

RESEARCH ARTICLE

The authors of economics journals revisited: evidence from a large-scale replication of Hodgson and Rothman (1999)

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Abstract

In this paper, we present results from of a large-scale replication of Hodgson and Rothman's (1999, *The Economic Journal*, 109(453): 165–186) seminal analysis of the institutional and geographical concentration of authors publishing in top economic journals. We analyze bibliometric data of more than 49,000 articles published in a set of 30 highly influential economic journals between 1990 and 2018. Based on a random sample of 3,253 authors, we further analyze the PhD-granting institutions of the authors under study to better scrutinize the claim of an 'institutional oligopoly'. The findings confirm the long-term persistence of strong oligopolistic structures in terms of both, author affiliations as well as PhD-granting institutions.

Key words: bibliometrics; concentration in science; replication study; sociology of economics

JEL Codes: A14; B20

1. Introduction

In this paper, we address the claim that a large fraction of authors in leading economics journals is associated with a comparatively small number of well-known economics departments. Hence, these journals are said to reflect some kind of 'institutional oligopoly' (Hodgson and Rothman, 1999). This evaluation goes back to the pioneer study of Hodgson and Rothman (1999, hereafter H&R), who analyzed the institutional and geographical concentration of authors and editors of 30 top economic journals in 1995. More than twenty years ago they found a strong dominance of institutions located in the U.S., and, within that subset, dominance of a small group of elite universities: more than half (54%) of the authors of articles published in these top 30 journals obtained their PhD degrees at one of twelve prestigious U.S. universities. At the same time, more than one fifth (21%) of authors in said journals were also affiliated with one of these universities. According to H&R, these findings have non-trivial implications for the development of the economics discipline since such an oligopolistic structure may prove detrimental for innovativeness in economic research.

'The danger with such a high degree of institutional concentration in the editors and authors of journals – as is evidenced by the 1995 data – is that it may be difficult for further change to take place. 'Lock-in' may occur, where specific institutions defend specific, and possibly outdated, ideas and approaches. In these circumstances, it would be quite difficult for alternative or innovative approaches to establish themselves.' (Hodgson and Rothman, 1999: F182)

Indeed, there is some evidence pointing to the existence of such ‘lock-ins’ on the institutional level. First, the set of top journals in economics – such as the prominent top 5 journals (Card and DellaVigna, 2013) – is judged to be fairly stable across time (Diamond, 1989; Kalaitzidakis *et al.*, 2003, 2011). Second, publishing in high-ranked economic journals has become even more decisive in shaping career paths in the economics discipline over the last decades (Conley *et al.*, 2013; Hamermesh, 2018; Heckman and Moktan, 2020). Third, current regimes of research evaluation create a competitive environment in which economists strive for getting their research published in the discipline’s most prestigious outlets (Attema *et al.*, 2014; Kapeller, 2010; Serrano, 2018). In the past, it has been argued that these path-dependent, hierarchical patterns in economics publishing also negatively impact on the conceptual and theoretical diversity found in economics in general and economic top journals in particular (Kapeller, 2010; Stockhammer *et al.*, 2021). And indeed, journal rankings seem to have a wide impact on how economists judge and perceive individual research performance: experimental evidence shows that economists’ judgement of the value of publication lists that contain high-ranked journals is negatively affected when such lists contain also lower-ranked journals (Powdthavee *et al.*, 2018).

Against this backdrop, we aim to reproduce core aspects of H&R’s original study with current data to provide a large-scale and up-to-date picture on the current status of the alleged ‘institutional oligopoly’ in economics publishing. For doing so, we compiled a large dataset on authors in top economics journals that also allows us to include an explicit time-dimension – so unlike H&R we are not limited to an analysis of a single point in time (1995 in their original paper), but, rather, are able to track developments across time. In addition, we do not replicate H&R’s analysis of concentration in editorship – a topic that has been recently covered elsewhere (Ductor and Visser 2022).

As such our study not only ties in to related work in bibliometrics on concentration and insularity in economic research (Aistleitner *et al.*, 2019; Glötzl and Aigner, 2019; Wallace *et al.*, 2012), but also relates to the broader literature on hierarchy and stratification in economics (Fourcade *et al.*, 2015) and its impact on the discipline’s conceptual, institutional and demographic diversity (Corsi *et al.*, 2019). In this context we suppose that some simultaneity is at work: the quest for publishing in highly regarded top 5 journals (Attema *et al.*, 2014; Serrano, 2018; Sutter and Kocher, 2001), the tendency to treat citations as the ‘currency of our industry’ (Coffman *et al.*, 2017; see also Hamermesh, 2018) and the strong focus on rankings to evaluate economists or economics departments (e.g. Handelsblatt, RePEc) can be seen as both symptom as well as cause of the comparatively stark internal hierarchies in economics (Fourcade *et al.*, 2015). The latter is reinforced by an increased focus on scientific excellence, which is supposedly found in publications in top journals, which in turn creates strong incentives to focus on those top (field) journals and to ignore the remainder of the discipline. That these simultaneously reinforcing relationships shape institutional hierarchies becomes especially clear when thinking about the close interconnections between specific economics departments with great visibility and prestige (most prominently: Harvard, Chicago and the MIT; see also Medoff (2006)), the discipline’s major outlets (like QJE, AER or Econometrica) and the important role US-based PhD programs play for the education of economic research professionals. Thus, by analyzing these relations in greater depth we indeed find that important authors, contributions, departments, and outlets are strongly concentrated in terms of their spatial distribution (Gibson, 2021), their personal as well as professional networks (Colussi, 2018) as well as their biography (e.g. shared PhD-granting institutions).

