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## DISCUSSION PAPER SERIES

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The Academic Origins of Economics Faculty

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# The Academic Origins of Economics Faculty 

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## ABSTRACT

## The Academic Origins of Economics Faculty*

We use roster data of 96 top U.S. economics departments to document the academic origins of their tenure-track faculty. Academic origins may have implications for how undergraduate (B.A.) and doctoral (Ph.D.) students are trained and placed, as well as the type of research produced. We find that faculty educated at top-ranked Ph.D. universities are overrepresented; e.g., over half of our sample attended a top 15 university, and over a third attended a top six university. We find similar, but less pronounced, patterns for B.A. origins; e.g., over a third of those with a U.S. B.A. attended a top 15 university.

## JEL Classification:

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[^1]
## 1 Introduction

Each Fall, universities across the United States post openings for tenure-track faculty ("faculty") positions in economics departments (McFall et al., 2015). An applicant's success in this market depends on his or her ability to correctly judge which programs might be most interested in him or her (Cawley, 2018). Numerous considerations factor into the determination that an applicant and a position make a good fit, such as a candidate's research background, the position's teaching load, and the needs of the program's faculty (Cawley, 2018).

It is unclear how heavily the average applicant should weigh one important consideration: how the ranking of the applicant's Ph.D. program compares to the ranking of the program at which they would like to teach. Numerous academic rankings systems exist, from the popular U.S. News rankings to the international THE-QS World University Rankings (Jones, 2011; Morse et al., 2011). Although these rankings each use different metrics (and have their fair share of critics), they all attempt to quantify the quality of education that a university provides (Jones, 2011; Morse et al., 2011). It may therefore be assumed that coming from a highly ranked program weighs in the favor of the applicant, but to what extent is this the case?

One rough way to estimate the value of an individual's Ph.D. program ranking in the hiring process is to quantify the average rankings of Ph.D. origins of current faculty in the hiring program In this descriptive paper, we compare the rankings of faculty doctoral alma maters to the rankings of the programs in which faculty currently teach (a concept hereinafter referred to as "Ph.D. origins"). We additionally consider undergraduate program origins ("B.A. origins").

Describing academic origins allows us to highlight the level of academic diversity in a program's faculty roster. The academic origins of university faculty members may influence how undergraduate and graduate students are trained and the type of research conducted,

[^2]which can in turn influence how ideas are perpetuated around the world.
We find that faculty in our sample are much more likely to have graduated from higher-ranked economics Ph.D. programs than from lower-ranked programs. Graduates from the top 15 Ph.D. programs make up more than half of faculty in the sample (59\%), and graduates from Harvard and MIT make up an entire $15 \%$ of the sample, or 391 of 2,686. Overall, we find relatively little "upward mobility" in the top 96 economics programs, meaning that few economics professors in this group are teaching at programs ranked higher than their own Ph.D. programs. We find even starker results when we restrict the sample to faculty currently at the top eight departments: $76 \%$ received their Ph.D. from one of these same departments. We find some differences between men and women and between assistant professors and full professors, but in general these differences are small. We also find substantial geographic concentration of Ph.D.s around New England, Chicago, and the Bay Area. Angus et al. (2021) find similarly for geographic concentration among economics journal editors.

We also study B.A. origins. Compared to only a small share of international Ph.D.s among faculty in our sample, we find that nearly half (47\%) have international B.A. degrees. Top-ranked universities in the US produce a substantial share of the faculty in our sample, with respect to B.A. Excluding international B.A.s, $63 \%$ of faculty in the sample are from a top 96 university, and of these, $34 \%$ are from the top 15. Faculty with B.A.s from Harvard consist of more than 100 faculty (106).

Ph.D. origins/networks of faculty have been studied to a greater or lesser extent in many fields, such as history, business, computer science, finance, law, political science, sociology, English, political science, anthropology, and management (Clauset et al., 2015; Morgan et al., 2018; Way et al., 2016; Bair, 2003; Jones and Xiong, 2021; Segall and Feldman, 2018; Schmidt and Chingos, 2007; Burris, 2004; Headworth and Freese, 2016; Colander and Zhuo, 2015; Fowler et al., 2007; Kawa et al., 2019; Bedeian et al., 2010). But in more than 25 years, economics Ph.D. origins among faculty have not been thoroughly examined across the number of departments that we consider in this paper. Colander (2015) evaluates Ph.D. origins of faculty from the top five economics programs in the U.S. and finds that Harvard
and MIT have historically hired each other's former students. Similarly, Svorenčík (2018) considers the number of faculty produced by 10 of the top departments, Chen (2014) considers the Ph.D. origins of faculty at 15 top economics departments, Svorenčík (2014) focuses on MIT graduates specifically, $\mathrm{Wu}(2005)$ considers the 25 top economics departments (and also considers other disciplines), and Klein (2005) considers 25 of the top 200 departments ${ }^{2}$ To our knowledge, we are the first in over 25 years to focus on the Ph.D. origins of the economics faculty from all ranked Ph.D. institutions. To our knowledge, the research most similar to ours is that of Pieper and Willis (1999), who use data from 1992 to document where faculty at 121 doctoral-granting departments received their Ph.D.s.3

We also add to the literature on the B.A. origins in economics. Much pre-existing work considers where economics Ph.D. students or graduates received their Bachelors or pre-doctoral training (e.g., Spellman and Gabriel, 1978; Siegfried and Stock, 2007; Stock and Siegfried, 2014, 2015; Schlauch et al., 2018, Bryan, 2019). In some cases, these articles consider where Ph.D. graduates did their pre-doctoral training as well as where they place (Bryan, 2019; Stock and Siegfried, 2014). We differ in that we begin with all the faculty at ranked departments and focus both on their B.A. and Ph.D. origins.

We conclude that faculty rosters at top programs are often, but not always, less academically diverse than rosters at lower-ranked universities. We hypothesize that Ph.D. origins play a large role in hiring decisions but we do not know whether this influence is direct or indirect. For example, Ph.D. origins may be proxies for an applicant's level of experience, amount of subject matter knowledge, published research, or networking skills.

This paper proceeds as follows. We first provide details about the data collection and data in Section 2. We then present results on Ph.D. origins in Section 3 and on B.A. origins in Section 4. Section 5 concludes.

[^3]
## 2 Description of Data

We collected data over several steps to produce our dataset of the name, rank, gender, current university, Ph.D. university, and B.A. university of the tenure-track faculty of the top 96 USNWR-ranked departments 5 See Appendix Table A. 1 for a list of these departments. As a baseline, we gathered the names and titles (Assistant Professor, etc.) of all faculty at these 96 ranked USNWR schools ${ }^{6}$ Of these, we consider only those that we determine to be tenure track professors and classify these as Assistant, Associate, and Full Professors. To fill in the gender and Ph.D. university fields, we merge in data provided by Andrew Langan (Langan, 2018) and data we collected from the internet (primarily from departmental rosters and faculty webpages/CVs). We obtain the B.A. university from internet searches and are able to locate this information for $98.7 \%$ of the sample; we report B.A. results conditional on this variable being non-missing. We match the current department, the Ph.D. university, and the B.A. university to the 2017 economics program rankings from the U.S. News \& World Report (USNWR, 2017). We further classify all US universities outside the top 96 as "Other U.S.," and all international universities as "International." For the figures to have a unique value on the x-axis, we give each department a unique ID to break the ties (within a tie, the ID is assigned alphabetically by school name) (Table A.1). Our sample consists of 2,686 faculty members in 96 departments. The Data Appendix contains additional details on the data.

