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The Role of Teaching and Teacher Training in the Hiring and Promotion of Ph.D. Economists

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Abstract

Surveys suggest that a majority of graduate students seek academic positions after completing their degree. We survey groups involved in the job market to determine the roles of teaching and research in hiring and the subsequent success of new faculty. We find that while characteristics that signal research potential are highly valued by both graduate directors and department chairs, there are significant discrepancies in the extent that teaching is valued in the hiring process across institution types. Furthermore, although new faculty devote half of their time to teaching, only half of them agree that graduate school prepared them to teach.

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1. INTRODUCTION

Each year thousands of students enter U.S. economics Ph.D. programs hoping to work someday in a career as an economist in academia. Those who train and hire these new graduates, wonder if the training new economists receive prepares them to successfully navigate the academic job market, and if they are equipped to succeed once employed. It is likely that students going on the academic job market have the same questions. To enhance the probability of professional success, graduate programs must provide the training and skills demanded by future employers, and this requires those running graduate programs to know what those employers demand. Furthermore, new faculty and their employers must agree on how faculty should spend their time and what skills are needed to be successful in the job.

In 1991, the AEA Commission on Graduate Education in Economics (COGEE) published the results of a number of surveys designed to assess the profession's performance in the education and training of economics doctoral students (Hansen, 1991; Krueger et al., 1991). The Commission made several recommendations for improving graduate training, although some feel these have gone largely unaddressed (Colander, 1998). The COGEE report was very thorough in surveying six different groups including current undergraduates and employers of economics Ph.D.s. The reporting of their results focused primarily on the content and structure of economics coursework (including prerequisites, core curriculum, and skill development) (Krueger et al,1991) and how this related to the research productivity of faculty once they secured employment. However, List (2000, 197-8) finds that having a teaching award in one's job market portfolio has a greater impact on obtaining job interviews than does a completed Ph.D.. Perhaps this is not surprising since even faculty at research institutions spend over forty percent of their work time on teaching (Allgood and Walstad, 2013, p. 656). In addition to the

work by List and COGEE, research has also addressed the specifics of what is taught in graduate school (Colander, 2005), job search and labor market outcomes (Krueger and Wu, 2000; Ehrenberg, 2004; Holmes and Colander, 2007), success on the job (Conley and Onder, 2014), and the demographic composition of new Ph.D. economists (Ehrenberg, 1999; Chen et al., 2013).

To assess the roles of teaching and research in the hiring and the subsequent success of new faculty, we survey the three groups involved in the process:

- graduate directors administering U.S. Ph.D. programs
- department chairs who make hiring decisions, and
- new faculty they produce and hire.

Whereas COGEE focuses on the role of research on job market and career success, we also consider the role of teaching, thereby both updating and expanding COGEE and other previous work. Our work is more focused in that we survey only academic employers. First, we identify what factors that are most important for academic job placement and whether these factors differ across the perspectives of directors of graduate studies and department chairs. This addresses the question of whether those training economists and those doing the hiring are in agreement about what constitutes a good hire. Second, we investigate if those doing the hiring and those being hired agree about the work the job involves. Specifically, we address if department chairs and new faculty agree on new faculty actually spend their time. Given that past work has largely ignored the question of whether new faculty are prepared to teach, we survey new faculty to determine if they feel prepared for the teaching aspect of an academic career based on the training they received in graduate school.

One should not be at all surprised that directors of undergraduate programs are unanimous in the view that graduate students must be able to demonstrate research effectiveness when going on the job market nor that three-fourths of department chairs view research as very important when hiring. Somewhat surprising is the difference across these two groups when it comes to the importance of teaching. Only forty percent of directors believe that teaching experience or teacher training are important. In fact, less than a quarter of directors from top 30 Ph.D. programs believe that the activities are important. This is in stark contrast to the fact that three-fourths of department chairs view teaching potential as very important. Perhaps even more surprising is that only one-in-three department chairs at Ph.D. granting departments hold this view about teaching potential versus ninety-five percent of chairs at non-Ph.D. granting departments. About three-fourths of department chairs, across institution types, indicate that "enthusiasm" for teaching and research are very important in the hiring decision. The disconnect in relative importance of teaching and research across department types may suggest that directors are out of touch with the skills they need to provide their graduating cohorts in order to best prepare them for a successful job market experience.

Once hired, over eighty percent of new faculty hired into departments with Ph.D. programs believe the incentive is greater to be a successful researcher whereas half of those at departments without Ph.D. programs feel there is greater emphasis on teaching. Department chairs express a similar perspective. Ninety percent of chairs at Ph.D. programs state that promotion is largely based on research production, whereas eighty percent of faculty at non-Ph.D. institutions state that for promotion, teaching is as important as or more important than research. Our results also reflect that actual faculty time allocation between teaching and research coincides with how department contracts allocate time between teaching and research.

Although faculty devote about half of their time to teaching, only half of them agree that graduate school prepared them to teach. Furthermore, there are substantial differences in the perception of preparedness across institution types with faculty members who attended a top 30 program much less likely to indicate that they were prepared to teach upon graduation.

