Who presents and where? An analysis of research seminars in US economics departments

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Abstract

Using a large dataset of research seminars held at US economics departments in 2018, I explore the factors that determine who is invited to present at a research seminar and whether the invitation is accepted. I find that high-quality scholars have a higher probability of being invited than low-quality scholars, and researchers are more likely to accept an invitation if it is issued by a top economics department. The probability of being invited increases with the size of the host department and if the scholar belongs to it. Having a coauthor in the host department increases the probability of being invited and accepting the invitation, whereas the distance between the host department and invited scholar reduces the probability of being invited and accepting the invitation. Female scholars have a lower probability of being invited to give a research seminar than male scholars.

JEL classification: A14, I23, O31

Keywords: research seminars, economics profession, gender, research quality, assortative matching.

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1 Introduction

To develop new ideas, scholars need to be aware of the state-of-the-art in the field and discuss their new research projects with peers. Research seminars contribute to the achievement of both objectives. Thus, university departments devote a considerable amount of resources to organize research seminars, and scholars invest a substantial share of time in preparing presentations and traveling to other universities. However, despite its being a core activity of academic life, little is known about the variables determining who is invited to deliver a research seminar and whether a scholar will accept the invitation to present.

I build a large dataset of research seminars held at US economics departments in 2018. In my sample, I only observe whether a scholar gives a seminar at an economics department. I do not observe whether a department invites a scholar to deliver a seminar or whether a scholar accepts the invitation, but the product of these individual decisions. Despite this limitation, I can estimate the variables governing the decision to invite and accept using a bivariate probit model with partial observability. I find that high-quality scholars are more likely to be invited to deliver a research seminar and that scholars are more likely to accept an invitation to give a seminar if it is issued by a top department. These results suggest a positive assortative matching in seminars between the quality of the inviting department and the quality of the invited scholar. This matching may reinforce the quality advantage of ex-ante high-quality scholars and departments. In my preferred specification, I find that women have a lower probability to be invited to deliver a research seminar than men. Scholars are more likely to be invited by a large department and are more likely to accept an invitation if they have a coauthor in the inviting department. A long distance between the inviting department and affiliation of the invited scholar reduces the probability of issuing and accepting an invitation to deliver a research seminar. A scholar belonging to the department that hosts the seminar has a larger probability of being invited and accepting the invitation than a scholar not belonging to the department. Departments prefer to invite young scholars.

To the best of my knowledge, the paper is the first to provide evidence on the variables that determine (i) the scholars invited to deliver a research seminar, and (ii) where a scholar is more likely to present a research seminar. Previous papers concluded that workshops and conferences facilitate the transmission of knowledge (Iaria et al., 2018; Lopez de Leon and McQuilllin, 2018; Head et al., 2019), promote collaboration among scholars (Campos et al., 2018; Chai and Freeman, 2019), increase the probability of publishing in high-quality journals (Gorodnichenko et al., 2019) and the quality of research (Minondo, 2020). I add to the literature by showing that high-quality departments are more likely to be aware of new knowledge generated in the field, because scholars producing the most promising ideas are
more willing to present their new projects to such departments. Previous studies on urban economics, economic growth, and economics of innovation have shown that social interactions enable people to be exposed to new ideas, thus raising knowledge and fostering the development of new ideas (Lucas, 2009; Glaeser, 2011; De la Roca and Puga, 2017; Akcigit et al., 2018; Andrews, 2019). Research seminars provide scholars with exposure to new ideas and facilitate interaction among peers. I contribute to the literature by analyzing the variables that raise the probability that a research seminar takes place and thus, foster awareness about new ideas and interaction among scholars. In general, this paper is related to the literature that explores the productivity and quality determinants of economics scholars and departments (Kim et al., 2009; Bosquet and Combes, 2017; Hamermesh, 2018). I contribute to this literature by showing that research seminars may further enhance the productivity of high-quality scholars affiliated with high-quality departments, because such scholars will have more opportunities to be aware of new ideas and improve their research projects on the basis of the comments and suggestions from high-quality peers. Finally, I join several studies in analyzing gender discrimination in economics (Ginther and Kahn, 2004; Bayer and Rouse, 2016; Lundberg and Stearns, 2019; Hengel and Moon, 2019; Card et al., 2020). I add to the literature by providing evidence that female scholars are less likely to be invited to deliver a research seminar.

The remainder of the paper is organized as follows. Section 2 posits a simple analytical framework to understand the factors that motivate departments to organize research seminars and scholars to present at a research seminar. Section 3 describes the dataset and presents some summary statistics. Section 4 discusses the results of the regression analyses, and Section 5 concludes.

2 Simple analytical framework on research seminars

To guide the empirical analysis I posit a very simple analytical framework to explain the factors that determine the scholars invited to deliver a research seminar and the reasons that lead a scholar to accept such an invitation. To produce high-quality research, university departments should be aware of new ideas, methodologies and databases in their field. A strategy for remaining at the frontier of knowledge is inviting the scholars who are generating new ideas and methodologies and using such novel databases. Research seminars are especially helpful for increasing awareness of cutting-edge research, because the presenters may have yet to publish a working paper of the new research project, and the new knowledge may still be tacit. Even when a working paper exists, oral presentations and discussions between
the presenter and attendees may clarify certain aspects of the paper (Chai and Freeman, 2019).

A department holds a limit on the number of research seminars that it can host during an academic course; thus, it will aim to maximize the research quality of the presenters given the budget. I assume that departments only observe the quality of the scholar and give freedom to decide the paper that will be presented. I define a latent variable $I^*_ds$, which measures the willingness of department $d$ to invite scholar $s$ to deliver a research seminar. Analytically:

$$I^*_ds = \beta_1 Q_s + \beta_2 Cost_{ds} + \beta_3 Size_d + \beta_4 Female_s + \beta_5 Coauthor_{ds} + \beta_6 Own_{ds} + \epsilon_{ds}$$

(1)

In addition to researcher’s quality, $Q_s$, other factors may also determine a department’s willingness to invite a scholar. For example, departments may be less willing to invite a scholar if travel expenses are high, $Cost_{ds}$. Large departments, $Size_d$, are more likely to invite scholars because they can hold a large number of seminars.

A recent survey of the American Economic Association indicated that 32% of women, as opposed to 13% of men, felt discriminated or unfairly treated in terms of being invited to participate in research conferences, associations and networks (American Economic Association, 2019). Chari and Goldsmith-Pinkham (2017) found that the rate of paper acceptance at the NBER Summer Institute for women is statistically indistinguishable from that for men. However, Hospido and Sanz (2019) found that female-authored papers are less likely to be accepted at three major academic conferences in economics.1 To capture potential gender discrimination when inviting a speaker, I introduce a dummy variable, $Female_s$, which takes a value of one if the speaker is female and zero otherwise. If the invited scholar has a coauthor in the inviting department, $Coauthor_{ds}$, then the inviting department may be more willing to invite. In addition to having the opportunity to learn about the latest research project of the invited scholar, the visit may enable coauthors to advance in the joint research project. In addition, departments may be willing to provide a first venue for own scholars, and researchers visiting the department, to discuss their new ideas. This possibility is captured by $Own_{ds}$, which is a dummy variable that takes a value of one if the invited scholar

1Regarding research seminars, The Econ Seminar Diversity project is gathering a database on who speaks at economics departments seminar series, and it provides a tool to visualize the percentage of women and scholars belonging to minorities that are invited to give a seminar. Available at https://econseminardiversity.shinyapps.io/EconSeminarDiversity/URL
was affiliated to or visiting the department that issued the invitation, and zero otherwise. \( \epsilon_{ds} \) is the disturbance term. A department will deliver an invitation to present a seminar if the willingness to invite exceeds a given threshold \( \lambda \). Thus, the probability that department \( d \) invites scholar \( s \) is \( \mathbb{P}(I^*_ds > \lambda) \).

