Evaluating Publications across Business Disciplines: Inferring Interdisciplinary "Exchange Rates" from Intradisciplinary Author Rankings

Timo Korkeamäki[1], Jukka Sihvonen[2], Sami Vähämaa[2]

[1]Hanken School of Economics, Department of Finance and Statistics

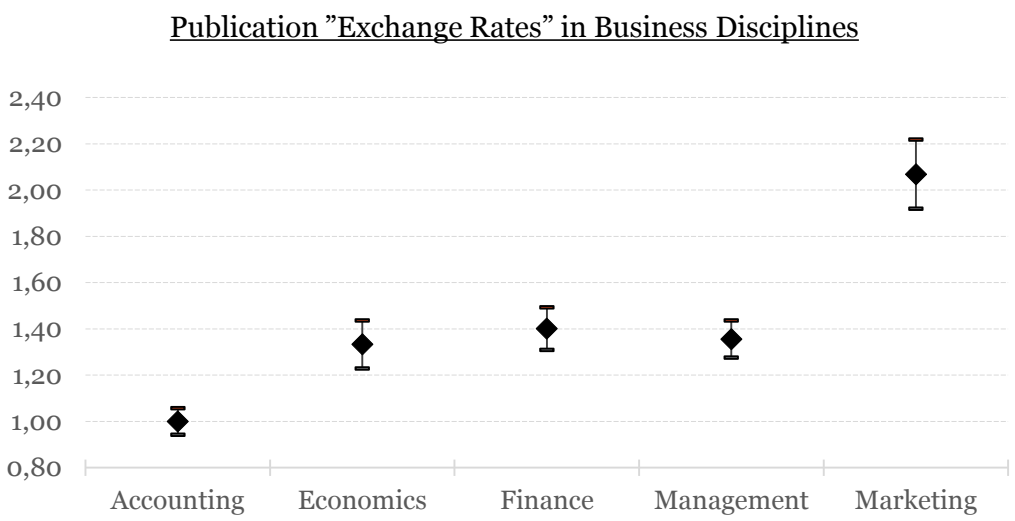
[2]University of Vaasa, Department of Accounting and Finance

Introduction

- Research performance is most commonly assessed based on publication records
- Performance evaluation across disciplines requires that the output measure shares a common scale
- One-to-one comparison may be hindered by different publication standards in different disciplines
- We aim to provide an objective method for evaluating the interdisciplinary value of publications

Results

Interdisciplinary “exchange rates” based on 15,610 publications by 18,154 authors in 24 top-ranked journals between 2005-2015:



Why do we do this?

- Previous research suggests that the effort taken to publish in top-tier journals varies across disciplines

- Authors' incremental efforts are not appropriately valued if one-to-one "exchange rates" are assumed
  - Schubert and Braun (1996): Interdisciplinary comparisons of publication records without a "transdisciplinary currency" induce a quotidian fallacy of comparing apples with oranges

- Misvaluation of scholarly efforts tends to cause:
  - Misallocated resources
  - Biased recruitment decisions
  - False publication incentives

Previous studies

- Buchheit et al. (2002): The top-three accounting journals publish less articles than the top-three journals of the other disciplines. Publishing in the top accounting journals is more concentrated to authors from the top-20 business schools
- Swanson (2004): Accounting journals publish fewer articles relative to the size of the faculty than finance, management, and marketing journals
- Valacich et al. (2006): Accounting scholars are relatively least successful and management scholar most successful in publishing in the top-tier journals of their own disciplines
- Swanson et al. (2007): Publishing is more concentrated to top individuals in the top accounting and finance journals than in management and marketing journals

Contribution

- We propose a simple and objective (quantitative) method for comparing the value of publications across (business) disciplines

- We construct interdisciplinary "exchange rates" for evaluating the value of top-ranked publications across business disciplines

- We present an objective ranking of the top-50 most prolific scholars in business studies and economics

Data

- All articles published in the ABS-4* business and economics journals over the period 2005-2015
- 24 journals; 15 610 articles; 18 154 individual authors

Table 2. ABS-AJG category 4* journals and descriptive statistics.