2. SURVEY DESIGN, METHODOLOGY, AND SAMPLES

We employ a three-pronged approach using Qualtrics to survey 1) economics Ph.D. programs that produce new Ph.D. economists (producers), 2) academic programs that hire new Ph.D. economists (consumers), and 3) new economists in academic positions that involve teaching (products of graduate programs). The design of these three surveys complement each other to allow for analysis from multiple perspectives. These survey results help fill gaps in the existing literature and paint a more complete picture of the current landscape for the importance of new faculty training (in terms of research and teaching) in economics from the perspective of producer, product, and consumer. Additionally, these data allow us to examine perceptions of how activities and training in graduate school influences hiring decisions and the connection between new faculty activities and time allocation and promotion.

SURVEY OF PH.D. GRANTING PROGRAMS AND THE DIRECTOR OF GRADUATE STUDIES SAMPLE

The survey of economic Ph.D. granting programs in the U.S. is what we refer to as our "producer" survey as these programs produce new Ph.D. economists. This survey gathers information on the activities of graduate students and the extent to which the Directors of Graduate Studies (DGS) perceive a range of factors to be important in securing a job. We obtained survey responses from 78 of the approximately 132 Ph.D. granting programs, a 59%

response rate. While we used the survey of Walstad and Becker (2010) as a starting point for many questions included on the survey, we expanded our focus to generate a more detailed picture of program administrator/department views on the role of various graduate school inputs in the labor market success of their graduate students.

Table 1 describes the Ph.D. program sample. In addition to showing results for the full sample, the table includes a breakdown of the top 30 Ph.D. programs compared to the remaining programs ranked 31-132 based on McPherson's (2012) research output ranking of U.S. economics departments. [1] Average program size is 53.78 students with a significant difference in the average size of top thirty programs at 110.86 students and the average size of the remaining programs at 41.10 students. Under the assumption that these sample means describe the populations from which they are drawn, the data suggest that forty-four percent of graduate students attend the thirty top programs. The average number of years of Ph.D. program residency is 5.74 for top 30 programs and 5.25 years for students at programs ranked below the top thirty. This difference in means is also statistically significant. Approximately 68 percent of students in U.S. Ph.D. programs are international students.[2] When describing the current snapshot of graduate students in their program, Directors of Graduate Studies indicate that about 43 percent of graduate students are on assistantship with only teaching-related duties, about 14 percent are on assistantship with only research-related duties, and about 22 percent are on assistantship with both teaching and research-related responsibilities. This breakdown is not statistically different between program tiers. However, we do find a statistically significant difference in the percentage of students who are unfunded. In the top tier programs about 3 percent are unfunded while in the remaining programs about 13 percent of students are unfunded.

SURVEY OF DEPARTMENT CHAIRS WHO EMPLOY NEW PH.D. ECONOMISTS

We refer to our survey of departments who hire new Ph.D. economists as our "consumer" survey as these programs demand and hire new economists. This survey allows us to identify factors that matter to those who are hiring faculty. While it is common in markets for consumer desires to influence the choices of producers, it is unclear that consumer preferences in hiring faculty influence the training of new economists. Our data provide a unique opportunity to see if these two groups are in agreement about what is important when hiring.

While the sample of Ph.D. granting institutions required for our producer survey is easily defined and quite contained, there are many different types of employers for Ph.D. economists and a large number of each type. Faculty might end up at a large public or private university, smaller liberal arts college, community college, or even teaching entirely online through the new cadre of online institutions. It is challenging to identify a consumer contact at some institution types, like community colleges and those schools which do not have an economics department or an economics major but still employ economists. One source for identifying institutions that have recently hired newly minted Ph.D. economists is the list of institutions that have posted jobs with the American Economic Association job market. We have made a concerted effort to ensure that our sample, obtained from the AEA and covering postings over the five years prior to our survey administration, is reasonably representative of all academic institutions that hire Ph.D. economists.[3] Because of differences in the nature of instructional positions across countries, the chair survey sample was limited to U.S. economics departments. We surveyed 797 department chairs and received 192 responses, for a response rate of 24 percent.

Table 2 provides descriptive information for the full sample of economics departments as well as subsamples of schools with and without an economics Ph.D. program. Fifty-one schools in the sample have Ph.D. programs for approximately a forty percent response rate from department chairs at the 132 Ph.D. granting institutions. Approximately 38 percent of the departments in the sample are housed in a College of Arts and Sciences with the remainder housed in either a business college (33 percent) or some other college (29 percent). The average number of faculty members per department is 11.66. Departments with a Ph.D. program are significantly larger, averaging about 20 faculty members, in comparison to departments without a Ph.D. program which average about 9 faculty members. Approximately 23 percent of faculty in Ph.D. granting institutions are non-tenure track teaching specialists and 18 percent of faculty in departments without Ph.D. programs have the same type of position. This statistically significant difference in the number of non-tenure-track faculty is likely related to the fact that the average number of undergraduate majors in departments with Ph.D. programs is significantly higher (611.17) than in departments without Ph.D. programs (110.66). It might also be the case that departments with more faculty members heavily engaged in research might utilize more teaching specialist positions to staff large section, lower level undergraduate courses and free up other faculty time.