The remainder of this paper is organized as follows. In the next section, we provide a brief overview of the literature that relates to the institutional peculiarities of the economics discipline with a special focus on institutional concentration and oligopolistic structures. Section 3 describes the data and our methodological strategy. Section 4 presents results from a large-scale replication of H&R based on analyzing current affiliations as well PhD-granting institutions of authors in top journals in economics. Section 5 provides a discussion and some concluding remarks.

2. Literature review

A little more than two decades ago H&R published their seminal paper on institutional concentration in economics. The core message of H&R's original paper was parsimonious and data-driven. It empirically documented the disproportionately strong role a few Anglo-Saxon academic institutions play in economics' top journals in the year 1995 as evidenced by the high share of editorial positions and authorships associated with these institutions. In this analysis, editorships and authors are interpreted as proxies for the assignment of 'gate-keeping' power (editors) and visibility (authorship) within these top journals. H&R thereby did not normatively evaluate this pattern – they even explicitly acknowledge the possibility that these non-random patterns reflect a healthy tendency for collusion among excellent researchers –, but they remind readers on the path-dependent properties associated with intellectual explorations. In this spirit, they hypothesized that such a concentration in discursive patterns might unnecessarily constrain future intellectual and theoretical developments, which also motivates their use of the term 'oligopoly'. In H&R this term is not employed in its textbook sense – a market with only a few potential suppliers –, but rather refers to the idea that a small number of players can end up in a privileged institutional position by capturing core positions in relevant networks ('gatekeeping-positions'; Hoenig 2015) that allow them to steer future developments akin to the role of core players in the platform economy (Gawer and Srnicek, 2021). Since the seminal paper of H&R, a rich body of literature has emerged focusing on the institutional peculiarities of the economics discipline. In this section, we provide a brief discussion of the most recent contributions.

The fact that the hierarchical structure of academic economics is characterized by a strong internal stratification has been confirmed empirically in various ways. Glötzl and Aigner (2019) for instance, provide a comprehensive and large-scale analysis of major patterns in economic research over a period of six decades (1956–2016). They find that the discipline is highly concentrated across six dimensions: articles, journals, geographic location, institutions, authors and paradigmatic orientation. For instance, the top 5 journals alone (out of 433 journals) account for almost a third (28.5%) of all citations and contain 71 of the 100 most-cited articles. In terms of institutional concentration, they show that the top 20 institutions (mostly US elite universities) account for 16.2% of all articles and receive 42% of all citations. Similarly, the 100 most-cited authors receive 15.5% of all citations. In a similar vein, Greenspon and Rodrik (2021) show that while authors from European institutions have made substantial gains in term of authorships, scholars from developing countries still remain largely excluded in their sample of 100 top-rated journals in the profession.

While these findings are in line with the general observation that scientific (re)production is subject to preferential attachment processes in terms of citations, prestige and attention (Birkmaier and Wohlrabe, 2014; de Solla Price, 1965; Lancho-Barrantes and Cantu-Ortiz, 2021; Merton, 1968) there is also some evidence that these processes are more pronounced in economics than in other disciplines. For instance, Glötzl and Aigner (2019) also argue that concentration in economics has increased over time (which indeed would make economists distinct from most other sciences; see Larivière *et al.* (2009)). Aistleitner *et al.* (2019) analyze citation patterns in top 5 journals across various disciplines and find that the share of intra-group self-citations among these outlets is almost twice as large in economics than in other social science disciplines. Moreover, they present evidence that economists more strongly tend to conform to institutional incentives that arise in the context of journal rankings (see also Nederhof (2008) for the case of Dutch economists), e.g. by citing mainly sources from high-impact journals, while ignoring contributions published in less well-known outlets. Gibson (2021) provides an interdisciplinary perspective on the institutional concentration of authors of the top 5 journals in economics as compared to other disciplines. An analysis of the author-affiliations in these journals in four different years (2000, 2005, 2010 and 2015) reveals that three U.S. ZIP codes, that cover Harvard, NBER, Chicago and Stanford, are associated with over 40% of articles in economics¹. While such a high level of concentration is not apparent in other disciplines, spatial

¹It should be noted that another top ranked institution, MIT, has an adjacent ZIP code (02139) to Harvard and NBER (02138). Treating 02138 and 02139 as a single cluster in Cambridge, Massachusetts reveals that the top three micro-

concentration in economics has even intensified over time. Gibson argues that such differences in terms of spatial concentration cannot be explained by only referring to seemingly exogenous variables, like market forces (e.g. salaries) or the reliance on specific research infrastructures (e.g. laboratories). This finding also aligns well with the observations of Fourcade *et al.* (2015), who show that the relation between institutional prestige and the representation of officials in major academic associations is much stronger in economics as compared to other disciplines, as well as Ductor and Visser (2022), who analyze the institutional concentration of the editorial boards of economics journals. Covering more than 100 journals over the period 1990–2011 the authors confirm the persistence of strong editorial oligopolies, in particular at the more prestigious journals. Among other things, they found that in the top 5 journals, nearly 30% of all editorial board members hold three editorial positions (in contrast, in the overall sample, nearly 80% of all members hold only one position). Moreover, most editors received their PhD at US-based institutions, where a small group of elite universities dominate the landscape (nearly 75% of all board members obtained their PhD at one of 13 US universities).

On the level of authors, Baghestanian and Popov (2014) analyze 6,000 author-publication observations and find a strong association between the reputation of an economists PhD-granting institution and the probability of publishing in a top economic journal which they call the ‘Alma mater-effect’. However, Conley and Önder (2014: 206) find that ‘graduating from a top department is neither necessary nor sufficient for becoming a successful research economist.’ They analyze economics PhDs’ research productivity who graduated between 1986 and 2000 at 154 economics departments in the US and Canada. Their overall conclusion is that, even at top economics departments, only a small share of graduates manages to produce a credible number of top-level publications (see also Conley *et al.*, 2013), a finding that would rather point to a strong concentration of top performance in the hands of few talented individuals. More recent findings from Yuret (2020) and O’Hagan (2021) complement this picture: Yuret (2020) analyzes the institutional background of the authors of the top 5 journals in economics between 2008 and 2017 and show that almost every article published in these outlets have at least one author who is either affiliated with or has received his or her PhD at one of ten top-level US institutions. O’Hagan (2021) explores the historical evolution of PhD programs in economics and demonstrates that the dominant position of Harvard and MIT as PhD-granting institutions is also reflected in the allocation of prestigious awards and that this dominance remains largely unchallenged over the past three decades.

