

Disciplinary differences in concentration of publications to journals

~ research in progress ~



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Background:



- It is commonly known that a few core journals cover most of the articles in a field (e. g. Bradford's law)

- Disciplinary differences?

- Sivertsen & Larsen (2012)¹:

“A main challenge in the SSH is that the publication and citation patterns are not as concentrated in core international journals as can be seen in the natural sciences”

“(In SSH) in book publishing as well as in domestic scholarly journals, the publications are for a large part concentrated in very few publication channels.”

¹) Sivertsen, Gunnar and Larsen, Birger. "Comprehensive bibliographic coverage of the social sciences and humanities in a citation index: an empirical analysis of the potential." *Scientometrics* 91.2 (2012): 567-575.

Research questions



1. To what extent the journals in different scientific fields vary by size?
2. To what extent the articles are concentrated to core journals in different scientific fields?
3. In SSH fields, are there differences between international and domestic journals?

Analysis



- Four scientific fields are compared:
 - *Chemistry*
 - *Neurosciences*
 - *Education*
 - *History*
- Analyses are limited to *articles in scientific journals*



Two datasets



Dataset 1

- Data on **Scopus** articles received from <http://www.scimagojr.com/>
- All "citable documents" = articles, reviews and conference papers in 2011-2013 included
- Scientific field is journal-specific (i. e. all articles within a journal are addressed to same fields)

Dataset 2

- **Publications by Finnish universities** reported to the Ministry of Education and Culture
- "Peer reviewed articles in scientific journals" in 2011-2013 included
- Scientific field is defined article by article (i. e. two papers in the same journal may represent different field(s))