Department chairs are in the position to provide an accurate description of average faculty teaching loads. Our results indicate that tenure-track faculty in departments with a Ph.D. program teach an average of 3.55 courses per year. This is significantly different from the 5.61 average course load for tenure-track faculty in departments without a Ph.D. program. Not surprisingly, the average teaching load for non-tenure-track faculty is higher than tenure-track faculty. Non-tenure-track faculty teach an average of 6.04 courses per year in departments with a

Ph.D. program and 6.36 courses in departments without a Ph.D. program implying comparable loads for lecturers across department types. There is not a statistically significant difference in the degree to which departments with and without Ph.D. programs offer online courses (58.82 versus 45.32 percent).

SURVEY OF NEW PH.D. ECONOMISTS

Our third survey polls new Ph.D. economists. We sent our survey to 2,804 economists who joined the American Economic Association between 2010 and 2015, excluding those who obtained their Ph.D. from a foreign institution. We have a response rate of 16.3% percent including 159 economists in nonacademic positions and 299 usable academic position responses. In reporting results, we compare subsamples of economists working at Ph.D. granting institutions in the U.S., economists working in economics departments in the U.S. that do not have a Ph.D. program, and foreign academic institutions.[4]

Table 3 provides basic demographics for the new faculty sample and characterizes their teaching experience in their current positions. About 65 percent of the new faculty sample are men, consistent with the current male/female breakdown for assistant professors in the economics profession.[5] About 67 percent of new faculty who completed our survey are white, 13 percent Hispanic, 14 percent Asian, 2 percent black and the remaining respondents selected "other." This racial distribution is fairly comparable across Ph.D. and NonPh.D. granting institutions in the U.S., but it is perhaps not surprising that the percent of Hispanic and Asian economists acquiring jobs at foreign institutions is higher given the substantial international student population in graduate schools. The average age of the sample of new professors is 35.23 years and the average time to earn a Ph.D. is 5.61 years. There is little variation in these

values across subsamples. There is no statistically significant differences across U.S. and foreign institutions with the exception of sex.

Two-thirds of the sample are tenure track but not yet tenured and another eighteen percent are already tenured. This leaves about a fifth of the sample in non-tenure track positions. U.S. Ph.D. programs and foreign institutions are more likely to hire faculty to non-tenure track positions. When we further look at the rank and titles of the new faculty, we see that almost 10 percent of faculty at Ph.D. programs are on contracts as full-time lecturers[6] versus only about five percent at non-Ph.D. programs. This difference arises because doctoral programs hire these teaching specialists on longer-term contracts and the non-doctoral programs do not. There are also 14.7 percent of faculty working at doctoral programs who chose "other" versus less than one percent at non-doctoral programs. Respondents were able to indicate what these other positions were, and almost all were post-doctoral or research associate positions. The results suggest that doctoral programs engage in greater specialization, both in terms of teaching and research. Job titles and the use of tenure in other countries differs from the U.S.. This is reflected in our data. Twenty-two percent of respondents at foreign institutions indicate they are not in a tenure track position but almost ninety percent indicate they have the title of assistant or associate professor. Of more interest perhaps, foreign institutions make little use of contract teaching specialists.

Teaching loads vary across subsamples, as one might expect. As seen in Table 3, the overall number of undergraduate course preparations is higher for new faculty not associated with a Ph.D. program, although they prepare fewer graduate courses. Since acquiring their academic job, new faculty in non-Ph.D. granting departments have prepped an average of 4.31 undergraduate courses and 0.97 graduate courses compared to 1.6 undergraduate courses and an

average of 1.77 graduate courses for faculty at Ph.D. granting departments. In terms of teaching intensity, most striking is the difference in total number of class/sections taught since coming to their job. Forty-two percent of new faculty in departments that do not grant Ph.D.s have taught 20 or more sections while this is true for only 14 percent of new faculty in departments with Ph.D. programs, likely reflecting differences in the weight of teaching in the faculty member's time allocation and the nature of their jobs. It is interesting to note that the distribution of the number of sections taught in foreign departments is comparable to the Ph.D. granting U.S. departments. Average class size for new faculty at Ph.D. granting departments is substantially larger at 60.55 students compared to an average class size of 36.05 students for new faculty employed by departments that do not grant a Ph.D..

Another way to describe new faculty positions is to compare their current department characteristics with that of the institution where they earned their Ph.D.. We find that about 45 percent of new faculty in programs that grant a Ph.D. are employed at a top 30 program and about 61 percent of these faculty also earned their degree at a top 30 program. Of new faculty working in departments without a Ph.D. program, about 34 percent earned their Ph.D. at a top 30 institution. Based on the subsample of new faculty employed at foreign institutions, 53 percent earned their Ph.D. at a top 30 Ph.D. program in the U.S..

