

Publication and Collaboration Patterns of Economists, Statisticians, and Other Scientists

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I am NOT an econometrician. Who am I?

I am a microeconomic theorist by training ...

chairs: Gary Becker and Phil Reny;

members: Pierre-André Chiappori, Scott Kominers, Hugo Sonnenschein

I got voted tenure in December 2022 ...

I got an Amazon research award in January 2023 ...

for a proposal to “use big data and machine learning to predict and study scientific collaboration success”

Ongoing science of science projects

- ▶ “Over a century of economics research collaboration”

coauthors: Willy Chen (MSU economics PhD), Xiao Qiao (City U of Hong Kong data science)

- ▶ “Collaboration and citation networks of economists and statisticians”

coauthors: Mingli Chen (Warwick economics), Tianxi Li (Minnesota statistics), Zhiyuan Ning (NYU biostatistics master → UT Dallas statistics PhD), Wen Zhou (NYU biostatistics)

- ▶ “High and rising institutional concentration of award-winning economists”

coauthors: Richard B. Freeman (Harvard economics), Danxia Xie (Tsinghua economics), Hanzhang Zhou (Tsinghua physics → MIT Sloan TIES PhD)

Project 1. Over a Century of Economics Research Collaboration

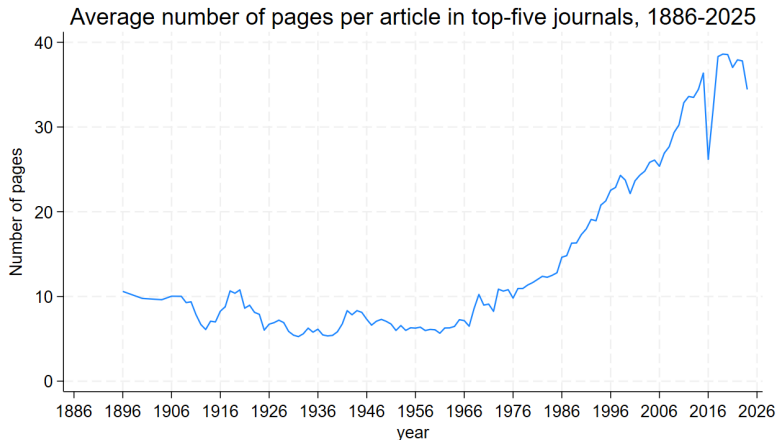
coauthors:

Willy Chen (MSU economics PhD)

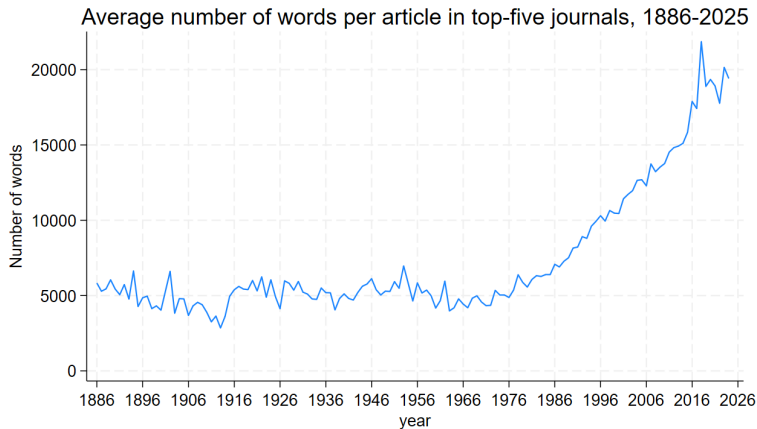
Xiao Qiao (City U of Hong Kong data science)

Rise in # pages per paper

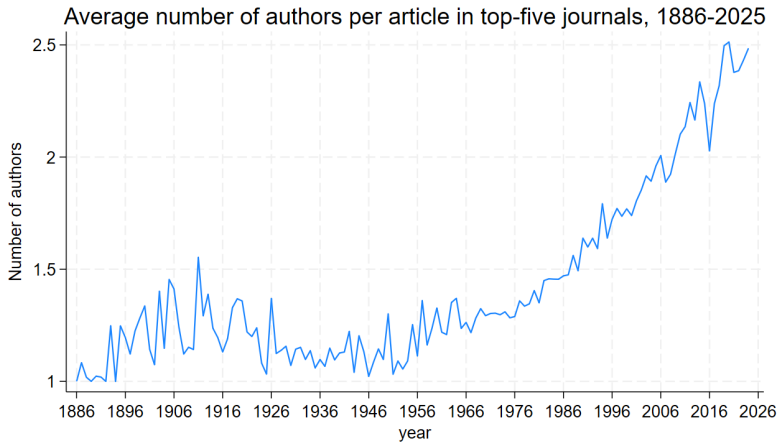
Quarterly Journal of Economics (QJE) was founded in October 1886.



Rise in # words per paper



Rise in # authors per paper



Rise in collaboration

Documented in select economics journals for a short period of time (e.g., 30 years): McDowell and Melvin (1983, REStat), Barnett et al. (1988, REStat), Hudson (1996, JEP), Hamermesh (2013, JEL), Jones (2021, JEP).

Widespread in natural sciences and social sciences: Guimera, Uzzi, Spiro and Amaral (2005, Science) and Wuchty, Jones and Uzzi (2007, Science).

How have collaboration patterns in economics evolved?

Two goals of this paper

Goal 1: to document more comprehensive—more longitudinal and more granular—facts about modern economics research and collaboration since 1886

patterns of collaboration based on experience level, affiliation, country

Goal 2: to explore potential drivers of collaboration

benefits of collaboration: increased relative citations

costs of collaboration: COVID as a natural experiment

Data

Publications from 64 economics journals, 1886-2023

35,109 publications from top-five journals (*AER*, *Ecma*, *JPE*, *QJE*, *REStud*)

Social Science Research Network (SSRN) economics working papers

from inception in 1994 to 2023

National Bureau of Economic Research (NBER) working papers

from inception in 1973 to 2023

Main observations

Research collaboration started to rise in the 1950s.

Two-author papers have risen since the 1950s and 1960s.

Three-author papers have risen since the 1970s.

Four-author papers have risen since the 2010s.

Inter-institutional collaboration:

decreased in the 20th century and

increased in the 21st century.

Experience assortativity remained stable.

Drivers of collaboration

Homerun paper: by citations in the top 10% of all papers in the same year.