Departments with higher rankings tend to have larger faculties than lower-ranked universities, with the steepest drop in faculty size between ranks 1 and 25 (Appendix Figure A.1. Princeton, for example, has 59 faculty members, while Oregon State has only 6.7

[^4]The proportion of women on faculty rosters is relatively constant across department rank, generally hovering around $20 \%$ (Appendix Figure A.2). Higher-ranked universities typically have a higher proportion of full professors and a lower proportion of associate professors than lower-ranked universities, in which proportions of assistant, associate, and full professor are more equal (Appendix Figure A.3). This trend is driven by male professors; ratios of the three faculty ranks are more equal throughout the distribution among female faculty. There are also disproportionately fewer full professors among women versus men.

## 3 Ph.D. Origins

### 3.1 Faculty Produced by Ph.D. Departments

Higher-ranked Ph.D. departments produce more faculty in our sample than lower-ranked Ph.D. departments. Figure 1 Panel A shows that Ph.D. departments ranked 50 and below produce very few faculty, while top-ranked departments produce disproportionately many $\|^{8}$ One in seven professors (14.6\%) received their Ph.D. at just one of two universities: Harvard and MIT (Appendix Table A.2). Forty two percent of faculty come from just eight departments (which are also the top 8 ranked departments), and $60 \%$ come from just 15 departments (Appendix Table A.2). Moreover, higher-ranked Ph.D. departments place their students at higher-ranked departments than do lower-ranked departments (Appendix Figure A.5).

### 3.2 Ph.D. Origins by Department Tier

We now turn our attention to the department at which the professors are teaching and describe the concentration of Ph.D.s by department tier. We consider the following department tiers: Harvard/MIT, 3-6, 7-15, 16-26, 27-52, 53-96. The Ph.D. tiers also include "Other U.S." and "International." The Sankey Diagram in Figure 2 documents flows from Ph.D.

[^5](middle) to current department (right) ${ }^{9}$ (We discuss the B.A. results below in Section 4.) The height of a tier (e.g., Harvard and MIT) denotes the percentage of individuals in that tier, and the height of the flow denotes the percentage of individuals going from a given Ph.D. tier to a given Department tier. Nearly all Ph.D.s come from one of the 96 ranked USNWR universities or from international universities. Among those from the 96 ranked USNWR universities, fewer than $5 \%$ come from universities ranked lower than 52. More than half of all faculty come from the top $15 \mathrm{Ph} . \mathrm{D}$. departments (59\%), and more than half of faculty from the top 15 deparments ( $57 \%$ ) come from the top 6 departments ${ }^{10}$ A substantial proportion of all faculty come from Harvard and MIT (15\%). The percentage of faculty with Ph.D.s from Harvard and MIT is much higher at the top 6 departments (44\%) and Harvard and MIT (59\%).

### 3.3 Ph.D. Origins by Individual Department

Figure 3 Panel A shows, for a given department (x-axis), the average rank of Ph.D. programs faculty members completed. Faculty members from the 42 unranked USNWR programs are assigned the rank of 97 ; faculty members from US departments not in the USNWR rankings and international departments are excluded. There is a linear relationship between department ID and the average rank of Ph.D. programs, and the top departments employ faculty who come from very highly-ranked Ph.D. departments on average. The slope coefficient is much smaller than 1 , indicating that on average, faculty received Ph.D.s at higher ranked programs than the ones at which they teach.

Figure 4 shows where faculty at individual departments (stacked bars) received their Ph.D.s, where the Ph.D.s are presented in tiers 11 While the broad patterns seen in Section 3.2 are evident, there is also variation across departments. Some departments draw

[^6]much more heavily from certain tiers than similarly-ranked departments $\sqrt{1213]}$
Figure 5 Panel A focuses on only the top eight departments. Each column is a department, and the stacked bars within represent the fraction of faculty who come from a given Ph.D. department, from a department outside of the top 8 departments, or from an international department. More than half of the faculty at each of the eight departments received their Ph.D.s at one of the top eight departments. Approximately $60 \%$ of faculty at Harvard and MIT comes from Harvard or MIT. Yale and the University of Chicago have the greatest percentage of faculty from outside the top eight departments: $41.5 \%$ and $31.4 \%$ of their professors come from either international Ph.D. programs or from U.S. programs outside of the top 8 .

### 3.4 Ph.D. Origins by Faculty Characteristics and Geography

How do Ph.D. origins differ by characteristics such as gender, rank, and geography? Appendix Figure A.11 replicates Figure 3, but splits by gender. On average, female professors come from slightly higher ranked Ph.D. programs than do male professors (until about the 80th ranked department), though these differences are very small and the confidence intervals overlap. ${ }^{14}$

How do these patterns vary over time? While we cannot answer this perfectly, we can at least compare assistant to full professors, keeping in mind that the full professors have

[^7]survived the tenure process and are more likely than assistant professors to have switched institutions ${ }^{15}$ and that the rankings we use are not necessarily the same as when full professors started (though they are likely quite correlated). Appendix Figure A. 12 shows that assistant and full professor on average came from similarly-ranked Ph.D. programs for the top 25 departments, with assistant professors coming from higher ranked departments thereafter, providing at least a little evidence that these institutions have become more selective (along this metric) over time (though the confidence intervals overlap). ${ }^{16}$

How do these patterns vary over space? Appendix Figure A. 13 shows geographic concentration faculty by department (Panel A) and by Ph.D. department (Panel B). Each dot is a department, and bigger dots mean more faculty or Ph.D.s. The color corresponds to department rank, where a darker color is a higher rank. Panel A shows that there are few departments in the West, Northwest, and South, with most being situated in the Northeast, Midwest, and California. Faculty size is relative even across departments. Panel B shows that faculty are disproportionately educated around New England, Chicago, and the Bay Area. Relatively few come from the West and South.

## 4 B.A. Origins

We now turn our attention to B.A. origins and largely mirror the discussion of Ph.D. origins above. Figure 1 Panel B shows the number of faculty in the sample produced by B.A. university, where the B.A.s are ranked using the same USNWR rankings as above. The overall pattern reflects that found for Ph.D. origins (Panel A), though the magnitude is smaller. To put this in perspective, consider 1) that there are orders of magnitude more US B.A. programs than there are U.S. economics Ph.D. departments; and 2) as we will see below, only about half of faculty in our sample attended a US B.A. program. The top-ranked B.A. universities produce a disproportionate number of faculty. More than twice as many come from Harvard (106) than from any other university (Berkeley is second with 52; see

[^8]Appendix Table A.6). Considering only those with U.S. B.A.s, $20 \%$ received their B.A. at one of only five universities (Harvard, Berkeley, Princeton, Yale, and MIT); similarly, 20\% of those with U.S. B.A.s received their B.A. from a university in the Ivy League.

Figure 2 shows the transition from B.A. (left) to Ph.D. (middle). ${ }^{17}$ Nearly half (47\%) studied internationally, a much higher percentage than those with international Ph.D.s (9\%). Among U.S. B.A.s, nearly two-thirds (63\%) come from the 96 ranked universities. Among those with B.A.s in the top $96,53 \%$ come from the top 15 (i.e., $34 \%$ of U.S. B.A.s are from the top 15) ${ }^{18}$ This is striking given that there are thousands of universities in the U.S.

Figure 3 Panel B depicts the average rank of the B.A. university a department's faculty came from, restricted to the 138 USNWR universities. Broadly speaking, the same pattern is found as with Ph.D.s (Panel A), particularly among higher-ranked departments: on average, faculty at the elite departments received their B.A.s at elite undergraduate institutions.

The final figure, Figure 5 Panel B displays the universities at which the faculty of the top eight departments received their B.A.s. In contrast to the Ph.D. version in Panel A, a large percentage of faculty B.A.s are international. There is a good amount of variance, ranging from $33 \%$ at Harvard to $63 \%$ at Princeton. We also see that five of eight departments (all but Yale, Northwestern, and Chicago) have more than half of their U.S. faculty from one of these same eight universities. A large share of these come from Harvard, and, to a lesser extent, Princeton.

