# Sharing Common Roots with an Advisor: Student-Advisor Matching and Job Market Outcomes*

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August 2019

**Abstract:** In this paper, we investigate the impact of student-advisor matching, in the form of country of origin and native language, on student initial placement outcomes in the economics PhD job market, accounting for both the type and quality of the placement. We utilize manually collected data on the identities and research profiles of both the candidates and their advisors to identify the student-advisor pairs with relevant matches. Our findings suggest that for international students, having at least one committee member from the same country of origin or at least one that speaks the same native language increases the chances of being placed into a tenure track academic job and being at an institution with higher research productivity, as measured by the research rankings in the Research Papers in Economics (RePEc) database. A closer examination of the results shows that these effects are primarily driven by matches from Chinese speaking students with their corresponding committee members.

**Keywords:** student-advisor matches; job placement; economics PhD job market;
**JEL Codes:** A11, J44

*We thank XXX. The remaining errors are ours.

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# 1 Introduction

Each year, hundreds of economics PhD students enter the job market seeking employment in academia, government, think tanks, and the private sector. There is a growing body of research that has examined various determinants of economics PhD job market outcomes. A number of studies have focused on the role of demographic information such as nationality (Tuckman et al., 1990), age (Siegfried and Stock, 2001), and gender (McMillen and Singell., 1994). Certain pre-graduate school characteristics such as GRE scores (Attiyeh and Attiyeh, 1997), undergraduate institution attended (Zhang, 2005), possession of a master's degree (Ehrenberg and Mavros, 1995) and the prominence of undergraduate reference writers (Krueger and Wu 2000; Grove and Wu 2007) have also been found to affect outcomes. Other work has focused on a student's experience and performance during graduate school, such as having independently taught a class as a graduate student, being from a highly ranked graduate program, or having publications prior to entering the job market (see Athey et al. (2007) and Sullivan et al. (2018), among others).

Dissertation advisors and committee members also play a crucial role in a student's initial placement. In addition to leveraging their professional networks and writing reference letters summarizing a student's research potential, advisors and committee members provide support and feedback on their students' progress throughout graduate school. In spite of the importance played by graduate advisors, the matching between advisors and students has not been extensively studied in prior research. Some authors, including Hilmer and Hilmer (2007b), and Hilmer and Hilmer (2009), test for the significance of an advisor's productivity on a student's job placement, but they do not specifically examine whether a close mentoring relationship affects students' job market outcomes. One strand of the literature that does look at student-advisor matches focuses on the role of gender. Neumark and Gardecki (1998) provide evidence that female graduate students are more likely to complete their degrees and they do so in a more timely manner when they have a female dissertation chair, but the authors do not find beneficial effects of having female advisors for

initial job placement. Hilmer and Hilmer (2007a) do not find statistical differences between female graduate students with female advisors and female students with male advisors in terms of the likelihood of pursuing research oriented jobs, but Gaule and Piacentini (2018) show that having a same gender advisor improves productivity during the PhD for both men and women, while women are more likely to pursue academic jobs when they have female advisors. In spite of the research on gender matches on student outcomes, the impact of student-advisor matching in other forms, including race, country of origin, and native language, has largely been overlooked.[1]

Our study seeks to bridge this gap in the literature by focusing on the impact of student-advisor matching, in the form of country of origin and native language, on student placement outcomes in the economics PhD job market. The similarity and attraction hypothesis (Osbeck et al., 1997) states that sharing similar characteristics may lead people to develop a close relationship. We posit that sharing similar cultural backgrounds and languages between students and advisors can make students feel more comfortable asking for help and feedback, which may potentially lead to a closer mentoring relationship and in turn a better placement outcome.

We obtain our data by assembling curriculum vitaes (CV's) of over 1,600 job market candidates from roughly 100 top ranked U.S. economics doctorate programs for the 2016-17 and 2017-18 job market cycles. We merge CV information with the candidates' initial placement outcomes as well as the identities and research profiles of their dissertation committee members. Our data thus allow us to identify student-advisor pairs (where we refer to advisor broadly as any member of one's committee) with country of origin matches or native language matches. We then examine the impact of such matches on student placement outcomes by considering both the type and quality of the placement. Our overall findings suggest that for international students, having at least one committee member from the same country of origin or at least one that speaks the same native language increases the

[1] A related area of research considers the effects of instructor gender on student outcomes at the undergraduate level (see Canes and Rosen (1995), Rask and Bailey (2002), Carrell et al. (2010), among others).

chances of being placed into a tenure track academic job and being at an institution with higher research productivity, as measured by the research rankings in the Research Papers in Economics (RePEc) database. A closer examination of the results shows that these effects are primarily driven by matches from Chinese speaking students with their corresponding committee members. We do not, however, find that country of origin or native language matches affect the probability of being placed into any particular job sector (e.g., academia vs. private sector).