Returns to collaboration (i.e., additional likelihood of homerun) peaked

- from the 1960s to 1980s for two-author papers

- in the 1990s and 2000s for three-author papers

- in the 2010s for four-plus-author papers

Costs of collaboration: Polarizing effects of COVID:

- More single-author papers

- More four-plus-author papers

Data

238,787 publications from EC64 journals: top-tier journals in the Shanghai University of Finance and Economics list

comparable to the NYU Stern list and Tilburg list, but more comprehensive

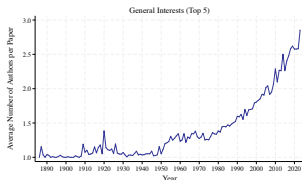
Define an *economist* as someone who has an EC64 publication

217,226 SSRN working papers with at least 1/3 economists (as defined)

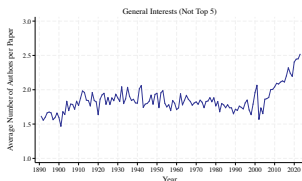
11,989 NBER working papers (with matched economists)

EC64 journals: General Interests

The numbers in parentheses indicate the ranks in Ham, Wright and Ye (2021).



Quarterly Journal of Economics (1)
American Economic Review (2)
Econometrica (3)
Review of Economic Studies (4)
Journal of Political Economy (5)



Journal of the European Economic Association (8)
Economic Journal (18)
International Economic Review (23)
European Economic Review (34)
Canadian Journal of Economics (61)
Journal of Economic Literature (nonstandard)
Journal of Economic Perspectives (nonstandard)
American Economic Review: Insights (new)

EC64 journals: Econometrics & Economic History



Econometrics

Quantitative Economics (16)

Journal of Business and Economic Statistics (21)

Journal of Econometrics (26)

Econometric Theory (28)



Economic History

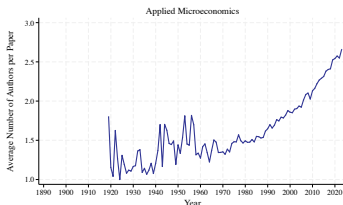
Journal of Economic History (48)

Explorations in Economic History (62)

Economic History Review (85)

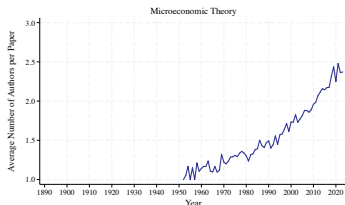
History of Political Economy

EC64 journals: Applied Microeconomics



American Economic Journal: Applied Economics (7)
American Economic Journal: Economic Policy (9)
Journal of Labor Economics (10)
Review of Economics and Statistics (12)
Journal of Human Resources (15)
Journal of International Economics (22)
Journal of Public Economics (25)
Journal of Development Economics (29)
Journal of Applied Econometrics (30)
Journal of Urban Economics (39)
Journal of Law and Economics (40)
Journal of Health Economics (42)
Journal of Environmental Economics & Management (49)
Journal of Population Economics (56)
Journal of Economic Education (nonstandard)
American Journal of Agricultural Economics

EC64 journals: Microeconomic Theory



Theoretical Economics (11)
American Economic Journal: Microeconomics (14)
RAND Journal of Economics (19)
Journal of Economic Theory (24)
Experimental Economics (27)
Games and Economic Behavior (33)
Economic Theory (36)
Journal of Industrial Economics (38)
Journal of Risk and Uncertainty (41)
International Journal of Industrial Organization (52)
Journal of Economic Behavior and Organization (53)
Journal of Economics and Management Strategy (64)
Journal of Mathematical Economics (66)
Social Choice and Welfare (71)
Journal of Comparative Economics (94)
Journal of Regulatory Economics

EC64 journals: Finance & Macroeconomics

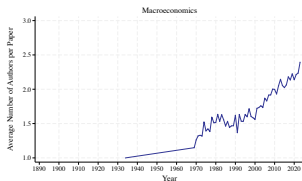


Finance

Journal of Finance

Journal of Financial Economics

Review of Financial Studies



Macroeconomics

American Economic Journal: Macroeconomics (6)

Journal of Monetary Economics (13)

Journal of Economic Growth (17)

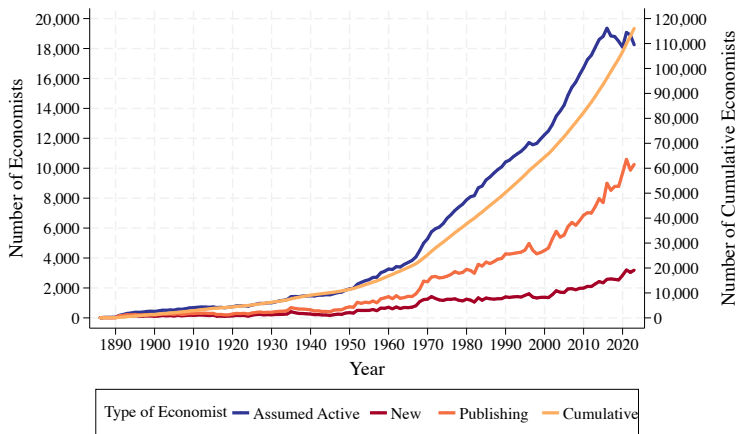
Review of Economic Dynamics (20)

Journal of Money, Credit and Banking (37)

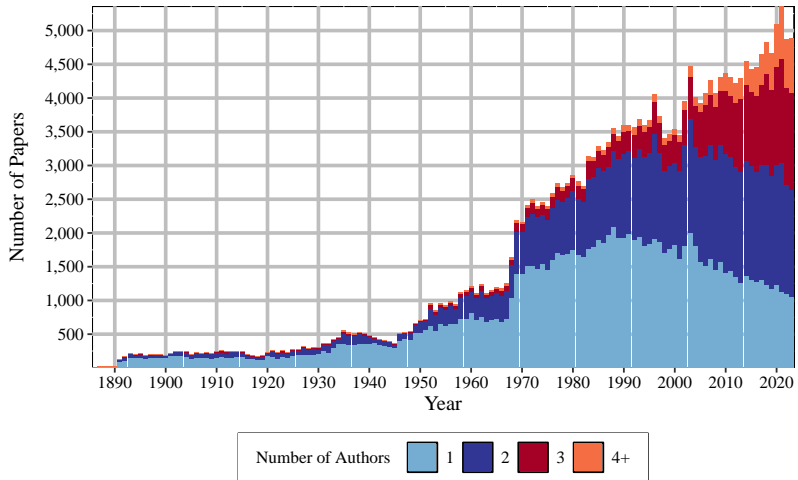
Journal of Economic Dynamics and Control (59)