## 5 Discussion and Conclusion

We find that graduates of highly ranked doctoral economics programs are far more common on faculty rosters than graduates of lower-ranked doctoral economics programs. This finding

[^9]is particularly pronounced for graduates of top-15 programs, top-six programs, and Harvard and MIT. These findings support the finding of Colander (2015) that elite economics programs generally hire from their own or a small number of departments. We go beyond that finding to show that this pattern extends to many universities and across faculty rosters, but to a lesser degree for the lowest-ranked schools.

One way to view the patterns that we document is that they are evidence of lack of "intellectual diversity" among top departments ${ }^{19}$ The top schools send their students to positions in these same top schools, and if students follow ideologies of their professors, then these ideologies may be perpetuated when these students become professors themselves 20 On the other hand, it is possible that, given department objectives, current hiring practices make sense.

Why might we observe the patterns we do? There are several possibilities, beginning with the supply (candidate) side of the market. First is candidate preferences. Candidates may have preferences over highly-ranked departments, departments with colleagues with similar research interests, or departments that support their research with funding opportunities. Candidates may also have preferences over geography and prefer to live in specific locations such as their alma mater or a school close to their home or Ph.D ${ }^{211}$ Second, candidate confidence in their suitability for the position may be a factor: candidates from lower-ranked Ph.D. departments may feel less qualified to apply for a position in a higher-ranked department. Third, higher-ranked departments may have more job market candidates than do lower-ranked departments.

There are also several possible factors on the demand (department) side. First is networks and information. The hiring committee may be more familiar with an applicant and/or an applicants' advisors from highly-ranked schools and feel like they can trust that

[^10]the applicant is likely to be successful. Faculty advisors at top departments are more also likely to be well-known in the profession and may be able to exert influence in their students' behalf. This has been seen in domains such as economics publishing (Colussi, 2018). Second is selection. If the best candidates are at the best schools, then it may make sense to hire them ${ }^{22}$ Third is the presumed academic prowess of candidates from certain departments. Candidates of same or higher-ranked schools may be perceived (accurately or inaccurately) to be more hard-working, intelligent, ambitious, and/or capable than those from lower-ranked schools. Finally, the hiring department may desire certain research or teaching philosophies or approaches. Applicants of highly ranked schools have been trained in certain philosophies or using certain teaching styles that top-ranked schools may prefer.

Future research might address what departments are trying to maximize (or minimize, such as the uncertainty of getting an unproductive colleague) in their faculty hiring, to what extent department hiring is efficient, to what extent there might be "diamonds in the rough" from lower-ranked departments Conley and Önder, 2014, and how the results we document compare to those in other fields.

[^11]
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## 6 Data Appendix

We keep individuals who are listed on the directory at the time of data collection even if they have not been removed after a recent move to another department.

We primarily used the titles collected from the faculty rosters to classify individuals to their rank; in some cases, we also used additional information, such as that obtained from faculty webpages. In general, we exclude instructional faculty such as professors of practice, lecturers, and instructors; affiliate and courtesy faculty (including secondary appointments at Duke); emeritus professors; those who have not started yet; fixed term faculty; and research professors. We assume that chairs are full professors unless it explicitly states that they are otherwise, such as associate professors. We also assume department chairs, deans, and those in other university leadership roles are full professors. It sometimes happens that a chaired professor's title is in another discipline such as finance; we include these cases. We note that classification is an imperfect process and that in some cases judgement calls have to be made. We also corrected several errors in the dataset that we became aware of, but a small amount of measurement error likely remains. The gender of the candidate was obtained by photo and/or pronouns and, in some cases in the data provided by Langan (Langan, 2018), using an algorithm of likely gender based on name. Individuals almost always have only one Ph.D., but can have multiple; in such cases we consider only one $\quad 23$

Classifying B.A. institution is often straightforward, but not always. If the person has two Bachelors degrees, we use the one that is in economics. If both or neither are in economics, we use the one that appears to have a later graduation date. We use our judgement when classifying international degrees. If we do not see a Bachelors but do see another (non-doctoral) degree from an international university, we consider the earliest nondoctoral degree to be the B.A. (even if there is a later degree in economics and the earlier one is not); this is necessary due to the sometime imperfect mapping of foreign degrees to B.A.s. If there is a (non-doctoral) school listed with no graduation date or degree (even

[^12]if they did not graduate from there), we consider that to be the B.A. If they have a dual degree from two universities with one in the U.S., we go with the one in the U.S. We use our judgement in other situations.

## 7 Figures

Figure 1: Number of Faculty (in Sample) Produced, by Ph.D. and by B.A. University
Panel A: Faculty Produced by Ph.D. University


Panel B: Faculty Produced by B.A. University


Notes: This figure displays the number of faculty produced by Ph.D. university (Panel A) and by B.A. university (Panel B), which is ordered according to ID (see Appendix Table A.1. In other words, this displays how many graduates of a given Ph.D. or B.A. university are now faculty members at departments in the sample. Because the Ph.D. and B.A. universities use the same ranking, the x axis refers to the same universities in both panels. Ph.D. and B.A. universities are limited to those in Table A.1, including those listed in the table notes.

Figure 2: Flows From B.A. Programs (Left) to Ph.D. Programs (Middle) to Departments (Right), by Tier


Notes: This Sankey diagram shows flows from B.A. programs (left) to Ph.D. programs (middle) to departments (right). The height of the flow represents the number of individuals going from one group to another. The B.A. column is shorter due to missing data on B.A.s.

Figure 3: Average Rank of Ph.D.s and B.A.s of a Department's Faculty
Panel A: Average Rank of Ph.D.


Panel B: Average Rank of B.A.


Notes: This figure displays, for a given department, the average rank of the Ph.D. programs faculty members attended (Panel A) and the average rank of the B.A. programs faculty members attended (Panel B). Departments are ordered on the x-axis according to ID (see Appendix Table A.1). Because the Ph.D. and B.A. universities use the same ranking, the x axis refers to the same universities in both panels. The sample is restricted to those who attended schools (for Ph.D. or B.A., depending) included in USNWR rankings.

Figure 4: \% of Department Faculty from Different Tiers of Ph.D. Program


Notes: This bar chart displays the percentage of a department's faculty that came from groupings of Ph.D. program rankings. Each row is a department, and the colorings of the row represent the percentage of faculty that come from the particular Ph.D. program group. Departments are ordered according to ID (see Appendix Table A.1).

Figure 5: Ph.D.s and B.A.s of Faculty of Top 8 Departments
Panel A: Ph.D.s of Faculty of Top 8 Departments


Panel B: B.A.s of Faculty of Top 8 Departments


Notes: This figure displays the percentage of a department's faculty that came from top $8 \mathrm{Ph} . \mathrm{D}$. programs (Panel A) and from the same B.A. universities (Panel B). Each row is a department, and the colorings of the row represent the percentage of faculty that come from the particular Ph.D. or B.A. program.

## Appendix Figures

Figure A.1: Number of Faculty by Department


Notes: This figure displays the number of faculty by department, which is ordered according to ID (see Appendix Table A.1.

Figure A.2: Percent of Faculty Who Are Female, by Department


Notes: This figure displays the percentage of faculty who are female by department, which is ordered according to ID (see Appendix Table A.1).

Figure A.3: Percent of Faculty Who Are Assistant, Associate, and Full Professors, by Department


Notes: This figure displays the percentage of faculty who are an assistant professor (blue), associate professor (red), and full professor (black) by department, which is ordered according to ID (see Appendix Table A.1). Panel (a) shows the full sample; Panel (b) restricts the sample to male; and Panel (c) restricts the sample to female.