	Accounting	Economics	Finance	Management	Marketing
Number of articles	1765	4224	2867	3555	3199
Number of authors	2063	5000	2990	4904	3197
Number of authors, adjusted	1862	4717	2623	4712	3076
Authors per article					
Mean	2.28	2.19	2.37	2.54	2.50
Median	2	2	2	2	2
Min	1	1	1	1	1
Max	5	10	5	49	14

Data

Discipline	No. of articles	Average no. of pages per article
Accounting (4 journals)	1765	25.06
Accounting Review	596	27.66
Accounting, Organizations and Society	410	19.18
Journal of Accounting Research	371	33.23
Journal of Accounting and Economics	388	20.16
Economics (6 journals)	4224	32.09
American Economic Review	1237	23.20
Annals of Statistics	1062	28.19
Econometrica	625	32.38
Journal of Political Economy	346	36.97
Quarterly Journal of Economics	438	42.97
Review of Economic Studies	516	28.86
Finance (3 journals)	2867	31.69
Journal of Finance	792	35.35
Journal of Financial Economics	1182	23.12
Review of Financial Studies	893	36.59
Management (6 journals)	3555	21.86
Academy of Management Journal	728	19.06
Academy of Management Review	418	17.54
Administrative Science Quarterly	190	32.97
Journal of International Business Studies	664	17.10
Journal of Management	584	26.84
Strategic Management Journal	971	17.64
Marketing (5 journals)	3199	12.81
Journal of Consumer Psychology	553	9.22
Journal of Consumer Research	781	13.12
Journal of Marketing	529	15.41
Journal of Marketing Research	659	12.28
Marketing Science	677	13.99

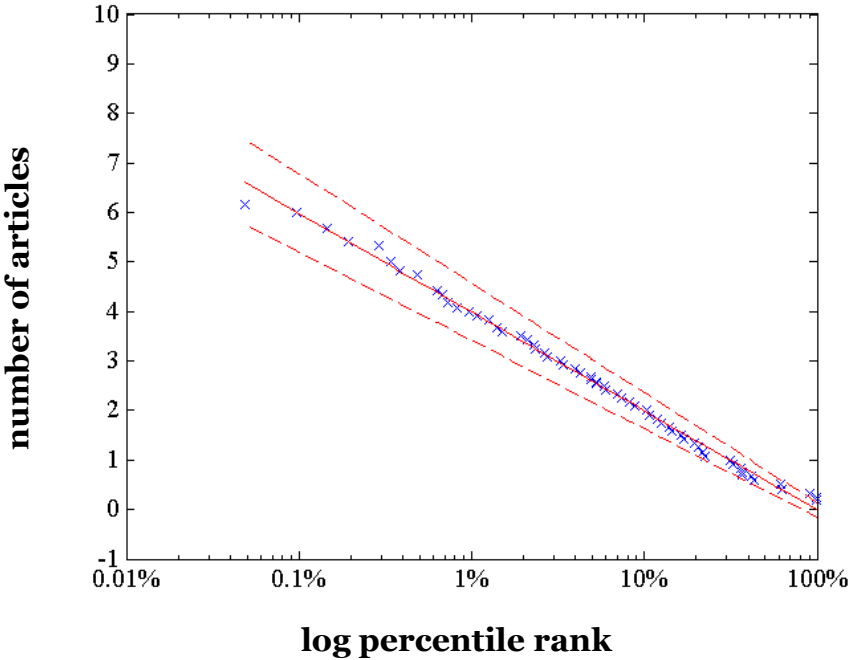
Methodology

- For each discipline, we rank the authors in terms of their research output
- We use fractional counting and percentile ranks
- For each discipline, we estimate the following regression:

