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BIBLIOMETRIC OVERVIEW OF BUSINESS & ECONOMICS RESEARCH

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Abstract. Bibliometrics is the quantitative study of bibliographic information. It classifies the information according to different criteria including authors, journals, institutions and countries. This paper presents a general bibliometric overview of the most influential research in business & economics according to the information found in the Web of Science. It includes research from different subcategories including business, business finance, economics and management. For doing so, four general lists are presented: the 50 most cited papers in business & economics of all time, the 40 most influential journals, the 40 most relevant institutions and the most influential countries. The results permit to obtain a general picture of the most significant research in business & economics. This information is very useful in order to identify the leading trends in this area.

Keywords: bibliometrics, economics, business, Web of Science, journals, universities, countries.

JEL Classification: A1, M0, Z0.

Introduction

Bibliometric analysis is a research field that is receiving increasing attention by the scientific community. It is very useful for the construction of a general picture in a scientific area. During the last years it has experienced a substantial growth especially motivated by the development of computers and internet. In the literature, it has received many definitions (Bar-Ilan 2008; Hood, Wilson 2001) such as "the quantitative study of physical published units, or of bibliographic units, or of surrogates of either" (Broadus 1987). It appeared in the field of library and information science and it has expanded to all the research categories. In economic sciences, it has received a lot of attention in a wide range of fields including management (Podsakoff *et al.* 2008), data envelopment analysis (Liu *et al.* 2013), production and operations management (Hsieh,

Chang 2009; Pilkington, Meredith 2009), SWOT analysis (Ghazinoory *et al.* 2011), fuzzy research (Merigó *et al.* 2015a), ecological economics (Hoepner *et al.* 2012), physics (Redner 2005), entrepreneurship (Landström *et al.* 2012), innovation (Fagerberg *et al.* 2012; Yang, Tao 2012), decision making (Wallenius *et al.* 2008), marketing (Seggie, Griffith 2009), finance (Chan *et al.* 2011; 2013; Currie, Pandher 2011), economics (Bonilla *et al.* 2015; Stern 2013), econometrics (Baltagi 2007) and health economics (Wagstaff, Culyer 2012). However, none of these studies has analyzed the area of business & economics as a whole.

The aim of this paper is to provide an overview of the most influential research in business & economics. Thus, it is possible to get a general picture of the most popular topics in this area considering all the different subfields that constitute the field of business & economics. This analysis is presented in three different parts. First, this paper presents the 50 most cited papers of all time in business & economics. Next, it studies the most influential journals and an analysis of the most influential institutions. It ends studying the most relevant countries in this area.

In order to do so, this study uses the Web of Science Core Collection (WoS) as the database for obtaining the information. The objective of using this database is to be as neutral as possible although sometimes the particular nature of a research field may over or underestimate the results. There are several reasons including the presence of more researchers in a specific area than should be that brings more papers and citations, a lot of self-citations or a lot of publications not included in the database. The WoS is a database included in a more general one known as the Web of Science that is owned by Thomson & Reuters. The WoS includes more than 15,000 journals and 50,000,000 papers classified in about 250 subject categories and 150 research areas (Merigó *et al.* 2015b). Business & economics is one of these research areas. It is divided in four subject categories: Business, business finance, economics and management. It includes 1,153,640 papers in November 2012. However, this number includes 15 different types of publications including articles, proceedings, reviews, notes and book reviews. In order to only consider main articles, this study only uses "articles" and "reviews". Thus, the total number of papers is reduced to 644,824 papers, that is, 55.8% of the total.

WoS currently contains 597 journals in business & economics that are divided in 116 journals in business, 85 in business finance, 330 in economics and 174 in management. Note that some of the journals may be included in two subject categories such as the Academy of Management Journal that appears in business and management. It classifies all the papers published in these journals and all the citations given. Its main limitation is that it gives the same value to all the journals. Thus, sometimes it may underestimate the most popular journals because according to the publication and citation counts it gives the same value than a less known journal. Therefore, if less popular journals publish and cite a lot of papers, they can become more influential than they should be. The paper is organized as follows. Section 1 presents a list with the 50 most cited papers in business & economics of all time. Section 2 analyses the most influential journals and Section 3 the most relevant institutions. Section 4 develops an analysis by countries and than summarizes the main results of the paper.

1. The most influential papers in business and economics of all time

In order to identify the most influential papers published in business & economics, a list with the 50 most cited papers of all time is studied. It is worth noting that currently, the citation level of all the papers in this field can be represented as shown in Table 1.