Macroeconomic Dynamics (75)

economists



authors in EC64 publications



Homerun paper

A *homerun paper* (Jones, 2021, JEP) is a paper whose trailing five-year citation is among the top 10% of all EC64 papers published in the same year.

$$100 \cdot HR_{ijkt} = \alpha + \sum_n \beta_n \mathbf{1}\{Num_{ist} = n\} + \gamma X_{ijkt} + \kappa_t + \phi_j^F + \phi_j^J + \varepsilon_{ijkt},$$

HR_{ijkt} : indicator for a homerun paper

β_n : n -author coefficient, $n \geq 2$

X_{ijkt} : covariates

κ_t : year fixed effect

ϕ_j^F : field fixed effect

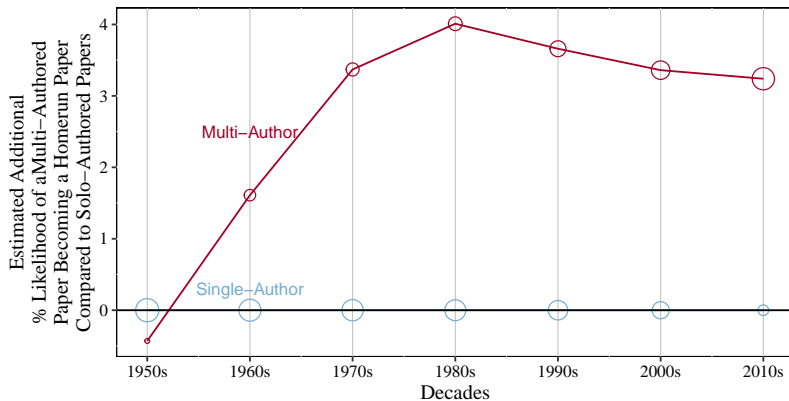
ϕ_j^J : journal fixed effect

Returns to collaboration: Likelihood of a homerun paper

2 authors	2.36*** (0.16)	2.92*** (0.17)	2.68*** (0.16)	3.81*** (0.17)
3 authors	2.94*** (0.24)	3.82*** (0.24)	3.28*** (0.24)	4.76*** (0.24)
4+ authors	0.52 (0.38)	1.28*** (0.38)	1.20*** (0.37)	3.49*** (0.37)
1{Inter-Institutional}	1.22*** (0.15)	0.49*** (0.15)	-0.33** (0.15)	-1.54*** (0.15)
1{Has Senior Author}	-0.99*** (0.15)	-0.72*** (0.15)	-0.94*** (0.15)	-0.71*** (0.15)
1{Has Top 10 Author}	15.93*** (0.26)	15.95*** (0.26)	13.81*** (0.26)	11.04*** (0.26)
1{Has Top 10 Senior}	-0.72** (0.35)	-0.82** (0.35)	-1.00*** (0.35)	-0.72** (0.34)
1{Has 11-30 Author}	7.80*** (0.27)	7.94*** (0.27)	6.80*** (0.26)	5.02*** (0.26)
1{Has 11-30 Senior}	-0.42 (0.36)	-0.47 (0.36)	-0.37 (0.35)	-0.42 (0.35)
1{US Institution}	0.67*** (0.15)	1.03*** (0.15)	2.64*** (0.15)	3.20*** (0.16)
1{Inter. Collab.}	-0.02 (0.23)	0.79*** (0.23)	0.81*** (0.23)	0.71*** (0.23)
Year FE		×	×	×
Field FE			×	
Journal FE				×

Estimated returns to collaboration

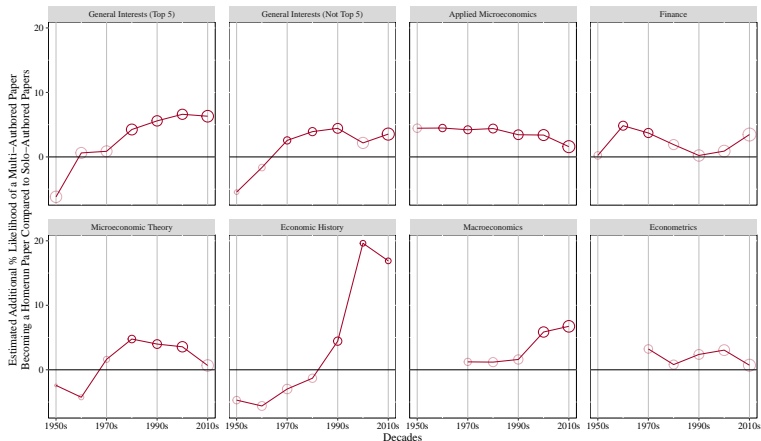
Likelihood of a homerun paper



Note: Estimating equation is equation (7) with year and journal FEs for each decennial. A homerun paper is a paper that has a trailing 5-year citation in the top 10 percentile among EC64 papers published in the same year. Sizes of the circles correspond to the shares of N-Author papers that year.

Estimated returns to collaboration, by field

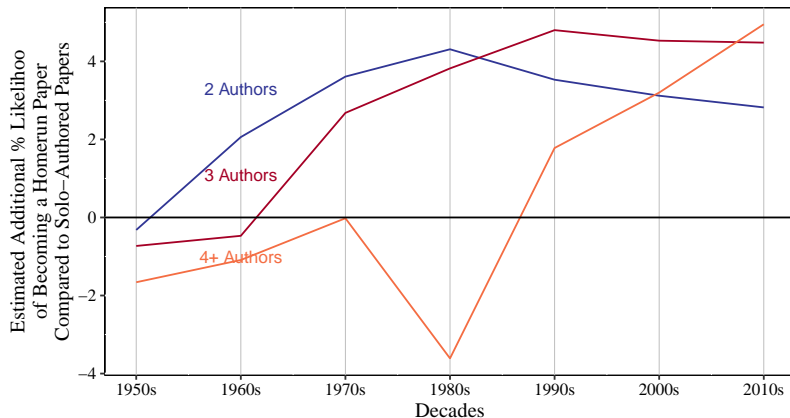
Likelihood of a homerun paper



Note: Estimating equation is equation (7) with year and journal FEs for each decennial. A homerun paper is a paper that has a trailing 5-year citation in the top 10 percentile among EC64 papers published in that field in the same year. Sizes of the circles correspond to the shares of N-Authored papers that year. Number of authors are noted in the center of markers if the estimates are positive and statistically significant at the 5% level.