3. FACTORS AFFECTING JOB MARKET PLACEMENT AND HIRING DECISIONS

Ph.D. programs are geared towards preparing students to conduct research (Hansen, 1991), so we ask Directors of Graduate Studies their impressions of what percent of their students on the job market in the last five years sought academic jobs that had some teaching component and the percent that actually took such jobs. For the sake of parsimony, the results

are not reported in a table. Directors believe that about 80 percent of their students sought jobs that included some teaching responsibilities and that about 64 percent actually ended up in this type of position. This result is consistent with that obtained from our new faculty survey – 66 percent of respondents are in jobs that include some teaching-related activity. Directors at top 30 programs indicate that about 83 percent of students looked for jobs that included teaching and about 71 percent took such jobs. Although DGSs at programs outside the top 30 reported similar job seeking likelihood (80 percent), only 63 percent actually secured this type of job. While not surprising, it would appear the job market candidates from top 30 programs are better able to land a position that matches their initial expectation.[7]

Insights into the difference in graduate student placement outcomes may originate in differences in the factors that are stressed as being important for job placement. We ask Directors of Graduate Studies, "When you think about the job placements of your PhD graduate students over the past five years, generally, what seems to be important for job placements for students coming out of your program?" We offer a five point Likert scale (from extremely important to not at all important) and we report the percent of DGSs who rated a factor as extremely important or very important. Table 4 provides a summary of their replies. Given that survey respondents are all in departments with a Ph.D. program it is not surprising that all of the Directors indicate that demonstrated research effectiveness and almost all indicate that quality of the job market paper are important. Eighty-two percent say that the likelihood of the dissertation being completed in a timely fashion is important. However, interesting differences emerge between program ranks with regard to teaching activity and training acquired while in graduate school. Although only about 31 percent of top 30 program DGSs say that teaching experience during graduate school is very important, 83 percent of DGSs in programs below the

top 30 say it is important. For teacher training acquired in graduate school, the gap in perspective narrows with 23 percent of DGSs at top 30 programs and 43 percent of DGSs outside the top 30 programs indicating that it is important for job placement. In light of the earlier finding that top 30 program DGSs think their students are likely to seek and acquire jobs that include teaching, it is interesting that they see less value in teaching experience and training than DGSs at programs below the top 30. Faculty outside of the top 30 teach more courses per semester and this might explain why these directors believe that teaching experience and training are more important than do directors at top 30 programs. Additionally, the importance of teaching experience over teacher training might reflect a belief that teaching is more of an experiential process – you learn how to teach by teaching.

Table 5 displays responses from department chairs on three items related to what matters when hiring. We first ask Chairs to reflect on what matters when they consider hiring a new assistant faculty member. We then ask them (using a set of more detailed items) what factors are important for evaluating teaching and research potential. Chairs rated factors on a three-point Likert scale (very important, somewhat important, and not at all important) and table values indicate the percentage of department chairs that responded “very important”. We further break down results into subsamples of departments with a Ph.D. program and departments without a Ph.D. program and indicate which values are statistically, significantly different. Two-thirds of chairs of departments without a Ph.D. program say collegiality is very important while only 48 percent of chairs of departments with a Ph.D. program rate this factor as very important. Nearly all non-Ph.D. program chairs say the ability to communicate effectively is very important (91 percent) while only 58 percent of chairs at departments with Ph.D. programs provide the same emphasis. Also, the ability to retain a job candidate appears to be a much greater concern to

chairs in departments without a Ph.D. program, for which about 30 percent say it is very important compared to 4 percent of chairs at Ph.D. granting departments.

At first glance, it appears that overall teaching potential and overall research potential are equally important to chairs, but this hides a large discrepancy across types of departments. Perhaps not surprisingly, almost all non-Ph.D. program chairs believe overall teaching potential is very important and almost two-thirds believe overall research potential is very important. Ph.D. program chairs are more one-sided in their view of what is important. They are unanimous in the view that research potential is important but only a third believe that teaching potential is important.

What determines potential is of course subjective, so we ask chairs to rate a number of factors on their degree of importance in determining teaching and research potential. We ask department chairs their views about nine items that they might consider when estimating a candidate's teaching potential. Enthusiasm for teaching that is conveyed during the interview process matters most to department chairs in both subsamples although again with substantial differences across subsamples. Ph.D. program chairs are significantly less likely to indicate that course evaluations are an important factor. It is interesting to note that for non-Ph.D. program chairs, about 56 percent say that the number of times the candidate taught a course as the instructor of record was very important while only about 21 percent say the number of different courses taught was very important. Department chairs of non-Ph.D. programs are also twice as likely to say letters of reference matter for evaluating teaching potential when compared to chairs of Ph.D. granting departments. Additionally, 42 percent of chairs in departments without Ph.D. programs say that a statement of teaching philosophy is very important while only 4 percent of Ph.D. granting department chairs say likewise.

Most factors used to assess a candidate's research potential are more likely to be rated as very important by chairs of Ph.D. granting departments. Over 60 percent of chairs of both types of departments say conveyed enthusiasm for research is very important.[8] So even at schools where more factors are deemed very important when assessing a candidates teaching potential a great deal of weight is still applied to a candidate's ability to conduct research. It is interesting to note that a completed dissertation matters more to chairs at non-Ph.D. departments, while having published in a refereed journal during graduate school matters more the chairs at Ph.D. granting departments. Also, 22 percent of chairs at Ph.D. granting departments say that the prestige and research productivity of the dissertation advisor is very important while only about 3 percent of chairs of non-Ph.D. granting departments say the same.