Table 1. General citation structure in business & economics

Number of citations	Number of papers	% Papers
>2,000 citations	60 papers	0.009%
>1,000 citations	240 papers	0.037%
>500 citations	887 papers	0.137%
>250 citations	3,090 papers	0.479%
>100 citations	13,007 papers	2.017%
>50 citations	32,777 papers	5.083%
<50 citations	612,107 papers	94.926%
Total	644,824 papers	

Most of the papers usually receive less than 50 citations. Only 32,777 papers have received more than 50 citations, that is, 5% of all the papers. Analyzing the most cited papers, only 240 papers have received more than 1,000 citations. This number is very low if it is compared with other fields such as physics and chemistry. Table 2 presents the 50 most cited papers of all time in business & economics.

Table 2. 100 most cited papers in business & economics of all time

R	J	TC	Title	Author/s	Year	C/Y
1	ECMT	8242	Prospect theory: Analysis of decision under risk	D. Kahneman, A. Tversky	1979	249
2	JFE	7119	Theory of firm: Managerial behaviour, agency costs and ownership structure	M. C. Jensen, W. H. Meckling	1976	197
3	OBHDP	6943	The theory of planned behavior	I. Ajzen	1991	330
4	ECMT	6643	A heteroskedasticity consistent covariance matrix estimator and a direct test for heteroskedasticity	H. White	1980	207
5	JM	6374	Firm resources and sustained competitive advantage	J. Barney	1991	303
6	JMKR	5753	Evaluating structural equation models with unobservable variables and a measurement error	C. Fornell, D. F. Larcker	1981	185
7	ECMT	5327	Sample selection bias as a specification error	J.J. Heckman	1979	161

Continue of Table 2

R	J	TC	Title	Author/s	Year	C/Y
8	ECMT	5290	Cointegration and error correction	R.F. Engle, C. W. J. Granger	1987	211
9	ASQ	5228	Absorptive capacity	W. M. Cohen, D. A. Levinthal	1990	237
10	JPE	5150	Pricing of options and corporate liabilities	F. Black, M. Scholes	1973	132
11	AMR	4841	Building theories from case-study research	K. M. Eisenhardt	1989	210
12	EJOR	4079	Measuring efficiency of decision-making units	A. Charnes, W.W. Cooper, E. Rhodes	1978	119
13	JAP	4075	Common method biases in behavioural research	P. M. Podsakoff, S. B. MacKenzie, J. Y. Lee, *et al.*	2003	452
14	ECMT	3999	Autoregressive conditional heteroscedasticity with estimates of the variance of UK inflation	R. F. Engle	1982	133
15	JLE	3903	The problem of social cost	R. H. Coase	1960	75
16	SMJ	3742	Dynamic capabilities and strategic management	D. J. Teece, G. Pisano, A. Shuen	1997	249
17	MISQ	3566	Perceived usefulness, perceived ease of use, and user acceptance of information technology	F.D. Davis	1989	155
18	SMJ	3267	A resource-based view of the firm	B. Wernerfelt	1984	116
19	QJE	3251	Market for lemons	G. A. Akerlof	1970	77
20	JECMT	3239	Generalized autoregressive conditional heteroskedasticity	T. Bollerslev	1986	124
21	ECMT	3196	Specification tests in econometrics	J. A. Hausman	1978	94
22	JEDC	3192	Statistical analysis of cointegration vectors	S. Johansen	1988	133
23	ECMT	3116	A simple, positive semidefinite, heteroskedasticity and autocorrelation consistent covariance matrix	W. K. Newey, K. D. West	1987	124
24	JF	3110	Portfolio selection	H. Markowitz	1952	
25	JME	3069	On the mechanics of economic development	R. E. Lucas	1988	127
26	JPE	3047	Increasing returns and long-run growth	P. M. Romer	1986	117
27	JPE	2982	A pure theory of local expenditures	C. M. Tiebout	1956	53