Estimated returns to collaboration, by # authors

Likelihood of a homerun paper



Note: Estimating equation is equation (7) with year and journal FEs for each decennial.

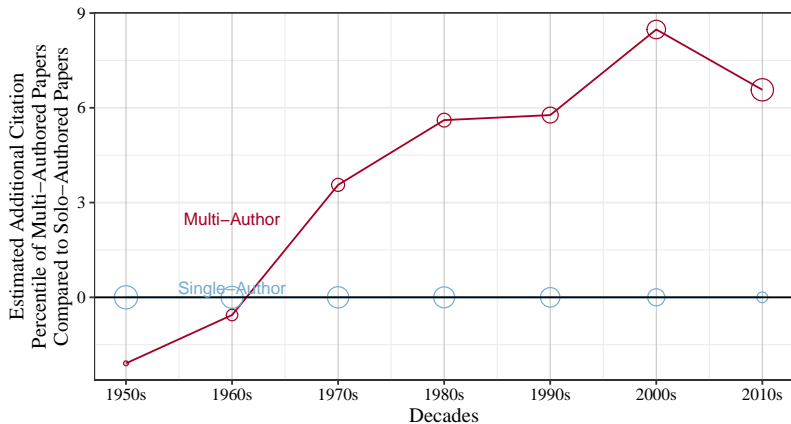
A homerun paper is a paper that has a trailing 5-year citation in the top 10 percentile among EC64 papers published in the same year.

Returns to collaboration: Citation percentile

2 authors	5.33*** (0.15)	6.26*** (0.16)	5.38*** (0.15)	6.06*** (0.16)
3 authors	5.60*** (0.22)	7.15*** (0.23)	5.76*** (0.23)	7.14*** (0.22)
4+ authors	2.11*** (0.36)	3.51*** (0.36)	2.70*** (0.35)	5.33*** (0.35)
1{Inter-Institutional}	1.38*** (0.14)	0.24 (0.15)	-0.56*** (0.14)	-1.99*** (0.14)
1{Has Senior Author}	-2.42*** (0.14)	-2.00*** (0.15)	-1.70*** (0.14)	-1.33*** (0.14)
1{Has Top 10 Author}	14.26*** (0.25)	14.21*** (0.25)	12.05*** (0.24)	8.44*** (0.24)
1{Has Top 10 Senior}	-0.88*** (0.33)	-1.02*** (0.33)	-1.36*** (0.33)	-1.00*** (0.32)
1{Has 11-30 Author}	9.13*** (0.26)	9.28*** (0.26)	7.90*** (0.25)	5.48*** (0.24)
1{Has 11-30 Senior}	-0.67* (0.34)	-0.70** (0.34)	-0.57* (0.33)	-0.60* (0.32)
1{US Institution}	1.65*** (0.14)	2.23*** (0.14)	3.59*** (0.14)	4.96*** (0.15)
1{International Collab.}	3.54*** (0.22)	5.12*** (0.22)	4.51*** (0.22)	3.85*** (0.21)
Year FE		×	×	×
Field FE			×	
Journal FE				×

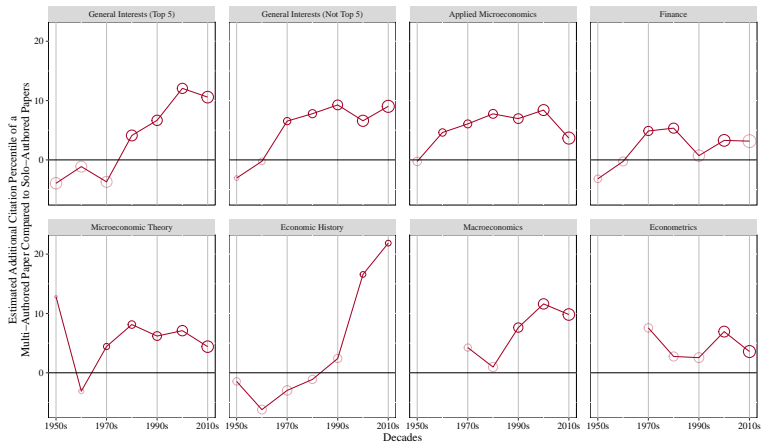
Estimated returns to collaboration

Percentile increase



Estimated returns to collaboration, by field

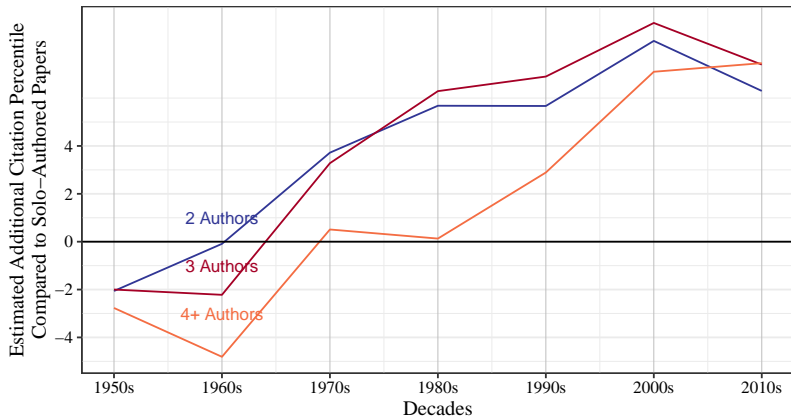
Percentile increase



Note: Estimating equation is equation (7) with year and journal FEs for each decennial. A homerun paper is a paper that has a trailing 5-year citation in the top 10 percentile among EC64 papers published in that field in the same year. Sizes of the circles correspond to the shares of N-Authored papers that year. Number of authors are noted in the center of markers if the estimates are positive and statistically significant at the 5% level.

