver, C	<i>Organization Studies</i>	1992	610	22.6
9	What is the difference between organizational culture and organizational climate? A native's point of view on a decade of paradigm wars	Denison, DR	<i>Academy of Management R.</i>	1996	578	25.1
10	Design and devotion - surges of rational and normative ideologies of control in managerial discourse	Barley, SR; Kunda, G	<i>Administrative Science Q.</i>	1992	555	20.6
11	Toward a theory of organizational culture and effectiveness	Denison, DR; Mishra, AK	<i>Organization Science</i>	1995	548	22.8
12	Toward a theory of spiritual leadership	Fry, LW	<i>Leadership Quarterly</i>	2003	473	29.6
13	Coming to a new awareness of organizational culture	Schein, EH	<i>Sloan Management Review</i>	1984	453	12.9
14	Organizational culture as a source of high-reliability	Weick, KE	<i>California Management R.</i>	1987	444	13.9
15	Review: A review of culture in information systems research: Toward a theory of information technology culture conflict	Leidner, DE; Kayworth, T	<i>Mis Quarterly</i>	2006	427	32.9

R: Ranking, **Y:** Year, **T/C:** Total Citations, **C/Y:** Citation/Year

Table 4. (Continuation) Most cited publications in the WoS on OC Management Category in Business economics research area (1980-2018)

	Title	Autor	Source	Y	TC	C/Y
16	Learning through acquisitions	Vermeulen, F; Barkema, H	<i>Academy of Management Journal</i>	2001	425	23.6
17	Corporate responsibility and financial performance: the role of intangible resources	Surroca, Jordi; Tribo, Josep A.; Waddock, Sandra	<i>Strategic Management Journal</i>	2010	412	45.8
18	Relationships between psychological climate perceptions and work outcomes: a meta-analytic review	Parker, CP; Baltes, BB; Young, SA; Huff, JW; Altmann, RA; Lacost, HA; Roberts, JE	<i>Journal of Organizational B.</i>	2003	404	25.3
19	Culture and congruence: The fit between management practices and national culture	Newman, KL; Nollen, SD	<i>Journal of International Business Studies</i>	1996	404	17.6
20	The dynamics of organizational culture	Hatch, MJ	<i>Academy of Management Review</i>	1993	377	14.5
21	Responding to organizational identity threats: Exploring the role of organizational culture	Ravasi, Davide; Schultz, Majken	<i>Academy of Management Journal</i>	2006	365	28.1
22	Innovation management measurement: A review	Adams, R; Bessant, J; Phelps, R	<i>International Journal of Man. Rs</i>	2006	357	27.5
23	The cross-level effects of culture and climate in human service teams	Glisson, C; James, LR	<i>Journal of Organizational B.</i>	2002	344	20.2
24	Climate strength: A new direction for climate research	Schneider, B; Salvaggio, AN; Subirats, M	<i>Journal of Applied Psychology</i>	2002	340	20
25	Being different yet feeling similar: The influence of demographic composition and organizational culture on work processes and outcomes	Chatman, JA; Polzer, JT; Barsade, SG; Neale, MA	<i>Administrative Science Quarterly</i>	1998	340	16.2
26	The role of the founder in creating organizational culture	Schein, EH	<i>Organizational Dynamics</i>	1983	325	9.03
27	Superman or the fantastic four? Knowledge combination and experience in innovative teams	Taylor, Alva; Greve, Henrich R.	<i>Academy of Management Journal</i>	2006	314	24.2
28	Cultural-differences and shareholder value in related mergers - linking equity and human-capital	Chatterjee, S; Lubatkin, MH; Schweiger, DM; Weber, Y	<i>Strategic Management Journal</i>	1992	310	11.5
29	Applicant personality, organizational culture, and organization attraction	Judge, TA; Cable, DM	<i>Personnel Psychology</i>	1997	306	13.9
30	The dynamics of organizational identity	Hatch, MJ; Schultz, M	<i>Human Relations</i>	2002	296	17.4

R: Ranking, **Y:** Year, **T/C:** Total Citations, **C/Y:** Citation/Year

Table 4. (Continuation) Most cited publications in the WoS on OC in Management Category
in Business economics (1980-2018)