Continue of Table 2

R	J	TC	Title	Author/s	Year	C/Y
28	OS	2806	Exploration and exploitation in organizational learning	J. G. March	1991	133
29	JMKR	2734	Estimating nonresponse bias in mail surveys	J. S. Armstrong, T. S. Overton	1977	78
30	HBR	2702	The core competence of the corporation	C. K. Prahalad, G. Hamel	1990	122
31	AER	2662	Agency costs of free cash flow, corporate-finance and takeovers	M. C. Jensen	1986	102
32	AER	2658	Production, information costs, and economic organization	A. A. Alchian, H. Demsetz	1972	66
33	ECMT	2642	Large sample properties of generalized method of moments estimators	L. P. Hansen	1982	88
34	JMK	2639	The commitment trust theory of relationship marketing	R. M. Morgan, S. D. Hunt	1994	146
35	RES	2638	Some tests of specification for panel data	M. Arellano, S. Bond	1991	125
36	JF	2582	Capital asset prices	W. F. Sharpe	1964	53
37	ASQ	2572	Job demands, job decision latitude, and mental strain	R. A. Karasek	1979	77
38	JM	2548	Self-reports in organizational research	P. M. Podsakoff, D. W. Organ	1986	98
39	QJE	2523	A contribution to the theory of economic growth	R. M. Solow	1956	45
40	OS	2519	A dynamic theory of organizational knowledge creation	I. Nonaka	1994	139
41	JMKR	2500	Paradigm for developing better measures of MK constructs	G. A. Churchill	1979	75
42	OS	2435	Knowledge of the firm, combinative capabilities, and the replication of technology	B. Kogut, U. Zander	1992	121
43	JPE	2396	Crime and punishment – economic approach	G. S. Becker	1968	54
44	MS	2369	User acceptance of computer technology	F. D. Davis, R. P. Bagozzi, P. R. Warshaw	1989	103
45	JPE	2333	Law and finance	R. LaPorta, F. Lopez-de-Silanes, A. Shleifer *s*.	1998	166
46	JF	2289	Efficient capital markets	E. F. Fama	1970	54

End of Table 2

R	J	TC	Title	Author/s	Year	C/Y
47	JR	2274	Servqual – A multiple item scale for measuring consumer perceptions of service quality	A. Parasuraman, V. A. Zeithaml, L. L. Berry	1988	94
48	ECMT	2244	Likelihood ratio statistics for autoregressive time-series	D. A. Dickey, W. A. Fuller	1981	72
49	MS	2215	Some models for estimating technical and scale inefficiencies in DEA	R. D. Banker, A. Charnes, W. W. Cooper	1984	79
50	EJ	2205	A theory of the allocation of time	G. S. Becker	1965	46

Abbreviations: R = Rank; J = Journal name; TC = Total number of citations; C/Y = Citations per year. Journal abbreviations: ECMT = Econometrica; JFE = J. Financial Economics; OBHDP = Organizational Behavior and Human Decision Processes; JM = J. Management; JMKR = J. Marketing Research; JPE = J. Political Economy; ASQ = Administrative Science Quarterly; AMR = Academy of Management Review; EJOR = European J. Operational Research; JAP = J. Applied Psychology; JLE = J. Law & Economics; SMJ = Strategic Management J.; MISQ = MIS Quarterly; QJE = Quarterly J. Economics; JEDC = J. Economic Dynamics and Control; JECMT = J. Econometrics; JME = J. Monetary Economics; OS = Organization Science; HBR = Harvard Business Review; AER = American Economic Review; JMK = J. Marketing; RES = Review of Economic Studies; JF = J. Finance; MS = Management Science; JR = J. Retailing; EJ = Economic J.

The most cited paper of all time in business & economics is the classical paper by Daniel Kahneman and Amos Tversky published in Econometrica that gave Kahneman the Nobel Prize in Economics in 2002. Some other influential authors that appear in the list also won the Nobel Prize including Heckman, Engle, Granger, Coase, Akerlof, Lucas, Sharpe and Solow. There are 23 papers from economics and 22 papers from business and management and 5 papers that appear both in business and economics. Only the paper by Podsakoff and collaborators in the thirteenth position has been published after the year 2000.

2. The most influential journals

In the previous list, significant publications have appeared from a wide range of journals. Table 3 presents a list of journals with the highest number of influential papers. The journals are ordered according to the number of papers that have received more than 2,000, 1,000 and 500 citations. If a journal is included in the 2,000 column, it is not included in the 1,000 and 500 column, and so on. In order to evaluate the quality of the journal, it is also presented the total number of papers published, the total number of citations received, the impact factor and the H-index. Note that the H-index (Hirsch 2005) is a method for measuring the quality of a set of papers. If a set of papers of an author, journal or institution has an H-index of 40, it means that it has 40 papers that have received at least 40 citations.