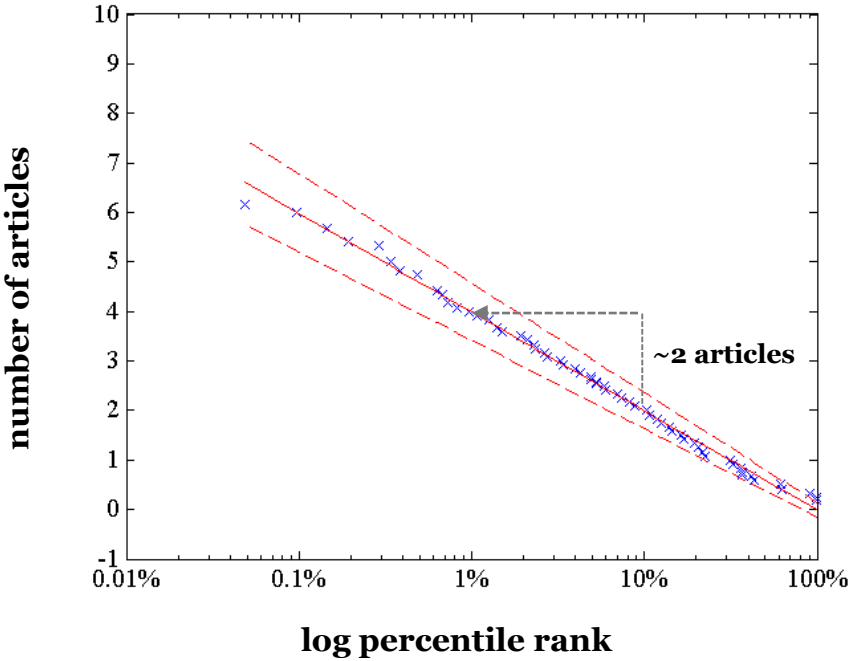
$$Articles = \alpha + \beta \times \ln(Ranking) + \varepsilon$$

- $-0.5 \times \beta$ tells how many articles a scholar needs to halve her author rank within a given discipline