A scholar wants to present her research to high-quality audiences, where she is more likely to receive suggestions and comments that may enable her to improve the quality of a new project. Therefore, the probability that an author accepts an invitation to deliver a research seminar will be high with a high-quality department issuing the invitation. The probability of accepting the invitation may also depend on other variables, such as duration of the trip and having a coauthor in the inviting department. Scholars may feel more comfortable presenting their new work to their department peers than to peers in other departments. However, previously receiving comments from department peers through personal conversations may also lessen the probability of scholars presenting at their department. The American Economic Association survey reports that a larger percentage of women than men (46% vs. 18%) do not speak at conferences or seminar presentations to avoid possible harassment, discrimination, or unfair or disrespectful treatment \( (\text{American Economic Association, 2019}) \). Lundberg and Stearns \( (2019) \) noted that economics seminars have a reputation for being particularly hostile environments. To capture the possibility that women may be less willing to accept an invitation to deliver a seminar, I include \( Female_{sd} \) as an additional variable in Equation (2).

Finally, young scholars may be more willing to accept an invitation because they want to present themselves to the research community \( (\text{Chai and Freeman, 2019}) \).

I define a latent variable \( A^*_sd \), which measures the willingness of scholar \( s \) to accept an invitation to present a paper at department \( d \). Analytically, \( A^*_sd \) can be expressed as follows:

\[
A^*_sd = \beta_1Q_d + \beta_2Trip_{sd} + \beta_3Female_s + \beta_4Coauthor_{sd} + \beta_5Age_s + \beta_6Own_{sd} + \epsilon_{sd}
\]

(2)

where \( Q_d \) denotes the quality of the inviting institution, \( Trip_{sd} \) the duration of the trip, \( Age_s \) the career age of the scholar, and \( \epsilon_{sd} \) the disturbance term. Scholar \( s \) will accept the invitation to deliver a research seminar at department \( d \) if the willingness to accept overcomes a given threshold \( \kappa \). Thus, the probability of accepting an invitation is \( \mathbb{P}(A^*_sd > \kappa) \).

A research seminar will take place if department \( d \) delivers an invitation to scholar \( s \), and scholar \( s \) accepts the invitation.\(^2\) Thus, the probability of holding a research seminar

\(^2\)The process can flow in the opposite direction: a scholar may offer to deliver a seminar and the department may accept the offer.
by scholar \( s \) at department \( d \), \( \mathbb{P}(S_{sd}) \), can be expressed as follows:

\[
\mathbb{P}(S_{sd}) = \mathbb{P}(I_{ds}^* > \lambda, A_{sd}^* > \kappa)
\]  

The model has two binary outcomes, namely, \( I_{ds} \), which takes a value of one if \( I_{ds}^* > \lambda \), and zero otherwise, and, \( A_{sd} \), which takes a value of one if \( A_{sd}^* > \kappa \), and zero otherwise. However, my data only allow me to observe the product of these outcomes. I note that an invitation was issued if the author accepts it; and I only observe the absence of a match. In the latter case, I cannot determine whether the seminar did not occur because the department did not issue the invitation or the scholar did not accept the invitation. Following Poirer (1980), the partial observability problem can be represented by a single binary random variable:

\[
Z_{ds} = I_{ds}A_{sd}
\]

The distribution of \( Z_{ds} \) is

\[
p_{ds} = \mathbb{P}(Z_{ds} = 1) = \mathbb{P}(I_{ds} = 1 \text{ and } A_{sd} = 1) = F(x_I \beta_I, x_A \beta_A; \rho),
\]

\[
1 - p_{ds} = \mathbb{P}(Z_{ds} = 0) = \mathbb{P}(I_{ds} = 0 \text{ or } A_{sd} = 0) = 1 - F(x_I \beta_I, x_A \beta_A; \rho)
\]

where \( F \) denotes the bivariate standard normal distribution and \( \rho \) the correlation of the error terms (i.e., \( \epsilon_{ds} \) and \( \epsilon_{sd} \)). \( x_I \beta_I \) and \( x_A \beta_A \) are the variables and parameters included in Equations (1) and (2), respectively.

The log-likelihood function of the sample is expressed as follows:

\[
L(\beta_I, \beta_A; \rho) = \sum_{d=1}^{n} \sum_{s=1}^{n} Z_{ds} \ln[F(x_I \beta_I, x_A \beta_A; \rho)] + (1 - Z_{ds}) \ln[1 - F(x_I \beta_I, x_A \beta_A; \rho)]
\]

Poirer (1980) showed that \( \beta_I \) and \( \beta_A \) can be estimated if, at least, one variable included in one of the variable vectors, \( x_I \) or \( x_A \), is excluded from the other variable vector. In my model, \( Q_s \) and \( Size_d \), which are included in \( x_I \), are excluded from \( x_A \). In addition, \( Q_d \), which is included in \( x_A \), is excluded from \( x_I \). Hence, estimating all parameters included in \( \beta_I \) and \( \beta_A \) with a bivariate probit model with partial observability is possible.

The partial bivariate model assumes a correlation between the errors terms (i.e., \( \epsilon_{ds}, \epsilon_{sd} \))
in Equations (1) and (2). This assumption is reasonable in the said context. For example, a department may not issue an invitation if it is very unlikely that a scholar will accept the invitation. Therefore, willingness to accept an invitation \( (\kappa) \) is a factor that can determine the willingness to issue an invitation \( (\lambda) \), which leads to a correlation between errors terms.

I argue that the regression equation incorporates the variables critical for the decisions that I am modeling. Obviously, other variables may also affect the probability of holding a seminar. For example, if a scholar is ill, she will be unable to accept the invitation to deliver a seminar. Conversely, if a department is located in an area that suffered an earthquake, it may be unable to host seminars until the faculty buildings are repaired. However, these factors are orthogonal to the variables included in the model, and their omission should not affect the estimates.

Identification in bivariate probit models with partial observability is weaker than that in bivariate models with full information about individual decisions (Meng and Schmidt, 1985). This is because the model has to estimate the parameters of two decisions from events that are incompletely observed. To test the robustness of results, I estimate a univariate probit model which combines the variables that affect the probability of inviting and accepting an invitation. The regression equation is expressed as follows:

\[
S_{sd}^* = \beta_1 Q_s + \beta_2 Q_d + \beta_3 Cost_{ds} + \beta_4 Female_s + \beta_5 Coauthor_{ds} + \beta_6 Own_{ds} + \beta_7 Size_d + \beta_8 Age_s + \epsilon_{ds}
\] (7)

Scholar \( s \) will hold a seminar at department \( d \) \( (S_{sd} = 1) \) if the latent variable \( S_{sd}^* \) is higher than a given threshold \( \mu \). If the latent variable does not overcome such a threshold, then seminar will not take place \( (S_{sd} = 0) \).

3 Data

I randomly selected 146 economics departments out of the 240 economics programs included in Table 1 of McPherson (2012). The randomly selected departments for the current study are listed in Table A.1 in the Appendix. From the departments’ web pages, I extracted information about seminars held in 2018, such as the invited scholar, affiliation of the invited scholar, and, if available, the title of the paper that was presented. I include a department

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3 I sampled up to 157 departments, but 11 of them could not be included in the sample due to limitations in retrieving the required information.

4 I do not include the recruitment seminars or the seminars delivered by PhD students in the sample.
in the sample even if it did not hold any research seminar in 2018. The sample of scholars is composed of professors affiliated with the 240 US economics departments included in Table 1 of McPherson (2012). The estimation sample is generated by crossing the randomly selected departments with the sample of scholars.

