

SOCIAL TIES IN ACADEMIA: A FRIEND IS A TREASURE

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Abstract—This paper employs a unique data set on articles, authors, and editors of the top general interest journals in economics to investigate the role of social connections in the publication process. Ties between editors and authors are identified based on their academic histories. About 43% of the articles published in these journals are authored by scholars connected to one editor at the time of the publication. Ph.D. students and faculty colleagues of an editor also improve their publication outcomes when this editor is in charge of a journal.

I. Introduction

THE world of economists who publish in high-impact journals is generally perceived as being small and composed of interconnected scholars (Goyal, van der Leij, & Moraga-Gonzalez, 2006). In 1995, about 71% of the editors of the thirty most-cited economics journals came from an institution located in the United States; similarly, 65.7% of journal articles' authors were appointed by a U.S. institution (Hodgson & Rothman, 1999). Among the different potential explanations for these figures, one is given by sorting of the most talented researchers in the same top universities (Kim, Morse, & Zingales, 2009). A second explanation relates to peer effects among researchers: the agglomeration of highly productive scholars in a particular university may generate positive spillovers on the scientific production of its members (Azoulay, Zivin, & Wang, 2010; Borjas & Doran, 2012; Waldinger, 2010). Finally, editorial favoritism—editors' practice of favoring professionally linked scholars in the publication process—might represent a third plausible reason (Laband & Piette, 1994; Brogaard, Engelberg, & Parsons, 2014).

This paper contributes to this last strand of the literature by presenting key stylized facts about author-editor connections in the publication process. To this end, I employ a unique data set containing detailed information on the academic histories of all scholars who published at least one article or served as editor in the leading general interest journals in economics across the 2000–2006 period. The data allow me to identify whether social ties between authors and editors exist along various dimensions. I focus on four different types of connections: I define an author and an editor as being connected if they have ever worked in the same institution at the same time (*Same Faculty*), if they received their Ph.D. from the same university in the same years (*Same Ph.D.*), if the editor

was one of the Ph.D. advisors of the author (*Ph.D. advisor*), or if the author has ever coauthored at least one paper with the editor (*Coauthors*).

Descriptive statistics show that about 43% of the 1,620 articles published over the period considered were written by scholars connected to at least one editor in charge of the journal at the time of the publication. Editors' former graduate students and faculty colleagues authored 15% and 29% of the articles, respectively. Furthermore, almost one-third of the authors were supervised during their Ph.D. by a scholar who was appointed as editor of a top journal. The data also reveal a large concentration of authors and editors in just a few institutions. Roughly 25% of the 2,105 authors in the sample were appointed by six U.S. universities at the time of publication; the same six institutions also employed 56% of the editors of the journals analyzed.¹

This paper finally uncovers interesting empirical regularities by analyzing differences in the publication outcomes of authors connected to a scholar when he is in charge as an editor compared with when he is not. During an editor's appointment at a journal, his former graduate students and faculty colleagues increase the number of articles in that journal by about 14% and 8%, respectively. Changes in journals' editorial policies, such as shifts toward particular research fields, do not seem to drive the results. The remainder of the paper is organized as follows. Section II provides a description of the data. I present key summary statistics and results in section III. Section IV concludes.

II. Data

The data used in this work provide detailed information on all articles published in the *American Economic Review* (AER), *Journal of Political Economy* (JPE), *Econometrica* (ECA), and *Quarterly Journal of Economics* (QJE), the leading American general interest journals in economics over the 2000–2006 period.² Data sources for articles are Web of Science, EconLit, and IDEAS-RePEc.³ The data report articles' number of citations received in each year since publication, authors' names, publication issue, number of pages,

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¹ These are Harvard University, University of Chicago, MIT, Stanford University, University of California, Berkeley, and Princeton University.

² I exclude from the sample papers published in the *Annual Papers and Proceedings* issues of the *American Economic Review*, as well as special issues, announcements, comments, replies, or notes.