In all, these findings suggest that H&R’s diagnosis of an ‘institutional oligopoly’ is still valid today. However, the works discussed in this section either take a holistic perspective on the discipline or focus on a particular aspect of top-level economic research (e.g. the focus on the top 5 journals or journal editors). With this paper, we thus seek to complement the existing literature in three ways. First, we assemble a novel dataset focused on publications in top journals and containing detailed data for all authors to be able to reproduce the analysis of H&R conceptually. Second, we aim to provide a more comprehensive analysis of top-level economic research by covering a broader set of high-impact journals over a period of three decades to replicate and extend the original approach taken by H&R. In this context, we focus on affiliations and PhD-granting institutions of authors to document institutional concentration – an aspect that has received little attention in the literature since the publication of H&R’s original study. Third, we aim to provide a more fine-grained methodology for analyzing the affiliations of authors in these journals to improve the precision of the underlying analysis.

3. Data and methods

For conducting our empirical investigation, we employ three main sources of bibliographic and biographic data namely (a) Clarivate’s annually published journal rankings labeled as *Journal Citation Reports (JCR)*, (b) *EconLit* as a core database on academic contributions in economics and (c)

geographic clusters (together with Chicago and Stanford) represent articles that receive more than the half (55%) of all citations to articles in the top 5 journals (Gibson 2021).

manually collected information on the authors in our sample found on CVs and professional websites. The latter step was mainly needed to gather information on the names and geographical locations of the PhD-granting institutions associated with the authors in our dataset.

In processing this data, we first used the Journal Citation Reports to identify the thirty most influential journals in economics considering 22 consecutive years (1997–2018; a description of the selection procedure is provided in the supplementary material to this article). Furthermore, we employ an automated web scraping algorithm and process data on individual articles compiled from the EconLit database covering papers published between 1990 and 2018². We excluded book reviews, editorials, obituaries and all items that either do not contain an author field or are not to be considered as original economic research (e.g. administrative reports). For every paper, we collected data on title, author name(s), author affiliation(s), source, publication date, abstract, and JEL-codes. A main advantage of the EconLit database is that it provides detailed information on author affiliations since 1990. As this data refers to affiliations at the time of publication, we always focus on historical affiliations, which implies that some authors will enter our dataset more than once, if they are associated with different institutions over time. This in turn, allows for a more balanced weighting of authors and affiliations associated with a given article, something that is difficult to achieve and, hence, typically not implemented in similar studies³. Using this data, we can assign accurate weightings to each article with respect to different authors and affiliations by first dividing a contribution across authors and, in a second step, relating each author's share of the contribution to her or his affiliations (see [Figure 1](#) for an illustrative example). Thereby, we assign an equal share of the contribution to each author and then distribute each author's contribution equally unto his or her affiliations.

Applying the weighting procedure sketched In [Figure 1](#) to our dataset of 49,469 papers results in an overall compilation of 113,020 observations of author-affiliation pairs. Each observation includes bibliographic information on the related paper as well as the weighted share expressing the relative contribution to a paper. Tracking the data in this form is necessary to accurately represent *authorships*, defined as the number of papers a scholar is involved with or an institution is unambiguously related to, and actual *articles*, defined as equivalent to single-authored articles, which are calculated by summing up the weights associated with all authorships of interest. From a more practical perspective going from author-affiliation pairs to authorships is equivalent to correcting for multiple affiliations held by some author at a given point in time, while going from authorships to articles amounts to correcting for co-authorships. Against this background, [Table 1](#) below reproduces some summary statistics describing the basic properties of our dataset on publications in the top 30 journals in economics from 1990–2018. Aside from information on author-affiliation pairs, authorships and articles, corresponding to the definitions stated above, [Table 1](#) also includes information on the number of (unique) academic institutions in our data set and their distribution across authors. All statistics are calculated using the number of unique authors as base (i.e. every unique author is, on average, associated with 2.93 affiliation-author pairs and 1.28 full articles).

For the analysis of PhD-granting institutions, we draw a random sample ($n = 4,000$) from the unique authors in the raw data to analyze the respective CVs of each author. After cleaning the sample for duplicate authors as described above and excluding those authors where no CV or equivalent information on a professional website could be obtained (617 authors)⁴, we arrived at a sample of 3,253 unique authors, slightly more than 8% of all unique authors. Applying the algorithm sketched

²Data were retrieved on June 2020 and May 2021 (data for *Economic Policy* was added at a later stage). Some practical challenges related to the processing and disambiguation of retrieved data are addressed in the supplementary material to this article.

³For an earlier example see Sutter and Kochner (2001) who manually apply a weighting procedure to a smaller dataset. More recent examples are Fontana *et al.* (2019) and Greenspon and Rodrik (2021) who apply fractional counting to the geographical origin of (multiple) authors per article.

⁴Many of the authors where we could not find a CV (or equivalent information) were students who left academia after their graduation. This implies that they either were only (minor) co-authors or they published articles that were part of their dissertation.

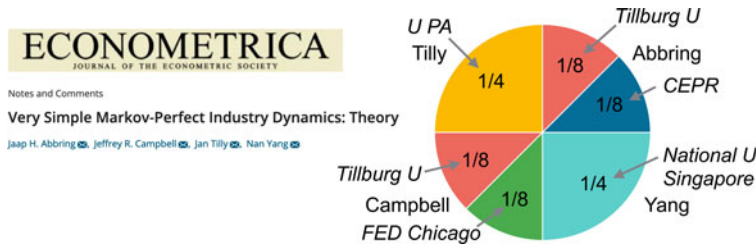


Figure 1. An illustrative example of our weighting procedure for the calculation of author-affiliation weights per paper.