Estimated returns to collaboration, by # authors

Percentile increase



Deviation from linear trend during COVID

	% 1 Author	% 2 Authors	% 3 Authors	% 4+ Authors
2020	-0.15 (0.61)	0.32 (0.68)	-1.14* (0.64)	0.97** (0.47)
2021	-2.31*** (0.57)	1.50** (0.67)	-1.54** (0.63)	2.34*** (0.49)
2022	0.04 (0.61)	-0.10 (0.70)	-1.89*** (0.67)	1.96*** (0.51)
2023	0.24 (0.61)	-0.94 (0.70)	-2.93*** (0.67)	3.64*** (0.54)
Working Paper ×				
2020	1.86*** (0.69)	-2.37*** (0.80)	-1.31* (0.77)	1.82*** (0.57)
2021	5.69*** (0.67)	-5.38*** (0.81)	-1.94** (0.78)	1.63*** (0.61)
2022	4.01*** (0.70)	-3.25*** (0.83)	-1.93** (0.80)	1.18* (0.63)
2023	1.78 (2.46)	-0.62 (2.84)	-0.10 (2.59)	-1.07 (1.99)
Working Paper	-11.55*** (0.19)	4.04*** (0.21)	6.13*** (0.18)	1.37*** (0.11)
Yearly Trend	-1.04*** (0.02)	-0.45*** (0.02)	0.90*** (0.02)	0.59*** (0.01)
Number of Papers	315,402	315,402	315,402	315,402
Sample Fixed Effects	×	×	×	×

Project 2. Collaboration and Citation Networks of Economists and Statisticians

coauthors:

Mingli Chen (Warwick economics)

Tianxi Li (Minnesota statistics)

Zhiyuan Ning (NYU biostatistics master → UT Dallas stats PhD)

Wen Zhou (NYU biostatistics)

Top-4 stats versus top-5 economics, 1980–2023

Top-5 economics journals

American Economic Review (AER)

Econometrica (Ecma)

Journal of Political Economy (JPE)

Quarterly Journal of Economics (QJE)

Review of Economic Studies (REStud)

Top-4 statistics journals

Annals of Statistics (AoS)

Biometrika

Journal of the American Statistical Association (JASA)

Journal of the Royal Statistical Society: Series B (JRSS-B)

Top econ and stats authors

#	# of papers	# of coauthors	# of citers
1	Daron Acemoğlu	Noam Yuchtman	Jean Tirole
2	Jean Tirole	James J. Heckman	Andrei Shleifer
3	James J. Heckman	Raj Chetty	Paul Milgrom
4	Drew Fudenberg	Michael Greenstone	Lawrence F. Katz
5	Andrei Shleifer	Magne Mogstad	Daron Acemoğlu
6	Elhanan Helpman	Ali Hortaçsu	Emmanuel Saez
7	Gene M. Grossman	John N. Friedman	Raj Chetty
8	B. Douglas Bernheim	Raymond Fisman	Ariel Pakes
9	Donald W. K. Andrews	Amit Seru	David Card
10	Mark R. Rosenzweig	Esteban Rossi-Hansberg	Esther Duflo
11	Boyan Jovanovic	Andrei Shleifer	Kevin Murphy
12	Joseph E. Stiglitz	Parag A. Pathak	James J. Heckman
13	Alberto Alesina	Erik Hurst	Sendhil Mullainathan
14	John A. List	Francesco Trebbi	Matthew Rabin
15	David Card	Jesse M. Shapiro	Nicholas Bloom
16	Debraj Ray	Jonathan Levin	Abhijit Banerjee
17	Eric Maskin	Arlington W. Williams	Philippe Aghion
18	Philippe Aghion	Gautam Rao	Peter J. Klenow
19	Richard Blundell	Chad Syverson	B. Douglas Bernheim
20	Whitney K. Newey	Johannes Stroebel	Guido W. Imbens

#	# of papers	# of coauthors	# of citers
1	Peter Hall	Peter Hall	Robert Tibshirani
2	Jianqing Fan	Raymond J. Carroll	Jianqing Fan
3	Raymond J. Carroll	Jianqing Fan	Peter Hall
4	Tommaso Cai	David B. Dunson	Iain M. Johnstone
5	David B. Dunson	Runze Li	Peter J. Bickel
6	Hans-Georg Müller	Donglin Zeng	Trevor Hastie
7	Holger Dette	Hongtu Zhu	Tommaso Cai
8	Larry Wasserman	Jun S. Liu	Raymond J. Carroll
9	R. Dennis Cook	Yufeng Liu	Larry Wasserman
10	Donglin Zeng	Holger Dette	Bradley Efron
11	Paul R. Rosenbaum	Joseph G. Ibrahim	Donald B. Rubin
12	L. J. Wei	Tommaso Cai	Peter Bühlmann
13	Runze Li	Dylan S. Small	Ming Yuan
14	Jun S. Liu	J. S. Marron	Alan E. Gelfand
15	Lawrence D. Brown	Hans-Georg Müller	Cun-Hui Zhang
16	J. S. Marron	James M. Robins	James M. Robins
17	James M. Robins	Donald B. Rubin	David L. Donoho
18	Xuming He	Larry Wasserman	Kung-Yee Liang
19	D. Y. Lin	Xuming He	Hui Zou
20	Joseph G. Ibrahim	Qiwei Yao	Bernard W. Silverman

100 most prolific top-5 econ authors, 1980-2023

author name	# of papers	author name	# of papers	author name	# of papers	author name	# of papers
Daron Acemoglu	70	Larry G. Epstein	26	Esther Duflo	21	Stephen Morris	19
Jean Tirole	65	IvÃn Werning	26	Parag A. Pathak	21	Kevin Murphy	19
James J. Heckman	43	Timothy Besley	26	Raj Chetty	21	George-Marios Angeletos	19
Drew Fudenberg	42	Arthur Lewbel	25	Robert J. Barro	21	Faruk GÃ¼l	19
Andrei Shleifer	42	Emmanuel Saez	25	Ariel Pakes	21	Per Krusell	19
Elhanan Helpman	38	Costas Meghir	25	Steven D. Levitt	21	Eddie Dekel	19
Gene M. Grossman	37	Lawrence H. Summers	25	John Y. Campbell	21	Benny Moldovanu	19
B. Douglas Bernheim	35	Thomas J. Sargent	24	James A. Robinson	20	Aldo Rustichini	19
Donald W. K. Andrews	34	Matthew O. Jackson	24	Charles R. Plott	20	Vincent P. Crawford	19
Mark R. Rosenzweig	33	Guido W. Imbens	24	Ernst Fehr	20	Torsten Persson	19
Boyan Jovanovic	32	Andrew Caplin	24	Magne Mogstad	20	Randall Wright	19
Joseph E. Stiglitz	32	Patrick J. Kehoe	24	Avinash Dixit	20	Matthew Rabin	19
Alberto Alesina	32	Pierre-AndrÃ© Chiappori	24	Jonathan Gruber	20	Jesse M. Shapiro	19
John A. List	32	John Van Reenen	23	Yeonâ€‹Koo Che	20	Edward L. Glaeser	19
David Card	32	Oliver Hart	23	Andrew Postlewaite	20	Erik Hurst	18
Debraj Ray	32	Olivier Blanchard	23	Robert M. Townsend	20	Sendhil Mullainathan	18
Eric Maskin	32	Larry Samuelson	23	Jeanâ€‹Jacques Laffont	20	Paul Klemperer	18
Philippe Aghion	31	Esteban Rossiâ€‹Hansberg	23	Andrew B. Abel	20	Peter J. Klenow	18
Richard Blundell	31	David K. Levine	23	Patrick Bolton	20	Nicholas Bloom	18
Whitney K. Newey	31	Martin Browning	22	Orazio Attanasio	19	Stephen Coate	18
Emmanuel Farhi	30	Amy Finkelstein	22	Raymond Fisman	19	Jonathan Levin	18
Abhijit Banerjee	30	Michael Kremer	22	AlÃ© HortaÃ§su	19	Philip J. Reny	18
Alvin E. Roth	30	Thomas R. Palfrey	22	Philippe JÃ©hiel	19	Robert E. Hall	18
Paul Milgrom	27	Ariel Rubinstein	22	Matthew Gentzkow	19	Edward P. Lazear	18
Ricardo J. Caballero	27	Peter C.B. Phillips	22	Colin F. Camerer	19	Michael Peters	18