R	Title	Autor	Source	Y	TC	C/Y
31	Real feelings - emotional expression and organizational culture	Vanmaanen, J; Kunda, G	Research in Organizational B.	1989	295	9.83
32	A framework for linking culture and improvement initiatives in organizations	Detert, JR; Schroeder, RG; Mauriel, JJ	Academy of Management R.	2000	288	15.2
33	Accounting for the contradictory organizational consequences of information technology: Theoretical directions and methodological implications	Robey, D; Boudreau, MC	Information Systems Research	1999	283	14.2
	Motivation to lead, motivation to follow:					
34	The role of the self-regulatory focus in leadership processes	Kark, Ronit; Van Dijk, Dina	Academy of Management R.	2007	272	22.7
	An empirical investigation of the process					
35	of knowledge transfer in international strategic alliances	Simonin, BL	Journal of International Business Studies	2004	271	18.1
	Assessing the relationship between					
36	industry characteristics and organizational culture - how difference can you be	Chatman, JA; Jehn, KA	Academy of Management Journal	1994	271	10.8
	Theorising from case studies: Towards a	Welch, C; Piekkari, R;				
37	pluralist future for international business research	Plakoyiannaki, E; Paavilainen-Mantymaki,	Journal of International Business Studies	2011	270	33.8
	Managing the post-acquisition integration					
38	process: How the human integration and task integration processes interact to foster value creation	Birkinshaw, J; Bresman, H; Hakanson, L	Journal of Management Studies	2000	270	14.2
	To agree or not to agree: The effects of					
39	value congruence, individual demographic dissimilarity, and conflict on workgroup outcomes	Jehn, KA; Chadwick, C; Thatcher, SMB	International Journal of Conflict Management	1997	265	12.1
	Behavioral norms and expectations - a					
40	quantitative approach to the assessment of organizational culture	Cooke, RA; Rousseau, DM	Group & Organization Studies	1988	265	8.55

R: Ranking, **Y:** Year, **T/C:** Total Citations, **C/Y:** Citation/Year

The network map of most cited publication in WoS on OC in Management category in Business economics research area is shown in Figure 4. The network map presents the connection between the 40 most cited publications. Oreilly (1991) and Barney (1986) are the authors of the publications with the highest number of citations. Eight groups of different colors were formed; these groups have a significant relationship with each other.

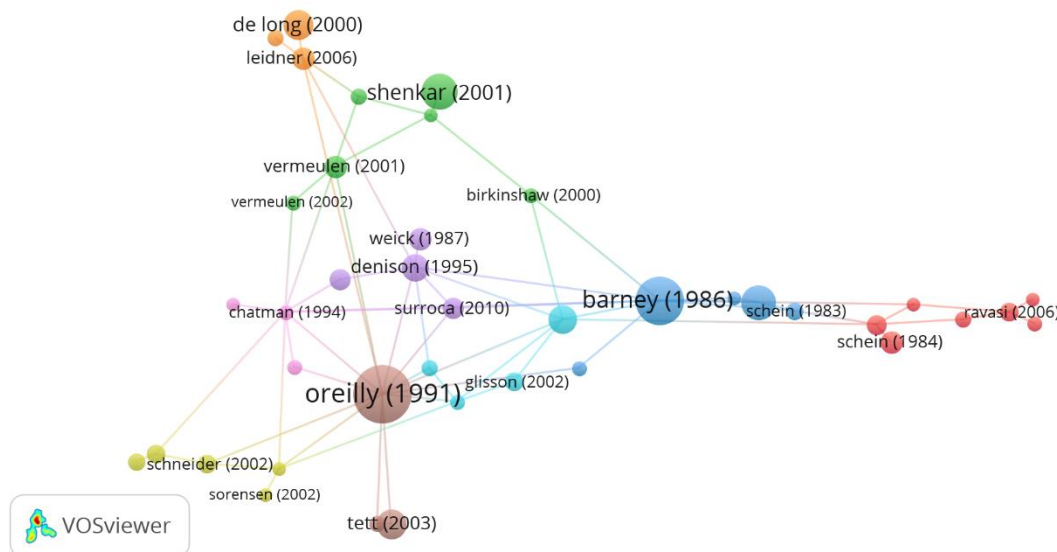


Figure 4. Network map of the publications most cited, Management category, Business economics, Organizational Culture, Web of Science

A brief analysis of the most productive sources in the research of the OC in the category of Management in Business economics of the WoS is shown in Table 5. In this table, the ranking of the primary 25 sources is shown based on the number of citations that accumulates in the WoS. Also based on the number of publications they have in the database above, another ranking is presented in the same table. The comparison between the two rankings allows establishing that despite having 16 publications in the database identified by the search, Academy of Management Review presents the highest number of citations (4488 citations), in contrast, Journal of Organizational Change Management with 68 publications only has 1015 citations. Academy of Management Review regarding publications in WoS is ranked 13th and Journal of Organizational Change Management ranked 15th regarding citations. The above shows the contrast between publications and citations of the sources.