Table 1. Dataset: basic distribution measures for authors, authorships and affiliations.

	Total	Mean	Median	Min	Max
Summary statistics on unique authors ($n = 38,519$)					
Affiliation-author pairs	113,020	2.93	1	1	130
Authorships	99,037	2.57	1	1	101
Articles	49,469	1.28	0.5	0.17	52.25
Affiliations of authors (total)	61,049	1.58	1	1	36
Affiliations of authors (unique)	12,844	0.33	–	–	–
Authorships in top 5 journals	22,073	0.57	0	0	72
Articles in top 5 journals	11,342	0.29	0	0	33.35

in Figure 1, we obtained a dataset containing information on the PhD-granting institutions related to 13,537 author-affiliation pairs (which amounts to a coverage of 12% of all author-affiliation pairs in the full dataset).

4. Results

In this section, we first aim to provide a bird’s eye view on our results regarding the institutional and geographic concentration of authors in top economics journals. We then turn to presenting more specific results from the analysis of weighted author affiliations and PhD-granting institutions in our full dataset and compare them with the original results of Hodgson and Rothman (1999) to explore whether the charge of an ‘institutional oligopoly’ in economics also holds when considering a larger and more precise dataset. Finally, we analyze the overall distributional properties of the underlying data with a special focus on the upper tail of the distribution of affiliations and PhD-granting institutions to identify the most important institutions.

4.1 Overview

The summary statistics of our dataset shown in Table 1 already point towards a highly skewed distribution of authorships and institutional affiliations as there is a huge distance between mean and maximal values. Figure 2 visualizes these properties by plotting the overall distribution of these parameters: the upper left panel in Figure 2 shows the absolute distribution of authorships across authors – in relative terms 44.3% of all authorships accrue to only 10% of all authors. For the case of author-affiliation pairs (upper right panel), the observed concentration is even more striking: 83.3% of all affiliations documented in our dataset relate to only 10% of all unique institutions with Harvard University being the most productive institution (2.78%) in these terms. The top five institutions (Harvard,

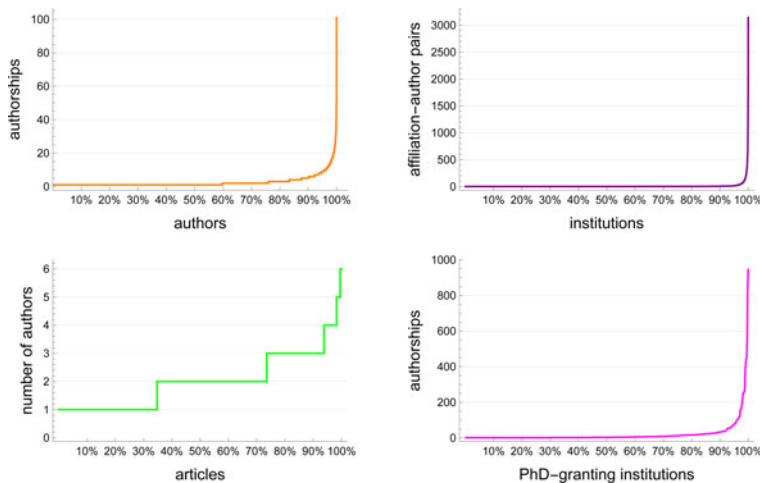


Figure 2. Overall distribution of authorships, authors per article and PhD-granting institutions.

Chicago, MIT, Stanford and Berkeley) alone are responsible for 9.4% of all author-affiliation pairs appearing in our dataset. A similar result is obtained for PhD granting institutions (lower right panel), where the figures also point to a high level of concentration: 10% of all PhD-granting institutions have trained roughly 60% of all (unique) authors in our sample, which are responsible for 74.1% of all authorships in the PhD sample. Furthermore, we have found that most papers in economics have three or less authors (lower left panel).

Table 2 further takes a closer look at the institutional background of the top 20 authors in terms of authorships, (main) affiliation and PhD-granting institution. The top 20 authors alone account for 1,258 authorships (or 1.27% of all authorships) with Daron Acemoglu being the most productive author (101 authorships). 13 out of the top 20 authors are affiliated with one of the top five institutions mentioned above and 15 authors obtained their PhD at three top institutions: Harvard, MIT and Princeton. 19 out of the top 20 authors are male which points once more to the stark underrepresentation of women in the discipline's elite segment (e.g. Gamage *et al.*, 2020; Lundberg and Stearns 2019).

Taking into account the role of self-reinforcing positive feedback effects in the allocation of scientific recognition and visibility (Birkmaier and Wohlrabe, 2014; Merton, 1968) and the related general insight, that indicators measuring scientific recognition – like the number of produced papers or received citations – typically show a skewed distribution, the general distributional properties documented in Figure 2 and Table 2 seem not too surprising. Against this backdrop, it seems important to emphasize that H&R's original argument, was not about concentration in academic discourse in general, but rather, that, about the particular way this concentration unfolds in economics. It relates to the claim that institutional hierarchies in economics are especially strong and persistent as well as about the fact that dominant institutions in economics are not diverse within themselves, but, rather, very similar to each other and also have strong institutional ties (as most top universities are US-based elite scientific, see Corsi *et al.*, 2019). In sum, this is supposed to cause an institutional closure that makes it more difficult to gain attention for ideas that emerge outside of this small elite circle of major authors, institutions and journals, which form a close-knit network.