At first glance, Chinese speaking advisors and committee members' professional networks in Chinese speaking countries may serve as a potential explanation for the observed improvement in their Chinese speaking students' placement outcomes. However, our analysis suggests that such improvement is primarily driven by candidates being placed in U.S. based tenure track jobs, which is at odds with the network-based explanation. Instead, because East Asian languages are linguistically so different from English, international students from these regions experience particularly high language barriers during their studies in the United States (Sato and Hodge, 2009; Rice et al., 2009). The significant improvement of placement outcomes for Chinese speaking students matched with dissertation committee members from the same country or speaking the same native language is consistent with the similarity and attraction hypothesis.

Our study contributes to the literature in two ways. First, much of the previous literature on the economics job market focuses on examining the effectiveness of candidates' research profiles and their advisors' reputation as signals that impact initial placement outcomes and largely ignores the matching and interactions between candidates and advisors, with the exception of the research discussed above that looks at matching along gender lines. Our study considers a different setting for student-advisor matching and job market outcomes, as we focus on native language and country of origin matches.

Second, our study relates to the broader literature that analyzes the impact of student-instructor matches along racial lines on the academic performance of undergraduate and

pre-college students. Rask and Bailey (2002) show that minority students are more likely to continue studying economics when they have a minority faculty member as an instructor at the introductory level. Similarly, Price (2010) finds that black students are more likely to continue future courses in science, technology, engineering, or mathematics (STEM) when they have black instructors at the introductory level. In analysis of primary school education, Dee (2004) shows that having a same race instructor increases test scores for both black and white students. The unique institutional settings of the economics PhD job market allow us to further contribute to the this research on student-instructor matches because 1) compared to undergraduate studies, (economics) doctorate studies typically feature much closer student-advisor interactions and mentoring; and 2) the centralized nature of the economics PhD job market makes it possible to quantify the impact of matching and mentoring on job market outcomes.

# 2 Data and Empirical Strategy

## 2.1 Data Sources and Description

We focus on the 2016-17 and 2017-18 job market cycles and manually collect job market candidates' curriculum vitaes from their professional websites or departments' placement information pages. We consider all job market candidates from the 96 top ranked economics PhD programs in the U.S., where the ranking is based on the 2017 U.S. News and World Report economics PhD program rankings.[2] Job market curriculum vitaes tend to follow similar and consistent formats, so they provide reliable and comparable information about the candidates' research productivity and teaching experience.

Unless citizenship is listed in the CV, a student's country of origin is determined by the location of the undergraduate institution. We also collect the curriculum vitaes of the dis-

[2]U.S. News and World Report's 2017 listing of top graduate programs in economics ranks all the way down to number 90, but because of ties, the list includes 96 total schools (as there are seven schools all tied for number 90).

sertation committee members and identify their country of origin in a similar fashion. While such classification of citizenship may introduce some errors in the reporting of citizenship for students who leave their home country for undergraduate studies, our approach helps identify a conservative and relatively accurate sample of foreign citizens.[3]

Students' placement information is primarily collected based on each department's official placement information page. In cases where the department does not list specific names in their placement outcomes, we search for this information on students' personal websites or publicly available LinkedIn profiles. We categorize job placement into three categories: academia, government or think tanks, and the private sector. Within academic positions, we distinguish between tenure-track jobs and other academic positions such as post-doctoral fellowships or visiting (non tenure-track) positions.

For academic, governmental, and research think tank positions, placement outcomes are ranked based on institutional research productivity from the Research Papers in Economics database published in February 2019. The RePEc index provides explicit rankings from 1 to 389 for the top 5 percent of all economics institutions around the world. Institutions outside of the top 5 percent are only ranked within their percentile in the ranking system and are not distinguishable from each other. For the purposes of this study, all institutions ranked in top sixth percentile are coded as having a ranking 400. Similarly, the remainder of the institutions ranked in the top 10 percent are coded as having a ranking of 500 (top 7 percent), 600 (top 8 percent), 700 (top 9 percent), or 800 (top 10 percent). Institutions that are not listed among the top 10 percent are coded as having a rank of 1,000. For academic positions, we only use the rank of an institution in the top 10 percent when the individual has been placed in a tenure-track job. Candidates that are placed in post-doctoral fellowships or non tenure-track academic positions are given a job placement rank of 1,000 (even if the institution is ranked among the top 10 percent). To maximize the number of observations,

[3]In addition, international students who go abroad for undergraduate studies will typically experience less language and cultural obstacles as they continue their graduate work abroad, compared to their peers who are college educated in their home countries.

all individuals placed in the private sector and those with missing job information have been given an imputed RePEc ranking of 1,000. However, we also show that our results are robust to excluding these imputed observations.