I use the index elaborated by McPherson (2012) to proxy for the quality of US economics departments. This index is based on the number of pages published by a department’s scholars in the top 50 economics journals during 2002-2009. I use two measures to proxy for the quality of the invited scholar, namely, (i) quality of the economics department to which the scholar is affiliated; and (ii) number of citations to the scholar’s research outputs according to her profile in Google Scholar. I use the same variable to capture the cost of inviting a scholar, $Cost_{ds}$, and length of the trip, $Trip_{sd}$, that is, the distance between the inviting department and affiliation of the invited scholar. Using information from Google Scholar, I identify whether the invited scholar has a coauthor in the inviting department. To calculate the career age of the scholar, I identify her earliest publication in Google Scholar. I calculate career age as 2018 minus the year in which the earliest work was published, plus one. I measure the size of an economics department by the number of professors affiliated with it.

Table 1: Building of sample and summary statistics

|                                | Median | Mean  | Std. dev. | Min | Max |
|--------------------------------|--------|-------|-----------|-----|-----|
| # Seminars per department      | 8.5    | 27.0  | 45.4      | 0   | 261 |
| # Seminars per scholar         | 0.0    | 0.4   | 0.9       | 0   | 7   |

Note: Author’s calculations.

Table 1 provides the summary statistics of the sample. The number of US economics

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5 I do not include emeritus professors or joint appointments.

6 I calculate bilateral distances using the latitude and longitude of the inviting department and affiliation of the invited scholar.
departments included in our sample is 146, out of which 93 held at least one seminar in 2018. The number of scholars affiliated with a US economics department was 4,853, out of which 1122 were female (23%). The crossing of the randomly sampled departments (146) and scholars affiliated with US economics departments (4,853) generates an estimation sample of 708,538 observations. I retrieved data from 3942 seminars held by economics departments included in the sample. The number of scholars presenting at least one research seminar was 2,842, out of which 1065 were affiliated with a US economics department. A total of 212 of the latter speakers were female (20%). The remainder of the seminars were delivered by scholars affiliated with non-US economics departments or institutions, scholars affiliated with business schools, law schools, and other non-economics departments in US universities, or scholars belonging to other US institutions (for example, federal reserve banks). The number of scholars affiliated with a US economics department that had a Google Scholar ID was 2,946 (61%).

The bottom panel of Table 1 indicates that the median department held 8.5 seminars in 2018. However, the distribution of seminars per department was highly skewed, because the average number of seminars was 27 and the standard deviation 45. A total of 53 departments did not hold any seminar in 2018, whereas one department held up to 261 seminars. The median number of seminars per scholar was zero. This distribution was also skewed as indicated by the average number of seminars per scholar of 0.4 and a standard deviation of 0.9. In total, 3,788 scholars did not present at a research seminar, whereas other scholars presented at seven economics departments in 2018.

Panel A in Figure 1 shows a positive correlation between the quality of the economics department and number of research seminars held by that department. The number of research seminars increases exponentially with the quality of the economics department. Panel B in Figure 1 plots the correlation between the quality of scholars and number of seminars delivered in 2018. The vertical axis measures the number of seminars, which ranges from 0 to 7 (Table 1). Each dot in the graph corresponds to a scholar. For each number of seminars, the quality-range of scholars is very wide. However, the average quality of scholars increases (i.e., the line of dots moves to the right) as the number of seminars delivered by a scholar increases. These figures suggest that research seminars are more likely to occur if the quality of the host department and invited scholar is high. The regression analyses carried out in the next section analyze whether this visual appreciation is correct.
Figure 1: Correlation between quality and number of seminars, 2018

A. Economics department

B. Scholar

Note: The quality of economics departments is measured by McPherson’s (2012) index (in logs). The quality of scholars is measured by the (log) number of citations to works recorded by Google Scholar between 2013 and 2017.
4 Regression results

This section presents the results of econometric analyses. To maximize the number of observations, I first proxy for the quality of the invited scholar by the quality of the department to which she is affiliated. The shortcoming of this estimation is that I cannot include career age and coauthor as independent variables because they can only be computed for authors with a Google Scholar profile.

Column (1) of Table 2 presents the baseline estimation. Standard errors are clustered at the scholar level. At the bottom of the table, I report the chi-square statistics for the likelihood ratio test that the correlation between the error terms is zero. The null hypothesis of the absence of correlation is strongly rejected. The probability that a scholar is invited to deliver a research seminar increases with the quality of the department to which she is affiliated. This result is in line with the prediction that departments seek to invite high-quality scholars to deliver a seminar. In turn, scholars are more likely to accept an invitation if it is issued by a high-quality department. This result is also in line with the prediction that scholars aim to present their papers to high-quality audiences. Gender (i.e., being a female) does not reduce neither the probability of being invited nor the probability of accepting an invitation. Larger departments have a higher probability to invite than smaller departments. Distance has a negative effect on the probability to invite and accept. In addition, departments prefer to invite their own scholars. Researchers are more willing to accept an invitation when it is issued by their department than when it is issued by another department, although the coefficient is imprecisely estimated.

I use the coefficients in column (1) to quantify the changes in the probability of being invited and accepting the invitation as I vary the value of the variables included in the model. For example, the probability that a scholar affiliated with Yale, a department that occupies the 10th position in the quality ranking, is invited to deliver a seminar at Stanford is 227 times larger than if the scholar was affiliated with Richmond, a university at a similar distance from Stanford, but which occupies the 194th position in the quality ranking. Likewise, the probability that a scholar affiliated with Stanford accepts an invitation from Yale is 269 times larger than the probability of accepting an invitation from Richmond. A scholar affiliated with Berkeley has a 2.5 times higher probability to be invited by Stanford than a scholar from MIT, a department that has a similar quality-ranking as Berkeley, but is much farther from Stanford. Likewise, a scholar from Berkeley has a 2.8 times higher probability of accepting an invitation from Stanford than a scholar from MIT. Finally, the probability that a scholar from Stanford in invited to deliver a seminar by her department is six times higher than if she were affiliated with Berkeley, which is a university close to Stanford in geographical and
Table 2: Probability to invite and accept. Scholars’ quality measured by affiliation

|                  | (1) Baseline | (2) Own scholar excluded | (3) RePEc | (4) Active hosts &presenters |
|------------------|--------------|---------------------------|-----------|------------------------------|
| **Probability to invite** |              |                           |           |                              |
| Scholar quality  | 0.441<sup>a</sup> | 0.432<sup>a</sup> | 0.531<sup>a</sup> | 0.283<sup>a</sup> |
|                  | (0.020)      | (0.019)                  | (0.042)   | (0.025)                      |
| Department size  | 0.418<sup>a</sup> | 0.436<sup>a</sup> | 0.583<sup>a</sup> | 0.310<sup>b</sup> |
|                  | (0.140)      | (0.135)                  | (0.159)   | (0.137)                      |
| Female           | 0.016        | 0.014                    | 0.054     | 0.015                        |
|                  | (0.049)      | (0.048)                  | (0.070)   | (0.047)                      |
| Distance         | -0.106<sup>a</sup> | -0.098<sup>a</sup> | -0.069<sup>a</sup> | -0.129<sup>a</sup> |
|                  | (0.014)      | (0.013)                  | (0.015)   | (0.016)                      |
| Own scholar      | 2.070<sup>a</sup> | 2.856<sup>a</sup> | 0.928<sup>a</sup> |                              |
|                  | (0.242)      | (0.250)                  | (0.129)   |                              |
| **Probability to accept** |              |                           |           |                              |
| Department’s quality | 0.456<sup>a</sup> | 0.511<sup>a</sup> | 0.410<sup>a</sup> | 0.337<sup>a</sup> |
|                  | (0.013)      | (0.016)                  | (0.024)   | (0.012)                      |
| Female           | 0.011        | 0.027                    | -0.024    | 0.040                        |
|                  | (0.040)      | (0.048)                  | (0.056)   | (0.026)                      |
| Distance         | -0.124<sup>a</sup> | -0.136<sup>a</sup> | -0.075<sup>a</sup> | -0.132<sup>a</sup> |
|                  | (0.012)      | (0.014)                  | (0.011)   | (0.010)                      |
| Own department   | 0.132        | 0.299<sup>a</sup> | 0.461<sup>a</sup> |                              |
|                  | (0.099)      | (0.093)                  | (0.091)   |                              |
| Log Pseudolikelihood | -9619.042    | -8813.460                | -8173.259 | -7550.875                    |
| Observations     | 708538       | 705603                   | 221680    | 96300                        |
| Test ρ=0         | 91.088       | 68.540                   | 126.884   | 2.335                        |

Note: Constants are not reported. Standard errors clustered at the scholar level are in parentheses. a, b, c: statistically significant at 1%, 5%, and 10%, respectively.