³ Web of Science (WoS) is one of the main sources of bibliographic information and one of the largest citation databases (<http://thomsonreuters.com/web-of-science/>). Research Papers in Economics (RePEc) is one of the largest Internet repositories of academic research (<http://repec.org/>). EconLit is the American Economic Association's database on the world's economics journal articles, which have been classified by field of economics using the JEL code system (<https://www.aeaweb.org/econlit/>).

TABLE 1.—ARTICLES' CHARACTERISTICS

	All	AER	ECA	JPE	QJE
Articles	1,620	603	429	306	282
Pages	25.92	17.89	27.23	29.87	36.78
Citations (8 years)	57.69	56.69	47.6	50.26	83.26
Authors	1.95	1.94	1.92	1.94	2.03
Single author (%)	29.32	29.35	30.77	29.74	26.60
JEL codes (%)					
C	10.28	3.09	39.26	2.62	1.64
D	22.53	19.51	32.21	22.03	18.8
E	7.79	10.5	4.53	7.69	5.84
G	7.51	7.5	6.04	7.69	8.94
I	5.51	5.74	3.02	5.24	8.03
J	10.64	10.59	4.19	13.64	14.6
L	7.44	8.65	3.02	10.14	6.93
O	6.39	8.38	1.68	6.12	7.66
References					
Number	32.95	32.05	29.77	31.25	36.78
Same journal (%)	10.8	9.73	16.49	8.29	7.16
Editor cited (%)	47.47	47.76	40.56	45.42	59.57
Connected papers (%)					
Same Ph.D.	10.25	9.45	8.16	9.8	15.6
Ph.D. advisor	14.75	11.61	14.71	15.03	20.92
Same faculty	28.83	25.04	32.87	32.03	27.30
Coauthors	7.65	5.31	8.39	7.52	11.7
Pooled	42.72	37.15	45.22	44.12	49.29
HHI Index	0.028	0.015	0.018	0.026	0.052

The table reports articles' characteristics by journal for the period 2000 to 2006. Papers are defined as connected if at least one author was linked to the editor. Connections are defined in section III. JEL codes reported are: Mathematical Methods (C), Microeconomics (D), Macroeconomics (E), Finance (G), Health and Education (I), Labor and Demography (J), Industrial Organization (L), and Development and Growth (O).

list of references, three-digit JEL codes, and a set of keywords describing the article's topic.⁴ I then collected and skimmed each author's curriculum vitae to construct a longitudinal data set that allows me to follow any scholar in every year since the time of graduation.⁵ I have information on authors' gender, Ph.D. university and year of award, institution and position in which they are appointed in every year since graduation, as well as their main research fields.⁶ There are 2,015 authors attached to the articles analyzed. The same information is provided for the 42 scholars who have served as editor in one of the four journals considered over the 2000–2006 period. I further recovered information on editors' coauthors and scientific publications.⁷

Table 1 reports summary statistics for the articles in the sample. Overall, there are 1,620 articles published in the top four economics journals over the seven-year period considered. The AER published the highest number of articles (603), and the QJE accounts for the fewest (282). QJE tends

to publish longer papers, with an average of 36.8 pages.⁸ Statistics show that the QJE is the most-cited journal, and ECA ranks last (83.3 versus 47.6).⁹ The number of citations is likely to depend on both the length and the field of the article, possibly explaining differences in citations across journals. For instance, ECA mainly focuses on econometric and theoretical papers, which have been less commonly cited than applied ones in recent years (Card & DellaVigna 2013; Hamermesh, 2013). On average, there are about two authors per article: ECA tends to publish papers written by fewer authors, while the average number of authors publishing in the QJE is the highest (2.03); moreover, the QJE also shows the lowest share of single-author papers. The data finally provide information on articles' cited references: on average, articles quote 33 papers, 11% of which are articles published in the same journal. Interestingly, almost 48% of the published articles cite one or more papers of at least one editor in charge; this share increases to 60% when QJE is considered.