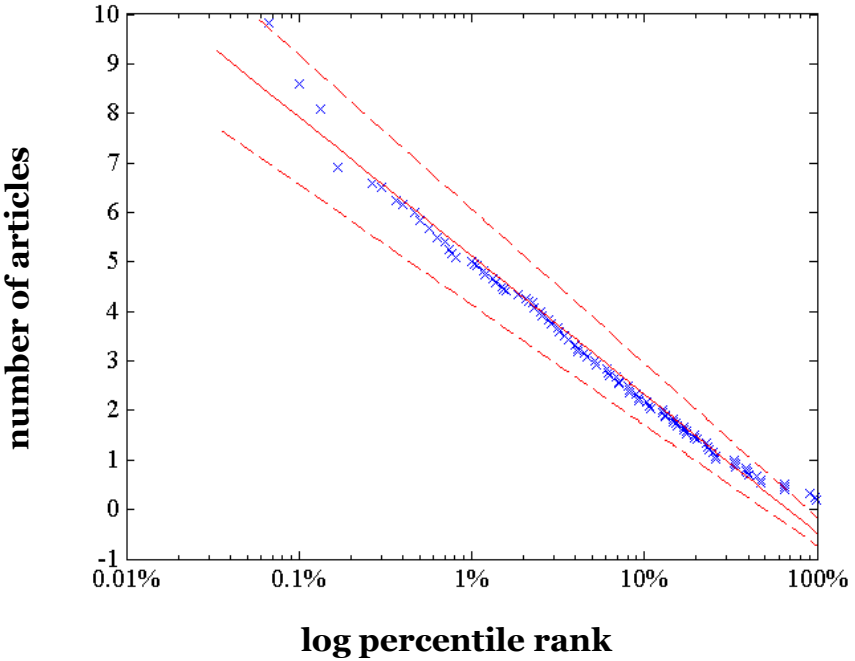
Accounting β = -0.87



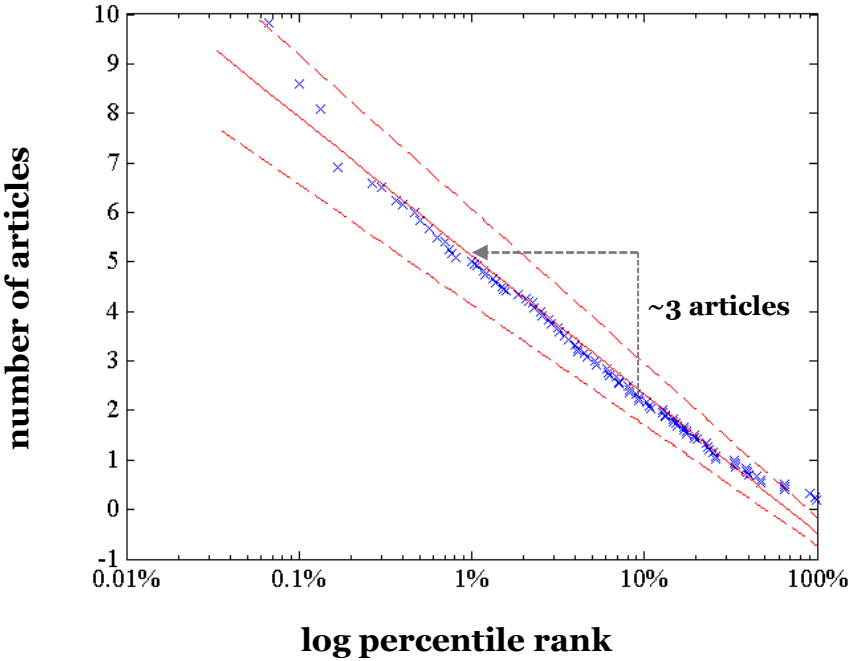
Accounting β = -0.87



Finance β = -1.22



Finance β = -1.22



Accounting and Finance rankings

Author	Institution	Weighted no. of articles
Accounting:		
Lennox C.	University of Southern California	6.17
Beatty A.	Ohio State University	6.00
Weber J.	Massachusetts Institute of Technology	5.67
DeFond M.	University of Southern California	5.42
Leuz C.	University of Chicago	5.33
Skinner D.	University of Chicago	5.33
Bushman R.	University of North Carolina at Chapel Hill	5.00
Shivakumar L.	London Business School	4.83
Tan H.	Nanyang Technological University	4.75
McVay S.	University of Washington	4.75
Top-1 %		3.92
Top-5 %		2.58
Top-10 %		2.00

Author	Institution	Weighted no. of articles
Finance:		
Stulz R.	Ohio State University	11.78
Acharya V.	New York University	9.83
Greenwood R.	Harvard University	8.58
Massa M.	INSEAD	8.08
Thakor A.	Washington University in St. Louis	6.92
Titman S.	University of Texas at Austin	6.58
Harford J.	University of Washington	6.58
Edmans A.	London Business School	6.58
Whited T.	University of Rochester	6.50
He Z.	University of Chicago	6.25
Strahan P.	Boston College	6.25
Top-1 %		4.96
Top-5 %		3.00
Top-10 %		2.17

Publication "exchange rates"

Panel A: Regression coefficients

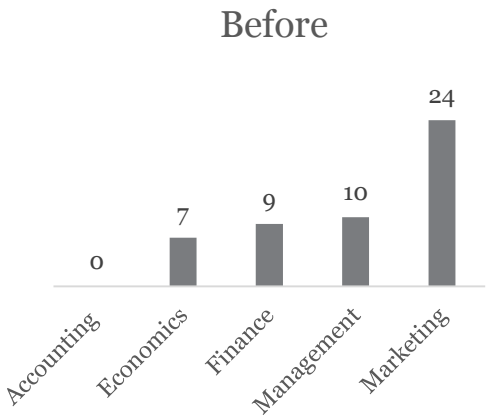
	Accounting	Economics	Finance	Management	Marketing
β	-0.87	-1.16	-1.22	-1.18	-1.80
s.e.*	(0.05)	(0.09)	(0.08)	(0.07)	(0.13)
R^2	1.00	0.90	0.97	0.94	0.91

Panel B: Interdisciplinary "exchange rates" vis-a-vis accounting

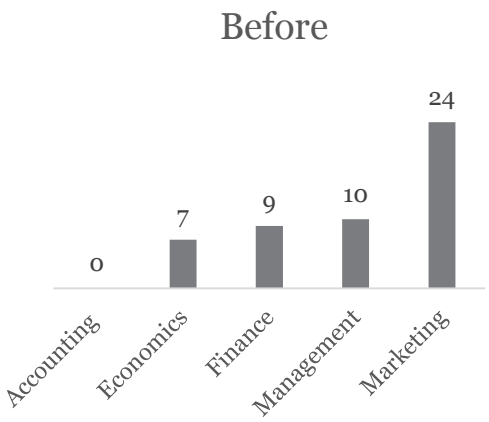
	Accounting	Economics	Finance	Management	Marketing
β (rescaled)	1.00	1.33	1.40	1.36	2.07