I perform additional analyses to test the robustness of the results. First, I exclude the observations in which the seminar presenter belongs to the host department from the sample. Arguably, the nature of some of these seminars (for example, brown bag) are different.
from regular research seminars, because the former are focused on PhD students and are
attended by a smaller number of professors than regular seminars. The estimates reported
in column (2) of Table 2 are qualitatively and quantitatively similar to those reported in the
baseline estimation. The only major difference lies in the quality of the inviting department
coefficient, whose value is larger than that in column (1).

Second, I use the quality ranking of US economics departments elaborated by Ideas as
an alternative measure for the quality of the invited scholar and inviting department.\footnote{I use the ranking published in May 2019. The latest ranking is available at https://ideas.repec.org/top/top.usecondept.html} Ideas
only provides the ranking for the top 25% US economics departments, which is a list that
covers 132 institutions. This list includes not only traditional economics departments, but
also economics departments belonging to business or other schools. The smaller number of
departments included in the alternative quality than in McPherson’s (2012) ranking leads to a
reduction in the number of observations. The quality coefficients for the inviting department
and invited scholar remain positive and very precisely estimated (column (3) of Table 2). An
increase in the size of the department coefficient’s value is noted. In contrast, a reduction
in the negative value of the distance coefficients is observed. Finally, the coefficients of own
scholar have larger values and are precisely estimated.

Third, I aim to test whether or not the results are robust to removing the departments
without seminars and scholars that did not present at any seminar from the sample. Column
(4) of Table 2 presents the results. The estimates should be taken with caution because
the estimation algorithm did not converge. With this caveat in mind, the estimates are
qualitatively similar to those obtained in the baseline analysis. As expected, a drop occurred
in the value of scholar’s quality and department’s quality coefficients due to the sample
selection. However, these coefficients are positive and precisely estimated.

In the second set of estimations, I measure the quality of the invited scholar by the
number of citations to her work. This measure is deemed a better proxy for the quality of a
scholar than her affiliation because of heterogeneity in the quality of scholars, as measured
by citations, within economics departments (Hamermesh, 2018). The information retrieved
from the Google Scholar profiles also enables me to include coauthor ties and career age as
additional explanatory variables of the decisions to invite and accept. The "cost" of using
these new data is a sizable reduction in the number of observations.

I expect departments to be more interested in inviting scholars that are actively producing
high-quality research than inactive scholars. To capture this fact, I proxy for the quality of
a scholar by the number of citations to her works in the five-year period, that is, 2013-2017,
prior to the seminars’ data year of 2018. Hamermesh (2018) revealed that scholars with longer careers receive more citations than junior scholars. To control for this effect, I add career age as an additional variable when estimating the probability to invite. To identify coauthor ties that are more likely to be "alive", I define two scholars as coauthors if they published a joint paper in the five-year period prior to 2018.\footnote{Estimations, not reported, are robust to using total citations and coauthor ties before 2013.}

Column (1) of Table 3 reports the baseline estimates. The chi-square coefficient reported at the bottom of the table confirms the correlation between errors terms. A high-quality scholar, proxied by the (log) number of citations to her papers between 2013 and 2017, has a larger probability of being invited to present a research seminar than a low-quality scholar. In turn, scholars are more likely to accept an invitation if it is issued by a high-quality department. These results confirm the positive assortative matching in research seminars between high-quality scholars and high-quality departments.

Large departments are more willing to invite scholars. Distance has a negative effect on the probability to invite and accept, although the impact is stronger on the latter. Departments are more likely to invite their own scholars, and scholars are more willing to accept an invitation if it comes from their department, although this latter coefficient is imprecisely estimated. Furthermore, departments are more willing to invite young scholars. In contrast, there is no relation between career age and probability of accepting an invitation. Having a coauthor in the host department raises the probabilities of being invited and accepting the invitation.

When the quality of a scholar is measured by the number of citations to her works in the previous five years, female scholars have a lower probability to be invited to deliver a research seminar than male scholars. This result suggests that inviting departments set a higher quality-bar for female scholars than for male scholars. This result is in line with Card et al. (2020) who found that journal referees set a higher bar for female-authored papers than for male-authored papers, and Hengel and Moon (2019) who showed that the quality of female-authored papers are higher than male-authored papers in the "top-five" economics journals. Female scholars are more willing to accept an invitation, but the coefficient is not precisely estimated.\footnote{In unreported estimations, I find that the difference in the female coefficient in the probability to invite relative to column (1) of Table 2 is not the result of using a different sample. The new result is explained by the use of a more accurate quality measure and adding career age and coauthor ties to the specification.}

I use the coefficients in column (1) of Table 3 to explore how variations in the value of the independent variables alter the probability of inviting and accepting an invitation. For example, a male scholar with no coauthors in the inviting department, a median career age
(17 years), affiliated to an east-coast university (for example, Yale), and at the top 80% of the five-year citation distribution (1,466 citations) has a 3.7 times higher probability to be invited by Stanford than a male scholar, with no coauthors in Stanford, same career age, affiliated with the same east-coast university, but located at the top 20% of the citation distribution (57 citations). Likewise, a male scholar affiliated to a west-coast university (for example, Stanford), with no coauthors in the inviting department, median career age, and at the top 80% of the five-year citation distribution is 1,756 times more likely to accept an invitation to give a seminar at Yale than at Richmond.

A male scholar affiliated with an east-coast university and the top 80% of the citation distribution has a 37% higher probability to be invited by Stanford than a female scholar affiliated with the same university and with the same number of citations. A male scholar affiliated with an east-coast university, and at the top 80% of the citation distribution has a 1.8 times higher probability to be invited by Stanford if he has a coauthor in that department relative to another east-coast university male scholar with the same quality ranking without a coauthor at Stanford. Likewise, a male scholar from an east-coast university has a 3.2 times larger probability of accepting an invitation from Stanford if he has a coauthor in that department than without. A male scholar at the top 80% who is affiliated with Berkeley has a 2.5 times higher probability of being invited to deliver a seminar at Stanford than a similarly ranked male scholar from MIT. Likewise, a male scholar from Berkeley has a 2.7 times higher probability to accept an invitation from Stanford than a male scholar from MIT. Finally, the probability that a top 80% scholar from Stanford delivers a seminar in his department is 3.7 times higher than if he were affiliated with Berkeley.

I perform additional analyses to test the robustness of the results. First, I re-estimate Equation (3) by omitting the observations in which the scholar belongs to the inviting department from the sample (column (2)). The estimates are quantitatively and qualitatively similar to the baseline estimations. The only noticeable difference lies in the coauthor coefficient, whose value increases in the probability to invite decision. Second, I use the Ideas quality ranking as a substitute for McPherson’s (2012) measure of economics department’s quality. The coefficient for the quality of the economics department (column (3)) is much larger than the baseline estimation (column (1)). A sizable increase is noted on the coauthor coefficient in the acceptance decision relative to the baseline estimate. The female coefficient in the decision to invite remains negative. However, it is statistically non-significant.