In coding student-advisor matches, we code "country match" as being equal to one when at least one of the student's committee members went to an undergraduate institution in the same country as the student's undergraduate institution. Similarly, we code "language match" as being equal to one when a student's country of origin (as proxied by undergraduate institution) has the same official language as that of at least one of the committee members.

## 2.2 Empirical Strategy

To examine the effects of student-advisor matches on job placement, we start by estimating the following probit model:

$$Pr(Tenure\_Track_i = 1) \quad = \Phi(\beta' Match_i + \gamma' X_i + \xi' Z_i) \tag{1}$$

where $Tenure\_Track_i$ is an indicator variable that is equal to one if candidate $i$ is placed in a tenure-track academic job and zero otherwise.[4] Our main variable of interest is $Match_i$, which represents a vector that includes student-advisor matches based on country of origin or native language as described in Section 2.1. The specifications for which we show results focus on matching with at least one of the committee members, as there is some uncertainty about the identity of the main dissertation advisor when this is not explicitly indicated on the candidate's CV. We also consider specifications that distinguish between matching with the primary advisor from that of matching with other committee members, but do not find significant differences.[5]

[4] In additional results not reported here, we also estimated Equation 1 with other dichotomous placement outcomes as dependent variables, e.g., whether a candidate is placed in academia or in a government/think tank job.

[5] Typically, candidates identify their primary dissertation advisor in their CV's, but when it is not clear, the reference writer that is listed first is assumed to be the primary advisor.

$X_i$ is a vector of job candidate characteristics in line with prior literature that includes gender, whether the undergraduate institution attended is an elite college,[6] prior graduate degree(s), USNWR ranking of the PhD program, the number of publications at the time of the job market, the number of publications in top 5 economics journals,[7] the number of papers currently under revise and resubmit, the receipt of a teaching award, and having independent instructor experience. In addition, we also control for the primary dissertation advisor's characteristics $Z_i$ such as the number of publications in top 5 journals, having experience of holding an editorial position, and having experience of holding an editorial position at a top 5 journal. Finally, we also control for region (US and Canada, Latin America and the Caribbean, Eastern Europe, Western Europe, South Asia and the Middle East, East and Southeast Asia, Australia, and Africa), sub-field (theory, macro/finance, econometrics, and applied micro), and job market year (2016-17 versus 2017-18).

To investigate the determinants of job placement quality, we utilize the RePEc database's ranking of economics institutions according to their research productivity. Specifically, we consider the following equation that relates the RePEc ranking of candidate $i$'s placement to his/her matching status with advisor/committee members and a set of job candidate and advisor characteristics:

$$RePEc_i \quad = \delta' Match_i + \phi' X_i + \theta' Z_i + \epsilon_i \tag{2}$$

where $Match_i$, $X_i$, and $Z_i$ are the match variables, job candidate characteristics, and advisor characteristics, respectively, as defined above. Given that the RePEc ranking is right censored at 1,000, we estimate Equation 2 using a tobit regression (with upper limit at 1,000), where we similarly control for region, sub-field, and job market cycle fixed effects.

[6]Similar to Athey et al. (2007), we define elite colleges as 1) Ivy League universities; 2) other top 15 national universities according to the 2019 U.S. News & World Report (USNWR) college ranking; and 3) top 5 liberal arts colleges, as rated by USNWR.

[7]We use the *Quarterly Journal of Economics*, *American Economic Review*, *Review of Economic Studies*, *Journal of Political Economy*, and *Econometrica* as our group of top 5 journals.

### 2.3 Summary Statistics

Our raw dataset contains a total of 1,660 job market candidates. After dropping observations with missing or inconsistent information, we obtain a sample of 1,315 candidates for our regression analyses. Table 1 presents the summary statistics of our sample. Most of the job market candidate characteristics are in line with those documented in prior studies. Close to 70 percent of our sample is male, slightly over half have completed a graduate degree, and less than 10 percent attended an elite U.S. undergraduate institution. The majority of job market candidates have limited publication experience as revealed by the mean number of publications or papers receiving a revise and resubmit invitation, which are both less than one. The match variables are indicator variables based on matching with at least one of the committee members. Most of the native language and country of origin matched pairs belong to matches with English speaking committee members and those from the U.S., respectively. Chinese and Spanish represent the most common foreign language matches. In terms of placement outcomes, 60% of candidates are placed into academic jobs, with the majority of these being tenure track positions. As explained in Section 2.1, we impute the RePEc ranking for those who are not placed in academia (approximately 40% of the sample). The mean imputed RePEc ranking is close to 800, equivalent to the top 10 percent of economics institutions around the world.