There are some common factors for assessing teaching and research potential. Enthusiasm is important for assessing both the potential of research and teaching. Enthusiasm was the factor most commonly chosen as extremely important for assessing teaching potential and second most for research potential. Letters of reference are similarly important for the assessment of teaching and research potential. Most of the purely objective measures of teaching and research potential are chosen as very important by less than half of chairs. Although graduate students are often told the importance of publishing a manuscript and having a number of working papers, those doing the hiring do not see them as important for assessing potential. Similarly, for assessing teaching, less than half of the chairs see the number of classes taught as a relevant indicator of teaching potential. In general, subjective measures of assessment matter as much or more as objective measures when assessing potential. This result is consistent with McFall et al. (2015) who find that subjective evaluation of candidates becomes very important in the hiring process.

4. TIME ALLOCATION AND WHAT MATTERS FOR PROMOTION AND TENURE

Department chairs often describe the relative importance of research and teaching in their department to candidates during the interview process and again after a new faculty member arrives on campus. The perspective of a department chair in terms of what matters for tenure and promotion can provide strong signals for faculty resource allocation. Our department chair survey includes five statements that might reflect common advice for promotion and asks chairs to indicate which advice he or she would be most likely to give a typical faculty member in their department. Table 6 provides results for the full sample of department chairs and subsamples based on whether or not the department has a Ph.D. program. Results suggest some expectation of quality in terms of both teaching and research components of the job across all programs, with less than 4 percent of either departmental type indicating either promotion based entirely on research or entirely on teaching. As one might expect, chairs at departments with Ph.D. programs put more emphasis on statements that indicate a research emphasis while non-Ph.D. program chairs were more likely to indicate they would provide advice that emphasized teaching relative to research. For example, advice consistent with the statement "The evaluation of research and teaching contribute equally to the promotion and tenure decision" was only selected by about 4 percent of chairs at Ph.D. granting departments while about 41 percent of chairs of non-Ph.D. granting departments indicate they would give this advice.

Untenured faculty frequently seek input about what the criteria are for promotion and tenure. To see if faculty are in agreement with chairs, we ask new faculty if their institution places greater emphasis on teaching or research. Results in Table 7 indicate that about 10 percent of new faculty residing in departments with a Ph.D. program believed the institution provided equal incentives for teaching and research while 25 percent of those at non Ph.D.

granting institutions made the same claim. It would appear that new faculty in departments that confer a Ph.D. are overestimating the emphasis on teaching whereas those residing in departments that do not have a Ph.D. program are underestimating it. Faculty at foreign institutions lie between U.S. Ph.D. granting and non-Ph.D. granting institutions.

Most faculty contracts provide some expectation of time allocation between research, teaching and service if only by the number of courses that faculty are expected to teach. Recognizing that this distribution may vary across faculty members within a department, we ask department chairs to describe the typical contract allocation (percent of effort) for their faculty. Table 6 indicates that while there is little difference between the percentage allocation of time toward service across Ph.D. granting departments (11 percent) and non-Ph.D. departments (13 percent), significant differences in percentage time allocation for teaching and research are as expected. Ph.D. program chairs indicate that new faculty are expected to devote about 52 percent of effort to research activity and about 37 percent toward teaching. For departments that do not grant Ph.D.s, chairs indicate about 32 percent of effort should go toward research and about 55 percent toward teaching.

It is not necessarily the case that faculty actually allocate time based on how their contract suggests it should be done. Table 7 shows how new faculty report they actually spend their time. The time allocation suggested by chairs is similar to how new faculty actually spend their time. This result holds across Ph.D. programs and non-Ph.D. programs. Faculty employed at foreign institutions spend their time differently than the average faculty employed at a U.S. institution, with a greater time allocation to research and less to teaching. However, the time allocation of foreign employed faculty is very similar to those at Ph.D. programs in the U.S., the difference is only with those at non-Ph.D. programs.

When providing advice for promotion, 31 percent of chairs say teaching and research are weighted equally while it is the impression of only 16.9 percent of new faculty that this is the case. Fifty-six percent of new faculty perceive greater emphasis on research. Given this mismatch, perhaps the best advice for the new faculty member is not to rely solely on the numeric distribution presented by the chair, but rather to ask for more specific detail about how effort, energy, and time are allocated with emphasis on the specific research and teaching activities that are valued. It is possible these perceptions differ because new faculty are already responding to other department signals.

5. PREPARED TO TEACH?

We ask all three groups about the preparedness of new faculty to teach. Directors were asked if students were prepared to teach upon leaving the program, based on a five point Likert scale from (strongly agree to strongly disagree). Table 8 displays the results. Ninety percent of those at top 30 programs strongly agree or agree and none strongly disagree or disagree. Directors outside the top 30 had a similar response to this item. Although not shown in the table, chairs were asked if newly hired assistant professors were prepared to teach, and about two-thirds say yes. There is no statistically significant difference between chairs of Ph.D. programs (74 percent) and those at other departments (66.67 percent).

However, new faculty have a different opinion about their preparedness to teach. Using the same Likert scale, new faculty were asked if their graduate school experience prepared them to teach. The new faculty sample responses are shown in Table 8 and the results are broken down based on whether the faculty member attended a top 30 graduate school program (given that the item is based on their graduate school experience). Less than half of those graduating from top 30 programs strongly agree or agree and almost a quarter strongly disagree or disagree.

This view is quite different from the directors at their programs as well as new faculty that attended programs outside the top 30. Three-fourths of faculty that attended schools outside the top 30 strongly agree or agree that graduate school prepared them to teach and only about one in ten strongly disagree or disagree. Our results indicate that directors of top 30 programs have a very different impression of the preparedness of their students than the students themselves have.