Third, I remove the departments that did not hold any seminar and scholars that did not deliver any seminar in 2018 from the sample (column (4)). Despite the very large reduction in the number of observations, the model converges. As expected, the quality coefficients for
the presenter and host department have lower values than those in the baseline estimation and are much less precisely estimated. The female coefficient in the decision to invite is negative and statistically significant. Female scholars that presented at least one research seminar are more willing to accept an invitation than male scholars that presented at least one seminar. Distance reduces the probability to invite, but does not affect the probability to accept. Paradoxically, having a coauthor in the host department reduces the probability to be invited. Having a coauthor in the host department raises the probability to accept, but the coefficient is not precisely estimated.

Fourth, previous papers showed that female scholars are not evenly distributed across fields (Dolado et al., 2012; Chari and Goldsmith-Pinkham, 2017; Card et al., 2020). If female scholars are concentrated in fields were seminars are less common, we could find that women have a lower probability of being invited to deliver a seminar, even if there was no gender discrimination. To rule out this possibility, we estimate the model only with scholars whose main research line is any of the five fields in which the presence of female researchers is largest: health, education, and welfare (JEL code I); labor and demographics economics (JEL code J); economic history (JEL code N); industrial organization (JEL code L); and economic development and growth (JEL code O).\footnote{The selection of the top 5 fields is based on Dolado et al. (2012)-Figure 1. To determine a scholar’s main research field, we compute the JEL codes of the articles and working papers written by the scholar between 2015 and 2019. We retrieve this information from RePEc. The main research field is the one corresponding to the most repeated JEL 1-digit code.} The female coefficient in the probability of being invited decision remains negative and statistically significant (column (5) of Table 3).

Identification in a partially observable biprobit model is weaker than in a model where both individual decisions are observable. To test the robustness of the results, I estimate a univariate probit model where the only decision is whether or not to hold a seminar (Equation (3)). Table 4 presents the results. In column (1), I approximate the quality of a scholar by the quality of her affiliation. The quality of the scholar and quality of the economics department are positively correlated with the probability of holding a seminar. Distance between the invited scholar and invited department reduces the probability of holding a seminar. If the speaker belongs to the host department, then the probability of holding a seminar increases. The size of the department has a positive sign, but the coefficient is imprecisely estimated. The coefficient for female scholars is nearly zero, which indicates that gender does not have an effect on the probability of holding a seminar. These results are consistent with those obtained from the partially observable bivariate probit model (column (1) of Table 2).
Column (2) presents the results of estimating Equation (3) when the quality of the presenter is measured by the number of citations to her works in the previous five years. The probability of holding a seminar increases with the quality of the scholar and inviting department. If the presenter has a coauthor in the inviting department, then the probability of holding a seminar increases. A seminar has a lower probability of taking place when the scholar is old and if a large distance is observed between the invited scholar and inviting department. Seminars have a higher probability of taking place if the presenter belongs to the department. Larger departments have a higher probability of holding a seminar, but the coefficient is imprecisely estimated. The coefficient for female scholars is negative, but statistically non-significant. For most coefficients, the results are consistent with those obtained from a partially observable bivariate probit model (column (1) in Table 3). Regarding the female variable, the bivariate probit results yielded a negative and precisely estimated coefficient for the probability to invite, whereas it presented a positive but imprecisely estimated coefficient for the probability to accept. These opposing signs may explain why I find a negative but imprecisely estimated coefficient in the univariate probit estimation.

5 Conclusions

The paper explores the variables that determine who is invited to deliver a research seminar and where scholars want to present their new research projects. I find that the probability of being invited to present at a research seminar is positively correlated with the quality of the scholar, and scholars are more likely to accept an invitation if it is issued by a high-quality department. I also show that the geographical distance between departments and scholars reduces the probability of being invited and accepting the invitation. In contrast, having a coauthor in the host department raises the probability of being invited and accepting the invitation. Departments prefer to invite young scholars and researchers that belong to their department. In my preferred specification, I find that female scholars have a lower probability of being invited to deliver a research seminar than male scholars.

These results suggest that scholars affiliated with high-quality departments have more opportunities to listen to high-quality scholars and increase awareness of the state-of-the-art in the field, enabling to endow their new research with advanced ideas, methodologies, and databases. In turn, high-quality scholars have additional opportunities to improve their papers because they are more likely to receive comments and suggestions from other high-quality scholars. The positive assortative matching in seminars between high-quality departments and high-quality scholars provides top departments and scholars a tool to retain their
leading positions. Low-quality departments and scholars can compensate for this disadvantage if they are located close to high-quality departments or if they have coauthor ties with top scholars.

Results also indicate that female scholars are at a disadvantage relative to male scholars. Research seminars are a very important tool to present a scholarly output and to receive feedback. Thus, economics departments should implement a gender-neutral policy when issuing invitations for scholars to deliver research seminars.

References

Akcigit, U., Caicedo, S., Miguelez, E., Stantcheva, S., and Sterzi, V. (2018). Dancing with the stars: Innovation through interactions. Working Paper 24466, National Bureau of Economic Research.

American Economic Association (2019). AEA professional climate survey: Main findings. The American Economic Association. Available at: https://www.aeaweb.org/resources/memberdocs/ climate-survey-results-mar-18-2019.

Andrews, M. (2019). Bar talk: Informal social interactions, alcohol prohibition, and invention. Working Paper.

Bayer, A. and Rouse, C. E. (2016). Diversity in the economics profession: A new attack on an old problem. Journal of Economic Perspectives, 30(4):221–42.

Bosquet, C. and Combes, P.-P. (2017). Sorting and agglomeration economies in French economics departments. Journal of Urban Economics, 101:27 – 44.

Campos, R., Leon, F., and McQuillin, B. (2018). Lost in the storm: The academic collaborations that went missing in Hurricane Isaac. The Economic Journal, 128(610):995–1018.

Card, D., DellaVigna, S., Funk, P., and Iriberri, N. (2020). Are referees and editors in economics gender neutral? The Quarterly Journal of Economics, 135(1):269–327.

Chai, S. and Freeman, R. B. (2019). Temporary colocation and collaborative discovery: Who confers at conferences. Working Paper 25993, National Bureau of Economic Research.

Chari, A. and Goldsmith-Pinkham, P. (2017). Gender representation in economics across topics and time: Evidence from the NBER Summer Institute. Working Paper 23953, National Bureau of Economic Research.
De la Roca, J. and Puga, D. (2017). Learning by working in big cities. *Review of Economic Studies*, 84(1):106–142.

Dolado, J. J., Felgueroso, F., and Almunia, M. (2012). Are men and women-economists evenly distributed across research fields? some new empirical evidence. *SERIES*, 3(3):367–393.

Ginther, D. K. and Kahn, S. (2004). Women in economics: Moving up or falling off the academic career ladder? *Journal of Economic Perspectives*, 18(3):193–214.

Glaeser, E. L. (2011). *Triumph of the city: How our greatest invention makes US richer, smarter, greener, healthier and happier*. Pan Macmillan.

Gorodnichenko, Y., Pham, T., and Talavera, O. (2019). Conference presentations and academic publishing. Working Paper 26240, National Bureau of Economic Research.

Hamermesh, D. S. (2018). Citations in economics: Measurement, uses, and impacts. *Journal of Economic Literature*, 56(1):115–56.

Head, K., Li, Y. A., and Minondo, A. (2019). Geography, ties, and knowledge flows: Evidence from citations in mathematics. *Review of Economics and Statistics*, 101(4):713–727.

Hengel, E. and Moon, E. (2019). Gender and quality at top economics journals. *Working paper*.

Hospido, L. and Sanz, C. (2019). Gender gaps in the evaluation of research evidence from submission to economics conferences. *Banco de España Documentos de Trabajo No. 1918*.

Iaria, A., Schwarz, C., and Waldinger, F. (2018). Frontier knowledge and scientific production: Evidence from the collapse of international science. *The Quarterly Journal of Economics*, 133(2):927–991.

Kim, E. H., Morse, A., and Zingales, L. (2009). Are elite universities losing their competitive edge? *Journal of Financial Economics*, 93(3):353–381.