Network

Collaboration network

Citation network

(Co-citation network)

Methods: Degree-corrected stochastic block model (and others)

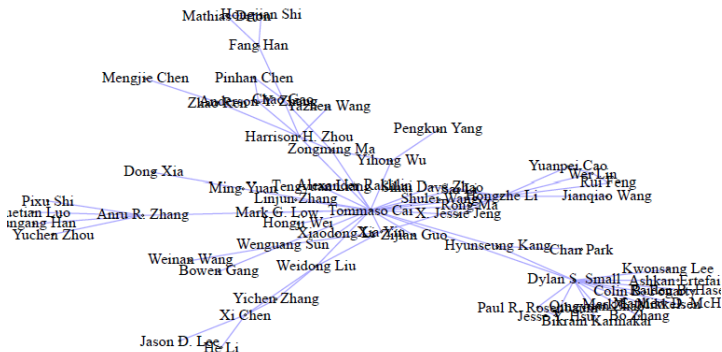
Statistics coauthorship network, 2012-2023: cluster 1



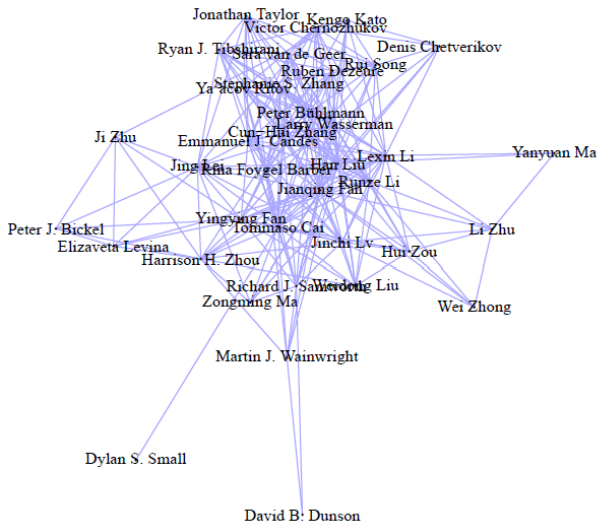
Statistics coauthorship network, 2012-2023: cluster 2



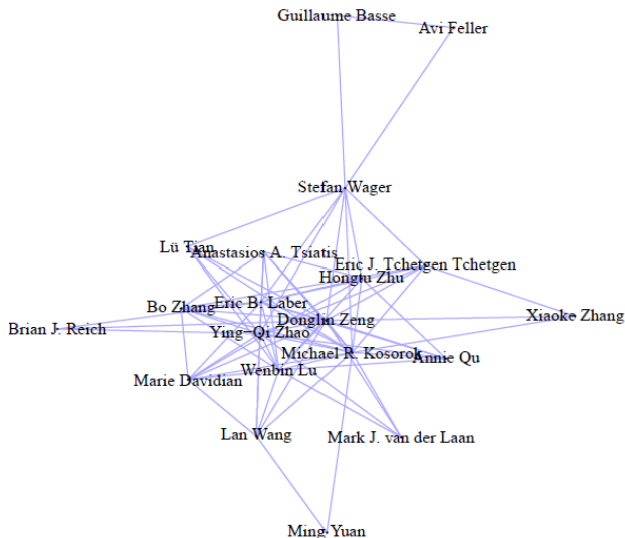
Statistics coauthorship network, 2012-2023: cluster 3



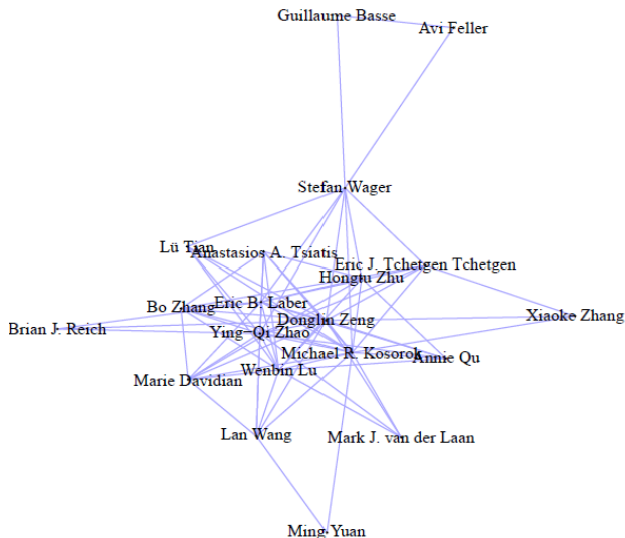
Statistics citation network, 2012-2023: cluster 1