[Insert Table 1 Here]

## 3 Results

### 3.1 Baseline Findings

Table 2 presents the probit marginal effect estimates of language and country of origin matches on the likelihood of placing in a tenure-track academic job. All specifications include controls for characteristics of both job market candidates and their advisors, as well as region,

sub-field, and job market cycle fixed effects. Across all specifications, we find that having a previous graduate degree and having a revise and resubmit during graduate school career are positively correlated with placement into a tenure track position. The negative coefficient on the PhD Ranking of the school suggests that candidates in better ranked schools (lower numbers) are more likely to obtain placements in tenure track positions. Having a publication at the time of the job market, having experience as an instructor of a class, and winning a teaching award are all positively correlated with getting a tenure track job, but none of these coefficients are statistically significant. Likewise, the main advisor's characteristics are not significant predictors of getting a tenure-track placement.

Turning to student-advisor matches, we see in the first column that having a country match for at least one committee member is positively related to being placed in a tenure-track job, though the coefficient is not statistically significant. However, when we distinguish between country matches for US student-advisor pairs versus foreign student-advisor pairs, we see that foreign job market candidates with at least one committee member from the same country of origin are 9.8% more likely to land a tenure track job compared to those who do not share country of origin with any of the committee members, and the coefficient is significant at the 5% level. However, the coefficient for country matches for US pairs is statistically insignificant (and actually negative).

For specific language matches, we find in column 3 that neither the coefficient for "language match English" nor "language match non-English" is statistically significant. However, when we break down the language matches more finely in column 4 (English, Chinese, Spanish, and other languages), we find that Chinese speaking candidates (those who attended undergraduate institutions located in China, Hong Kong, Taiwan, or Singapore) who share the same language with at least one of their committee members are 17.4% more likely to be placed in a tenure track position than candidates whose native languages do not match with any of their dissertation committee members. To make sure that this effect is not simply due to differences in preferences by job type, we re-estimated these regressions for the subset

of individuals who placed in academic jobs and found similar results, with the coefficients on foreign country matches and Chinese language matches being even larger in magnitude. Contingent on going into academia, foreign students with a country of origin match and Chinese students with a Chinese language match are much more likely to obtain a tenure track position instead of a post-doc or visiting position. In supplementary analysis, we also estimated similar probit models for (1) the likelihood of obtaining an academic jobs (relative to government/think tank or industry), and (2) the likelihood of obtaining a academic or government/think tank job (relative to industry), but did not find the match variables to be statistically significant. These results suggest that these matches do not impact the job sector in which candidates place, but rather the quality of placement within academic jobs.

[Insert Table 2 Here]

To further explore the impact of student-advisor matches on job quality, we now use the imputed RePEc ranking of job placements as the outcome of interest, and results are shown in Table 3. Note that a lower RePEc index implies a higher productivity, so the negative coefficients on revise and resubmits, top journal revise and resubmits, and teaching award imply that having these accomplishments on the resume improve their job market placements by 117, 354, and 120 RePEc ranks, respectively. The positive coefficient on PhD Ranking shows that being at a PhD institution ranked 10 spots better would improve job placement by 166 spots on the RePEc index. Having an advisor who is an editor at a top journal or one who has more top 5 publications does not improve job placement rank. In terms of matching between students and advisors, we follow the same convention as the previous table, where a match occurs if the student and at least one committee member match by country of origin or native language. We see in column 1 that students who have at least one committee member from the same country of origin obtain jobs that are ranked 143 spots better than those without a country match for any committee member, though this coefficient is only significant at the 10% level. When we split the matches by US and foreign pairs in column 2, we see that only the coefficient for foreign country matches is

significant. Compared to candidates without matches, having a committee member from the same country of origin is correlated with a more than 200-rank improvement in job placement. For non-English speakers, having a language match with a committee member improves job placement by 184 places, though this coefficient is only marginally significant. Meanwhile, having a language matches between a committee member and a student is most significant for Chinese speaking students, as having a Chinese speaking committee member improves initial job placement by over 480 places in the RePEc ranking. Such effect is also economically meaningful as the mean and median imputed RePEc index for Chinese speaking students are 843 and 1,000, respectively. On the other hand, language matches for English speaking students and other non-Chinese speaking students are not significant predictors of RePEc rankings of jobs.