To further investigate this, we decompose the responses of the new faculty based on the type of institutions at which they are employed. In Table 9 responses are first broken down by rank of graduated program attended and then by the type of institution at which they are employed. This creates some small sample sizes, so the results may not be representative. Students attending top 30 Ph.D. programs and obtaining employment at non-Ph.D. departments feel statistically significantly less prepared to teach than students attending non-top 30 programs and obtaining employment at non-Ph.D. departments. Only a third of those attending top programs and teaching at non-Ph.D. institutions agree or strongly agree that they were prepared to teach.

6. CONCLUSIONS

Doctoral degrees in economics are research degrees, and as a result, doctoral education is designed to prepare students to conduct research. Given this perspective of graduate education, it is not surprising that directors of graduate programs unanimously believe that demonstrating research ability through publications and conference presentations are important for new graduates to obtain employment. What might be surprising is that only a quarter of department chairs that do the hiring believe that publications are very important for assessing research potential and only fifteen percent believe that conference presentations are very important. Department chairs are more likely to rely on subjective evaluations of research potential, such as

enthusiasm. It is obviously important to provide students the hard skills needed to conduct research, but departments should not forget about the soft skills associated with interacting with other members of the profession.

This emphasis on research may suggest that there is little role for teaching in evaluating job candidates. In fact, three-fourths of directors of graduate programs believe that teaching experience obtained in graduate schools is important for job placement and almost two-thirds of department chairs view course evaluations from graduate school as important for assessing teaching potential. These results conceal an important distinction: only thirty percent of directors from top 30 programs believe that teaching experience from graduate school is important and only a quarter of department chairs at Ph.D. departments believe that course evaluations are important for assessing teaching potential. Given that many from top 30 programs find employment at non-Ph.D. granting departments, it may be that top 30 departments are not providing students with sufficient teaching experience.

In our sample, half of the graduates of top 30 programs find employment at non-Ph.D. programs. Our results show that these particular new faculty do not feel prepared to teach. This places these new faculty at a disadvantage for success because 80 percent of department chairs at non-Ph.D. departments say that teaching is as, or more, important than research when evaluating faculty for tenure and promotion. It would seem that most graduate programs are preparing faculty for jobs at Ph.D.-granting departments, where over ninety-percent of department chairs state that tenure and promotion is mainly based on research and teaching must only be "adequate."

It is obvious from reading the COGEE report (Hansen, 1991; Krueger et al., 1991) that economists think that training is essential for knowing how to properly conduct research. It is

also obvious, that economists do not believe that training is necessary for professors to properly teach students. Only about two-fifths of graduate directors believe teacher training is important for job placement and less than ten percent of department chairs believe that formal teacher training is important for assessing the teaching potential of new hires. It is possible that this reflects a belief that teaching is only learned by doing, although it is not clear how faculty can learn to use specific pedagogical techniques and assessment methods if they are unaware of their existence. Regardless, the evidence of our surveys suggests that Ph.D. granting departments might better serve their students by providing more teaching preparation and models for such enhanced preparation do exist. For example, Milkman and McCoy (2014) provide insight into more common components of teacher training via a survey of none 'exemplar' programs and Salemi (2003) describes a hypothetical, comprehensive model for graduate student teacher training specific to economics.

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ENDNOTES

[1] Fourteen of the top thirty schools replied for a response rate of 47 percent and 64 of the remaining programs responded for a response rate of 63 percent.

[2] This characterization of the Ph.D. students is consistent with Siegfried and Stock (2004). Their survey results suggested 62% international students, but with a growing trend since the mid 1970s.

[3] Although community colleges do advertise in the JOE, there are a limited number of job postings and the nature of community colleges made it much more challenging to identify the appropriate target to complete the survey. Thus we dropped these institutions from our sampling process.

[4] The foreign departments may or may not have a Ph.D. program.

[5] The 2016 Committee on the Status of Women in the Economics Profession Annual Report notes that women make up just over 28 percent of assistant professors at doctoral-granting institutions (p. 12).

[6] Although there are many titles for non-tenured faculty that teach, we use the term lecturer throughout as a catch-all for these positions.

[7] Differences in these average percentage values between top 30 Ph.D. programs and the other programs is not statistically significant.

[8] We did not define enthusiasm, so we cannot be certain that all respondents interpreted the term in a similar fashion. Enthusiasm may be a necessary factor for hiring, but it may not be sufficient. Our data does not allow us to determine this.

Table 1 Ph.D. Program Characteristics

(Perspective of Directors of Graduate Studies)

	Full Sample (n=78)	**Top 30 Programs (n=14)**	**Programs 31-132 (n=64)**
Number of Graduate Students in Program	53.78 (Range 1-200)	110.86 (Range 60-200)	41.10* (Range 1-105)
Number of Years in Residence	5.34	5.74	5.25*
Percent International Students	67.77%	70.08%	67.25%
% of current graduate students in program			
-On Assistantship-teaching only	43.11%	46.96%	42.25%
-On Assistantship-research only	13.83%	10.77%	14.51%
-On Assistantship with teaching and research	22.20%	23.59%	21.88%
-With no funding	11.37%	3.29%	13.16%*

*Differences in means between Top 30 and outside of the Top 30 Ph.D. granting programs are statistically significant at the 5% level.