Table 3. Journals with the most influential papers in business & economics

R	Journal	>2000	>1000	>500	Total	% TP	TP	TC	IF	5-IF	H
1	ECMT	9	21	60	90	2.33%	3,848	283,009	2.976	4.700	223
2	JPE	6	15	49	70	2.32%	3,011	226,570	2.902	5.416	212
3	AMR	3	11	30	44	3.96%	1,109	136,642	6.169	11.442	193
4	JF	3	8	20	31	0.79%	3,897	177,201	4.218	6.333	181
5	SMJ	3	7	25	35	1.99%	1,756	145,439	3.783	6.288	179
6	JFE	3	4	26	33	1.70%	1,930	128,902	3.725	5.676	163
7	OS	3	3	14	20	1.81%	1,101	72,914	4.338	5.613	124
8	JMKR	3	2	8	13	0.58%	2,232	105,051	2.517	3.978	141
9	AER	2	16	52	70	0.91%	7,617	330,336	2.693	4.076	238
10	ASQ	2	12	42	56	4.06%	1,378	153,677	4.212	6.545	200
11	JMK	2	12	20	34	1.42%	2,384	123,807	5.472	7.039	169
12	QJE	2	11	23	36	1.51%	2,383	152,070	5.920	8.184	180
13	MS	2	6	21	29	0.48%	5,792	218,560	1.733	3.304	187
14	JLE	2	3	2	7	0.59%	1,170	46,265	0.891	1.890	90
15	JM	2	0	6	8	0.67%	1,190	59,708	4.595	6.810	111
16	JECMT	1	5	4	10	0.34%	2,911	85,751	1.349	2.496	126
17	JAP	1	3	22	26	0.51%	5,058	233,710	4.308	6.850	191
18	JME	1	3	5	9	0.45%	1,988	62,578	1.892	2.576	107
19	BJE	1	2	13	16	0.91%	1,741	75,077	1.485	2.333	120
20	RES	1	2	12	15	0.65%	2,277	91,629	2.810	4.080	133
21	MISQ	1	2	9	12	1.34%	890	58,531	4.447	7.497	122
22	EJ	1	2	5	8	0.24%	3,204	78,251	1.945	2.719	105
23	HBR	1	1	10	12	0.25%	4,784	78,953	1.269	2.179	127
24	OBHDP	1	1	8	10	0.42%	2,370	98,658	3.129	3.944	123
25	OBES	1	0	4	5	0.33%	1,480	17,127	1.000	1.440	52
26	EJOR	1	0	2	3	0.02%	11,963	175,693	1.815	2.277	128
27	JR	1	0	2	3	0.21%	1,419	27,279	2.750	3.645	71
28	JEDC	1	0	0	1	0.04%	2,366	25,329	0.855	1.223	55
29	AMJ	0	4	23	27	1.20%	2,236	151,074	5.608	10.565	187
30	JET	0	3	9	12	0.38%	3,102	77,179	1.235	1.519	115
31	RP	0	3	4	7	0.33%	2,092	63,106	2.520	3.977	112
32	REStat.	0	2	7	9	0.28%	3,209	86,870	2.664	3.812	114
33	PP	0	2	5	7	0.39%	1,767	58,004	2.926	6.068	102

End of Table 3

R	Journal	>2000	>1000	>500	Total	% TP	TP	TC	IF	5-IF	H
34	JB	0	2	4	6	0.37%	1,598	41,918	-	-	91
35	JIBS	0	2	3	5	0.36%	1,376	50,156	3.406	5.142	105
36	JHE	0	2	1	3	0.23%	1,295	32,631	2.341	3.165	74
37	JEL	0	1	15	16	2.50%	639	59,277	9.243	9.426	140
38	OR	0	1	11	12	0.22%	5,227	133,143	1.665	2.285	140
39	ROB	0	1	2	3	1.43%	209	16,476	2.056	4.486	62
40	CMR	0	1	2	3	0.15%	1,910	30,783	1.667	2.417	82

Abbreviations: R = Rank; >2000, >1000, >500 = Number of papers with more than 2000, 1000 and 500 citations; %TP = Percentage of highly cited papers from the total number of papers; TP = Total number of papers; TC = Total number of citations; IF = Impact factor 2011; 5-IF = 5 year impact factor 2011; H = H-index.
Journal abbreviations are shown in Table 2 except for: BJE = Bell J. Economics (also RAND J. Economics); OBES = Oxford Bulletin of Economics and Statistics; AMJ = Academy of Management J.; JET = J. Economic theory; RP = Research Policy; REStat. = Rev. Economics and Statistics; PP = Personnel Psychology; JB = J. Business; JIBS = J. International Business Studies; JHE = J. Health Economics; JEL = J. Economic Literature; OR = Operations Research; ROB = Research in Organizational Behavior; CMR = California Management Review.

ECMT is the journal that has published the highest number of influential papers in business & economics including nine with more than 2,000 citations and 90 above 500 citations. Several reasons may explain it, especially because it is a very interdisciplinary journal that connects the fields of economics and statistics. Thus, authors from both areas may cite these papers. According to citations it is the second most cited journal after AER although its citations/papers rate is higher. The JPE also gets remarkable results including six papers with more than 2,000 citations and 70 with more than 500 citations. AER has also published 70 papers above the 500 citation threshold although it only has two papers with more than 2,000 citations. Regarding management journals, the AMR obtains the best result with three papers over the 2,000 citation threshold and 44 with more than 500 citations. Other journals with remarkable results are SMJ, JFE, ASQ, JMK, QJE, JF and MS. OS and JMKR have three papers with more than 2,000 citations although they do not have many papers above the 500 citation threshold compared to the previous ones.