Lopez de Leon, F. L. and McQuillin, B. (2018). The role of conferences on the pathway to academic impact: Evidence from a natural experiment. *Journal of Human Resources*, Online publication ahead of print.

Lucas, R. E. (2009). Ideas and growth. *Economica*, 76(301):1–19.

Lundberg, S. and Stearns, J. (2019). Women in economics: Stalled progress. *Journal of Economic Perspectives*, 33(1):3–22.
McPherson, M. A. (2012). Ranking U.S. economics programs by faculty and graduate publications: An update using 1994–2009 data. *Southern Economic Journal, 79*(1):71–89.

Meng, C. and Schmidt, P. (1985). On the cost of partial observability in the bivariate probit model. *International Economic Review, 26*(1):71–85.

Minondo, A. (2020). Comments are welcome. *arXiv 2001.08376*.

Poirer, D. J. (1980). Partial observability in bivariate probit models. *Journal of Econometrics, 12*(2):209–217.
| Ranking | Institution | Seminars included                                                                                                                                                                                                 | # of seminars |
|---------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 1       | Harvard     | The Monetary and Fiscal Policy Seminar; The Political Economy of Religion Seminar; The Public Economics and Fiscal Policy Seminar; The Law, Economics, and Organizations Workshop; Economics of Science and Engineering Workshop; The International Economics Workshop; The Program on Political Economy; Industrial Organization Workshop; Behavioral & Experimental Economics Workshop; The Economic Development Workshop; Health Economics Workshop; The Theory Workshop; The Econometrics Workshop; The Economic History Workshop; The Labor Workshop; Seminar in Macroeconomic Policy; Seminar in Behavioral and Experimental Economics; Seminar in Public Economics and Fiscal Policy; Seminar in Economic Theory; Seminar in Econometrics; Seminar in Monetary and Fiscal Policy; Seminar in Industrial Organization; Seminar in Economic History; Seminar in Law, Economics, & Organization; Seminar in Financial Economics; Seminar in Environmental Economics and Policy; Seminar in Labor Economics. Some seminars were organized jointly with MIT | 211           |
| 2       | Chicago     | Applications Workshop; Econometrics Workshop; Money & Banking Workshop; Workshop in Economic Theory; Workshop in Family Economics                                                                                                                                 | 73            |
| 4       | MIT         | Applied Microeconomics Seminar; Development Economics Seminar; Econometrics Workshop; Economics IAP; Finance Seminar; IO Workshop; International Seminar; Macro Seminar; Program on Political Economy; Public Finance/Labor Workshop; Seminar in Organizational Economics; Special Events; Theory Workshop. Some seminars were organized jointly with MIT | 180           |
| 5       | Stanford    | Arrow Lectures; Department Seminar; Joint Applied Micro Seminar; Development; Econometrics; Experimental Behavioral Seminar; Economics Brown Bag Lunch Series; GSB Economic Theory; GSB Finance; GSB Organizational Behavior Seminars; GSB Political Economy; Industrial Organization; International Trade; Labor; Law and Economics; Macroeconomics; Public Economics and Environmental Economics; SIEPR Social Science and Technology | 261           |
| 7       | Northwestern| Applied Micro Lunch; Development Economics Lunch Seminar; Development Lunch Seminar; Joint CET/CMS - EMS Theory Workshop; Macroeconomics Lunch Seminar; Seminar in Applied Microeconomics (Development, Labor and Public Economics); Seminar in Econometrics; Seminar in Economic History; Seminar in Industrial Organization; Seminar in Macroeconomics; Theory Bag Lunch | 107           |
| 8       | Penn        | Econometrics Lunch; Econometrics Seminar; Empirical Micro Seminar; Industrial Organization Seminar; Macro Lunch; Micro Theory Lunch; Micro Theory Seminar; Money Macro Seminar                                                                                                                                 | 96            |
| 10      | Yale        | The Behavioral Sciences Workshop; Cowles Lunch Talks; Development Lunch; Development Workshop; Econometrics Seminar; Economic History Workshop; International Trade Lunch; Labor/Public Economics Workshop; Labor/Public Economics Prospectus Workshop; Industrial Organization Seminar; ISPS Event; Leitner Political Economy Seminar; Macro Lunch; Macroeconomics Workshop; Microeconomic Theory Workshop; Micro Theory Lunch; Partner Event; Simon Kuznets Lecture; Wasserman Workshop in Law and Finance; YLS Center for the Study of Corporate Law | 200           |

Continued on the next page
| Ranking | Institution       | Seminars included                                                                                                                                                                                                 |
|---------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11      | Michigan         | Abraham and Thelma Zwerdling Lecture; Applied Microeconomics/IO Seminar; Causal Inference in Education Research Seminar; Econometrics; Economic Development Seminar; Economic History; Economic Theory; Health, History, Demography & Development; International Economics; Interdisciplinary Seminar in Quantitative Methods; Labor Economics; Law and Economics Workshop; Macroeconomics; Public Finance; Social, Behavioral & Experimental Economics; W.S. Woytinsky Lecture |
| 12      | Princeton        | Behavioral Economics; CHW-RPDS; Griswold Center Event; Industrial Organization; Department Wide Seminars; Industrial Relations; International Trade; Macro/International Macro; Microeconomic Theory; Oskar Morgenstern Memorial Seminar; Political Economy Workshop; Simpson Lecture; Summer Seminar Series |
| 13      | UCLA             | Albert Family Fund Seminar in Applied Microeconomics; Vongremp Workshop in Economic and Entrepreneurial History; Workshop in Econometrics; Workshop in Economic Theory; Laub Foundation Workshop in Industrial Organization; Ettinger Fund Workshop in Macroeconomics; Workshop in Trade, Economic Geography and Development |
| 16      | Maryland         | Econometrics; IO/Theory; Labor/Public Finance/Development; Macroeconomics/International Finance; Trade/Institutions/Politics                                                                                      |
| 18      | UC San Diego     | Applied Seminar Series; Econometrics Seminars Series; Int/Dev Seminar series; Macro Seminar Series; Metrics Seminar Series; Theory Seminar Series                                                                      |
| 19      | Wisconsin-Madison| Robert E. Baldwin International Workshop; Joseph Krislov Labor Workshop; Juli Plant Grainger Econometrics Workshop; Juli Plant Grainger Industrial Organization Workshop; Juli Plant Grainger Macroeconomics Seminar; Juli Plant Grainger Public Workshop; Juli Plant Grainger Theory Workshop |
| 21      | Ohio State       | Applied Microeconomics Seminar; Econometrics Seminar; Economic Theory/Experimental Seminar; Macroeconomics Seminar                                                                                                  |
| 22      | Minnesota        | Agricultural and Applied Economics Seminar; Applied Micro; Department Seminar; Environmental and Resource Economics Seminar; Fed Bag Lunch; Finance Department Seminar; Jon Goldstein Memorial Lecture; Math Econ Seminar; Micro-Macro Seminar; Minnesota Economics Seminar; Minnesota Lecture; MPC Seminar Series; Strategic Management and Entrepreneurship Seminar; Trade and Development Seminar |
| 24      | UC Davis         | Behavioral; Development; Econometrics; Economic History; Energy; Environmental Economics; Industrial Organization; Macro/International Economics; Public Finance-Labor; Theory                                                                 |
| 26      | Carnegie Mellon  | Not available                                                                                                                                                                                                       |
| 27      | Dartmouth        | Dartmouth IO Winter Conference; Economics Seminars; Household Finance Seminar; International Seminar                                                                                                               |
| 28      | Rochester        | Applied Workshop; International Workshop; Jones Lecture; Macro Workshop; McKenzie Lecture; Theory Workshop                                                                                                        |
| 30      | Penn State       | Applied Micro; Macroeconomics; Econometrics; Trade and Development; Micro Theory                                                                                                                                   |
| 31      | Iowa State       | Charles Sivesind Memorial Lecture; Department Seminars; George A. Fuller Memorial Lecture; I.W. Arthur Memorial Seminar; Pioneer Policy Lecture; William G. Murray Memorial Seminar                                                                 |
| 32      | North Carolina   | Economics Seminars                                                                                                                                                                                               |