The results so far are derived from the aggregation of the available data. Including a temporal dimension and disaggregating the data by the geographical location of affiliations reveals a clear trend in terms of the geographic origin of papers (see also section 2.3 and Figure S1 in the supplementary material). While the share of affiliations located in the US has gradually decreased from roughly 70% in 1990 to 40% in 2018, non-Anglo-Saxon countries have roughly tripled their shares to almost 30% of all affiliations in the same period. This trend is largely in line with the analysis of Greenspon

Table 2. The top 20 authors measured by the number of authorships.

Author name	No. of authorships	Affiliation ^a	PhD-granting inst.
Acemoglu, Daron	101	MIT	LSE
Shleifer, Andrei	97	Harvard U	MIT
Heckman, James J.	86	U Chicago	Princeton U
Stulz, Rene M.	71	Ohio State U	MIT
List, John A.	69	U Chicago	U WY
Tirole, Jean	64	U Toulouse	MIT
Krueger, Alan B.	63	Princeton U	Harvard U
Gruber, Jonathan	62	MIT	Harvard U
Glaeser, Edward L.	61	Harvard U	U Chicago
Hall, Robert E.	59	Stanford U	MIT
Currie, Janet	59	Princeton U	Princeton U
Alesina, Alberto	57	Harvard U	Harvard U
Card, David	57	U CA, Berkeley	Princeton U
Stein, Jeremy C.	52	Harvard U	MIT
Katz, Lawrence F.	51	Harvard U	MIT
Rajan, Raghuram G.	50	U Chicago	MIT
Aghion, Philippe	50	LSE/College de France	Harvard U
Blundell, Richard	50	U College London	LSE
Besley, Timothy	50	LSE	U Oxford
Lerner, Josh	49	Harvard U	Harvard U

^aAs of August 11th 2021 via online search.

and Rodrik (2021) who document a general decline of US-based institutions while European-based institutions are increasing their shares among a sample of top 100 economic journals. Not surprisingly and also in line with their results, we observe a stark underrepresentation of author affiliations based in developing countries (with the notable exception of China). However, these results should be taken with a grain of salt as the geographical position of authors' across journals shows some heterogeneity (see Figure 6 below as well as Figures S5 and S7 in the supplementary material). Also, this trend is less pronounced when looking at the development of authors' PhD-granting institutions (Figure S2).

4.2 Comparison with Hodgson and Rothman (1999)

In the next step, we compare H&R's results with estimates derived from our replication data to assess whether the original results are robust with regard to a variation in the time scale and the associated changes in 'second-tier' top journals that can be observed over time. As our dataset is constructed to reflect these two aspects by including a longer time span as well as by selecting a more timeless sample of thirty top journals, we can directly proceed with a comparison of the estimated shares for the most important affiliations and PhD-granting institutions of the authors under study (Figures 3 and 4). At this point it should be noted that our methodological approach substantially deviates from the approach pursued by H&R. As described above, we calculate weighted shares of authorships and affiliations responsible for producing a paper while H&R count unweighted authorships based on what they assume to represent the primary academic affiliation of an author. Thus, to make our results

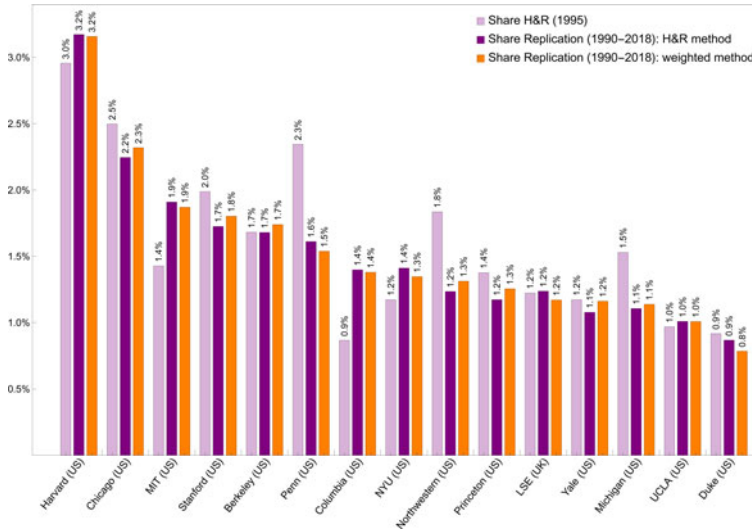


Figure 3. Most important affiliations in top 30 journals: H&R vs. replication. The affiliations are ordered according to their relative share in the replication study.

more comparable, we mimic the approach used by H&R and calculate unweighted authorships by assuming that, for each author, the top-ranked institution in our dataset also represents the primary affiliation⁵.

Overall, we find a strong agreement between the data presented by H&R for 1995 and our own data, which covers a longer time span and a more nuanced selection of ‘top journals’, which is less dependent on the relative prominence of journals as observed in the 1990s. The degree of correlation between the measured shares is especially high for the most visible institutions, which suggests that hierarchies in academic economics are less stable across ‘second-tier’ top institutions, whose share is affected more strongly by the overall expansion of the discipline over time. In line with the analysis of H&R, we show the thirty most important institutions identified from the top 30 journals used by H&R. However, this fine-grained comparison only works in one direction as we can only rely on the published data for H&R, which is restricted to their set of top 30 institutions. However, when asking for the exact composition of the top 30 institutions in the replication data, we find a significant overlap with the top 30 institutions identified by H&R – more precisely, 21 of the institutions identified as top 30 by H&R also are within the top 30 in the replication data⁶ and all of H&R’s top 30 are positioned within the top 100. This observation points to a strong persistence of institutional hierarchy in economics over the last decades, which also maps onto a geographical level as the large majority of the institutions covered is based in the US and none is located outside the Anglo-Saxon countries.