We also conducted a number of additional analyses to corroborate our main findings.[8] First, we tested to see whether the effects of having a match are stronger for one's primary dissertation advisor versus other members of the committee. Specifically, we repeated our baseline probit and tobit specifications with match variables that separately identify matching with a student's main dissertation advisor and other committee members. In general, we did not find significant differences in the impact of matches on either getting a tenure track job or in the ranking of the job placement when the match occurred with a primary advisor versus a different committee member. Next, given some of the similarities between Chinese and Korean speaking students, we included language matches between Korean students and their committee members as an additional match variable and re-estimated our baseline probit and tobit specifications. However, we did not find significant job market impacts from the Korean language match variable, possibly due to the small sample size of Korean language matches (only 18 matched pairs) and an even smaller number of tenure track jobs for those observations.

[Insert Table 3 Here]

[8]To streamline the presentation, we do not report these results, but they are available on request.

To alleviate concerns about our imputed RePEc index, we re-estimate our main specifications by excluding individuals who entered industry, did not have placement information, or were post-doctoral fellows or placed in visiting positions (who were earlier imputed as having the worst ranking of 1,000). The resulting sample consists of 762 observations with complete information. The results, as shown in Table 4, are qualitatively similar to those shown in Table 3 and in particular, the coefficient on Chinese language matches between students and committee members (including advisors) is large (-370) and statistically significant. Next, we also reclassify the RePEc rankings into six categories (RePEc$\leq$ 50, 50 <RePEc$\leq$ 200, 200 <RePEc$\leq$ 400, 400 <RePEc$\leq$ 900, RePEc= 1000, RePEc=missing) and estimate an ordered probit model version of our main specification. The estimates presented in Table 4 show that they are in line with those in Table 3.

[Insert Table 4 Here]

## 3.2 Potential Explanations

We next explore potential explanations for our baseline findings. We first investigate whether the placement impact of country and language match is related to the location of the jobs. Here, we separate the sample into U.S. and non-U.S. based positions and consider both tenure track and jobs in other sectors. Table 5 presents the results on language matches with committee members. Intriguingly, Chinese speaking students with a language match with at least one of their committee members see a significant improvement in the quality of the placement in U.S. based tenure track jobs, but not for non-U.S. based tenure track jobs. When we broaden the comparison to all jobs, we continue to observe Chinese students with language match to have a larger improvement in their placement in U.S. based jobs compared to non-U.S. based jobs with a t-test of the difference in coefficients being statistically significant at the 1% level. Overall, these results suggest that the networking of Chinese speaking committee members in Chinese speaking countries is not the main ex-

planation for the observed placement improvement of their students as we would otherwise expect a stronger matching effect for non-U.S. jobs. Rather, we argue that such heterogeneity of the placement improvement between U.S. and non-U.S. based jobs signals a close mentoring relationship between matched pairs and thus supports the similarity and attraction hypothesis.

[Insert Table 5 Here]

Because our main results are mostly driven by Chinese speaking students matched with committee members speaking the same language, we re-estimate our RePEc Tobit models for the subsample of Chinese speaking students. The results, which are available upon request, suggest that even within the sample of native Chinese speakers, those with a language match with at least one committee member see a statistically significant improvement in placement quality (by over 370 spots) relative to those without.

In addition to country of origin and language matches, matches based on a broader set of geographical regions, e.g., a Chinese speaking student matched with a Korean speaking committee member, might also improve graduate school experience and resulting job market outcomes due to similar cultural backgrounds. We test this hypothesis by re-estimating our main specifications adjusted for geographical region matches, and the results fail to support such possibility.[9] This implies that the placement impact from matching may be country and language specific, which further supports the similarity and attraction hypothesis.

# 4 Discussion and Conclusions

This paper has examined the effect of student-advisor matches on economics PhD job outcomes by tracking over candidates from roughly 100 of the top graduate programs in the United States over the 2016-2017 and 2017-2018 job market cycles. Our analysis shows that job market outcomes for U.S. students and other English speaking students are not

[9]The results on region matches are available upon request.

significantly impacted by having a country or language match with a dissertation committee member. For foreign students, however, being matched with a committee member of the same country of origin increases the likelihood of obtaining a tenure-track academic position by approximately 10 percent and improves the job placement outcome by approximately 200 spots on the RePEc ranking of economics institutions. When we break down these matches more finely, we see that Chinese speaking students benefit the most from a language match with their committee members, with an increase of 17 percent in the likelihood of placing in a tenure track job and an improvement of nearly 500 spots in the RePEc ranking of job placements, relative to students without a match.