III. Social Ties in Academia

Table 1 reports the fraction of papers by authors who were connected with at least one editor at the time of the publication. I focus on four types of social ties. The first, which I define as *Same Ph.D.*, indicates whether an editor and an author obtained the Ph.D. from the same university in the same time window.¹⁰ About 10% of the 1,620 articles analyzed were written by authors connected according to the *Same Ph.D.* tie.¹¹ A *Ph.D. Advisor* connection is established when an editor had an academic position at the same university and in the same year in which the author obtained his or her Ph.D.; moreover, the two scholars also share at least one research field.¹² The fraction of connected papers according to this second measure is about 15%, with the QJE showing the highest figure (21%). I then investigate the role of connections between colleagues. Two scholars are socially tied if they have ever worked in the same institution in the same period before the editor's appointment (*Same Faculty*); more than one-quarter of the articles were authored by connected scholars according to this last metric. Finally, I examine social ties based on coauthorships. I define an editor and an author as *Coauthors* if they have ever coauthored a paper up to the year in which the editor started his mandate. The share of *Coauthors*' connected papers is around 8%. Overall, about 43% of the papers analyzed are authored by at least

⁴ I used an automatic computer algorithm (Thomson Reuters—Keywords Plus) to obtain a finely grained measure of an article's subfield. This algorithm assigns to each article a set of keywords generated by text-mining articles' abstract, title, and cited references (Zhang et al., 2016).

⁵ About 96% of the authors in the sample have their CV publicly available on the web.

⁶ These are one-digit JEL codes automatically retrieved from IDEAS-RePEc, listing authors' main research fields based on their entire publication history.

⁷ Only editors in chief and coeditors are included in the sample. Information on editors' publications includes the journal, the three-digit JEL codes, and a set of keywords (i.e., Keywords Plus).

⁸ This value depends on the formatting used by the journal: until 2008 the AER was the only journal using the two-column format.

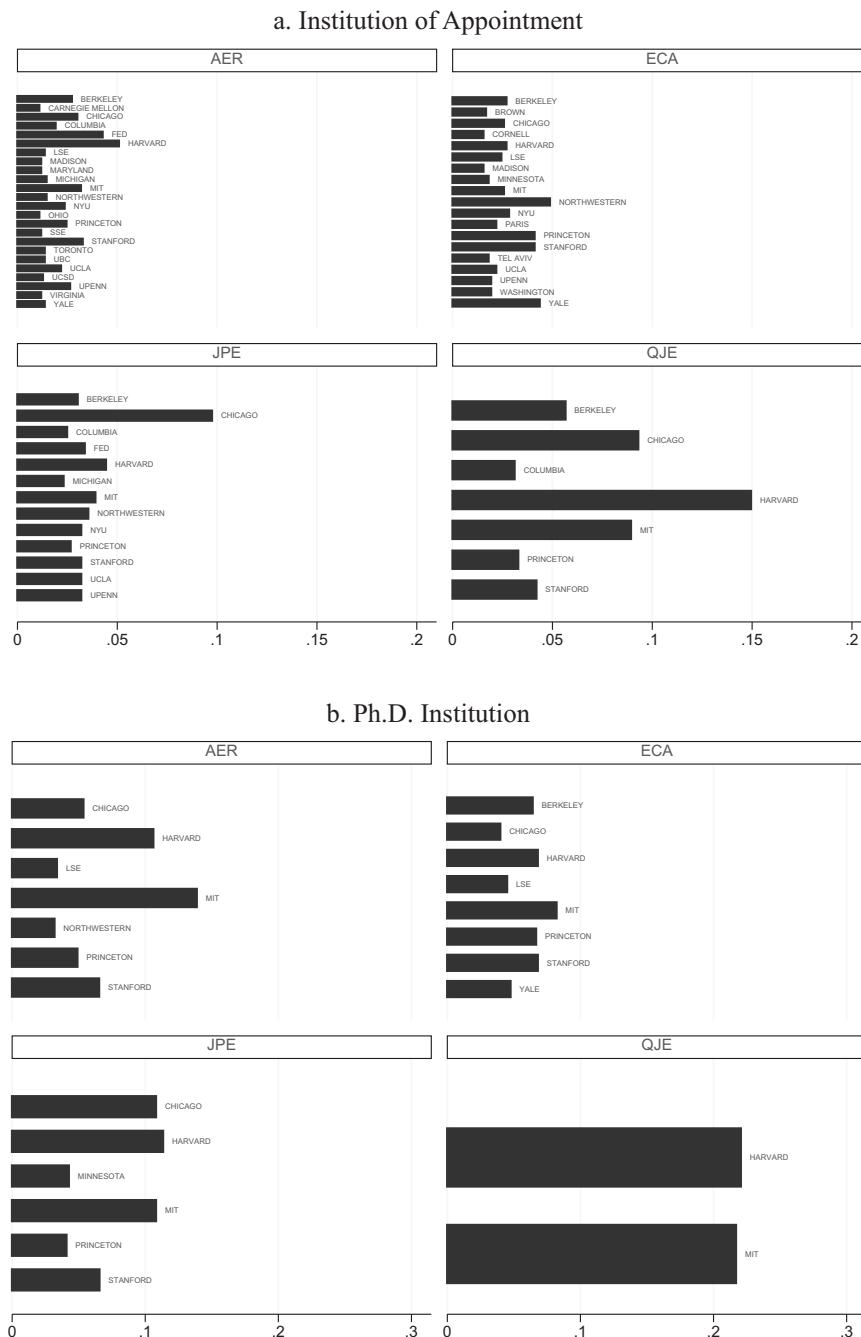
⁹ Citations include all papers (published or working paper) that have cited the article within eight years since publication. This information was collected in 2015; thus, each paper has a fixed time window of eight years in which it can be cited.