Results: Size of journals by field

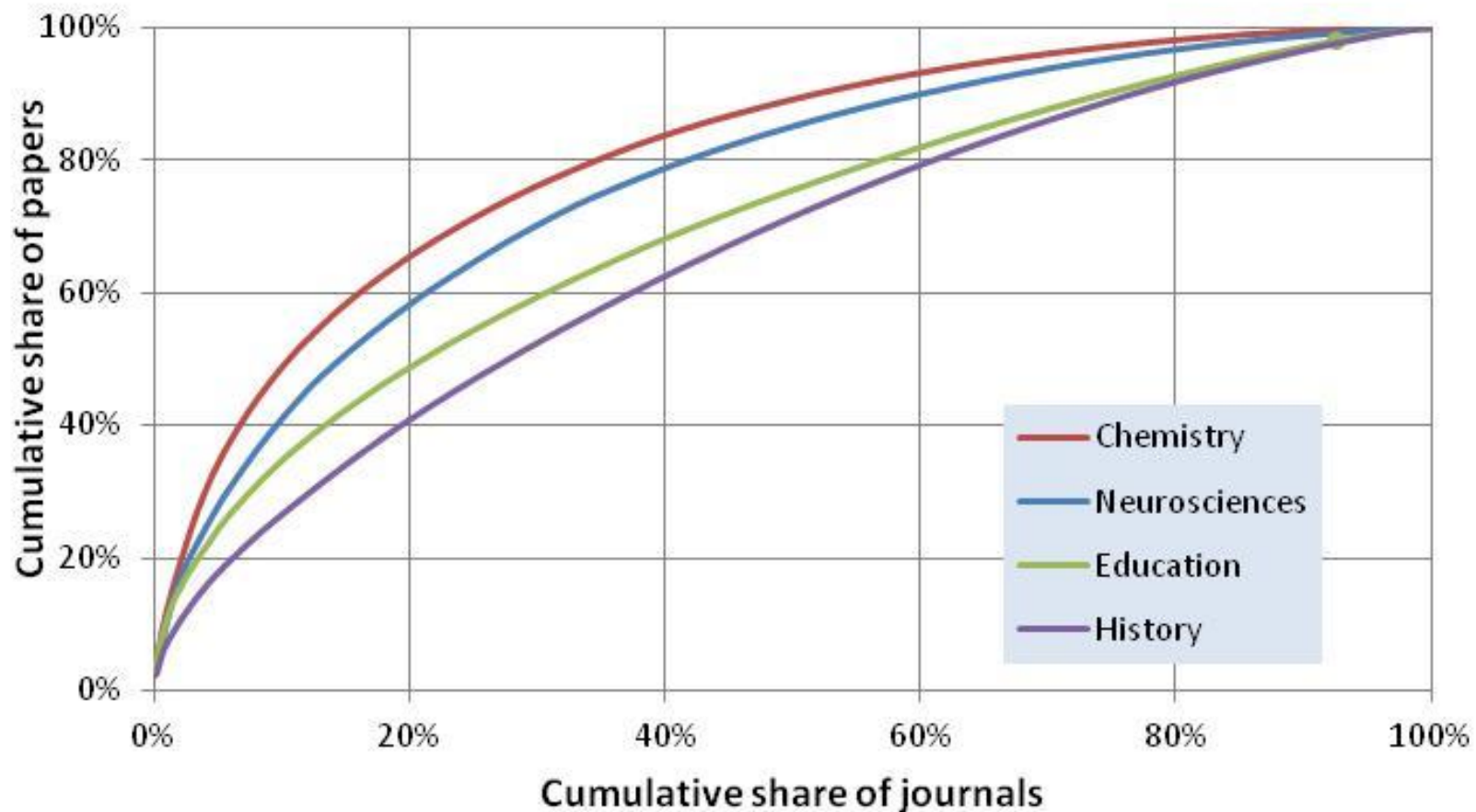


	Chemistry	Neurosciences	Education	History
Number of papers (in 3 years)	551,717	155,644	85,230	42,050
Number of journals*	740	441	744	576
Papers per journal (Mean)	745.6	353.0	114.6	73.0
Papers per journal (Median)	352	196	78	61
Papers per journal (Maximum)	12,564	5,224	2,576	1,030

*Journals with at least 1 paper each year (2011-13) are included

Data: Scopus "citable documents" in 2011-2013 from <http://www.scimagojr.com/>

Papers by journals



Data: Scopus "citable documents" in 2011-2013 from <http://www.scimagojr.com/>

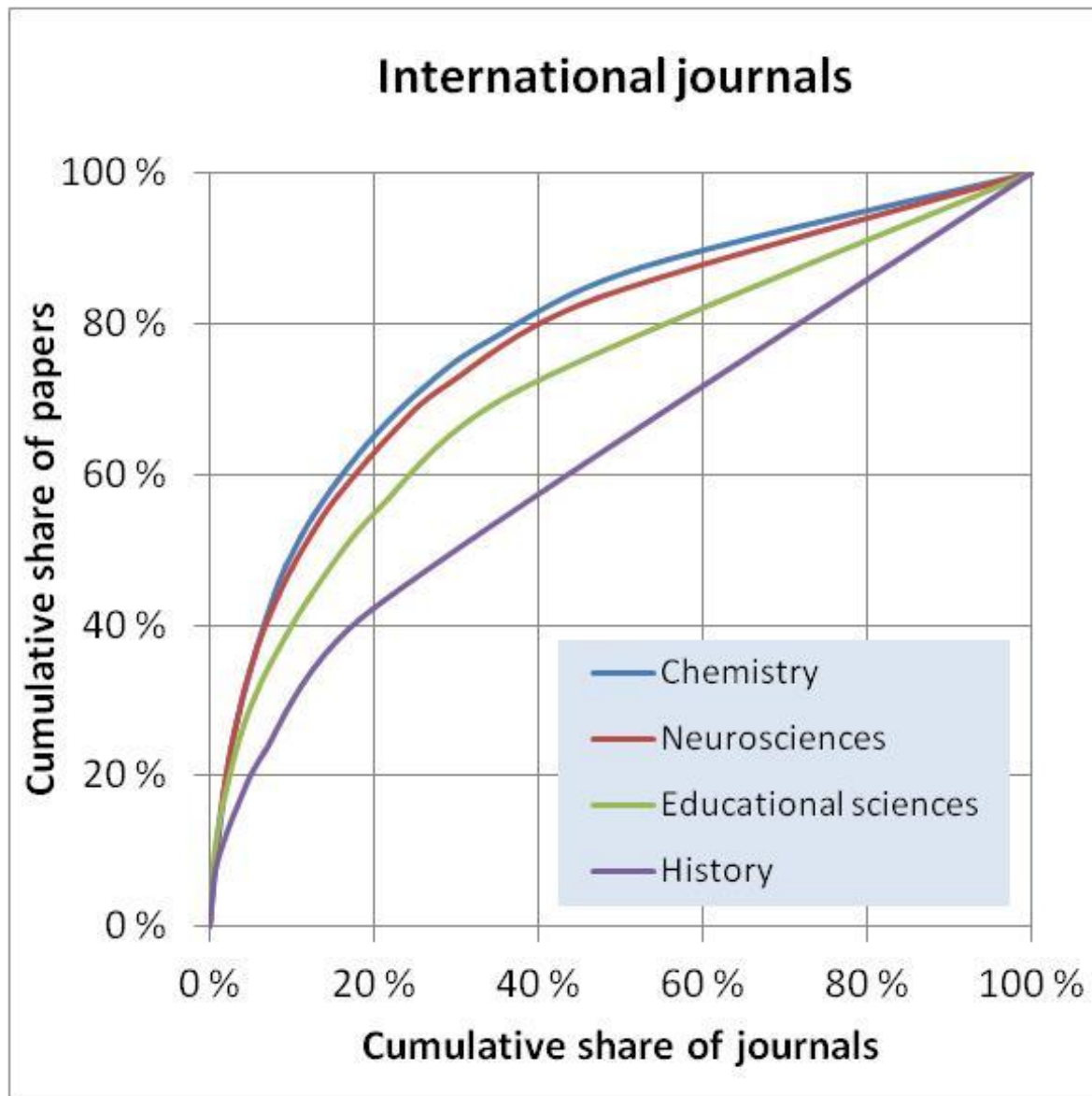
Results: Finnish universities' papers per journal by field