Figure A.4: Percentage of a Ph.D. Programs' Graduates Who Went to Higher-ranked Department, by Ph.D. Program


Notes: This figure displays the percentage of a Ph.D. programs' graduates (in the sample) who went to a higher-ranked department than their Ph.D. program. Ph.D. programs are ordered according to ID (see Appendix Table A.1). Because by definition those who graduate from the top-ranked Ph.D. programs cannot go to a department ranked higher than theirs, they are excluded. Ph.D. programs are weighted by number of graduates (in the sample).

Figure A.5: Average Rank of Department a Ph.D. Programs' Graduates Went To, by Ph.D. Program


Notes: This figure displays the average department rank that graduates of a particular Ph.D. program went to. Ph.D. programs are ordered according to ID (see Appendix Table A.1). Ph.D. programs are weighted by number of graduates (in the sample).

Figure A.6: \% of Department Faculty from Different Tiers of Ph.D. Program, Dpts. 1-26 and 27-52


Notes: This figure displays the percentage of a department's faculty that came from groupings of Ph.D. program rankings. Each row is a department, and the colorings of the row represent the percentage of faculty that come from the particular Ph.D. program group. Panel (a) shows department withs ID6 1-26, while Panel (b) shows departments with IDs 27-52.

Figure A.7: \% of Department Faculty from Different Tiers of Ph.D. Program, Dpts. 53-77 and 78-96


Notes: This figure displays the percentage of a department's faculty that came from groupings of Ph.D. program rankings. Each row is a department, and the colorings of the row represent the percentage of faculty that come from the particular Ph.D. program group. Panel (a) shows department withs IDF 53-77, while Panel (b) shows departments with IDs 78-96.

Figure A.8: Percentage of Department Faculty from Top X Ranked Ph.D. Programs, by Department


Notes: This graph shows the percentage of a department's faculty from the departments indicated in the Panel title.

Figure A.9: Herfindahl Index, Broad Categories


Notes: This figure displays the Herfindahl indices for each department. The index is computed using broad categories of Ph.D. departments.

Figure A.10: Herfindahl Index, Individual Departments


Notes: This figure displays the Herfindahl indices for each department. The index is computed using individual Ph.D. departments.

Figure A.11: Average Rank of Ph.D. Programs of a Department's Faculty, by Male and Female Professors

$\sim$ Male $\sim$ Female
Notes: This figure displays, for a given department, the average rank of the Ph.D. programs faculty members attended. Departments are ordered on the x-axis according to ID (see Appendix Table A.1). The sample is restricted to those who went to USNWR Ph.D. programs.

Figure A.12: Avg. Rank of Ph.D. Programs of a Department's Faculty, by Assistant and Full Professors


Notes: This figure displays, for a given department, the average rank of the Ph.D. programs faculty members attended. Departments are ordered on the x -axis according to ID (see Appendix Table A.1]. The sample is restricted to those who went to USNWR Ph.D. programs.

Figure A.13: Geographic Distribution of Faculty, by Department and Ph.D. School Attended
Panel A: Distribution of Faculty


Panel B: Distribution of Ph.D. Origins


Notes: This figure plots the distribution of faculty, where each dot is a department (Panel A) or a Ph.D. school attended (Panel B). Dot size (color) corresponds to number of individuals (rank) in the department or Ph.D. school attended. Only the 1-96 ranked USNWR departments are included.

Figure A.14: \% of Dpt. Faculty from Different Tiers of B.A. Program, by Department


Notes: This bar chart displays the percentage of a department's faculty that come from groupings of B.A. program rankings. Each row is a department, and the colorings of the row represent the percentage of faculty that come from the particular B.A. program group. Departments are ordered according to ID (see Appendix Table A.1). Observations with missing information on B.A. are excluded.

## Appendix Tables

Table A.1: Department USNWR Rankings and IDs

| School | USNWR | ID |
| :---: | :---: | :---: |
| Harvard University | 1 | 1 |
| Massachusetts Institute of Technology | 1 | 2 |
| Princeton University | 1 | 3 |
| Stanford University | 1 | 4 |
| University of California-Berkeley | 1 | 5 |
| Yale University | 1 | 6 |
| Northwestern University | 7 | 7 |
| University of Chicago | 7 | 8 |
| Columbia University | 9 | 9 |
| University of Pennsylvania | 10 | 10 |
| New York University | 11 | 11 |
| University of California-Los Angeles | 12 | 12 |
| University of California-San Diego | 12 | 13 |
| University of Michigan | 12 | 14 |
| University of Wisconsin | 12 | 15 |
| Cornell University | 16 | 16 |
| Duke University | 16 | 17 |
| University of Minnesota | 16 | 18 |
| Brown University | 19 | 19 |
| Carnegie Mellon University | 20 | 20 |
| University of Maryland | 21 | 21 |
| University of Rochester | 21 | 22 |
| Boston University | 23 | 23 |
| Johns Hopkins University | 23 | 24 |
| Boston College | 25 | 25 |
| Pennsylvania State University | 25 | 26 |
| University of Texas-Austin | 27 | 27 |
| Washington University in St. Louis | 27 | 28 |
| Michigan State University | 29 | 29 |
| Ohio State University | 29 | 30 |
| University of California-Davis | 29 | 31 |
| University of Illinois-Urbana-Champaign | 29 | 32 |
| University of North Carolina | 29 | 33 |
| University of Virginia | 29 | 34 |
| University of Washington | 35 | 35 |
| Vanderbilt University | 35 | 36 |
| University of California-Santa Barbara | 37 | 37 |
| University of Southern California | 37 | 38 |
| Indiana University | 39 | 39 |
| Texas A\&M University | 39 | 40 |
| University of Pittsburgh | 39 | 41 |
| Arizona State University | 42 | 42 |
| Purdue | 42 | 43 |
| Rice University | 42 | 44 |
| University of Arizona | 42 | 45 |
| University of Iowa | 42 | 46 |
| Rutgers | 47 | 47 |
| University of California-Irvine | 47 | 48 |
| University of Notre Dame | 47 | 49 |
| Georgetown University | 50 | 50 |


| School | USNWR | ID |
| :--- | :---: | :---: |
| Syracuse University | 50 | 51 |
| University of Colorado-Boulder | 50 | 52 |
| Iowa State University | 53 | 53 |
| University of California-Santa Cruz | 53 | 54 |
| North Carolina State University | 55 | 55 |
| Southern Methodist University | 55 | 56 |
| University of Florida | 55 | 57 |
| University of Georgia | 55 | 58 |
| Florida State University | 59 | 59 |
| Georgia State University | 59 | 60 |
| University of Oregon | 59 | 61 |
| Virginia Tech | 59 | 62 |
| Emory University | 63 | 63 |
| George Washington University | 63 | 64 |
| Stony Brook University | 63 | 65 |
| University of California-Riverside | 63 | 66 |
| University of Missouri | 63 | 67 |
| CUNY Graduate School | 68 | 68 |
| University of Illinois-Chicago | 68 | 69 |
| University of Kentucky | 68 | 70 |
| University of Wyoming | 68 | 71 |
| Binghamton University | 72 | 72 |
| Brandeis University | 72 | 73 |
| Clemson University | 90 | 74 |
| Tulane University | 90 | 93 |
| University of Kansas | 94 |  |
| University of Tennessee | 90 |  |
| George Mason University | 72 | 75 |
| Louisiana State University | 72 | 76 |
| University of Connecticut | 72 | 77 |
| University of Houston | 78 | 78 |
| Washington State University | 78 | 79 |
| University of Miami | 78 | 80 |
| University of Nebraska | 78 | 81 |
| University of South Carolina | 83 |  |
| University of Texas-Dallas | 83 | 84 |
| University of Utah | 83 | 85 |
| University of Wisconsin-Milwaukee | 83 |  |
| West Virginia University | 83 | 86 |
| Claremont Graduate University | 90 | 87 |
| Northeastern University | 90 |  |
| Oregon State University | 91 |  |
| University at Albany | 90 |  |
| University at Buffalo | 93 |  |
| University of Alabama | 93 |  |
|  | 93 |  |