Our findings for Chinese speaking candidates are not driven by network effects, as there is a much larger effect of matching for candidates placing in U.S. jobs than for candidates placing in non-U.S. jobs. We postulate that students who have advisors from the same country or ones that share the same native language may develop a closer relationship due to lower communication costs and a shared cultural background. While we do not have direct evidence on this, future research that focuses on the nature of these mentoring relationships would be beneficial to our understanding of the keys to succeeding in graduate economics programs. Individual surveys that ask about students' graduate experience (and more specifically, their interactions with their advisors) would help further our understanding of the mechanisms through which student-advisor matching impacts degree completion and job market placement. In addition, by having a better understanding of the potential language and cultural obstacles that international students experience in their graduate training, faculty and administrators will be better equipped to foster an environment that allows a diverse group of students to succeed in their graduate programs.

Table 1: Summary Statistics

| | (1) Mean | (2) Std. Dev. | (3) Min | (4) Max |
|---|---|---|---|---|
| Candidate Characteristics | | | | |
| Male | 0.693 | 0.461 | 0 | 1 |
| Elite US Undergrad | 0.091 | 0.288 | 0 | 1 |
| Prior Grad Degree | 0.557 | 0.497 | 0 | 1 |
| PhD Ranking | 33.796 | 26.085 | 1 | 90 |
| No. of RRs | 0.156 | 0.460 | 0 | 5 |
| No. of Top 5 RRs | 0.021 | 0.148 | 0 | 2 |
| No. of Pubs | 0.672 | 1.294 | 0 | 17 |
| No. of Top 5 Pubs | 0.010 | 0.100 | 0 | 1 |
| Teaching Award | 0.205 | 0.404 | 0 | 1 |
| Instructor Exp | 0.523 | 0.500 | 0 | 1 |
| Advisor Characteristics | | | | |
| No. of Top 5 Pubs | 5.565 | 7.678 | 0 | 61 |
| Top 5 Journal Editor Exp | 0.245 | 0.430 | 0 | 1 |
| Editor Exp | 0.833 | 0.373 | 0 | 1 |
| Match Variables | | | | |
| Country Match | 0.442 | 0.497 | 0 | 1 |
| Country Match Foreign | 0.102 | 0.303 | 0 | 1 |
| Country Match US | 0.339 | 0.474 | 0 | 1 |
| Language Match | 0.520 | 0.500 | 0 | 1 |
| Language Match English | 0.420 | 0.494 | 0 | 1 |
| Language Match Spanish | 0.016 | 0.124 | 0 | 1 |
| Language Match Chinese | 0.048 | 0.214 | 0 | 1 |
| Language Match Other | 0.026 | 0.159 | 0 | 1 |
| Placement Outcomes | | | | |
| Academia | 0.609 | 0.488 | 0 | 1 |
| Tenure Track | 0.433 | 0.496 | 0 | 1 |
| Visiting | 0.055 | 0.229 | 0 | 1 |
| Postdoc | 0.088 | 0.284 | 0 | 1 |
| Government_Think Tank | 0.158 | 0.365 | 0 | 1 |
| Industry | 0.213 | 0.410 | 0 | 1 |
| Imputed RePEc Ranking | 793.559 | 355.724 | 1 | 1000 |

The data are based on the 2016-17 and 2017-18 job market cycles. The raw data contain information about 1,660 job market candidates. All match variables are dummy variables based on matching with at least one of the committee members (including advisors).