¹⁰ I allow for a maximum three-year gap between graduation dates.

¹¹ Articles authored by more than one scholar are connected if at least one author is linked to an editor.

¹² Fields are one-digit JEL codes retrieved from IDEAS-RePEc. Since I do not have information on the Ph.D. advisors for all of the authors in the data, this variable proxies for the link between academic advisors and their students.

FIGURE 1.—AUTHORS' INSTITUTION OF APPOINTMENT AND PH.D.



The figure plots authors' Ph.D. and appointment institutions, which, combined, account for 50% of published articles over the 2000–2006 period.

one scholar who is connected to at least one editor at the time of the publication.

The degree of concentration of this particular “market” can be analyzed by computing the Herfindahl Index (HHI) of institutions’ shares of articles in these journals across the whole observation period (Ellison, 2002).¹³ As shown in the

last row of table 1, the QJE has the highest concentration index, about 5%, followed by the JPE. Figure 1a provides a clear picture of the level of concentration in each journal by plotting the distribution of authors according to their institution of appointment. ECA and the AER seem to be

¹³ The HHI is the sum of the square of the market share of the largest fifty universities in terms of academic production observed in the data. For each journal j , this is defined as $HHI_j = \sum_i s_{ij}^2$, where s_{ij} is the fraction of all articles in journal j written by authors affiliated at the institution i .

The market share is thus the number of authors employed by an institution at the time of the publication over the total number of authors who have published in the journal. In general, values of the HHI index greater than 0.15 are considered high, implying that the market is an oligopoly with a medium-high level of concentration.

TABLE 2.—AUTHORS' AND EDITORS' CHARACTERISTICS

	Authors	Editors
Number	2,015	42
Male (%)	90.33	92.36
Early career (%)	27.76	0
Full professor (%)	51.38	96.53
Institution of appointment (%)		
Harvard	6.14	15.28
Chicago	5.30	25.69
MIT	4.20	4.86
Stanford	3.63	4.17
UC Berkeley	3.30	2.78
Princeton	3.07	3.47
Ph.D. university (%)		
MIT	13.24	31.25
Harvard	11.84	12.5
Chicago	6.34	8.33
Stanford	6.24	4.17
Princeton	5.40	4.86
UC Berkeley	4.03	2.78
Connected authors (%)		
Same Ph.D.	23.26	.
Ph.D. advisor	32.09	.
Same faculty	46.47	.
Coauthors	11.55	.
Pooled	67.86	.