Table 2 Economics Department Characteristics and Teaching Activity

(Survey of Department Chairs)

	Full Sample of Departments (n=192)	**Departments with Ph.D. Program (n=51)**	**Departments without Ph.D. Program (n=141)**
Number of tenure track faculty	11.66	20.37	8.81*
Number of non-tenure track faculty	3.08	5.82	2.09*
Percent of faculty who are lecturers	19.49%	22.53%	18.36%*
Number tenure track faculty hired in last 5 years	1.88	3.39	1.32*
Number non-tenure track faculty hired last 5 years	1.05	1.35	0.95
Percent of departments housed in			
-College of Arts and Sciences	37.70%	41.18%	36.42%
-College of Business	32.98%	29.41%	34.29%
-Other Colleges	29.32%	29.41%	29.29%
Number of Undergraduate Majors	240.17	611.17	110.66*
How many courses/sections does a tenure track faculty member teach in a typical year?	5.04	3.55	5.61*

How many courses/sections does a non-tenure track faculty member teach in a typical year?	6.25	6.04	6.36
Our departments offers some courses online	49.21%	58.82%	45.32%

*Differences in means between PhD granting and Non-PhD granting programs are statistically significant at the 5% level.

Table 3 New Faculty Characteristics

	Full Sample (n=299)	In Dept. with Ph.D. program (n=102)	In Dept. without Ph.D. Program (n=116)	At Foreign Institution (n=81)
Male	64.90%	62.75%	60.34%	75.31%†
Race				
-White/nonhispanic	66.78%	72.56%	68.10%	59.26%
-White/Hispanic	12.91%	10.78%	11.21%	16.05%
-Asian	14.24%	14.71%	11.21%	18.52%
-Black	2.32%	0.98%	5.17%	0.00%
Age in years	35.23	34.57	35.45	35.79
Time to Degree in years	5.61	5.62	5.74	5.40
Type of Position				
-Not tenure track	19.54%	29.41%	9.48%*	22.22%
-Tenure track but not yet tenured	62.58%	63.73%	66.38%	54.32%
-Tenure track and has tenure	17.88%	6.86%	24.14%*	23.46%
Rank				
-Assistant Professor	66.89%	64.71%	65.51%	70.37%
-Associate Professor	17.55%	8.82%	25.00%*	18.52%
-Full time teaching position, contract less than 3 years	3.97%	4.90%	5.17%	1.23%

-Full time teaching position, contract	1.66%	4.90%	0.00%*	0.00%
greater than 3 years	1.66%	1.96%	1.72%	1.23%
-Part time teaching position	6.62%	14.71%	0.86%*	4.94%
-Other				
Number of class sections taught so far				
0-5	26.46%	30.59%	18.63%	34.33%
6-10	22.57%	27.06%	15.68%	28.36%
11-20	25.29%	28.23%	23.52%	22.39%
20 or more	25.68%	14.12%	42.16%*	14.93%
Number of undergraduate courses prepped	3.01	1.65	4.31*	2.64
Number of graduate courses prepped	1.41	1.77	0.97*	1.63
Average class size	51.42	60.55	36.05*	66.36
Current dept. is ranked in the top 30	N/A	45.10%	1.72%	N/A
Grad program where earned Ph.D. top 30	49.00%	60.68%	34.48%	53.09%

*Differences in means between PhD granting and Non-PhD granting programs are statistically significant at the 5% level. †Differences in means between U.S. and foreign institutions are statistically significant at the 5% level.

Table 4: Factors in job market placement from point of view of Directors of Graduate Studies

Relevance for Job Placement (Percent of Directors of Graduate Studies who responded as extremely or very important.)	**Full Sample**	**Top 30 Programs**	**Programs 31-132**
-Demonstrated research effectiveness through publications and conference presentations while in graduate school	100.00%	100.00%	100.00%
-Quality of job market paper	97.44%	100.00%	96.92%
-Likelihood dissertation completed in timely fashion	82.06%	69.23%	84.61%
-Teaching experience acquired while in graduate school	74.44%	30.77%	83.08%*
-Teacher training acquired while in graduate school	39.74%	23.08%	43.08%

*Differences in means between Top 30 and outside of the Top 30 Ph.D. granting programs are statistically significant at the 5% level.

Table 5: Importance that Department Chairs Place on Various Factors when Making a New Hire

Percent of department chairs claiming that a factor is "very important"	Full Sample	Departments with Ph.D. Program	Departments without Ph.D. Program
What Matters for Hiring			
Collegiality	62.30%	48.00%	67.14%*
Ability to communicate effectively - verbally	82.72%	58.00%	91.43%*
Attainability	27.66%	26.00%	27.73%
Ability to retain over time	23.81%	4.00%	30.44%*
Overall teaching potential	78.06%	34.00%	95.00%*
Overall publication potential	73.30%	100.00%	63.57%*
Factors Considered when Assessing Candidate's Teaching Potential			
Enthusiasm for teaching conveyed during interview process	73.29%	32.00%	87.86%*
Course evaluations	61.78%	24.00%	74.75%*
Letters of reference – content as well as who authored	52.35%	32.00%	58.29%*
Number of times taught a course as instructor of record	44.50%	12.00%	55.71%*
Served as teaching assistant while in graduate school	30.89%	20.00%	35.00%*
Teaching Philosophy	32.63%	6.00%	42.45%*