Table 2: Impact of Matching on Likelihood of Tenure Track Placement

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Candidate Characteristics | | | | |
| Male | 0.024 | 0.024 | 0.022 | 0.024 |
| | (0.030) | (0.030) | (0.030) | (0.030) |
| Elite US Undergrad | 0.012 | 0.013 | 0.013 | 0.011 |
| | (0.049) | (0.049) | (0.049) | (0.049) |
| Prior Grad Degree | 0.065** | 0.065** | 0.065** | 0.068** |
| | (0.033) | (0.033) | (0.033) | (0.033) |
| PhD Ranking | -0.001* | -0.001* | -0.001* | -0.001* |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| No. of RRs | 0.103*** | 0.102*** | 0.103*** | 0.105*** |
| | (0.034) | (0.034) | (0.034) | (0.034) |
| No. of Top 5 RRs | 0.138 | 0.144 | 0.139 | 0.129 |
| | (0.109) | (0.108) | (0.108) | (0.109) |
| No. of Pubs | 0.013 | 0.013 | 0.013 | 0.013 |
| | (0.011) | (0.011) | (0.011) | (0.011) |
| No. of Top 5 Pubs | 0.121 | 0.121 | 0.125 | 0.116 |
| | (0.141) | (0.141) | (0.140) | (0.142) |
| Teaching Award | 0.039 | 0.041 | 0.039 | 0.039 |
| | (0.035) | (0.035) | (0.035) | (0.035) |
| Instructor Exp | 0.029 | 0.030 | 0.030 | 0.032 |
| | (0.031) | (0.031) | (0.031) | (0.031) |
| Advisor Characteristics | | | | |
| No. of Top 5 Pubs | 0.001 | 0.001 | 0.001 | 0.001 |
| | (0.002) | (0.002) | (0.002) | (0.002) |
| Top 5 Journal Editor Exp | 0.042 | 0.042 | 0.040 | 0.042 |
| | (0.041) | (0.041) | (0.041) | (0.041) |
| Editor Exp | 0.060 | 0.059 | 0.059 | 0.055 |
| | (0.039) | (0.039) | (0.039) | (0.039) |
| Match Variables | | | | |
| Country Match | 0.059 | | | |
| | (0.042) | | | |
| Country Match Foreign | | 0.098** | | |
| | | (0.048) | | |
| Country Match US | | -0.055 | | |
| | | (0.082) | | |
| Language Match English | | | -0.002 | -0.009 |
| | | | (0.058) | (0.058) |
| Language Match Non-English | | | 0.042 | |
| | | | (0.050) | |
| Language Match Spanish | | | | -0.062 |
| | | | | (0.116) |
| Language Match Chinese | | | | 0.174*** |
| | | | | (0.067) |
| Language Match Other | | | | -0.070 |
| | | | | (0.095) |
| Observations | 1.315 | 1.315 | 1.315 | 1.315 |
| Region/Sub-Field/JM Cycle FE | Yes | Yes | Yes | Yes |

The dependent variable across all specifications is a dummy variable for being placed in a tenure track position. All specifications are estimated using a probit model, and the presented coefficients are marginal effects. All match variables are dummy variables based on matching with at least one of the committee members (including advisors). *** p<0.01, ** p<0.05, * p<0.1.

Table 3: Impact of Matching on Placement Quality

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Candidate Characteristics | | | | |
| Male | 37.010 | 37.230 | 40.860 | 41.880 |
| | (64.720) | (64.690) | (64.780) | (64.890) |
| Elite US Undergrad | -75.090 | -77.150 | -77.460 | -75.410 |
| | (101.000) | (101.000) | (101.100) | (100.600) |
| Prior Grad Degree | -112.000 | -111.600 | -113.400 | -117.600* |
| | (71.000) | (70.960) | (71.010) | (70.900) |
| PhD Ranking | 16.640*** | 16.630*** | 16.610*** | 16.920*** |
| | (1.867) | (1.868) | (1.866) | (1.873) |
| No. of RRs | -117.300* | -115.800* | -119.900* | -120.200* |
| | (66.430) | (66.320) | (66.400) | (66.240) |
| No. of Top 5 RRs | -354.000* | -364.300** | -348.400* | -337.300* |
| | (184.700) | (184.700) | (184.700) | (183.800) |
| No. of Pubs | -24.010 | -24.650 | -23.750 | -22.610 |
| | (23.560) | (23.550) | (23.570) | (23.520) |
| No. of Top 5 Pubs | -276.000 | -275.700 | -284.000 | -267.000 |
| | (241.300) | (241.100) | (241.500) | (240.200) |
| Teaching Award | -120.200* | -123.200* | -122.000* | -115.900 |
| | (71.980) | (71.980) | (72.010) | (71.830) |
| Instructor Exp | 18.880 | 17.980 | 17.460 | 17.980 |
| | (65.680) | (65.650) | (65.660) | (65.460) |
| Advisor Characteristics | | | | |
| No. of Top 5 Pubs | -5.469 | -5.483 | -5.992 | -6.179 |
| | (4.213) | (4.206) | (4.213) | (4.197) |
| Top 5 Journal Editor Exp | -5.650 | -4.540 | 2.056 | 5.291 |
| | (79.020) | (78.990) | (79.090) | (78.890) |
| Editor Exp | 5.453 | 4.362 | 9.510 | 22.670 |
| | (91.610) | (91.650) | (91.520) | (91.480) |
| Match Variables | | | | |
| Country Match | -143.100* | | | |
| | (86.360) | | | |
| Country Match Foreign | | -203.100** | | |
| | | (98.780) | | |
| Country Match US | | 37.380 | | |
| | | (168.300) | | |
| Language Match English | | | 64.240 | 84.850 |
| | | | (121.700) | (121.700) |
| Language Match Non-English | | | -183.500* | |
| | | | (100.200) | |
| Language Match Spanish | | | | -198.900 |
| | | | | (211.300) |
| Language Match Chinese | | | | -482.400*** |
| | | | | (141.400) |
| Language Match Other | | | | 129.100 |
| | | | | (193.700) |
| Observations | 1.315 | 1.315 | 1.315 | 1.315 |
| Region/Sub-Field/JM Cycle FE | Yes | Yes | Yes | Yes |