Note that this ranking is presented according to the number of papers above the 2,000 citation threshold. Thus, some journals that do not have any paper in this situation but have many papers with more than 500 citations may appear in a lower position in the ranking as it should be from a general perspective such as the AMJ. The objective of this ranking is to provide a general picture focusing on the most cited papers but it is worth noting that a complete ranking should take into account other factors. Furthermore, by looking to the total number of citations and to the H-index, some other journals appear in a higher position than should be and vice versa. Focusing on the quality of the journal, an additional column has been introduced that analyzes the percentage of

papers from the total that are above the 500 citation threshold. Analyzing this column, AMR and ASQ are the most selective having 4% of their papers over the 500 citation threshold. ECMT, JPE, SMJ and JEL also obtain a good percentage around 2%.

A further interesting issue is the impact factor. Currently, it is the most accepted method for measuring the value of a journal. It considers the number of citations received in the last two years divided by the total number of publications of the current year. However, it has several limitations as it has been stated by a lot of authors (Buela-Casal, Zych 2012; Leydesdorff 2012; Stonebraker *et al.* 2012). Therefore, several alternative methods have been suggested such as the 5-year impact factor that considers the number of citations of the last five years. Its main advantage is that it reduces the influence of citation manipulation and self-citations. Furthermore, a lot of other limitations should be considered. For example, it is not the same to publish and cite in one of the most selective journals than in a less known journal. However, according to WoS it has the same value because in the publication and citation count it always gives one unit to each bibliographic reference independently of the journal where it has been published.

Technically, this limitation could be solved by giving more than one unit to the best journals and less than one unit to the less popular journals. Thus, publishing a paper in Science should have a higher value than publishing in an average journal. Therefore, if an author published 10 papers in Science, his value would be much higher than an author that has published 10 papers in average journals. Note that currently WoS gives the same value to both authors since it always gives one unit to all the publications and citations. A solution example of this problem could be that publishing 10 papers in Science should have a similar value than publishing 50 papers in average journals, that is, a value of 5:1. The main problem in order to implement this methodology is that first it is necessary to calculate the value of all the journals and as it has been explained before, there is no official method that clearly determines the value of a journal. Obviously, the best candidate that could be used is the impact factor. Thus, every year, the value of publishing in a journal would be equivalent to the impact factor and this would be reflected in WoS. That is, if one author publishes a paper in Science, instead of receiving one unit for the publication count it would receive five units according to the previous example. Moreover, each of the citations of this paper would be counted in the WoS as five citation units. Note that this method seems to be useful in a closed research field. However, its main limitation is that it would have a lot of asymmetries between research fields and would overestimate interdisciplinary research that gets a lot of citations from one field but has been published in another one.

3. The most influential institutions

Next, the analysis is going to be focused on the most influential institutions. Table 4 presents the 40 institutions with the highest number of citations in business & economics. Other variables are included such as the total number of papers published by each institution, their H-index and the number of papers that have received more than 2,000, 1,000 and 500 citations.