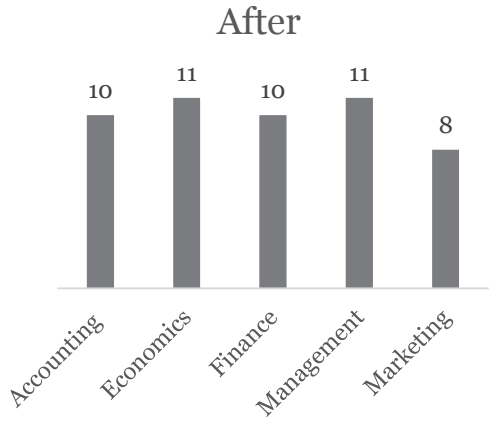
Validating the "exchange rates"

Top-50 author ranking

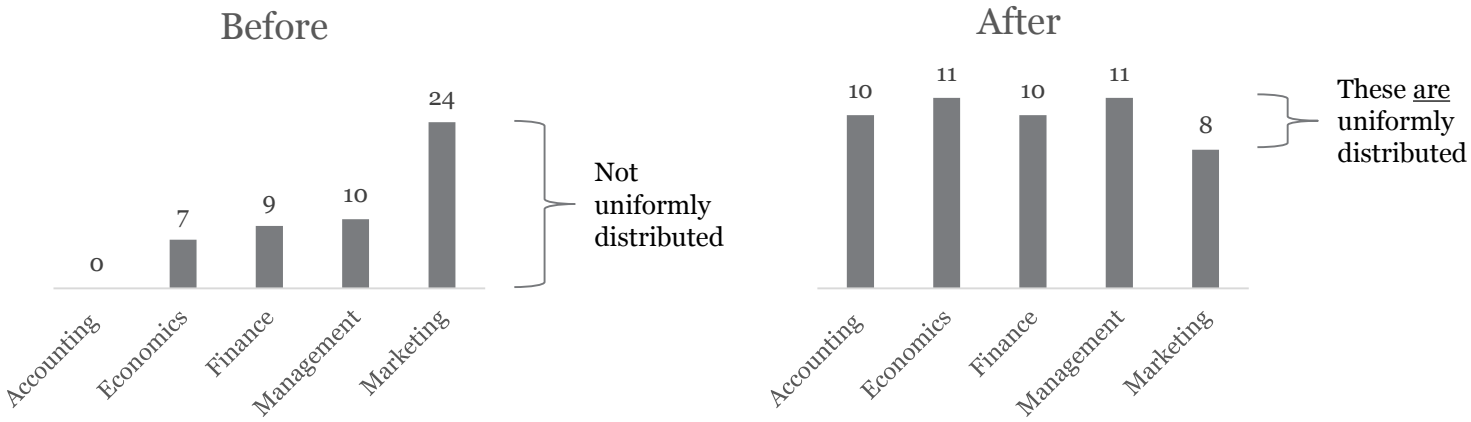


Top-50 author ranking





Top-50 author ranking



Validating "exchange rates"

1. Rank all authors according to their accounting-equivalent output

2. Test the global ranking for disciplinary imbalance using a multivariate Kolmogorov-Smirnov-Kuiper test

- H_o: the global ranking is <u>not</u> balanced

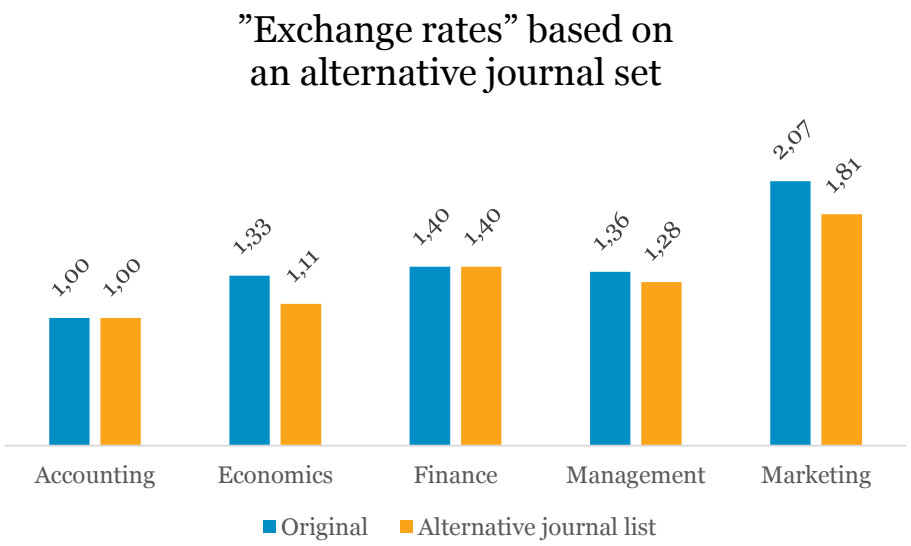
Ranking	Test statistic	Critical value	p-value
Original	0.25	0.20	0.30
Weighted	0.18	0.20	**0.02**