Table 5. Sources more important in OC of WoS in Management category of
Business economics (1980-2018)

R	Source	TP	TC	R	Source	TP	TC
1	Academy of Management Review	16	4488	1	Journal of Organizational Change Management	68	1016
2	Human Relations	64	3561	2	Human Relations	64	3561
3	Academy of Management Journal	12	3430	3	International Journal of Human Resource Management	56	1185
4	Journal of International Business Studies	18	2950	4	Organization Studies	45	2463
5	Organization Studies	45	2463	5	Journal of Knowledge Management	33	764
6	Administrative Science Quarterly	21	2336	6	Management Decision	33	592
7	Organization Science	27	2277	7	Journal of Management Studies	31	1866
8	Strategic Management Journal	12	2156	8	International Journal of Operations & Production Management	28	913
9	Journal of Management Studies	31	1866	9	Organization Science	27	2277
10	Journal of Applied Psychology	12	1785	10	Industrial Marketing Management	26	726
11	Journal of Organizational Behavior	15	1358	11	Administrative Science Quarterly	21	2336
12	Leadership Quarterly	13	1300	12	Journal of International Business Studies	18	2950
13	International Journal of Human Resource Management	56	1185	13	Academy of Management Review	16	4488
14	Sloan Management Review	6	1059	14	Journal of Organizational Behavior	15	1358
15	Journal of Organizational Change Management	68	1016	15	Leadership Quarterly	13	1300
16	Decision Sciences	11	918	16	Academy of Management Journal	12	3430
17	International Journal of Operations & Production Management	28	913	17	Strategic Management Journal	12	2156
18	Academy of Management Executive	7	843	18	Journal of Applied Psychology	12	1785
19	Mis Quarterly	6	810	19	Decision Sciences	11	918
20	Journal of Knowledge Management	33	764	20	Technovation	10	739
21	Technovation	10	739	21	Academy of Management Executive	7	843
22	Industrial Marketing Management	26	726	22	Journal of Operations Management	7	718
23	Journal of Operations Management	7	718	23	Sloan Management Review	6	1059
24	International Journal of Management Reviews	5	635	24	Mis Quarterly	6	810
25	Management Decision	33	592	25	International Journal of Management Reviews	5	635

R: Ranking, **TP:** Total Publications, **TC:** Total

Network map between the sources based on the number o publications in OC research in Management category in Bussines Economics is presented in Figure 5.. Network map of sources, but, based on the number of citations that are present in the WoS on the subject of the analysis is shown in Figure 6.

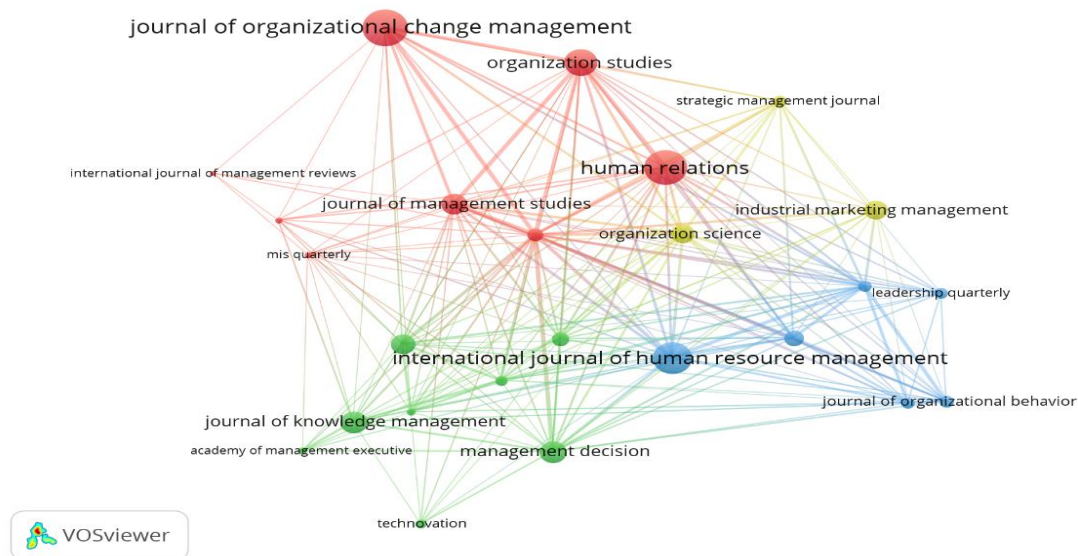


Figure 5. Network map of the more productive sources of publications on OC research in Management category of Business economics (1980-2018)