Number of different courses taught	15.71%	2.00%	20.71%*
Number of semesters led/taught a recitation	19.05%	4.00%	24.46%*
Received formal teacher training in graduate school	8.38%	4.00%	10.00%*
Factors Considered when Assessing Candidate's Research Potential			
Letters of reference –content as well as author	66.49%	88.00%	58.57%*
Enthusiasm for research conveyed during interview process	64.21%	68.00%	62.59%
Dissertation Completed	50.79%	44.00%	52.86%
Published in a refereed journal while in graduate school	24.08%	36.00%	19.29%*
Number of working papers beyond dissertation	22.99%	24.00%	20.71%
Prestige of graduate program	12.04%	18.00%	10.00%
Presented at a conference while in graduate school	15.26%	12.24%	16.43%
Prestige and/or research productivity of dissertation advisor	7.85%	22.00%	2.86%*
Ability to obtain grant funding	2.11%	4.00%	1.45%

*Differences in means between PhD granting and Non-PhD granting programs are statistically significant at the 5% level.

Table 6 Department Chair Expectations for Faculty Time Allocation and Advice for Promotion and Tenure

	Full Sample (n=193)	**Departments with Ph.D. program (n=51)**	**Departments without Ph.D. program (n=141)**
With regards to expectations about teaching and research as related to promotion to associate professor, which most closely describes the advice you would give to a new hire?			
Promotion is largely based on research production but you must be adequate in the classroom.	36.98%	92.16%	16.43%*
The evaluation of research and teaching contribute equally to the promotion and tenure decision.	31.25%	3.92%	41.43%*
Promotion is largely based on classroom performance but you must have some scholarly activity.	29.69%	0.00%	40.71%*

Promotion is entirely based on research productivity.	1.56%	3.90%	0.71%
Promotion is based entirely on the teaching effort and quality.	0.52%	0.00%	0.71%
What is typical contract allocation (percent of effort) for newly hired tenure-track, assistant professors?			
Teaching	50.55%	37.15%	55.44%*
Research	37.16%	51.69%	31.95%*
Service	12.28%	11.17%	12.61%

*Differences in means between PhD granting and Non-PhD granting programs are statistically significant at the 5% level.

Table 7 New Faculty Actual Time Allocation and Perceived Valuation

	Full Sample (n=299)	In Dept. with Ph.D. program (n=102)	In Dept. without Ph.D. program (n=116)	In Dept. at Foreign Institution (n=81)
From your perspective, does your institution provide greater incentives for…				
Teaching	27.48%	7.84%	50.00%*	20.99%
Research	55.63%	82.35%	25.00%*	66.67%†
Equal emphasis on teaching and research	16.89%	9.80%	25.00%*	12.34%
During the current semester, what percent of your time each week do you devote to…				
Teaching	40.87%	32.03%	53.76%*	34.26%†
Research	46.53%	58.24%	32.15%*	51.51%†
Service	12.64%	9.73%	14.21%*	14.23%

*Differences in means between Ph.D. granting and non-Ph.D. granting programs are statistically significant at the 5% level.

†Differences in means between U.S. and foreign institutions are statistically significant at the 5% level.

Table 8 Preparedness to Teach

DGS	**Full Sample (n=69)**	**Top 30 Programs (n=12)**	**Programs 31-132 (n=57)**
When graduate students complete our program, if they enter into an academic position that involves some teaching, they are prepared to teach effectively.			
Strongly Agree/Agree	82.61	91.67	80.71
Neither Agree nor Disagree	10.14	8.33	10.53
Strongly Disagree/Disagree	7.25	0.00	8.77
		Degree From	
New Faculty	**Full Sample (n=243)**	**Top 30 Programs (n=117)**	**Programs 31-132 (n=126)**
My graduate school experience adequately prepared me to teach			
Strongly Agree/Agree	60.08	44.44	74.60*
Neither Agree nor Disagree	22.20	32.48	12.70*
Strongly Disagree/Disagree	17.28	23.08	11.90

*Differences in means between Top 30 and outside of the Top 30 Ph.D. granting programs are statistically significant at the 5% level.

Table 9: Faculty Preparedness to Teach by Rank of Graduate Program

	Degree from: Programs 31-132			Degree from: Top 30 Programs		
My graduate school experience adequately prepared me to teach	**In Dept. without Ph.D. program**	**In Dept. with Ph.D. program**	**In Department at Foreign Institution**	**In Dept. without Ph.D. program**	**In Dept. with Ph.D. program**	**In Department at Foreign Institution**
Strongly Agree/Agree	79.1	64.52	73.33	34.29*	50	51.43
Neither Agree nor Disagree	8.96	16.13	20	28.57*	31.82	34.29
Strongly Disagree/Disagree	11.94	16.13	6.67	37.14*	18.18	14.29
n	67	31	30	35	44	35

*Differences in means between Ph.D. granting and non-Ph.D. granting programs are statistically significant at the 5% level.