

CIDS country rankings: comparing documents and citations of USA, UK and China top researchers

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Abstract

This technical report presents a bibliometric analysis of the top 30 cited researchers from USA, UK and China. The analysis is based on Google Scholar data using CIDS. The researchers were identified using their email suffix: edu, uk and cn. This naïve approach was able to produce rankings consistent with the SCImago country rankings using minimal resources in a fully automated way.

1 Introduction

The research impact and relevance of scientists, institutions and even countries are being measured and analysed by multiple bibliometric studies [1, 4, 5].

SCImago country rank reports the number of citations, self-citations, citations per document and h-index for the period of 1996-2007 [6]. The top three countries are USA (United States of America), China and UK (United Kingdom). USA has the highest number of documents and citations, China the second highest number of documents and UK the second highest number of citations.

This report presents a bibliometric analysis that was performed to have an idea of these numbers for USA, UK, and China but based on Google Scholar¹ data by using CIDS (Citation Impact Discerning Self-citations), a tool that automates the post-processing of raw Google Scholar data [3].

2 Methodology

The first step was to obtain the list of top researchers of each country. This was done by searching the Google Scholar profiles by the following keywords: edu² for USA, uk³ for UK, and cn⁴ for China. From the results, for each country the first 30 profiles which email ended with the suffix edu, uk, or cn, respectively, were selected. This is a rough estimate since not all the researchers from these

¹<http://scholar.google.com>

²http://scholar.google.pt/citations?view_op=search_authors&mauthors=.edu

³http://scholar.google.pt/citations?view_op=search_authors&mauthors=.uk

⁴http://scholar.google.pt/citations?view_op=search_authors&mauthors=.cn

three countries have an email with any of those suffixes. However, it is expected to give us the big picture.

The list of profiles was given as input to CIDS, a freely available tool that automatically calculates bibliometric parameters based on Google Scholar for teams of researchers [2].

3 Results

Country	Citable documents	Citations	Self Citations	Cits per Doc	H index
USA	6,672,307	129,540,193	62,480,425	20.45	1,380
China	2,655,272	11,253,119	6,127,507	6.17	385
UK	1,763,766	31,393,290	7,513,112	18.29	851

Table 1: SCImago country rankings.

Country	Citable documents	Citations	Self Citations	Cits per Doc	H index
USA	6,877	2,108,797	93,803	307	99
China	5,979	243,840	27,431	41	38
UK	6,355	1,145,060	91,260	180	87

Table 2: CIDS country rankings.

Table 1 presents the raw numbers of the SCImago country rankings for the studied countries. Table 2 presents the raw numbers obtained by CIDS (see A). Numbers in CIDS are much smaller than in SCImago since CIDS analysis only dealt with the top 30 researchers of each country.

Country	Citable documents	Citations	Self Citations	Cits per Doc	H index
USA	100%	100%	48%	100%	100%
China	40%	9%	54%	30%	28%
UK	26%	24%	24%	89%	62%

Table 3: SCImago country rankings: percentage of USA numbers.

Country	Citable documents	Citations	Self Citations	Cits per Doc	H index
USA	100%	100%	4%	100%	100%
China	87%	12%	11%	13%	38%
UK	92%	54%	8%	59%	88%

Table 4: CIDS country rankings: percentage of USA numbers.

Table 3 compares the USA SCImago numbers with the China and UK numbers. The table shows that China has the second largest number of cited papers and self-citations, and UK has the second largest in all the other numbers.

Table 4 compares the USA CIDS numbers with the China and UK numbers. The table shows that UK has a larger percentage than China for all the numbers except self-citations.

4 Conclusions

Comparing CIDS with SCImago results, we see that CIDS was able to give the same big picture as SCImago, except in the number of cited papers. However, this can be explained by the recent growth of China's research leading to a high number of young researchers, and CIDS only analyzed the top 30. This also explains why China has not the second largest number of citable documents as in SCImago. Even so, China's number of citable documents is very close to UK's number in comparison to the their larger difference in the citation numbers.

Even by using a naïve selection of team members (using the email suffix), the results show that CIDS is a feasible alternative to get the big picture of team rankings using minimal resources. The rankings can be automatically updated since the retrieval and analysis of the bibliographic data is fully automated.