Table 4. Most influential institutions in business & economics research

R	Institution	Country	TC	TP	>2000	>1000	>500	Total	% TP	H
1	Harvard U.	USA	369,748	8,815	5	19	49	73	0.82%	252
2	U. Chicago	USA	281,494	4,881	7	18	57	82	1.67%	236
3	MIT	USA	273,412	5,672	4	13	42	59	1.04%	222
4	Stanford U.	USA	250,109	5,619	3	12	38	53	0.94%	211
5	U. Pennsylvan.	USA	249,678	6,614	3	8	28	39	0.58%	202
6	UC Berkeley	USA	198,317	6,090	2	8	28	38	0.62%	178
7	Northwest. U.	USA	171,833	4,547	1	7	28	36	0.79%	174
8	U. Michigan	USA	165,217	5,122	5	0	24	29	0.56%	161
9	Columbia U.	USA	156,446	5,394	2	4	14	20	0.37%	163
10	NYU	USA	137,609	5,014	0	0	17	17	0.33%	155
11	U. Wisconsin	USA	136,074	6,244	1	1	12	14	0.22%	153
12	UCLA	USA	133,426	4,156	1	4	17	22	0.52%	156
13	U. Minnesota	USA	131,405	4,198	0	6	21	27	0.64%	151
14	U. Illinois	USA	129,156	6,043	0	4	9	13	0.21%	142
15	U. Texas	USA	128,623	4,848	2	3	9	14	0.28%	138
16	Yale U.	USA	125,902	3,551	0	11	22	33	0.92%	150
17	Princeton U.	USA	119,479	2,727	0	7	13	20	0.73%	162
18	U. Maryland	USA	113,270	4,217	0	5	9	14	0.33%	145
19	Carn. Mell. U.	USA	112,389	2,524	3	4	17	24	0.95%	148
20	Cornell U.	USA	106,289	4,466	0	4	10	14	0.31%	138
21	U. Rochester	USA	104,912	1,833	6	3	17	26	1.41%	145
22	Michig. St. U.	USA	90,833	3,867	0	1	4	5	0.12%	130
23	Ohio State U.	USA	90,304	3,739	0	0	6	6	0.16%	125
24	Texas AM U.	USA	90,031	3,540	3	3	8	14	0.39%	122
25	Indiana U.	USA	86,322	4,033	2	0	6	8	0.19%	122
26	Duke U.	USA	85,566	3,101	1	2	4	7	0.22%	128
27	Penn State U.	USA	85,227	3,965	0	0	5	5	0.12%	125
28	London Sch Ec.	UK	80,076	3,735	2	0	6	8	0.21%	116
29	U. N. Carolina	USA	78,879	3,767	0	0	3	3	0.07%	117
30	U.B. Columbia	CAN	77,220	3,039	1	1	5	7	0.23%	110
31	U. So. Calif.	USA	76,121	3,161	0	0	6	6	0.18%	119
32	U. Washington	USA	73,092	2,738	0	3	6	9	0.32%	113
33	Purdue U.	USA	64,751	2,984	1	1	4	6	0.20%	104
34	U. Florida	USA	62,788	2,708	1	0	7	8	0.29%	107
35	U. Toronto	CAN	59,222	3,525	0	0	3	3	0.08%	99
36	UC San Diego	USA	58,066	1,455	2	1	12	15	1.03%	106
37	Tel Aviv U.	ISR	57,687	2,341	0	1	8	9	0.38%	108
38	U. Arizona	USA	56,868	2,106	0	6	3	9	0.42%	98
39	Arizona St. U.	USA	55,928	2,727	0	0	7	7	0.25%	105
40	Boston U.	USA	52,409	2,202	0	0	3	3	0.13%	104

Harvard University is the most influential institution in business & economics of all time. It has the highest total number of papers and citations and the highest H-index. Five of its papers have received more than 2,000 citations and 73 are above the 500 citation threshold. The University of Chicago gets the second place according to citations although it has published a lower number of papers than many other institutions. However, it is the institution with the highest number of influential papers with seven above 2,000 citations and 82 over 500 citations. In the next positions appear other very well-known institutions from the USA including Massachusetts Institute of Technology (MIT), Stanford University, University of Pennsylvania, University of California – Berkeley, Northwestern University, University of Michigan, Columbia University and New York University (NYU). It is worth noting that the first institution outside the USA is London School of Economics in the 28th position and only four institutions with this characteristic appear in the top 40 list.

By looking to these results, it is clear that the American school is the most dominating one in business & economics. The first 27 most cited institutions and 36 of the top 40 are from the USA. They publish the most influential journals and most of the leading articles in business & economics of all time. The British and Canadian schools are also influential although far away from the USA. One and two of their institutions entered the top 40 list and they have published some influential papers with more than 2,000 and 500 citations. The Israeli school also included one institution in the top 40 list and has some papers above the 500 citation threshold. The rest of countries did not include any institution which clearly shows that they need further improvements in the future. It is worth noting that the information presented in this paper included material from all time. However, if the analysis is focused on the last decade, the differences between American institutions and the rest of the world have been reduced although the American school is still the most influential one. Note that this situation is explained because the most influential research needs at least one decade in order to consolidate in the scientific community. As it is well known, several decades ago most of the top researchers of the world emigrated to the USA so they were working in an American institution although their nationality was different. However, today this trend has been reduced and now a lot of researchers develop their research in their home country or in other developed countries. There is a lot of mobility to the USA but now many other institutions are attracting the best researchers of the world.

4. Country analysis

A further interesting issue is to analyse the influence that each country has in the development of the scientific literature in business & economics. It is worth noting that according to the Web of Science, when it refers to a country, it is indicating the number of papers published by institutions from this country. However, authors from external countries may publish under the name of this country when they work in one of its institutions. Table 5 presents the 30 most productive countries. In this case, the ranking has been established by total number of papers instead of total citations in order to focus more on quantitative issues since the volume of publications for a country analysis is very high and it is not easy to filter qualitative issues.