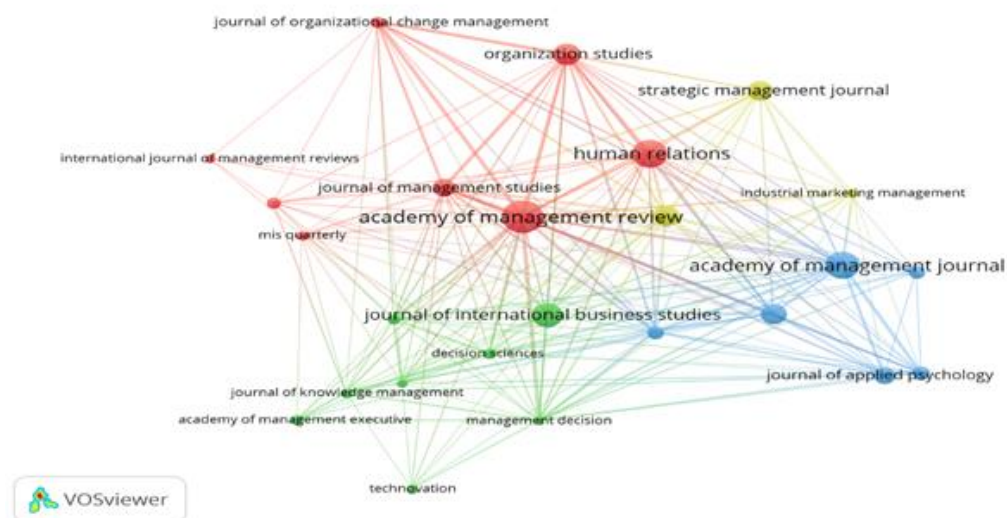


Figure 6. Network map of the more productive sources of publications on OC Management category of Business economics (1980-2018)

The co-citation analysis of cited references indicates the number of times that two references are cited at the same time in a publication. In this case, Schein (1985), Schein (1992), Hofstede (1980), O'Reilly (1991) and Smircich (1983) present the highest number of citations in the total of publications analyzed. The Table 6 showing the main cited references of OC in Management category in Business economics. The column of the table "total link strength" shows the strength of the relationship exists in the co-citation of the references, that is, among the 25 references that the table contains, as is the co-citation between them in the publications analyzed.

Table 6. Main cited references of OC in Management category in Business economics

	Label	T/O	TLS
1	Schein E. H., 1985, Org Culture Leadersh	246	642
2	Hofstede G, 1990, Admin Sci Quart, V35, P286.	170	623
3	O'Reilly Ca, 1991, Acad Manage J, V34, P487.	190	613
4	Smircich L, 1983, Admin Sci Quart, V28, P339.	173	598
5	Schein E., 1992, Org Culture Leadersh	194	558
6	Barney Jb, 1986, Acad Manage Rev, V11, P656.	156	554
7	Kotter Jp, 1992, Corporate Culture Pe	133	538
8	Denison Dr, 1995, Organ Sci, V6, P204.	119	532
9	Hofstede G. H., 1980, Cultures Consequence	194	532
10	Pettigrew Am, 1979, Admin Sci Quart, V24, P570.	118	518
11	Schein Eh, 1990, Am Psychol, V45, P109.	157	452
12	Denison Dr, 1990, Corporate Culture Or	95	434
13	Deal T., 1982, Corporate Cultures R	89	404
14	Hatch Mj, 1993, Acad Manage Rev, V18, P657.	107	378
15	Hofstede G., 2001, Cultures Consequence	142	351
16	Martin J., 1992, Cultures Org 3 Persp	92	349
17	Denison Dr, 1996, Acad Manage Rev, V21, P619.	88	341
18	Quinn Re, 1983, Manage Sci, V29, P363.	101	320
19	Podsakoff Pm, 2003, J Appl Psychol, V88, P879.	134	314
20	Peters T.J., 1982, Search Of Excellence	95	301
21	Barney J, 1991, J Manage, V17, P99.	123	290
22	Fornell C, 1981, J Marketing Res, V18, P39	125	269
23	Baron Rm, 1986, J Pers Soc Psychol, V51, P1173	92	251
24	Schein E, 2004, Org Culture Leadersh	101	245
25	Nonaka I., 1995, Knowledge Creating C	88	119

T/O: Total Occurrences, **TLS:** Total Link Strength

Figure 7 presents the network map formed by the co-citations of the references of the publications of the WoS database on OC in Management category. Each color of bubbles represents different

strength of co-citation between the references that make up the group of bubbles of the same color. Three groups were formed in which, Schein. (1985), Schein, (1992), Barney (1986) represent the references with the greatest strength of link in the groups of colored bubbles (green, blue and red respectively). The above indicates that these references with the most active link, are the most co-cited references about the rest of the other references in the database analyzed.