References

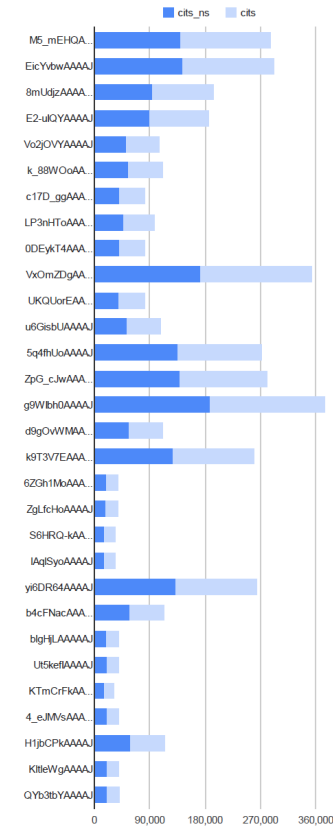
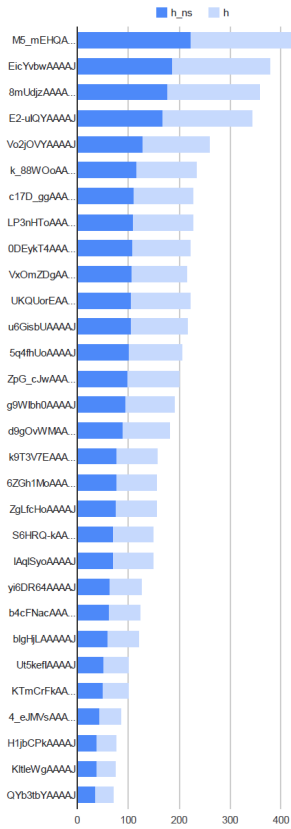
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A CIDS Analysis

A.1 USA

unique cited papers	unique citations	unique nonself citations	unique cited papers per FTE-PhD	unique citations per FTE-PhD	unique nonself citations per FTE-PhD
6877	2108797	2014994	229.2333	70293.2333	67166.4667

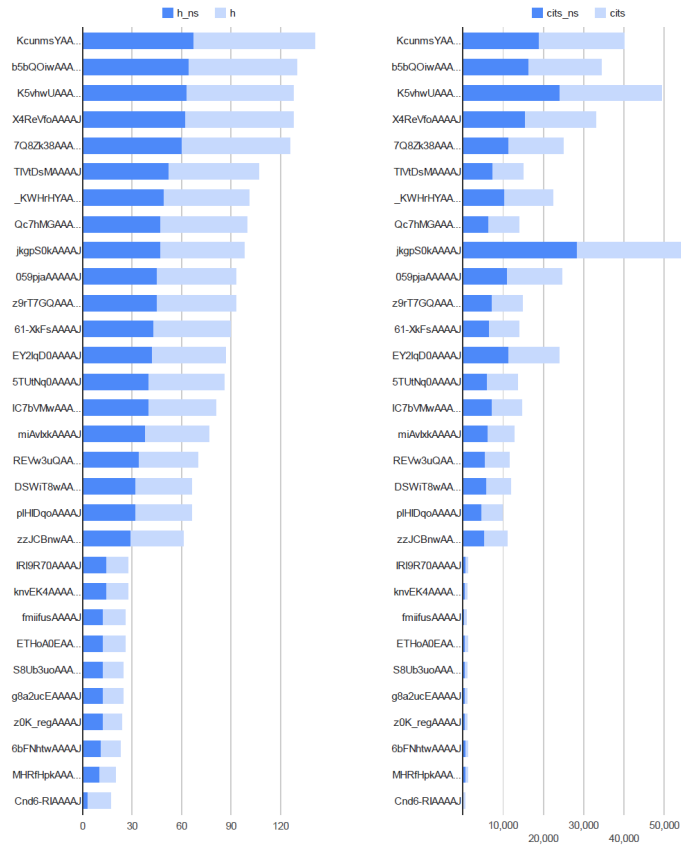
#FTE-PhD	AVG(h)	AVG(h_ns)	AVG(g)	AVG(g_ns)	AVG(papers)	AVG(cits)	AVG(cits_ns)	STD(h)	STD(h_ns)	STD(g)	STD(g_ns)	STD(pape)
30	98.7667	94.4000	193.4333	189.5333	239.3333	70958.6333	67685.3000	47.1979	45.2877	75.9481	77.1111	79.1443



A.2 China

unique cited papers	unique citations	unique nonself citations	unique cited papers per FTE-PhD	unique citations per FTE-PhD	unique nonself citations per FTE-PhD
5979	243840	216409	199.3000	8128.0000	7213.6333

#FTE-PhD	AVG(h)	AVG(h_ns)	AVG(g)	AVG(g_ns)	AVG(papers)	AVG(cits)	AVG(cits_ns)	STD(h)	STD(h_ns)	STD(g)	STD(g_ns)	STD(papers)
30	37.6000	34.7667	67.2000	62.8000	199.9000	8242.6667	7325.6000	19.9943	19.1079	41.5719	41.2556	109.2451



A.3 UK

unique cited papers	unique citations	unique nonself citations	unique cited papers per FTE-PhD	unique citations per FTE-PhD	unique nonself citations per FTE-PhD
6355	1145060	1053800	219.1379	39484.8276	36337.9310

#FTE-PhD	AVG(h)	AVG(h_ns)	AVG(g)	AVG(g_ns)	AVG(papers)	AVG(cits)	AVG(cits_ns)	STD(h)	STD(h_ns)	STD(g)	STD(g_ns)	STD(paper)
29	87.2069	81.9655	166.5517	160.0000	220.8621	40449.5517	37258.3793	45.6474	43.3132	84.8941	83.7418	88.3679