Table 5. Most influential countries in business & economics

R	Country	TC	TP	>2000	>1000	>500	Total	% TP	H
1	USA	5,580,252	290,511	48	155	555	758	0.26%	577
2	UK	825,359	68,274	4	11	38	53	0.07%	234
3	Canada	501,495	33,014	1	10	40	51	0.15%	221
4	Germany	171,049	22,405	0	1	5	6	0.02%	122
5	Australia	178,787	20,230	0	2	10	12	0.05%	121
6	Netherlands	199,055	16,584	0	0	6	6	0.03%	135
7	France	168,797	16,581	0	3	7	10	0.06%	144
8	Spain	91,007	12,032	0	1	3	4	0.03%	92
9	Italy	92,037	11,417	0	1	4	5	0.04%	102
10	PR China	96,947	10,456	0	0	2	2	0.01%	98
11	Japan	63,501	9,183	1	0	3	4	0.04%	85
12	Israel	141,282	7,650	0	2	16	18	0.23%	144
13	Sweden	100,128	7,473	1	2	6	9	0.12%	112
14	Belgium	91,125	7,370	0	1	6	7	0.09%	106
15	Taiwan	47,282	7,176	0	0	1	1	0.01%	69
16	Switzerland	70,859	6,857	0	2	6	8	0.11%	95
17	South Korea	47,138	5,382	0	0	2	2	0.03%	82
18	Czech Rep.	5,556	5,360	0	0	0	0	0%	27
19	Denmark	56,238	4,694	3	1	2	6	0.12%	86
20	Norway	47,426	4,259	0	2	1	3	0.07%	84
21	New Zealand	34,269	4,042	0	0	1	1	0.02%	63
22	Finland	33,485	3,905	0	0	0	0	0%	71
23	India	32,950	3,886	1	0	0	1	0.02%	68
24	Singapore	42,308	3,645	0	0	2	2	0.05%	76
25	Austria	30,571	3,579	0	0	0	0	0%	66
26	Turkey	20,208	3,189	0	0	0	0	0%	53
27	Greece	19,402	2,809	0	0	0	0	0%	49
28	South Africa	10,296	2,712	0	0	0	0	0%	40
29	Brazil	14,674	2,584	0	0	0	0	0%	53
30	Ireland	19,826	2,540	0	0	0	0	0%	54

The USA is clearly the most productive and influential country in the World. It has published four times more than the second country and received six times more citations. Moreover, most of the highly cited papers come from the USA. The UK and Canada also obtains remarkable results although far away from the USA. Some smaller countries, but well-developed also obtain very positive results including Australia in the fifth position, Netherlands, Israel, Sweden and Belgium.

In order to analyse the quality of these publications, let us introduce an additional table where the number of publications is filtered by some key journals in the field. These journals are those usually regarded as the most influential ones including the top five in economics (ECMT, AER, JPE, QJE and RES), top two in finance (JF and JFE), marketing (JMK and JMKR), accounting (TAR and JAR) and five key journals in management (AMR, AMJ, ASQ, SMJ and MS). The results are shown in Table 6.