Similar observations can be made regarding the stable and prominent role of major PhD-granting institutions – if anything, the alignment between the estimates of H&R and our replication estimates is even closer in this case. To obtain this comparison we measure the total relative weight of authors, that have graduated at a certain institution, which, as in H&R, leads to an even stronger result on institutional concentration in academic economics as compared to considering author affiliations. Now as then, this finding underscores the pivotal impact educational facilities have on the further development of scientific fields – an observation that is especially peculiar as, again, most dominant

⁵This is less problematic as it might seem at first glance as being affiliated with two top-level universities at the same time (e.g. Harvard and MIT) is rather the exception than the rule. Moreover, most secondary affiliations are non-university institutions (e.g. NBER).

⁶See Figure S3 in the supplementary material for the top institutions that are ranked #16–30.

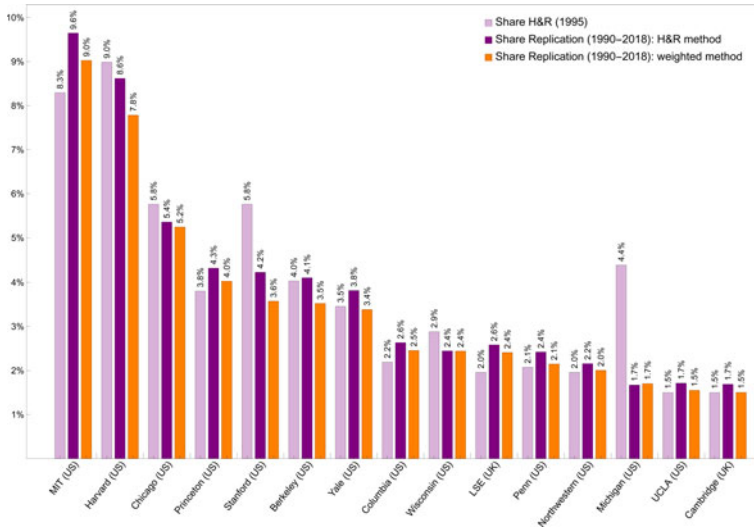


Figure 4. Most important PhD-granting institutions in top 30 journals: H&R vs. replication. The institutions are ordered according to their relative share in the replication study.

institutions are in the US, with the only two geographical outliers being in the UK. As in the case of affiliations, the results obtained from our replication dataset indicate the robustness and validity of H&R’s original results. Thereby, Figure 4 closely follows the presentation of H&R and, hence, plots the relative share of those top15 PhD-granting institutions that have been identified in their original analysis. However, in this case, the abovementioned bias emerging from the constraint of unidirectionality is truly minimal as 13 of H&R’s top15 PhD-granting institutions are also positioned in the top15 of the replication dataset (and 18 of H&R’s top20 are positioned within the top 20 of the replication dataset⁷).

4.3 Evaluating concentration in author affiliations on the level of journals

A first picture on the overall concentration of author affiliations has confirmed the general message of H&R’s original paper. However, given our more fine-grained and larger dataset, in what follows, we will exploit the opportunity to excavate additional interesting properties of economic research as conducted in top journals.

On the aggregated level, author affiliations in our dataset of top economic journals are highly concentrated among a small set of prestigious US-based elite universities (see Figure 5): More than a quarter of all weighted affiliations in our dataset stem from only 20 institutions; that is, on average, every fourth article in our top 30 journals is produced by this set of 20 institutions. To highlight the prominent position of US-based institutions we plot bars associated with affiliations outside the US in a different color. Thereby we show authorship shares for the top 5 journals and the top 30 journals separately, to assess whether institutional concentration increases with rank in the hierarchy of journals. This intuition is supported by the already discussed observation that highly visible institutions, authors and journals form a close-knit network (Colussi, 2018; Heckman and Moktan, 2020) – hence, we would expect ‘top-journals’, ‘top-authors’ and ‘top-institutions’ to cluster together. By comparing the authorship shares of the top institutions within the top 5 and the top 30 journals we find that the data provides some support for this intuition.

To get a better appreciation for the journal-specific heterogeneity of discursive patterns and the related spatial as well as the institutional concentration in economics, Figure 6 shows more fine-

⁷See Figure S4 in the supplementary material for the top PhD-granting institutions that are ranked #1–20.

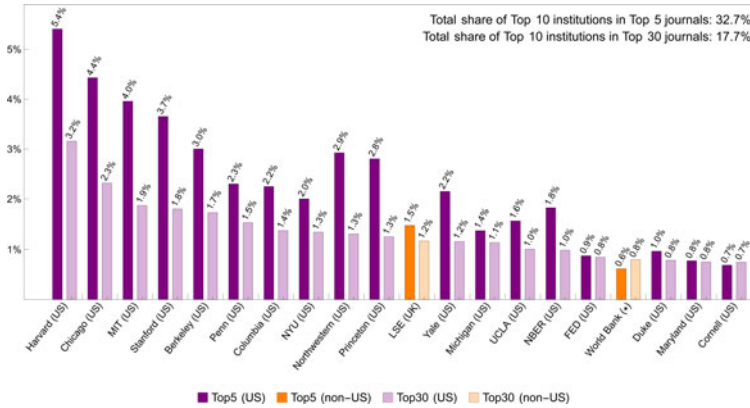


Figure 5. Top 20 institutions with the greatest share of authorships in the top 5 vs. top 30 journals. The institutions are ordered according to their share in the top 30 journals.

grained results for the four journals with the greatest concentration (measured as the share of authorships attributed to the top 10 institutions with each journal; top row) and the four journals with the lowest discursive concentration (bottom row)⁸. Casual inspections of these figures show, that the four journals with the highest institutional concentration contain three highly appraised, generalized journals (QJE, JEP & JPE), while the four journals showing the lowest degree of concentration can all be considered special field journals with high impact. Note also, that institutions based outside the US and, to some extent, outside the Anglo-Saxon countries manage to achieve greater relative prominence in those ‘least concentrated’ journals.