The top-20 most prolific scholars

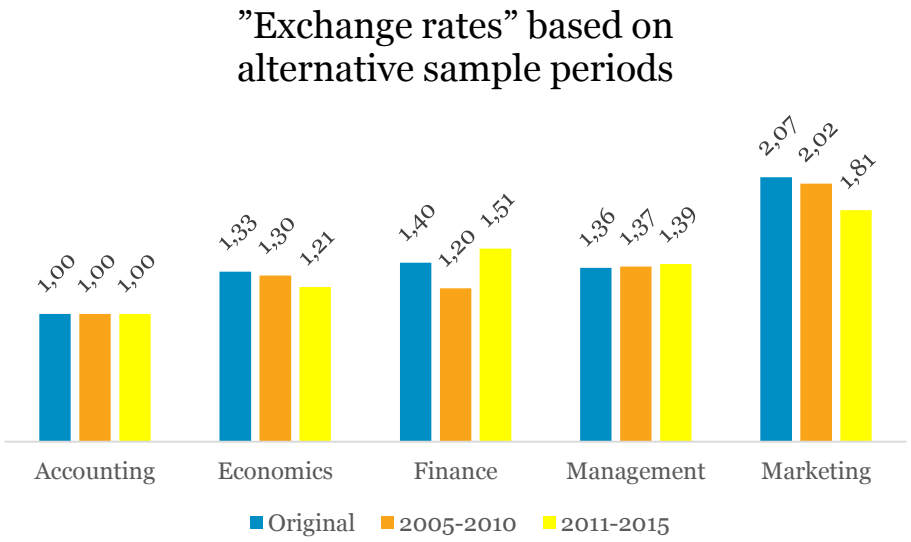
Rank	Author	"Exchange rate" adjusted no. of articles	Discipline
1	Hall P.	10.90	Economics
2	Shugan S.	10.62	Marketing
3	Acemoglu D.	10.07	Economics
4	Stulz R.	9.74	Finance
5	Hambrick D.	9.46	Management
6	Luo Y.	8.15	Management
7	Tirole J.	7.47	Economics
8	Acharya V.	7.27	Finance
9	Leuz C.	6.52	Accounting
10	Greenwood R.	6.50	Finance
11	Chernev A.	6.44	Marketing
12	Westphal J.	6.39	Management
13	Eden L.	6.32	Management
14	Lennox C.	6.17	Accounting
15	Wyer R.	6.08	Marketing
16	Shleifer A.	6.08	Economics
17	Hitt M.	6.04	Management
18	Skinner D.	6.04	Accounting
19	Beatty A.	6.00	Accounting
20	Repullo R.	5.94	Economics

Sensitivity tests

An alternative set of "top" journals



Alternative sample periods



Why do publication values differ across disciplines?

- We presume that the observed differences in publication values between the disciplines are largely induced by discipline-specific quality norms and publication barriers

- We create a simulated universe of authors competing for publications

- The simulations suggest that differences in publication barriers and the level of scholarly competition are plausible explanations

Conclusions

- We propose an objective method for evaluating the value of top-tier publications across disciplines
- We utilize intradisciplinary author rankings for inferring interdisciplinary publication "exchange rates"
- The value of top-tier publications varies substantially across the business disciplines
  - The value of a single article in a top-ranked journal is highest in accounting and lowest in marketing
- We utilize the estimated "exchange rates" for constructing a balanced, interdisciplinary author ranking of the most prolific business scholars