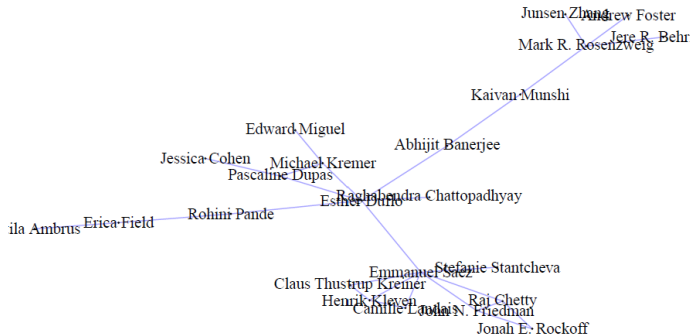
Statistics citation network, 2012-2023: cluster 2



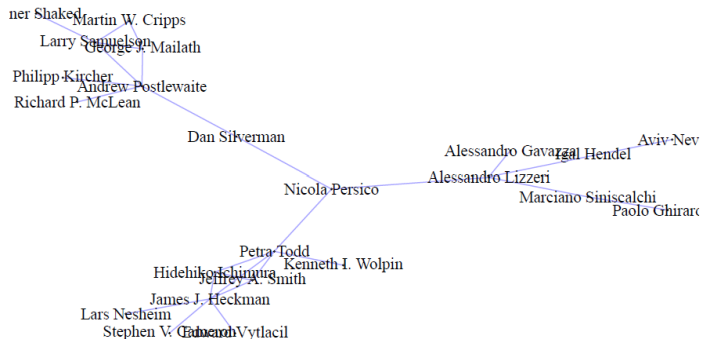
Statistics citation network, 2012-2023: cluster 2



Econ coauthorship network, 1997-2015: Harvard cluster



Econ coauthorship network, 1997-2015: Theory cluster



Econ coauthorship network, 2012-2023: Theory cluster



Project 3. High and Rising Institutional Concentration of Award-Winning Economists

coauthors:

Richard B. Freeman (Harvard economics)

Danxia Xie (Tsinghua economics)

Hanzhang Zhou (Tsinghua physics → MIT Sloan TIES PhD)

Award winners

We analyze the academic affiliations of nearly 6,000 award-winning researchers in 18 major fields in the natural sciences, engineering, and social sciences,

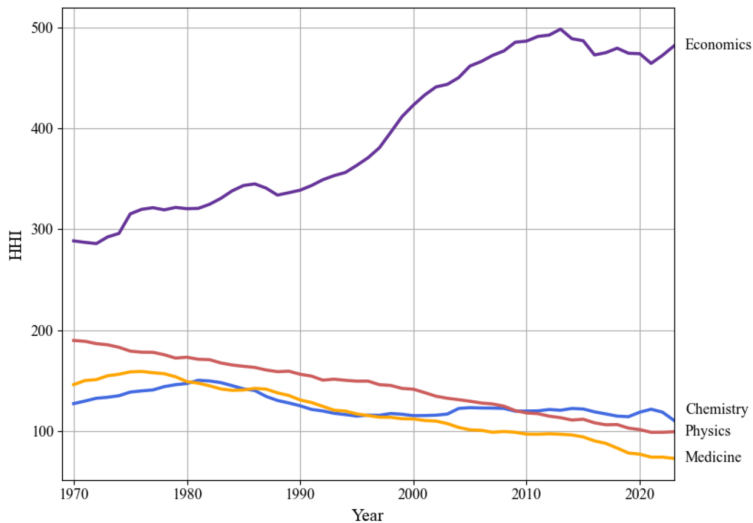
dating back to the 1840s but mostly covering 1960 to 2022.

The data shows a trend decline in the concentration of institutional affiliations of award-winning researchers from a few science-strong universities in high-income countries toward a more diverse set of institutions across the world.

The decline in concentration is found in large fields, such as physics and chemistry, and in small fields, such as earth science and astronomy; in fact, in all fields but one.

The exception is economics, in which the institutional affiliation of prize-winning researchers has become more concentrated over time, making economics the top field in the institutional concentration of award-winners.

Institutional concentration of Nobel laureates since 1969



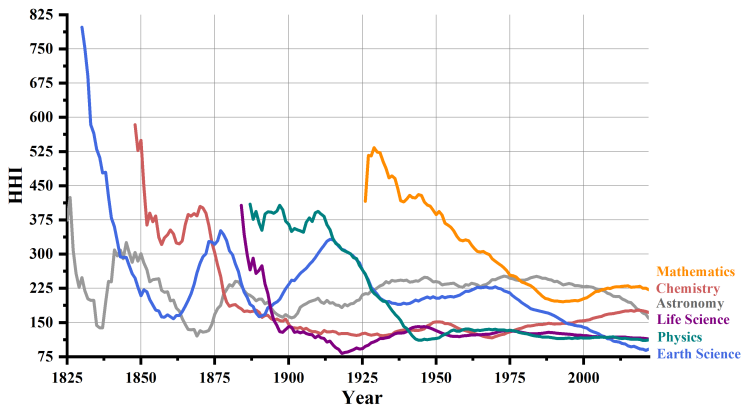
Awards in economics

award	#
The Sveriges Riksbank Prize in Economic Sciences	93
John Bates Clark Medal	45
The Frisch Medal Award	44
The John von Neumann Award	29
The IZA Prize in Labor Economics	21
The Jacob Viner Award	22
The Deutsche Bank Prize in Financial Economics	6
Stephen A. Ross Award	16
Leontief Prize for Advancing the Frontiers of Economic Thought	34
The Erwin Plein Nemmers prize in Economics	14
The Fischer Black Prize	10
BBVA Foundation Frontiers of Knowledge Award in Economics, Finance and Management	25

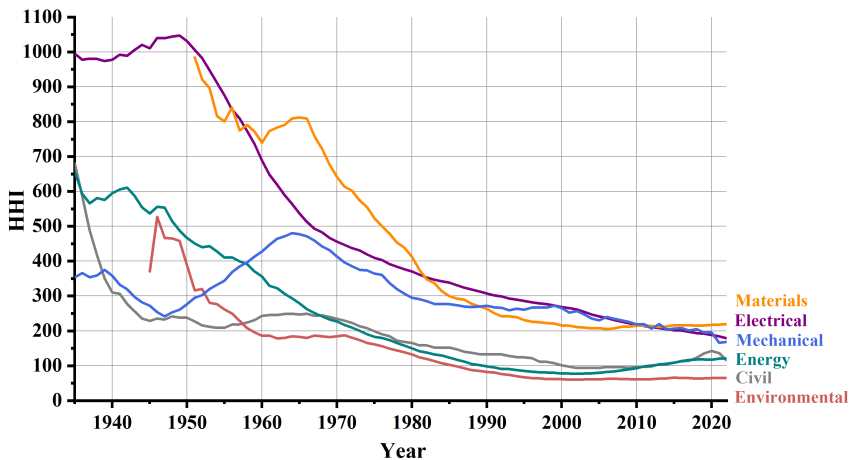
Awards in physics

award	#
Nobel Prize in Physics	222
Wolf Prize in Physics	68
Isaac Newton Medal	15
Max Planck Medal	86
Breakthrough Prize in Fundamental Physics	38
Special Breakthrough Prize in Fundamental Physics	16
Physics Frontiers Prize	10
Lorentz Medal	24
Henri Poincare Prize	30
Benjamin Franklin Medal in Physics	39
UNESCO Niels Bohr Medal	10