The table reports scholars' characteristics for the period 2000 to 2006. Authors' and editors' characteristics refer to the ones at the time of publication and editorship, respectively. Authors are connected if they are linked to at least one editor at any time.

more open than the QJE and JPE, which show a bias toward authors appointed at their host institutions.¹⁴ Roughly 10% of the authors of papers appearing in the JPE were employed by the University of Chicago at the time of the publication, whereas the same share is almost half in journals like the AER and ECA. Similarly, only seven universities contributed to 50% of the articles published by the QJE, with Harvard alone accounting for about 15%. Figure 1b shows even more striking results, plotting the distribution of authors according to the institution of Ph.D. award. As in figure 1a, top U.S. universities are overrepresented; Harvard and MIT alone account for about 50% of all papers published in the QJE, while their share ranges from 15% to 22% in other journals.

Table 2 reports editors and authors' characteristics at the time of publication. Less than one-third of the authors are early career (i.e., within six years since graduation). Experienced and male scholars are the most represented groups in the sample: the share of full professors is 51%, while the share of men is roughly 90%. Despite the growing proportion of women in academia over the past thirty years (Donald & Hamermesh, 2006; Abrevaya & Hamermesh, 2012), female authors are still underrepresented in top economics journals. It is also interesting to observe that while about 25% of the authors received their Ph.D. from MIT or Harvard, the share increases to 44% for editors. Editors are usually male professors, mainly appointed by the University of Chicago and

Harvard. Finally, the proportion of scholars who are connected to at least one editor of any journal at any time is extremely large: about half of the authors had at least one editor as a colleague; moreover, roughly 40% of authors were supervised by a scholar who was or eventually became editor in one of these journals. The idea of economics being a small world seems to be confirmed by these figures; whether connections also affect publication outcomes of economics scholars remains an open question.

A. Social Ties and Publication Outcomes

This section compares publication outcomes of scholars connected to an editor when she or her is in charge and when she or her is not. I only consider ever-connected scholars to wash out any unobserved differences between connected and nonconnected authors that might also affect the outcome of interest. In practice, for each editor i in charge of journal j at time t , I identify papers published by authors connected to editor i in the same journal across the whole observation period. I then estimate whether the publication outcomes of editor i 's connections in journal j change depending on i 's editorship, based on the following linear regression model:

$$y_{ijt} = \beta_0 + \beta_1 \text{InCharge}_{ijt} + \lambda_i + \zeta_{jt} + u_{ijt}, \quad (1)$$

where y_{ijt} is the outcome of scholars connected to editor i in journal j at time t . *InCharge* takes a value of 1 whenever editor i is in charge of journal j at time t and 0 otherwise. Editor fixed effects (λ_i) control for the time-invariant unobserved quality of the network.¹⁵ The vector ζ_{jt} absorbs unobservables affecting journal j at any time t . Standard errors are clustered at the level of the interaction between journal j and time t .¹⁶ The coefficient β_1 estimates the average change in publication outcomes of scholars connected to an editor when this editor is in charge.¹⁷ Since submission data are not available, the coefficient is likely to capture changes in both authors' and editors' behavior. A positive effect may then be driven by a change in connected authors' submissions (e.g., due to higher expectations) or editors' preferences toward authors of their network.

I consider three different publication outcomes: the number of articles, the number of pages, and the number of lead articles. Panel A of table 3 shows that the number of articles authored by connected scholars increases when their connection is in charge as editor. The effect is particularly

¹⁵ If a scholar is appointed as an editor of two journals, I treat him or her as two independent observations. In this sample, only one scholar was editor of two different journals.

¹⁶ This type of clustering allows for arbitrary correlation of errors across observations of the same journal in the same term, whereby the number of clusters is 56. Clustering at the editor level would reduce the number of clusters.

¹⁷ The final sample comprises 588 observations; since journals have different release dates, the inclusion of a time fixed effects in equation (1) would not be independent of the journal. In order to control for time trends, I need to aggregate the data by term whereby the time variable becomes biannual, no longer being journal specific.

¹⁴ The QJE and the JPE are house journals: they have at least one editor coming from the university in which they are hosted, namely, Harvard University and the University of Chicago, respectively.