The dependent variable across all specifications is the RePEc productivity index. All specifications are estimated using a tobit model. All match variables are dummy variables based on matching with at least one of the committee members (including advisors). *** p<0.01, ** p<0.05, * p<0.1.

Table 4: Impact of Matching on Placement Quality: Alternative Specifications

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Alternative RePEc Classification | | | | |
| Country Match | -66.030 | | | |
| | (66.820) | | | |
| Country Match Foreign | | -80.800 | | |
| | | (76.530) | | |
| Country Match US | | -19.530 | | |
| | | (135.100) | | |
| Language Match English | | | -5.474 | 5.409 |
| | | | (96.900) | (96.740) |
| Language Match Non-English | | | -113.700 | |
| | | | (78.270) | |
| Language Match Spanish | | | | -86.370 |
| | | | | (167.300) |
| Language Match Chinese | | | | -369.800*** |
| | | | | (108.000) |
| Language Match Other | | | | 110.900 |
| | | | | (161.400) |
| Observations | 762 | 762 | 762 | 762 |
| Ordered Probit Regressions | | | | |
| Country Match | -0.175* | | | |
| | (0.090) | | | |
| Country Match Foreign | | -0.254** | | |
| | | (0.104) | | |
| Country Match US | | 0.064 | | |
| | | (0.180) | | |
| Language Match English | | | 0.060 | 0.084 |
| | | | (0.128) | (0.128) |
| Language Match Non-English | | | -0.185* | |
| | | | (0.107) | |
| Language Match Spanish | | | | -0.209 |
| | | | | (0.252) |
| Language Match Chinese | | | | -0.344** |
| | | | | (0.147) |
| Language Match Other | | | | 0.138 |
| | | | | (0.220) |
| Observations | 1.315 | 1.315 | 1.315 | 1.315 |
| Region/Sub-Field/JM Cycle FE | Yes | Yes | Yes | Yes |
| Control Variables | Yes | Yes | Yes | Yes |

The dependent variable across all specifications is the RePEc productivity index. All specifications in the top panel are estimated using a tobit model and all specifications in the bottom panel are estimated using an ordered probit model. All match variables are dummy variables based on matching with at least one of the committee members (including advisors). Control variables include the same set of candidate and advisor characters tics as presented in Tables 2 and 3. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Impact of Matching on Placement Quality: US vs. Non-US Positions

| | (1) US TT | (2) Non-US TT | (3) US Job | (4) Non-US Job |
|---|---|---|---|---|
| Language Match English | 33.800 | 108.400 | -2.064 | 217.000 |
| | (135.000) | (149.100) | (170.800) | (166.500) |
| Language Match Spanish | 107.400 | -141.500 | -167.000 | -318.600 |
| | (254.800) | (276.600) | (298.400) | (282.400) |
| Language Match Chinese | -460.600** | -165.000 | -606.900** | -391.900*** |
| | (197.900) | (127.700) | (247.300) | (149.700) |
| Language Match Other | 242.400 | -92.810 | 88.920 | 170.500 |
| | (212.300) | (257.900) | (275.300) | (259.100) |
| Observations | 324 | 266 | 876 | 439 |
| Region/Sub-Field/JM Cycle FE | Yes | Yes | Yes | Yes |
| Control Variables | Yes | Yes | Yes | Yes |

The dependent variable across all specifications is the RePEc productivity index. All specifications are estimated using a tobit model. All match variables are dummy variables based on matching with at least one of the committee members (including advisors). Control variables include the same set of candidate and advisor characters tics as presented in Tables 2 and 3. *** p<0.01, ** p<0.05, * p<0.1.

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