	Chemistry	Neurosciences	Education	History
Number of papers (in 3 years)	1,953	1,365	1,299	524
% in international journals	99%	91%	80%	55%
Number of journals	517	398	529	266
% international	99%	98%	90%	78%
Papers per journal				
International	3.8	3.2	2.2	1.4
Domestic	3.2	17.6	5.2	4.1
Share of journals where only 1 paper is published				
International	48%	53%	63%	80%
Domestic	60%	43%	40%	46%

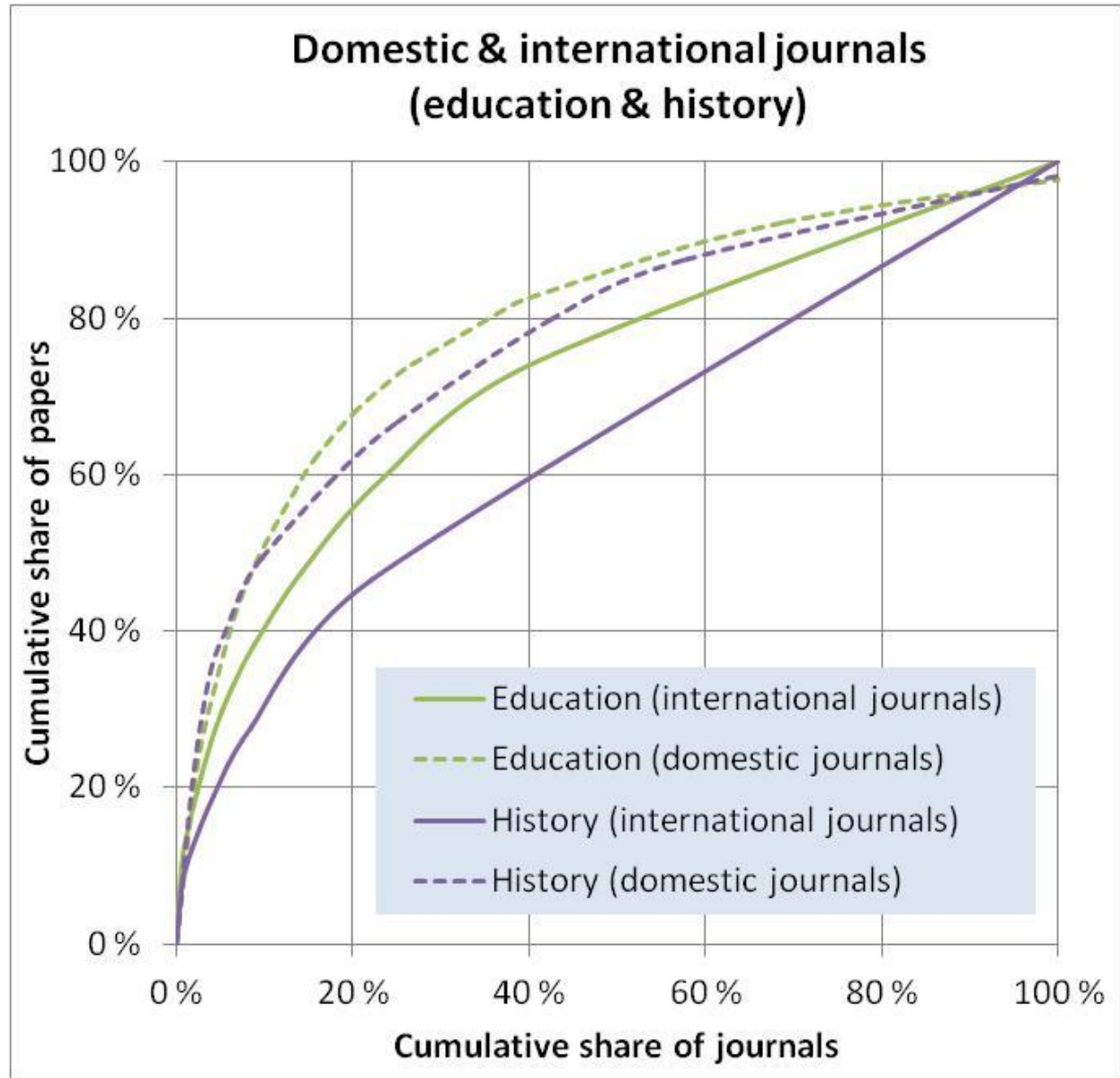
Data: Finnish universities' publications reported in 2011-2013

Results: Distribution of papers by journals



Data: Finnish universities' publications reported in 2011-2013

Results: Domestic and international journals



Data: Finnish universities' publications reported in 2011-2013

Summary



- In chemistry and neurosciences, the international journals are bigger on average and their size varies more than in education and history
 - In terms of international journals, Finnish universities' papers in chemistry and neurosciences are more heavily concentrated into core journals than in education and history.
 - Finnish universities' papers in education and especially history are more strongly concentrated among Finnish journals than among international journals.
- How to consider these patterns in national journal rankings?

Thank you for your attention!

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