TABLE 3.—SOCIAL TIES AND PUBLICATION OUTCOMES

	Pooled (1)	Same Faculty (2)	Ph.D. Advisor (3)	Same Ph.D. (4)	Coauthors (5)	Same Field (6)
A. Articles						
InCharge	0.2419* (0.1373)	0.2670** (0.1046)	0.1456* (0.0777)	−0.0570 (0.0776)	0.0463 (0.0575)	0.0704 (0.0922)
B. Pages						
InCharge	10.9883** (4.4484)	10.2054*** (3.4194)	6.0008** (2.7478)	−1.3440 (2.4186)	2.7016 (1.9209)	4.6627 (2.9171)
C. Lead articles						
InCharge	0.0714 (0.0505)	0.0921** (0.0377)	−0.0098 (0.0290)	−0.0075 (0.0234)	0.0315 (0.0219)	−0.0199 (0.0331)
Controls						
Editor×Journal	Yes	Yes	Yes	Yes	Yes	Yes
Journal×Time	Yes	Yes	Yes	Yes	Yes	Yes
Observations	588	588	588	588	588	588

* $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$. Each observation is the combination editor×journal×time (ijt). In panel A, the dependent variable is the number of articles connected to editor i published in journal j in term t . The dependent variable in panel B is the number of pages of connected articles. The number of connected lead articles in journal j in term t is the dependent variable in panel C. Standard errors in brackets are clustered at the level of the interaction between journal j and time t .

relevant for faculty colleagues and former graduate students, who experience an increase of about 8% and 14% at the baseline, respectively.¹⁸ Regressions in panel B estimate the change in the number of pages written by connected scholars. The effect remains positive and statistically significant for the *Same Faculty* and *Ph.D. Advisor* connections, increasing by about ten and six pages per term, respectively. Finally, panel C reports the estimated effect on the number of lead articles of the journal issues.¹⁹ The coefficient is positive and statistically significant only for editors' faculty colleagues. The other two types of social ties have smaller and nonstatistically significant effects on all of the dependent variables considered (see columns 4 and 5).

An important concern is that an editor's appointment may be correlated with his connections' publication outcomes for reasons other than the existence of social ties. For instance, an editorial policy aiming to attract papers in a particular field would simultaneously determine the appointment of an editor in that field and the publication outcomes of the editor's connections. To test whether this field effect drives my results, I estimate whether editors accept more papers by authors in their research field when they are in charge.²⁰ Column 6 of table 3 shows that all estimates are not statistically significant, suggesting that the effect of connections on publication outcomes is not driven by editors' preferences toward their own research fields.

IV. Conclusion

Publishing in top journals largely affects the pay and promotions of economists, making the returns to publications

extremely large. At the same time, it has become increasingly demanding to publish in these journals (Card & DellaVigna, 2013). The growth of the economics profession has increased competition for the limited number of slots in high-impact journals; moreover, journals' concentration of authors and editors in a few institutions has perpetuated the belief of editors' favoritism toward their network members at the expense of unconnected scholars.

This paper analyzes the role played by social ties in the publication process. By employing a novel data set on top journal articles, authors, and editors, I have identified ties between editors and authors along different dimensions. The results show that a large fraction of the published papers are authored by scholars connected to an editor of the journal at the time of the publication. The share is particularly large for editors' former Ph.D. students and faculty colleagues. Furthermore, more than two-third of the authors are connected to a scholar who became editor of a journal at some point. I finally uncover important empirical regularities in the data: an editor's former graduate students and faculty colleagues improve their publication outcomes when the editor to whom they are connected is in charge of a journal.

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¹⁸ The average number of published articles per term of editors' colleagues and former Ph.D. students is 3.28 and 1.05, respectively.

¹⁹ The estimated effect on the number of articles is only weekly significant for Ph.D. advisor ties. It becomes significant at the 5% level when the number of pages is considered.

²⁰ Articles that have at least one three-digit JEL code and a keyword in common with the editor's set of JEL codes and keywords (based on past publications) are defined as the same field. Moreover, same field-connected papers need to have at least one paper of the editor among the cited references.

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