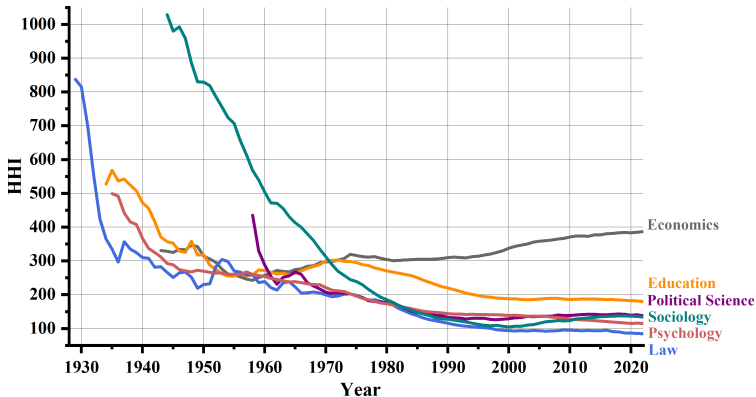
Concentration of natural sciences award winners



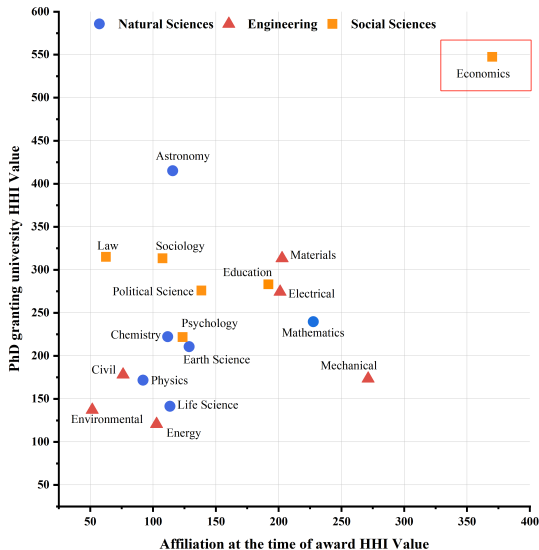
Concentration of engineering award winners



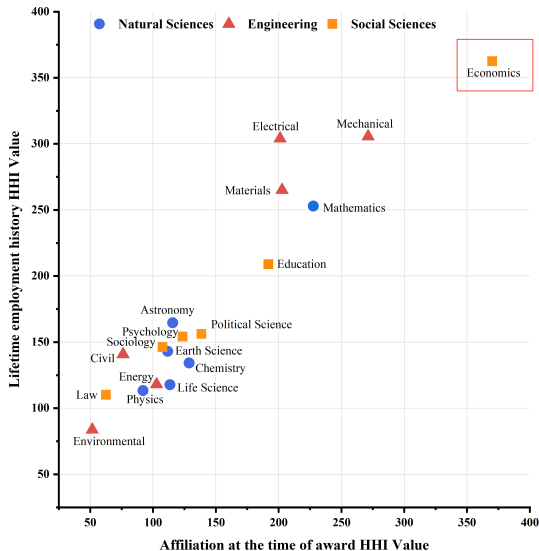
Concentration of social sciences award winners



HHI at time of award and at time of PhD



HHI at time of award and lifetime employment



Potential explanations

Need for resources

- Economists are most mobile due to less need for physical capital

- Mathematicians are second mobile

The role of prestige and network

- Economics journal editors are in network

- Editors at Cell, Nature, Science are full-time employees

The nature of evidence

- A body of evidence is needed in economics

- compared to a single experiment

Summary

Project 1: publication and collaboration patterns of economists since 1886.

Economics is increasingly collaborative.

Project 2: collaboration and citation networks of economists and statisticians.

Statisticians are more collaborative than economists.

Project 3: institutional concentration of award-winners in 18 fields.

Economics is uniquely highly and increasingly concentrated.

Other projects

We collected the dissertation titles, JEL fields, years, and schools of 80,000+ North American economics PhDs since 1904.

We collected job placement information of 12,000+ economics PhD students in the top 100 US institutions.

Knick Laux (MSU economics undergrad → Princeton economics PhD) studied how dissertation field, school, and other characteristics are related to job placement outcome.

THANK YOU!

References I

- Barnett, Andy H., Richard W. Ault, and David L. Kaserman**, “The Rising Incidence of Co-authorship in Economics: Further Evidence,” *The Review of Economics and Statistics*, August 1988, 70 (3), 539–543.
- Guimera, Roger, Brian Uzzi, Jarrett Spiro, and Luis A. Nunes Amaral**, “Team assembly mechanisms determine collaboration network structure and team performance,” *Science*, 2005, 308 (5722), 697–702.
- Ham, John C., Julian Wright, and Ziqiu Ye**, “New rankings of economics journals: Documenting and explaining the rise of the new society journals,” 2021. Mimeo.
- Hamermesh, Daniel S.**, “Six decades of top economics publishing: Who and how?,” *Journal of Economic Literature*, 2013, 51 (1), 162–172.
- Hudson, John**, “Trends in multi-authored papers in economics,” *Journal of Economic Perspectives*, 1996, 10 (3), 153–158.
- Jones, Benjamin F.**, “The rise of research teams: Benefits and costs in economics,” *Journal of Economic Perspectives*, 2021, 35 (2), 191–216.

References II

- McDowell, John M. and Michael Melvin**, “The determinants of co-authorship: An analysis of the economics literature,” *The Review of Economics and Statistics*, February 1983, 65 (1), 155–160.
- Wuchty, Stefan, Benjamin F. Jones, and Brian Uzzi**, “The increasing dominance of teams in production of knowledge,” *Science*, 2007, 316 (5827), 1036–1039.