Table 6. Countries classified by selected journals

R	Country	ECT	AER	JPE	QJE	RES	FIN	MK	ACC	AM	ASQ	SMJ	MS	Total
1	USA	1854	6278	2199	1681	1287	4863	3564	3036	2785	1028	1415	4461	290,511
2	UK	314	365	141	144	443	257	101	77	133	46	147	191	68,274
3	Canada	168	340	149	83	148	327	224	167	264	86	135	435	33,014
4	Germany	61	123	14	17	46	37	87	8	13	6	26	104	22,285
5	Australia	55	64	34	23	47	39	49	92	72	7	27	52	20,230
6	Netherlands	49	61	13	10	28	75	132	32	68	14	30	117	16,584
7	France	153	107	28	32	90	76	66	9	50	10	96	178	16,581
8	Spain	54	64	16	16	33	16	9	2	15	4	34	48	12,032
9	Italy	23	61	20	26	29	26	5	0	8	4	16	35	11,417
10	PR China	13	30	10	0	10	106	66	57	66	5	45	90	10,456
11	Japan	72	40	19	15	49	10	11	6	12	12	15	39	9,183
12	Israel	109	142	101	72	94	138	51	42	46	18	19	169	7,650
13	Sweden	24	80	24	29	16	20	12	2	10	4	17	26	7,473
14	Belgium	53	36	12	14	38	23	39	6	8	4	14	65	7,370
15	Taiwan	3	9	4	3	3	4	2	10	6	1	9	21	7,176
16	Switzerland	40	59	8	9	18	44	19	2	17	3	18	25	6,857
17	South Korea	9	18	4	3	9	33	31	18	21	3	21	48	5,382
18	Czech Rep.	2	9	0	0	0	0	0	0	0	0	0	4	5,238
19	Denmark	24	15	3	4	7	13	3	10	10	2	10	39	4,694
20	Norway	17	22	12	2	18	17	18	5	7	3	9	12	4,259
21	New Zealand	18	7	0	5	10	15	23	17	7	1	7	12	4,042
22	Finland	4	7	2	1	5	19	0	0	6	2	12	24	3,905
23	India	24	19	16	8	18	7	2	2	5	1	4	27	3,886
24	Singapore	6	9	6	4	2	49	31	33	37	9	32	72	3,645
25	Austria	15	10	1	4	4	8	6	3	1	0	4	31	3,579
26	Turkey	3	9	0	2	4	4	12	0	0	3	2	29	3,189
27	Greece	1	4	3	1	4	3	2	0	1	0	3	14	2,809
28	South Africa	0	2	0	0	0	0	1	1	1	0	1	5	2,712
29	Brazil	11	8	6	4	2	4	1	1	3	1	2	5	2,584
30	Ireland	7	13	2	7	5	1	3	1	3	0	3	2	2,540

Abbreviations: R = Rank; Journal abbreviations are shown in Table 2 and 3. FIN = JF + JFE; MK = JMK + JMKR; ACC = J. Accounting Research + The Accounting Review; AM = AMR + AMJ.

The USA is the most dominant country being the most influential in all these publications and far away from the second one. It has published more than 50% of all the papers of these journals. The UK and Canada obtain also very good results according to their size. Concerning the rest of the countries, Israel, Netherlands and France also obtain good results. Germany gets positive results in AER and in marketing journals. Australia ranks very highly in accounting journals and China in finance.

Conclusions

This article presents a general bibliometric overview of the most influential research in business & economics. Most of the results are in accordance with our common popular knowledge that includes several Nobel prizes in economics. However, this study identifies from a deeper perspective the leading trends in the field over the last decades. This information is very useful to get a complete picture of the state of research in business and economics and can be used for a wide range of purposes including research policies and academic strategies. First, the USA is the most dominant country having the highest number of papers and citations. Most of the highly cited papers and the most influential institutions come from this country. They are also responsible for publishing the most popular journals in the field.

The British school has also shown very remarkable results being the second most influential country. They also publish a considerable number of papers according to their size and have some of the most cited papers of all time. One of its universities has appeared in the ranking of top 40 institutions (LSE) and they publish some of the most popular journals including the Review of Economic Studies.

The Canadian school has also shown very positive results being the third most influential country. They have also some of the most influential papers and two of its institutions are in the top 40. Australia also shows similar results than Canada but in a lower level according to his size. They have particularly shown strength in accounting research. At a similar level than Australia, it is also remarkable the results obtained by Netherlands and Israel.

In the following positions appear the other "big" European countries including Germany, France, Italy and Spain. They have published a lot of papers in this field including some highly cited papers. However, they are still behind the level of the English-speaking countries. It is worth noting that in the last years, the differences tend to reduce and the European countries are gaining more importance in this area and now they publish regularly in the most influential journals.

Some smaller European countries but well-developed appear in the ranking and with very productive results according to their size. These countries are Sweden, Belgium, Switzerland, Denmark, Norway, Finland and Austria. Their productivity is comparable to that of UK and Canada. They have also published some of the most influential papers of all time.

The Asian school is still very far away from the Western standards although China, Japan, Taiwan and South Korea are increasing very much in the last years. However,

they are less developed in this field compared to other fields where they are already in relevant positions. China is the most promising country and it seems that in the future it will increase considerably its number of publications in business and economic journals. However, they still need many improvements one more years of consolidation in order to publish some highly cited papers and include some of its institutions in the top 40.

Finally, it is worth noting that this bibliometric overview permits to obtain a general picture of the state of the art of business and economics research through the last decades and according to the research found in the Web of Science. However, this study may have several limitations due to the peculiarities found when classifying research. For example, most of the journals included in the Web of Science are in English. Thus, some good publications in other journals are not usually considered so it is very easy to lose important information. Moreover, some researchers tend to publish their research in books instead of articles and this issue is difficult to consider here. Furthermore, depending on the research topic that a researcher is studying, it may bring more citations than other fields. Therefore, it is difficult to quantify the results, especially when it comprises a wide range of subfields as it happens with business & economics.

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