When inspecting Figure 6, it is also noteworthy that a journal with one of the lowest degrees of concentration in our sample – *Ecological Economics* – is also an outlier in terms of content as *Ecological Economics* is known to be more open to interdisciplinary and heterodox submissions as compared to the remainder of the top 30 journals under study. In this vein, Figure 6 can be fruitfully interpreted in greater detail. For instance, we observe in line with other studies (Colussi, 2018; Medoff, 2006) that institutional ties also do play a role for the allocation of journal space within top journals as the JPE – which is edited at the University of Chicago and published by the in-house press – shows a disproportionately high share of papers coming from the University of Chicago, while the QJE is traditionally associated with Harvard and MIT, which also reflects on the share of contributors in the QJE, that are associated with said universities. The obvious importance of such institutional ties is thereby difficult to align with the usual reasoning in economics that the dominant position of some institutions simply reflects the high quality of their associated research outputs as such a ‘home-bias’ is difficult to rationalize in terms of pure differences in research quality. Finally, Figure 6 also contains the Journal of Economic Perspectives (JEP) that can be considered as an outlier in terms of editorial policies as contributions to the JEP are typically invited by the editors. However, at least for the JEP this alternative editorial routine does not seem to contribute to greater institutional inclusiveness.

For now, this casual inspection leaves two main questions open: For one, while the share of the top institutions within the most concentrated journals as shown in Figure 6 might already seem dramatic, it seems difficult to put these numbers into context and to provide an accurate interpretation of *how unequal* exactly the institutional involvement in economics top journals is. For another, one main pattern of interest observed in Figure 6 – namely that high-quality, generalist journals seem to be more exclusive – still remains elusive as it is not very rigorously documented.

We address these two issues jointly by calculating Hoover-Indices for inequality for all journals under study. By doing so we find that, the degree of inequality in representation measured in our

⁸For a more detailed analysis of all journals under study see Figure S5.

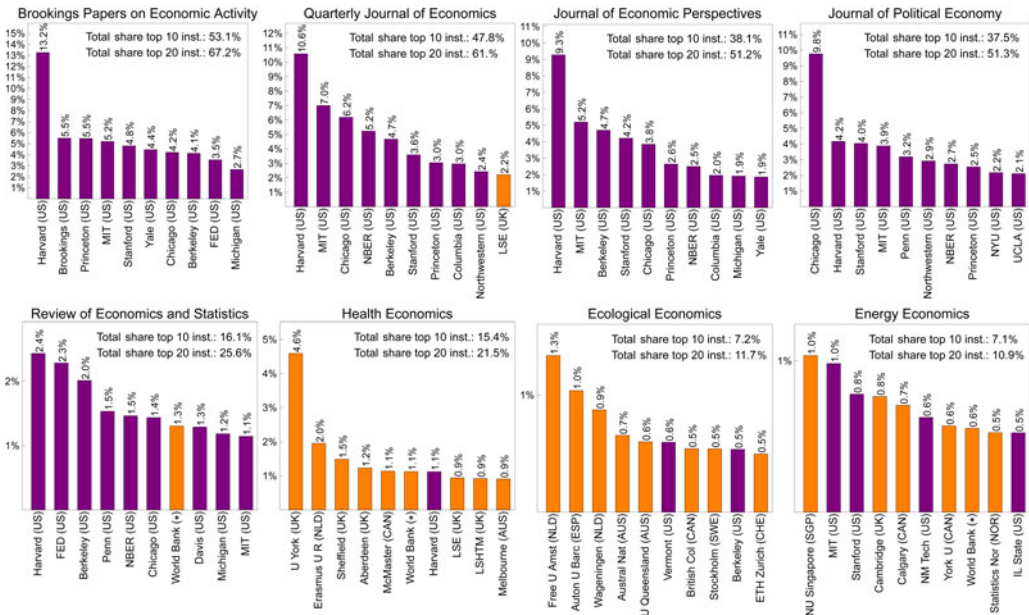


Figure 6. The four most concentrated journals (top row) and the four least concentrated journals (bottom row) in the top 30 journals.

data is comparatively high and roughly similar to the degree of inequality found when analyzing wealth distributions in modern economies. Second, we observe that generalist journals indeed tend to be more concentrated as all top five journals as well as the *Journal of Economic Perspectives* reside in the upper half of the resulting ranking, while more specialized field journals make up the majority of the bottom half, that shows less concentration. Thereby we also observe that the field of finance differs from the other research fields as finance journals also exhibit a higher degree of concentration. Finally, as we focus on pooled data, we inspected the latter for temporal heterogeneity in prevailing institutional hierarchies. In this context, we find that the basic patterns observed for the pooled data are quite stable over time. Thereby, a substantiation of these more fine-grained results using descriptive statistics can be obtained from section 3 in the article’s supplementary material.

4.4 Evaluating the impact of PhD-granting institutions on the level of journals

Already the preliminary analysis of the relative impact of major PhD granting institutions in economics undertaken in section 4.1 indicated that there is an even higher degree of institutional concentration when looking at PhD-granting institutions (understood as the share of articles in top journals, that are produced by the graduates of an institution) as compared to the concentration of author affiliations (understood as the share publications attributable to the employees of an institution). Thereby, it is quite natural to assume that the graduates of departments with the highest merits are represented disproportionately with a given academic field. Notwithstanding this word of caution the measured shares of articles, that are attributable to graduates from only a handful of universities still seem nominally huge (see Figure 7). This double grip of elite economic departments on both – major journals as well as major educational pathways into the profession – resonates well with H&R’s original claim as it makes the assertion of an ‘institutional oligopoly’ tractable. Further similarities relate to the strong overlap with the set of top institutions – comparing, for instance, the top20 institutions in both categories we find an overlap of 14 institutions – and the observation