Notes: This table show the 2017 US News \& World Report rankings of economics departments. There are many cases in which departments are tied; as such, we create a unique ID in order to distinguish tied schools, which are arranged alphabetically. Departments that are listed but unranked are: American University, Auburn University, Clark University, Colorado School of Mines, Colorado State University, Drexel University, Florida International University, Fordham University, Howard University, Kansas State University, Lehigh University, Middle Tennessee State University, Mississippi State University, New Mexico State University, New School, Northern Illinois University, Oklahoma State University, Rensselaer Polytechnic Institute, Southern Illinois University-Carbondale, Southern New Hampshire University, Suffolk University, Teachers College, Temple University, Texas Tech University, University of Arkansas, University of Central Florida, University of Cincinnati, University of Delaware, University of Hawaii, University of Massachusetts-Amherst, University of Memphis, University of Mississippi, University of Missouri-Kansas City, University of New Hampshire, University of New Mexico, University of New Orleans, University of Rhode Island, University of Southern Mississippi, University of South Florida, Utah State University, Wayne State University, Western Michigan University. We assign each a rank of 97 . California Institute of Technology is the only other U.S. school that produced Ph.D.s in our sample.

Table A.2: Ph.D. Departments with Highest Number of Faculty Graduates

| School | N | CumPerc |
| :--- | :---: | :---: |
| Harvard University | 207 | 7.7 |
| Massachusetts Institute of Technology | 184 | 14.6 |
| Stanford University | 150 | 20.1 |
| University of California-Berkeley | 144 | 25.5 |
| University of Chicago | 138 | 30.6 |
| Yale University | 113 | 34.8 |
| Princeton University | 110 | 38.9 |
| Northwestern University | 89 | 42.3 |
| University of Pennsylvania | 82 | 45.3 |
| University of Wisconsin | 78 | 48.2 |
| University of Michigan | 72 | 50.9 |
| University of Minnesota | 71 | 53.5 |
| Columbia University | 66 | 56 |
| New York University | 57 | 58.1 |
| University of California-San Diego | 50 | 60 |
| University of California-Los Angeles | 46 | 61.7 |
| Cornell University | 44 | 63.3 |
| University of Rochester | 44 | 65 |
| Duke University | 41 | 66.5 |
| Brown University | 37 | 67.9 |
| University of Illinois-Urbana-Champaign | 26 | 68.8 |
| University of Maryland | 26 | 69.8 |
| California Institute of Technology | 25 | 70.7 |
| Johns Hopkins University | 23 | 71.6 |
| University of Washington | 23 | 72.4 |
| Boston University | 22 | 73.3 |
| Michigan State University | 22 | 74.1 |
| Pennsylvania State University | 22 | 74.9 |
| University of Virginia | 10 | 83.8 |
| Texas A\&M University | 84.1 |  |
| Carnegie Mellon University | 84.5 |  |
| University of Texas-Austin | 75.7 |  |
| University of North Carolina | 21 | 76.5 |
| Ohio State University | 20 | 77.3 |
| Purdue | 20 | 78 |
| University of California-Davis | 19 | 78.7 |
| University of Iowa | 17 | 79.3 |
| Washington University in St. Louis | 16 | 79.9 |
| University of Pittsburgh | 16 | 80.5 |
| Boston College | 15 | 81.1 |
| Indiana University | 15 | 81.6 |
| University of Arizona | 82.1 |  |
| Syracuse University | 82.6 |  |
| George Mason University | 83 |  |
| University of Colorado-Boulder | 12 |  |

Notes: This table displays the number of faculty produced by US Ph.D. department. Departments with fewer than 9 faculty are excluded. The cumulative percentage is the percentage over the entire sample, including those with international degrees.

Table A.3: Transition Matrix, Ph.D. to Department

| PhD | Harvard,MIT | $3-6$ | $7-15$ | $16-26$ | $27-52$ | $53-96$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Harvard,MIT | 0.59 | 0.38 | 0.23 | 0.17 | 0.09 | 0.05 |
| $3-6$ | 0.19 | 0.26 | 0.32 | 0.23 | 0.19 | 0.11 |
| $7-15$ | 0.09 | 0.19 | 0.23 | 0.34 | 0.28 | 0.24 |
| $16-26$ | 0.03 | 0.05 | 0.10 | 0.13 | 0.17 | 0.15 |
| $27-52$ | 0.00 | 0.01 | 0.03 | 0.02 | 0.11 | 0.25 |
| $53-96$ | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.10 |
| Other U.S. | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.03 |
| International | 0.09 | 0.11 | 0.08 | 0.09 | 0.12 | 0.07 |

Notes: This transition matrix displays the percentage of faculty in a given tier (columns) that come from the different tiers of Ph.D. programs (rows).

Table A.4: Herfindahl Indices

| Rank | School | USNWR_Rank | H_Broad | H_Indiv |
| :---: | :---: | :---: | :---: | :---: |
|  | Schools with USNWR Rankings 1-15 |  |  |  |
| 1 | Massachusetts Institute of Technology | 1 | 0.63 | 0.20 |
| 2 | Harvard University | 1 | 0.63 | 0.19 |
| 3 | Stanford University | 1 | 0.59 | 0.17 |
| 4 | Northwestern University | 7 | 0.59 | 0.13 |
| 5 | University of California-San Diego | 12 | 0.57 | 0.13 |
| 6 | University of California-Berkeley | 1 | 0.57 | 0.14 |
| 7 | Princeton University | 1 | 0.42 | 0.10 |
| 8 | University of Chicago | 7 | 0.40 | 0.10 |
| 9 | Columbia University | 9 | 0.40 | 0.09 |
| 10 | University of Michigan | 12 | 0.39 | 0.09 |
| 11 | University of California-Los Angeles | 12 | 0.37 | 0.08 |
| 12 | University of Wisconsin | 12 | 0.37 | 0.10 |
| 13 | Yale University | 1 | 0.33 | 0.08 |
| 14 | New York University | 11 | 0.30 | 0.06 |
| 15 | University of Pennsylvania | 10 | 0.25 | 0.07 |
|  | Schools with USNWR Rankings 16-52 |  |  |  |
| 1 | Brown University | 19 | 0.45 | 0.12 |
| 2 | University of Illinois-Urbana-Champaign | 29 | 0.43 | 0.09 |
| 3 | Cornell University | 16 | 0.40 | 0.10 |
| 4 | Johns Hopkins University | 23 | 0.40 | 0.12 |
| 5 | Boston University | 23 | 0.39 | 0.13 |
| 6 | University of Washington | 35 | 0.34 | 0.09 |
| 7 | University of California-Santa Barbara | 37 | 0.32 | 0.08 |
| 8 | University of North Carolina | 29 | 0.31 | 0.09 |
| 9 | Duke University | 16 | 0.31 | 0.09 |
| 10 | University of Minnesota | 16 | 0.31 | 0.08 |
| 11 | Pennsylvania State University | 25 | 0.30 | 0.08 |
| 12 | University of Maryland | 21 | 0.29 | 0.06 |
| 13 | Carnegie Mellon University | 20 | 0.29 | 0.09 |
| 14 | Michigan State University | 29 | 0.28 | 0.05 |
| 15 | University of Rochester | 21 | 0.28 | 0.09 |
| 16 | University of Texas-Austin | 27 | 0.28 | 0.07 |
| 17 | Boston College | 25 | 0.27 | 0.06 |
| 18 | University of California-Davis | 29 | 0.27 | 0.07 |
| 19 | University of Notre Dame | 47 | 0.27 | 0.06 |
| 20 | Rutgers | 47 | 0.26 | 0.06 |
| 21 | University of Arizona | 42 | 0.26 | 0.07 |
| 22 | Georgetown University | 50 | 0.26 | 0.06 |
| 23 | Ohio State University | 29 | 0.25 | 0.06 |
| 24 | University of Southern California | 37 | 0.25 | 0.07 |
| 25 | University of Virginia | 29 | 0.24 | 0.05 |
| 26 | Rice University | 42 | 0.24 | 0.08 |
| 27 | University of California-Irvine | 47 | 0.24 | 0.06 |
| 28 | Syracuse University | 50 | 0.24 | 0.06 |
| 29 | Indiana University | 39 | 0.23 | 0.06 |
| 30 | Vanderbilt University | 35 | 0.22 | 0.07 |
| 31 | University of Pittsburgh | 39 | 0.21 | 0.06 |
| 32 | Washington University in St. Louis | 27 | 0.21 | 0.07 |
| 33 | University of Iowa | 42 | 0.21 | 0.11 |
| 34 | University of Colorado-Boulder | 50 | 0.21 | 0.05 |
| 35 | Purdue | 42 | 0.20 | 0.06 |
| 36 | Arizona State University | 42 | 0.20 | 0.06 |
| 37 | Texas A\&M University | 39 | 0.20 | 0.05 |