*Continued on the next page*
| Ranking | Institution                | Seminars included                                                                 | # of seminars |
|---------|----------------------------|-----------------------------------------------------------------------------------|--------------|
| 34      | Vanderbilt                 | Applied Economics; Departmental Macro; Departmental Micro; Econometrics; Economic History; Empirical Micro; Health; International; Political Economy | 59           |
| 36      | Boston College             | Applied Microeconomics Seminar; Econometrics Seminar; Macroeconomics and Financial Economics Seminar; Macroeconomics Lunch; Microeconomics Seminar | 85           |
| 38      | UC Irvine                  | Econometrics Seminar; Labor-Public Seminar; Macroeconomics Seminar; Theory, History and Development Seminar; Transportation, Urban and IO Seminar | 54           |
| 39      | Purdue                     | Economics Seminar                                                                 | 33           |
| 45      | Emory                      | Department-wide; Econometrics; Lunch&Learn; Macroeconomics; Microeconomics         | 21           |
| 46      | Arizona State              | Economic Seminars                                                                 | 60           |
| 47      | George Mason               | ICES Experimental Economics Brown Bag Lecture; Micro-Economic Policy Seminar; Public Choice Seminar; Seminars; Washington Area Economic History Seminar; Workshop in Philosophy, Politics & Economics | 53           |
| 49      | Pittsburgh                 | Seminars                                                                        | 96           |
| 50      | Rutgers                    | Econometrics; Empirical Microeconomics; Macroeconomic Theory; Micro Theory/Experimental Seminar; Money, History and Finance | 56           |
| 51      | University of Washington   | Econometrics; International Economics and Macroeconomics; Joint Seminar in Development Economics Series; Microeconomics | 33           |
| 52*     | Colorado                   | Could only retrieve data for Spring Series                                        |              |
| 54      | Iowa                       | No seminar series                                                                |              |
| 56      | Georgia                    | Economics Seminar Series                                                        | 24           |
| 57      | North Carolina State       | Macro Seminar Series; NCSU Econometrics Workshop; Microeconomics Workshop Series  | 18           |
| 58      | Houston                    | Macroeconomics Series; Empirical Microeconomics Series                           | 39           |
| 60      | Rice                       | Brown Bag Seminars; Kalai Family Workshop in Applied Microeconomics; Kalai Family Workshop in Business and Economics; Kalai Family Workshop in Econometrics | 48           |
| 61      | UC Santa Cruz              | Brown Bag Seminars; Macroeconomics & International Finance Seminars; Microeconomics & International Trade Seminars | 50           |
| 62      | Johns Hopkins              | Seminars                                                                        | 54           |
| 64      | Oregon                     | EC Seminar                                                                       | 17           |
| 68      | Missouri                   | Brown Bag Seminar; Regular Seminar                                              | 11           |
| 70      | Brigham Young              | R² Research; Visiting Scholar Seminar                                            | 20           |
| 72      | Kentucky                   | Seminars and Workshops                                                           | 27           |
| 73      | Connecticut                | Friday Econometrics Lunch; IO, Environmental, and Law Economics; Labor, Development, and Health Economics; Macroeconomics; | 53           |
| 74      | Texas-Dallas               | No seminar series                                                                |              |
| 75      | Claremont McKenna          | RDS Seminar Series                                                               | 11           |
| 76      | Utah                       | No seminar series                                                                |              |
| 77      | Wisconsin-Milwaukee        | Seminars in the Center for Research on International Economics and the Department of Economics | 19           |
| 81      | Oregon State               | Applied Economics Seminar Series                                                | 5            |
| 83*     | Baruch College-CUNY        | Could only retrieve data for the 2018 Fall Series                               |              |
| 87      | Case Western               | Economics Research Seminar                                                      | 8            |
| 91      | Oklahoma                   | Economics Research Seminar Series                                               | 23           |
| 93      | Kansas                     | Seminars                                                                        | 8            |
| 94      | UC Riverside               | Applied Economics; Brown Bag; Econometrics; Economic Theory                     | 71           |

*Continued on the next page*
| Ranking | Institution | Seminars included | # of seminars |
|---------|-------------|------------------|--------------|
| 96      | Drexel      | School of Economics Seminars | 15 |
| 99      | SUNY Albany | Seminars         | 25 |
| 100     | Williams College | Economic Class of 1960 Scholars Seminar; Economics Department Seminar | 24 |
| 102     | Colorado-Denver | Seminars | 12 |
| 103     | American University | Research Seminar Series | 27 |
| 106     | Stony Brook | Departmental Research Series | 28 |
| 109     | South Carolina | No seminar series | |
| 111     | West Virginia | Economics Seminar Series | 28 |
| 113     | IUPUI | Economic Theory Workshop; Health Economics Seminar; Robert Sandy Economics Seminar | 17 |
| 114     | Auburn | Friday Seminar Series | 27 |
| 117     | Brandeis | Seminar Series | 38 |
| 120*    | Swarthmore | Not available | |
| 121     | Nevada-Las Vegas | No seminar series | 13 |
| 122     | Middlebury | Economics Department Seminars | 9 |
| 123     | Mississippi | Seminar series | |
| 124     | Nebraska | Economics Seminars | 11 |
| 125     | North Carolina - Charlotte | Economics Seminars Series | 11 |
| 126*    | Fordham | Not available | |
| 127     | Northeastern | Research Seminars | 19 |
| 129     | Cal State-Fullerton | Spring Seminar | 4 |
| 130*    | Graduate Center | | |
|         | CUNY | | |
| 132     | San Diego State | No seminar series | |
| 133     | Florida Atlantic | No seminar series in 2018 | |
| 134     | Texas Tech | Free Market Institute’s Research Workshop | 22 |
| 136     | Texas Arlington | No seminar series in 2018 | |
| 137*    | Vermont | Not available | |
| 138     | UNC-Greensboro | Economics Seminars | 2 |
| 139     | Wesleyan | No seminar series in 2018 | |
| 140     | Bentley | No seminar series | |
| 141     | South Florida | Seminar Series | 11 |
| 142     | Cincinnati | Seminar Series | 9 |
| 144     | Miami-Ohio | Could not retrieve data for Spring 2018 seminar series | |
| 145     | Utah State | Seminars | 16 |
| 146     | Baylor | Seminars | 6 |
| 147     | Memphis | Seminar Series | 13 |
| 148     | Hawaii | Seminar Series | 22 |
| 149     | Temple | No seminar series | |
| 150     | Rhode Island | No seminar series | |
| 152     | Wake Forest | Seminars | 12 |
| 154     | North Texas | Department of Economics Seminar Series | 2 |
| 156     | Texas San Antonio | No seminar series | |
| 158     | Amherst | No seminar series | |
| 161     | Nebraska-Omaha | No seminar series | |
| 162     | Illinois State | Economics Department Seminar Series; International Seminar Series; Applied Econometrics Workshop; Econometrics Workshop; Seminars sponsored by the Institute for Corruption Studies | 15 |
| 163     | Cal State-Sacramento | No seminar series | |