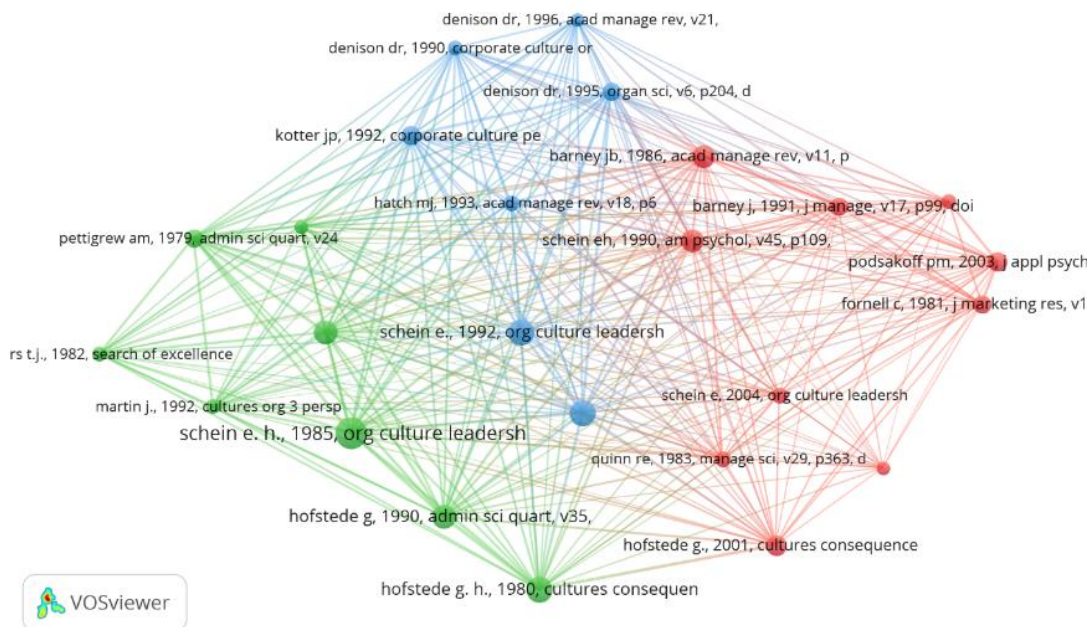


Figure 7. Network map of most co-cited references in Organizational culture of WoS in Management category of Business economics (1980-2018)

Discussion and Conclusion

Analyzing information derived of all research considered in this article allowed to answer questions presented in reference to knowing who are most cited publications, authors, and sources that had generated knowledge on the subject. Additionally, the co-citation analysis provides an overview useful for researchers interested in the area, offering valuable information for their work. The bibliometric analysis showed that the Organizational Culture (OC) is maintained as a wealthy research area. The analysis of the 40 most cited publications in WoS on OC in Management of Business economics research area, allows recognizing that new researchers have emerged in the area, generating publications and citations that demonstrate the growth of the research area.

Ogbonna, Harris, and Denison, are the authors with the mayor number of publications of OC in Management in Business economics research area, but they are not the most cited. The

authors most cited are Chatman, Caldwell, and Oreilly. The results of the present research concur with Lopez-Fernandez, Serrano-Bedia, & Perez-Perez (2016) who express: "the most productive authors and journals do not necessarily coincide with those most cited."

The analysis of co-citations of the references and their VOSviewer map allows us to observe that the oldest and most important reference for their number of citations is Pettigrew (1979). Schein is the author of cited references with the highest number of occurrences, he presents three important base publications distributed in time (1985, 1992 and 2004).

Schein, Hofstede, and Denison present three publications within the 25 most co-cited references each; they are the principal founding authors of OC in the Management of Business economics research area.

It is important to point out that the network maps made by VOSviewer allow observing the interaction that all the selected authors have in the database, showing a great connection of the researchers, promoting the advance on research.

One of the limitations of our research is to consider only the publications in the database of the Web of Science; there are probably publications in other databases that could enrich this study. On the other hand, the research is limited to a category in a research area, a bibliometric analysis that includes all the research areas of OC would provide a broader point of view.

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