| Rank | School | USNWR_Rank | H_Broad | H_Indiv |
| :---: | :---: | :---: | :---: | :---: |
|  | Schools with USNWR Rankings 53-96 |  |  |  |
| 1 | University of Tennessee | 72 | 0.44 | 0.07 |
| 2 | Brandeis University | 72 | 0.40 | 0.12 |
| 3 | University of Florida | 55 | 0.37 | 0.10 |
| 4 | West Virginia University | 83 | 0.36 | 0.10 |
| 5 | University of Oklahoma | 90 | 0.35 | 0.06 |
| 6 | University of Miami | 83 | 0.35 | 0.15 |
| 7 | Claremont Graduate University | 90 | 0.35 | 0.14 |
| 7 | University of California-Santa Cruz | 53 | 0.35 | 0.11 |
| 9 | University of Nebraska | 83 | 0.34 | 0.09 |
| 10 | University of Texas-Dallas | 83 | 0.33 | 0.08 |
| 11 | Tulane University | 72 | 0.32 | 0.08 |
| 12 | University of California-Riverside | 63 | 0.31 | 0.09 |
| 13 | University of Alabama | 90 | 0.30 | 0.07 |
| 14 | University of Kentucky | 68 | 0.29 | 0.08 |
| 15 | Louisiana State University | 78 | 0.28 | 0.09 |
| 16 | University of Wisconsin-Milwaukee | 83 | 0.28 | 0.09 |
| 17 | Binghamton University | 72 | 0.28 | 0.09 |
| 18 | University at Buffalo | 90 | 0.28 | 0.10 |
| 19 | University of Illinois-Chicago | 68 | 0.27 | 0.07 |
| 20 | Stony Brook University | 63 | 0.27 | 0.08 |
| 21 | Clemson University | 72 | 0.27 | 0.18 |
| 22 | University of Georgia | 55 | 0.26 | 0.07 |
| 23 | University of Missouri | 63 | 0.26 | 0.07 |
| 24 | Florida State University | 59 | 0.26 | 0.05 |
| 25 | University of Utah | 83 | 0.26 | 0.13 |
| 26 | Washington State University | 78 | 0.26 | 0.07 |
| 27 | University at Albany | 90 | 0.25 | 0.06 |
| 28 | George Washington University | 63 | 0.24 | 0.05 |
| 29 | University of Houston | 78 | 0.23 | 0.08 |
| 30 | CUNY Graduate School | 68 | 0.22 | 0.05 |
| 31 | Oregon State University | 90 | 0.22 | 0.17 |
| 32 | University of Wyoming | 68 | 0.22 | 0.14 |
| 33 | Southern Methodist University | 55 | 0.21 | 0.07 |
| 34 | University of Oregon | 59 | 0.21 | 0.07 |
| 35 | Emory University | 63 | 0.21 | 0.06 |
| 36 | Georgia State University | 59 | 0.21 | 0.04 |
| 37 | Northeastern University | 90 | 0.21 | 0.12 |
| 38 | University of South Carolina | 83 | 0.20 | 0.08 |
| 38 | North Carolina State University | 55 | 0.20 | 0.07 |
| 40 | George Mason University | 78 | 0.20 | 0.09 |
| 41 | Virginia Tech | 59 | 0.19 | 0.05 |
| 42 | University of Connecticut | 78 | 0.19 | 0.06 |
| 43 | Iowa State University | 53 | 0.19 | 0.05 |
| 44 | University of Kansas | 72 | 0.18 | 0.08 |

Notes: This table shows two different Herfindahl indices for individual departments. The first, "H_Broad," computes the index based on the broad categories, while the second, "H_Indiv," computes the index based on individual departments. Schools are grouped based on rankings (1-15; 16-52; and 53-96). Within a grouping, schools are sorted based on "H_Broad." The school's rank is also indicated.

Table A.5: Transition Matrix, Ph.D. to Department: Male, Female, Assistant Professor, Full Professor Panel A: Male

| PhD | Harvard,MIT | $3-6$ | $7-15$ | $16-26$ | $27-52$ | $53-96$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Harvard,MIT | 0.58 | 0.36 | 0.23 | 0.17 | 0.09 | 0.05 |
| $3-6$ | 0.20 | 0.25 | 0.31 | 0.22 | 0.19 | 0.10 |
| $7-15$ | 0.09 | 0.21 | 0.23 | 0.33 | 0.27 | 0.23 |
| $16-26$ | 0.04 | 0.05 | 0.10 | 0.14 | 0.17 | 0.15 |
| $27-52$ | 0.00 | 0.02 | 0.03 | 0.02 | 0.12 | 0.26 |
| $53-96$ | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.11 |
| Other U.S. | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.03 |
| International | 0.09 | 0.11 | 0.08 | 0.10 | 0.11 | 0.07 |


| Panel B: Female |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| PhD | Harvard,MIT | $3-6$ | $7-15$ | $16-26$ | $27-52$ | $53-96$ |
| Harvard,MIT | 0.67 | 0.45 | 0.24 | 0.18 | 0.09 | 0.06 |
| $3-6$ | 0.17 | 0.32 | 0.35 | 0.27 | 0.19 | 0.13 |
| $7-15$ | 0.08 | 0.11 | 0.20 | 0.35 | 0.29 | 0.27 |
| $16-26$ | 0.00 | 0.03 | 0.07 | 0.11 | 0.18 | 0.15 |
| $27-52$ | 0.00 | 0.00 | 0.06 | 0.03 | 0.09 | 0.25 |
| $53-96$ | 0.00 | 0.00 | 0.02 | 0.00 | 0.02 | 0.07 |
| Other U.S. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 |
| International | 0.08 | 0.11 | 0.06 | 0.05 | 0.15 | 0.04 |

Panel C: Assistant Professors

| PhD | Harvard,MIT | $3-6$ | $7-15$ | $16-26$ | $27-52$ | $53-96$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Harvard,MIT | 0.45 | 0.41 | 0.18 | 0.18 | 0.06 | 0.04 |
| $3-6$ | 0.27 | 0.18 | 0.37 | 0.18 | 0.21 | 0.09 |
| $7-15$ | 0.18 | 0.27 | 0.21 | 0.34 | 0.31 | 0.31 |
| $16-26$ | 0.00 | 0.02 | 0.08 | 0.15 | 0.15 | 0.15 |
| $27-52$ | 0.00 | 0.02 | 0.05 | 0.02 | 0.08 | 0.25 |
| $53-96$ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 |
| Other U.S. | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.02 |
| International | 0.09 | 0.10 | 0.09 | 0.11 | 0.17 | 0.07 |