*Continued on the next page*
| Ranking | Institution               | Seminars included                        | # of seminars |
|---------|---------------------------|------------------------------------------|---------------|
| 165     | Villanova                 | No seminar series                        |               |
| 166     | Occidental College        | No seminar series                        |               |
| 167     | Union College             | No seminar series                        |               |
| 168     | Towson                    | Economics Department Seminar Series      | 4             |
| 171     | Cal. Polytech State       | Seminar                                  | 4             |
| 172     | San Houston State         | Seminar series                           | 4             |
| 173     | Middle Tennessee State    | No seminar series                        |               |
| 174     | New Hampshire             | Not available                            |               |
| 175     | Hamilton College          | No seminar series                        |               |
| 176     | Trinity University        | No seminar series                        |               |
| 177     | Loyola Marymount          | Economics Seminar Series                 | 7             |
| 178     | Ohio                      | Economics Seminar                        | 3             |
| 180     | New Mexico                | Graduate Seminars                        | 1             |
| 181     | North Dakota              | Economic Seminar Series                  | 10            |
| 184     | Lafayette College         | No seminar series                        |               |
| 185     | Texas Christian           | No seminar series                        |               |
| 186*    | St. Louis                 |                                          |               |
| 187     | Lehigh                    | Department of Economics Seminar Series   | 6             |
| 188     | Colby College             | Seminars                                 | 7             |
| 189     | Northern Illinois         | Economics Seminar Series                 | 13            |
| 190     | Cal. State-Northridge     | No seminar series                        |               |
| 191     | North Dakota State        | No seminar series                        |               |
| 193     | Old Dominion              | No seminar series                        |               |
| 194     | Richmond                  | No seminar series                        |               |
| 195     | Dayton                    | No seminar series                        |               |
| 196     | Kenyon College            | No seminar series                        |               |
| 197     | Akron                     | No seminar series in 2018                |               |
| 198     | Washington and Lee        | W&L/VMI Seminars                         | 7             |
| 199     | Air Force Academy         | No seminar series                        |               |
| 200     | Portland State            | Economics Seminar Series                 | 10            |
| 202     | Gettysburg College        | No seminar series                        |               |
| 203*    | Queens College            | Not available                            |               |
| 204*    | Missouri-St. Louis        | Not available                            |               |
| 205     | Saint Cloud State         | No seminar series                        |               |
| 206*    | Smith College             | Not available                            |               |
| 207     | Barnard College           | No seminar series                        |               |
| 208     | Chapman                   | No seminar series                        |               |
| 209*    | Clark University          | Not available                            |               |
| 210     | Bowling Green             | No seminar series                        |               |
| 212     | Southern Mississippi      | No seminar series                        |               |
| 218     | Bucknell                  | No seminar series                        |               |
| 219     | Toledo                    | Economics Department Speaker Series      | 4             |
| 221     | Kennesaw State            | Coles Seminar Series                     | 12            |
| 222     | Louisiana Tech            | No seminar series                        |               |
| 223     | Rhodes College            | No seminar series                        |               |
| 224     | Central Arkansas          | No seminar series                        |               |
| 226     | Western Kentucky          | No seminar series                        |               |
| 227     | New School                | No seminar series                        |               |
| 228     | Kent State                | No seminar series                        |               |

*Continued on the next page*
| Ranking | Institution          | Seminars included       | # of seminars |
|---------|----------------------|-------------------------|--------------|
| 229     | Louisville           | No seminar series       |              |
| 230     | Texas State          | No seminar series       |              |
| 231     | Rochester Tech       | Gosnell Lecture Series  | 1            |
| 232     | Central Michigan     | No seminar series       |              |
| 233     | Northern Iowa        | No seminar series       |              |
| 234     | Bates College        | Seminars                | 13           |
| 236     | San Jose State       | Economics Workshop      | 4            |
| 237     | U.S. Military Academy| No seminar series       |              |
| 239     | Seton Hall           | No seminar series       |              |
| 240     | Vassar               | No seminar series       |              |

Not available: The departments’ web does not provide information about research seminars in 2018; it provides partial information; or, it is not clear whether seminars are related to the economics department. * = No information on faculty.
Table 3: Probability to invite and accept. Scholar quality measured by the number of citations

|                     | (1) Baseline | (2) Own scholar excluded | (3) RePEc &presenters | (4) Active hosts &fields | (5) Female fields |
|---------------------|-------------|--------------------------|-----------------------|--------------------------|------------------|
| **Probability to invite** |             |                          |                       |                          |                  |
| Scholar quality     | 0.154\(^a\) | 0.163\(^a\)              | 0.153\(^a\)           | 0.013                    | 0.205\(^a\)      |
| Department size     | 0.636\(^a\) | 0.574\(^a\)              | 0.738\(^a\)           | 0.201\(^b\)             | 0.858\(^b\)      |
| Female              | -0.128\(^b\) | -0.125\(^b\)             | -0.075                | -0.176\(^c\)            | -0.231\(^b\)     |
| Distance            | -0.091\(^a\) | -0.092\(^a\)             | -0.101\(^a\)          | -0.036\(^c\)            | -0.141\(^a\)     |
| Own scholar         | 0.381\(^a\) | 0.397\(^a\)              | 0.492\(^a\)           | 0.268                    |                  |
| Career age          | -0.025\(^a\) | -0.026\(^a\)             | -0.025\(^a\)          | -0.011\(^a\)            | -0.033\(^a\)     |
| Coauthor            | 0.254\(^a\) | 0.409\(^a\)              | 0.305\(^a\)           | -0.224\(^c\)            | 0.245\(^b\)      |
| **Probability to accept** |             |                          |                       |                          |                  |
| Department’s quality| 0.673\(^a\) | 0.674\(^a\)              | 1.321\(^a\)           | 0.152                    | 0.481\(^a\)      |
| Female              | 0.151       | 0.153                    | -0.066                | 0.253\(^c\)             | 0.159            |
| Distance            | -0.203\(^a\) | -0.202\(^a\)             | -0.191\(^a\)          | -0.050                   | -0.189\(^a\)     |
| Own department      | 0.463       | 0.302                    | 8.051\(^e\)           | -0.141                   |                  |
| Career age          | -0.003      | -0.003                   | -0.004                | 0.011\(^b\)             | -0.010\(^b\)     |
| Coauthor            | 1.133\(^b\) | 1.113\(^a\)              | 2.247\(^b\)           | 1.471                    | 0.541\(^c\)      |
| Log Pseudolikelihood| -7367.937   | -6836.702                | -6629.836             | -5778.819                | -2129.087        |
| Observations        | 397120      | 395459                   | 184960                | 68295                    | 88409            |
| Test \(\rho=0\)     | 7.704       | 12.806                   | 10.277                | 5.448                    | 7.332            |

Note: Constants are not reported. Standard errors clustered at the scholar level are in parentheses. \(^a\), \(^b\), \(^c\): statistically significant at 1%, 5%, and 10%, respectively.
Table 4: Univariate probit. Probability of holding a seminar

|                                      | (1) Affiliation | (2) Citations |
|--------------------------------------|-----------------|---------------|
| Presenter’s quality                  | 0.228<sup>a</sup> | 0.109<sup>a</sup> |
|                                      | (0.009)         | (0.011)       |
| Department’s quality                 | 0.270<sup>a</sup> | 0.278<sup>a</sup> |
|                                      | (0.010)         | (0.012)       |
| Department size                      | 0.063           | 0.127         |
|                                      | (0.102)         | (0.119)       |
| Female                               | 0.013           | -0.047        |
|                                      | (0.029)         | (0.035)       |
| Distance                             | -0.107<sup>a</sup> | -0.121<sup>a</sup> |
|                                      | (0.008)         | (0.009)       |
| Own scholar                          | 0.586<sup>a</sup> | 0.407<sup>a</sup> |
|                                      | (0.065)         | (0.081)       |
| Coauthor                             | 0.393<sup>a</sup> |               |
|                                      | (0.055)         |               |
| Career age                           | -0.019<sup>a</sup> |               |
|                                      | (0.002)         |               |
| Log Pseudolikelihood                 | -9899.745       | -7434.897     |
| Observations                         | 708538          | 397120        |

Note: Constants are not reported. Standard errors clustered at the scholar level are in parentheses. a, b, c: statistically significant at 1%, 5%, and 10%, respectively.