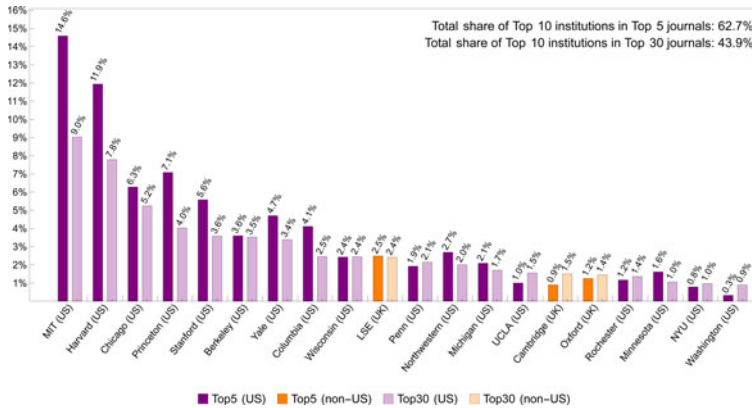


Figure 7. Top 20 PhD-granting institutions in the top 5 vs. top 30 journals. The institutions are ordered according to their share in the top 30 journals.

that institutional concentration increases with journal rank, i.e. the higher the rank of a journal the stronger is the prominence of highly visible and influential PhD-granting institutions.

The supplementary material (Figure S7) thereby reproduces charts for all single journals under study. The main reason for doing so is that these charts are useful for tracking the institutional peculiarities that coin the reciprocal publication network consisting of highly visible authors, highly regarded journals and prestigious universities. For instance, Harvard graduates are over-represented not only in the *Quarterly Journal of Economics* (QJE), which has institutional ties to Harvard, but also in journals related to Economic Growth, International Economics and Environmental Economics as well as in generalist journals, which feature mainly invited papers (JEL and JEP). MIT, on the other hand, is not only the overall strongest force in terms of PhD-graduates publishing in the top 30 journals – as Figure 7 indicates, publications of MIT graduates make up 9% of all contributions our sample – but especially dominant in highly regarded generalist journals like the *American Economic Review* (AER), *Econometrica* or *the Review of Economic Studies* as well as in Finance and International Economics. The University of Chicago, finally, is exceptionally visible in finance and macro-related issues as well as in Law & Economics. And, perhaps unsurprisingly, graduates of the University of Chicago also dominate the Chicago-based *Journal of Political Economy* (JPE).

What is somehow evident here is that the findings on dominant PhD-institution look qualitatively similar to the findings on the distribution of affiliations – although the magnitude of concentration is larger in general, which underscores the pivotal role a few Anglo-Saxon institutions play for the education of future ‘top’ economists.

5. Discussion and conclusion

The main aim of this paper was to provide an empirical analysis to critically reflect and substantiate past observations on institutional concentration in economics. The results as such are also useful to understand how established hierarchies in economics map unto actual publication patterns and to provide some basic intuition for studying the sociological mechanisms and the formal and informal networks, that foster and preserve the high degree of institutional concentration in economics.

An overall conclusion of this analysis is that the oligopoly effect in economics publishing, is (still) at work in a very big and potentially problematic way and its long-term persistence should be of concern for anyone interested in scientific integrity within the discipline of economics. However, most economists would probably be unimpressed when confronted with our results. As indicated, many economists would argue that economics is a discipline which is simply quite successful in locating the best minds only in a few places, which creates positive externalities. Hence, concentration is driven solely or

mostly by quality and has little to do with institutional prestige, although the latter may indeed serve as a suitable ‘signal’ in academic labor market contexts. Both concentration and prejudice are then reframed as fostering an effective research process that mimics an efficient allocation of resources. Success is then conceived in terms of citation exports and the most visible institutions are simply to be conceived as ‘successful’, instead of powerful. Ignorance towards other disciplines or lower-ranked journals then reinforces itself as lack of citations and recognition received on this basis weakens any outsider position and strengthens the impression that one’s preliminary ignorance was justified eventually. While this is a nice example for how prevailing theories and worldviews might impact on the interpretation of presumably neutral data, a constructive response would probably point to the differences in reported shares that seem to have a close relationship to underlying institutional patterns. If publication prospects only depend on quality – and Harvard and Chicago graduates are of about the same quality – then they should have equal shares of papers in both, QJE and JPE, shouldn’t they? In other words, our data in some respect casts much doubt on the simplistic Null-hypothesis that it is only quality that matters. In turn, as recent evidence on intergenerational social cohesion among elite economists suggest (Henriksen *et al.*, 2022; Colussi, 2018), it seems very plausible that socialization mechanisms and interpersonal networks matter.

Our findings and its implications for the future development of the discipline aligns well with recent evidence from large-scale surveys among economists. For example, Falk and Andre (2021) report widespread and substantial dissatisfaction with the current state of academic economics, even among the field’s most successful scholars. Similarly, Pestel and Oswald (2021) find that although a large majority of economists are concerned about climate change, only a minority of them actually do research on this topic. While we leave it to the reader to judge whether actual ‘lock-ins’ in economic research exist, our study provides a complementary view to these skeptical assessments that points to prevailing institutional patterns that might foster the exclusion of certain topics, methods and approaches.

As our study is explorative in nature it points to many venues for further research: First, an interdisciplinary comparison would be useful to better put our results into context – especially, as past research has shown that economic research is different on many levels from other social sciences. Second, the time-series properties of our dataset could be exploited more eagerly, to better understand specific dynamics related to single journals or universities over time. Finally, and although our data is rudimentary in many respects, we have gone a long way to assure a more or less consistent database for tracing the networks between authors, contributions, outlets and institutions (on two levels, employment as well as education). This database could serve as a basis for a (social) network analysis that might better explain the dynamic of persistence associated with institutional hierarchies in economics.

Supplementary material. The supplementary material for this article can be found at <https://doi.org/10.1017/S174413742200025X>

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