Panel D: Full Professors

| PhD | Harvard,MIT | $3-6$ | $7-15$ | $16-26$ | $27-52$ | $53-96$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Harvard,MIT | 0.62 | 0.37 | 0.25 | 0.19 | 0.10 | 0.06 |
| $3-6$ | 0.16 | 0.30 | 0.29 | 0.25 | 0.19 | 0.11 |
| $7-15$ | 0.09 | 0.15 | 0.22 | 0.34 | 0.26 | 0.25 |
| $16-26$ | 0.04 | 0.06 | 0.12 | 0.11 | 0.17 | 0.13 |
| $27-52$ | 0.00 | 0.01 | 0.03 | 0.01 | 0.13 | 0.24 |
| $53-96$ | 0.00 | 0.00 | 0.01 | 0.01 | 0.03 | 0.12 |
| Other U.S. | 0.00 | 0.00 | 0.01 | 0.00 | 0.02 | 0.04 |
| International | 0.09 | 0.10 | 0.07 | 0.09 | 0.10 | 0.06 |

Notes: This transition matrix displays the percentage of faculty in a given tier (columns) that come from the different tiers of Ph.D. programs (rows). Panel A is for male professors, Panel B is for female professors, Panel C is for assistant professors, and Panel D is for full professors.

Table A.6: BA Universities with Highest Number of Faculty Graduates

| BA | N | Cum_Perc_All | Cum_Perc_US |
| :--- | :---: | :---: | :---: |
| Harvard University | 106 | 4 | 7.6 |
| University of California-Berkeley | 52 | 6 | 11.3 |
| Princeton University | 44 | 7.6 | 14.5 |
| Yale University | 40 | 9.1 | 17.3 |
| Massachusetts Institute of Technology | 37 | 10.5 | 20 |
| University of Chicago | 37 | 11.9 | 22.6 |
| University of Michigan | 29 | 13 | 24.7 |
| Stanford University | 26 | 14 | 26.6 |
| University of Pennsylvania | 23 | 14.9 | 28.2 |
| Columbia University | 21 | 15.6 | 29.7 |
| Cornell University | 20 | 16.4 | 31.2 |
| Swarthmore College | 20 | 17.2 | 32.6 |
| University of Virginia | 18 | 17.8 | 33.9 |
| University of Wisconsin | 18 | 18.5 | 35.2 |
| Williams College | 17 | 19.2 | 36.4 |
| Brown University | 16 | 19.8 | 37.5 |
| Duke University | 16 | 20.4 | 38.7 |
| Northwestern University | 16 | 21 | 39.8 |
| University of California-Davis | 16 | 21.6 | 41 |
| University of Washington | 15 | 22.1 | 42 |
| Dartmouth College | 14 | 22.7 | 43.1 |
| Miami University of Ohio | 14 | 23.2 | 44.1 |
| Brigham Young University | 13 | 23.7 | 45 |
| Carleton College | 13 | 24.2 | 45.9 |
| College of William and Mary | 13 | 24.7 | 46.8 |
| Michigan State University | 8 | 31.4 | 57.8 |
| Georgetown University | 13 | 25.2 | 59.7 |
| Tufts University | 12 | 25.6 | 48.6 |
| University of Illinois-Urbana-Champaign | 12 | 26.1 | 49.5 |
| Washington University in St. Louis | 12 | 26.5 | 50.4 |
| Wesleyan University | 12 | 27.4 | 51.2 |
| California Institute of Technology | 11 | 27.8 | 52.1 |
| Indiana University | 11 | 28.2 | 52.9 |
| Oberlin College | 11 | 28.7 | 53.7 |
| University of California-Los Angeles | 11 | 29.1 | 54.4 |
| Amherst College | 10 | 29.4 | 55.2 |
| University of North Carolina | 10 | 29.8 | 55.9 |
| University of Texas-Austin | 10 | 30.2 | 56.7 |
| University of Notre Dame | 9 | 30.5 | 57.4 |
| Boston College | 30.8 | 58.6 |  |
| Pomona College | 8 | 59.2 |  |
| Purdue |  |  |  |

Notes: This table displays the number of faculty produced by US B.A. department. Departments with fewer than 8 faculty are excluded. The cumulative percentage all column is the percentage over the entire sample, including those with international degrees (but excluding those with missing B.A. information). The cumulative percentage US column is computed only among those with nonmissing US BAs.

Table A.7: BA-Ph.D. Combinations with Highest Number of Graduates

| BA | PhD | N |
| :--- | :--- | :--- |
| Harvard University | Harvard University | 47 |
| Harvard University | Massachusetts Institute of Technology | 19 |
| Yale University | Massachusetts Institute of Technology | 17 |
| University of California-Berkeley | University of California-Berkeley | 13 |
| University of Chicago | University of Chicago | 11 |
| Princeton University | Stanford University | 10 |
| Massachusetts Institute of Technology | Massachusetts Institute of Technology | 9 |
| Harvard University | Stanford University | 8 |
| Princeton University | Harvard University | 8 |
| Yale University | Harvard University | 8 |
| Harvard University | University of California-Berkeley | 7 |
| Massachusetts Institute of Technology | Harvard University | 7 |
| Princeton University | Massachusetts Institute of Technology | 7 |
| Harvard University | Princeton University | 6 |
| Stanford University | Stanford University | 6 |
| University of California-Berkeley | Harvard University | 6 |
| University of California-Berkeley | Stanford University | 6 |
| Amherst College | Massachusetts Institute of Technology | 5 |
| Cornell University | University of California-Berkeley | 5 |
| Harvard University | University of Chicago | 5 |
| Harvard University | Yale University | 5 |
| Swarthmore College | Yale University | 5 |
| University of Michigan | University of California-Berkeley | 5 |
| University of Pennsylvania | Massachusetts Institute of Technology | 5 |
| Brown University | Harvard University | 4 |
| Massachusetts Institute of Technology | Princeton University | 4 |
| Stanford University | Massachusetts Institute of Technology | 4 |
| University of California-Berkeley | Massachusetts Institute of Technology | 4 |
| University of California-Berkeley | University of California-Los Angeles | 4 |
| University of California-Berkeley | Yale University | 4 |
| University of Chicago | Harvard University | 4 |
| University of Illinois-Urbana-Champaign | University of Illinois-Urbana-Champaign | 4 |
| University of Michigan | University of Wisconsin | 4 |
| University of Pennsylvania | Harvard University | 4 |
| University of Washington | University of Chicago | 4 |
| Wesleyan University | Massachusetts Institute of Technology | 4 |
|  | ars | 4 |

Notes: This table displays the number of faculty produced by US BA-Ph.D. combinations. Combinations with fewer than 4 faculty are excluded.

Table A.8: Departments, by Percentage of Faculty from a Given Ph.D. Program

| PhD Origin | Department | Percent |
| :---: | :---: | :---: |
| University of Chicago | Clemson University | 38 |
| Massachusetts Institute of Technology | Harvard University | 33 |
| Harvard University | Massachusetts Institute of Technology | 30 |
| Massachusetts Institute of Technology | Massachusetts Institute of Technology | 30 |
| Harvard University | Boston University | 29 |
| Stanford University | Stanford University | 27 |
| Massachusetts Institute of Technology | Northwestern University | 27 |
| Harvard University | University of California-Berkeley | 27 |
| Massachusetts Institute of Technology | Northeastern University | 27 |
| Harvard University | Brown University | 26 |
| Harvard University | Harvard University | 26 |
| Yale University | Johns Hopkins University | 25 |
| New School | University of Utah | 24 |
| Massachusetts Institute of Technology | Brandeis University | 23 |
| University of California-Berkeley | University of Wyoming | 23 |
| University of Chicago | University of Miami | 23 |
| University of Pennsylvania | University of Miami | 23 |
| Harvard University | Stanford University | 23 |
| Harvard University | University of California-San Diego | 22 |
| University of Pennsylvania | University of North Carolina | 22 |
| Harvard University | University of Michigan | 21 |
| Johns Hopkins University | West Virginia University | 21 |
| Massachusetts Institute of Technology | University of California-Berkeley | 21 |
| University of California-Berkeley | University of California-Santa Barbara | 21 |
| Northwestern University | Duke University | 20 |
| Harvard University | Princeton University | 20 |
| George Mason University | George Mason University | 20 |
| University of California-Berkeley | University of California-San Diego | 20 |
| Northwestern University | Cornell University | 19 |
| Stanford University | University of California-Santa Cruz | 19 |
| Massachusetts Institute of Technology | Yale University | 19 |
| Massachusetts Institute of Technology | Stanford University | 18 |
| Yale University | University of Wisconsin | 18 |
| Northwestern University | University of Florida | 18 |
| University of Michigan | University of Wisconsin-Milwaukee | 18 |
| University of Minnesota | Carnegie Mellon University | 17 |
| Harvard University | University of Chicago | 17 |
| Harvard University | Columbia University | 17 |
| Massachusetts Institute of Technology | Boston University | 17 |
| Stanford University | University of California-Los Angeles | 16 |
| Harvard University | Binghamton University | 16 |
| University of California-San Diego | University of California-Riverside | 16 |
| University of California-Berkeley | University of Illinois-Urbana-Champaign | 15 |
| University of Chicago | Pennsylvania State University | 15 |
| University of Wisconsin | University of Oregon | 15 |
| Yale University | University of Illinois-Urbana-Champaign | 15 |
| Massachusetts Institute of Technology | Princeton University | 15 |
| Harvard University | Johns Hopkins University | 15 |

Notes: This table displays the number of faculty produced by US Ph.D.-Department combinations. Combinations with fewer than 3 faculty are excluded.


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[^2]:    ${ }^{1}$ Of course, it is theoretically possible that the rank of one's Ph.D. program plays no role in the hiring process, though we think that this is unlikely.

[^3]:    ${ }^{2}$ Other papers are somewhat related to ours. Boustan and Langan (2019) describe how female economics Ph.D. graduates experience uneven rates of success in academia across several metrics relative to men. Amir and Knauff (2008) use placement to create a new way to rank departments. Several papers study factors revolving around the application and hiring process among new economics job market candidates (e.g., Siegfried and Stock, 1999 Stock and Siegfried, 2001; Formby and Hoover, 2002; McFall et al., 2015).
    ${ }^{3}$ Spellman and Gabriel (1978) document the universities attended by economics Ph.D. recipients over the time period 1940-1974.
    $4^{4}$ Way et al. (2016) find that Ph.D. prestige plays an important role in the computer science field.

[^4]:    ${ }^{5}$ The sample consists of faculty in economics departments only. For Ph.D. (B.A.) variable, we consider only the Ph.D. (B.A.) university, not the department or discipline. For instance, we would classify both Chicago Economics and Chicago Public Policy as Chicago. We then assign both the Chicago economics department ranking from the USNWR. Throughout the paper, we use the terms "department" and "university" interchangeably.
    ${ }^{6}$ A research assistant collected these departments in a random order and did so between August 30th and September 25th, 2020. The USNWR includes 138 departments in its ranking, but only scores the 96 that comprise our sample. We note that notable institutions such as California Institute of Technology and Georgia Institute of Technology are not included in these rankings.
    ${ }^{7}$ CUNY Graduate School has the most, at 75 .

[^5]:    ${ }^{8}$ It is uncommon for a faculty member to be at a department ranked higher than their Ph.D. department. See Appendix Figure A.4.

[^6]:    ${ }^{9}$ Appendix Table A.3 shows this information in table format: for each department grouping (rows), it displays the fraction of faculty that come from Ph.D. groupings (columns).
    ${ }^{10}$ We do not have data on the number of Ph.D. graduates per program, but it is our sense that the higher ranked programs tend to have more Ph.D. students. This may be part of the reason we find that the top schools produce more professors.
    ${ }^{11}$ For a zoomed-in version, see Appendix Figures A. 6 and A. 7 .

[^7]:    ${ }^{12}$ Appendix Figure A. 8 shows the data in another way: the fraction of a department's faculty who came from Harvard/MIT, the top 6, 15, 26 etc., departments.
    ${ }^{13}$ We also calculate Herfindahl indices for broad categories of institutions in order to construct a measure of how concentrated these broad categories are in terms of the individual institutions they hire from. We find that the top six departments have a Herfindahl index of 0.12 . This is monotonically decreasing over department ranking tier: departments ranked $7-15$ have an index of $0.06 ; 16-26$ have an index of $0.05 ; 27-52$ have an index of 0.03 ; and $53-96$ have an index of 0.02 . We also compute Herfindahl indices for each of the 96 individual departments. First, we compute it with respect to broad categories of universities (1-6, $7-15,16-26,27-52,53-96$, Other U.S., and International) and second with respect to individual universities. These are also displayed in Appendix Table A.4 and in Appendix Figures A.9 and A.10. On average the higher-ranked, the higher-ranked departments have higher Herfindahl indices, suggesting that their faculty are concentrated among fewer Ph.D. departments.
    ${ }^{14}$ There are some differences at the highest-ranked departments. A higher percentage of female professors at the top six departments received their Ph.D.s at Harvard and MIT than did male professors. In addition, all female professors at four of the top eight departments received their Ph.D.s at one of the top eight; this is not the case for any of the top eight departments among male professors. Additionally, $84 \%$ of female faculty at the top eight departments come from the top eight, and $51 \%$ from Harvard and MIT. See also Appendix Table A. 5 Panels A and B.

[^8]:    ${ }^{15}$ For instance, no assistant professors at Harvard (MIT) received their Ph.D.s at Harvard (MIT).
    ${ }^{16}$ See also Appendix Table A.5 Panels C and D for transition matrices.

[^9]:    ${ }^{17}$ Appendix Figure A.14 shows the stacked bar chart version, analogous to Figure 4
    ${ }^{18}$ It is also interesting to consider the most common B.A.-Ph.D. pathways. Appendix Table A. 7 shows that 47 students attended Harvard for B.A. and Harvard for Ph.D. The next several are: 19 for Harvard (B.A)-MIT (Ph.D.); 17 for Yale-MIT; 13 for Berkeley-Berkeley; 11 for Chicago-Chicago; and 10 for Princeton-Stanford. Considering all three steps: B.A.-Ph.D.-Department, five students did Harvard (B.A.) - Harvard (Ph.D.) Harvard (Department). Five did Harvard-MIT-MIT. And another five did Harvard-Berkeley-Harvard.

[^10]:    ${ }^{19} \widehat{\text { Colander }}(2015)$ makes this point as well.
    ${ }^{20}$ We do note, however, that there could exist a substantial amount of intellectual diversity within top departments, particularly because they typically have a relatively large number of faculty.
    ${ }^{21}$ Appendix Table A. 8 shows departments by share of Ph.D.s from a given Ph.D. program (restricted to a minimum of three faculty, which excludes some small departments). With our data, it is not possible to disentangle geographical preferences from other factors, but we do observe many candidates at departments near their Ph.D., such as $27 \%$ of Northeastern's faculty being from MIT.

[^11]:    ${ }^{22}$ If the best candidates are indeed at the best schools, this may be due to selection in Ph.D. program admissions if the top-ranked Ph.D. programs attract many of the very best students. It may also be due to department value-added if the best departments train their students better than lower-ranked departments, giving them a higher level of the skills that the market values.

[^12]:    ${ }^{23}$ A university can be referred to by multiple names or change names over time. It is possible that in rare instances we classify a given university as multiple universities; this may affect things such as the Herfindahl calculations.

