

# Gender Differences in Peer Recognition by Economists\*

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## Abstract

We study the evolving gender gap in peer recognition in Economics. We begin by analyzing the selection of Fellows of the Econometric Society, one of the oldest and most prestigious international societies in the field. Using publicly available information on Fellows elected each year from 1933 onward, merged with a new data set of over 40,000 “actively publishing” economists, we estimate the effect of gender on selection as a fellow over the past seven decades. Our baseline models include controls for cumulative publications in each of the top 5 journals, citations to these papers, and publications in a broad set of general interest and field journals. We then propose to use confidential data obtained from the Econometric Society on nominations and vote shares in the last 13 years (2006-2019) to decompose the gender gap in selection as a fellow into components attributable to differences in the probability of being nominated and in the probability of being successfully elected if nominated. We provide a broader perspective on our findings for the Econometric Society by conducting a parallel analysis of gender gaps in selection as a fellow of the American Academy of Arts and Sciences, the National Academy of Sciences, and the American Economic Association, as well as being awarded a Sloan Foundation Fellowship. We conclude by analyzing several of the channels that may mediate the gender gap in peer recognition, including visibility, networking, and credit for coauthored work.

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\*This draft combines an analysis using publicly available data and a proposal to the Econometric Society using confidential data on nominations and vote shares. We thank the Executive Committee of the Econometric Society for pursuing this study and for agreeing to share the confidential data. We are grateful to Zihao Li, Chris Lim, Anna Sun and a team of undergraduate research assistants for their extraordinary help. The research assistants have worked only on public data thus far. Nagore Iriberry acknowledges financial support from grants ECO2015-66027-P MINECO/FEDER and IT367-19. Patricia Funk acknowledges financial support from the Swiss National Science Foundation (grant 178887).

# 1 Introduction

The Econometric Society (ES) is one of the oldest and most prestigious honorific societies in the field of economics. Fellows have a remarkable track record in winning the Nobel Memorial Prize: of the 69 prizes awarded between 1969 and 2011, nearly 90% were fellows of the ES (Chan and Torgler, 2012). As is true in the economics profession more broadly (Bayer and Rouse, 2016; Lundberg, 2017) and in the upper echelons of business and government (Bertrand, 2018), women make up only a small share of the current Fellows of the ES. Figure 1 shows the fraction of women among the Fellows elected from 1933 onward (red line). This share was under 5% until the 1990s, but has risen to over 15% most recently. For comparative purposes we also show the fraction of women among economics fellows selected by the American Academy of Arts and Sciences (AAAS), the National Academy of Sciences (NAS), the American Economic Association (AEA), and the Alfred P. Sloan Foundation, all of which show a similar pattern. These data raise an important question: to what extent does the low fraction of female fellows – particularly in the years up to 2000 or so – reflect the relative scarcity of women among potentially qualified scholars, versus a lack of recognition for the accomplishments of female economists?<sup>1</sup>

We lay out a series of analyses designed to answer this question. In contrast to the earlier study of ES elections by Hamermesh and Schmidt (2003), which focuses exclusively on the probability of being elected as a Fellow conditional on being nominated, we seek to characterize the broad process through which individuals are selected for peer honors from the underlying population of active scholars.<sup>2</sup> This wider focus is motivated by three factors. First, as an empirical matter the low rate of selection as a Fellow of the ES (or as a Fellow of AAAS, NAS, or the AEA) is largely driven by the low probability of nomination for an honor. In the case of the ES, for example, we estimate that in 2019 there were over 1,600 economists with at least three “top 5” publications who were not yet Fellows of the ES. Of these, only a few dozen were nominated for election as a Fellow; ultimately 14 were elected. In order to understand whether peers tend to under-value the accomplishments and contributions of female economists it is therefore crucial to study the broader selection process that incorporates both the nomination **and** election steps. Second, a key advantage of academia is that we can actually measure the population “at risk” for receiving an honor, and quantify the relative quality of potential candidates based on their publications and citations. Parallel analyses for CEO’s or political office holders are infeasible, making it virtually impossible to assess whether there is a shortage of qualified women for top posts, or an apparent preference for males among the set of qualified candidates. Third, our models for the probability of being selected as a fellow could in principle be used to identify candidates for nomination who have been overlooked.

We begin by constructing a data base of “actively publishing” economists who have authored

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<sup>1</sup>Rossiter (1993) called the under-recognition of female scientists the “Matilda effect” (in honor of Matilda Joslyn) and provided a number of historical examples. Lincoln et al. (2012) compare the female shares of prize winners to the underlying fraction of female scholars in 13 STEM disciplinary societies, though they do not try to control for differences in publications or citations between potential prize winners.

<sup>2</sup>A similar earlier study by Donald and Hamermesh (2006) looks at the probability of election to the Vice Presidency and Executive Committee of the AEA, conditional on nomination as a candidate.

or coauthored at least one paper in a set of high impact journals. As of this writing we have completed this task using the set of journals listed in Appendix Table 1, yielding a list of over 40,000 economists who were active over the period from the 1930s to today. This is, as far as we know, a unique data set of active publishers in the field.

We assign gender to these economists using a combination of methods developed and validated in Card et al. (2020), including hand checking of over 5,000 names. We then construct an annual profile for each economist that includes a list of all his or her publications up to the current year. By design, our list of journals includes the top field journal for each major subfield of economics: thus, a scholar’s publications provide an indication of her or his field(s) of specialization. We also measure cumulative citations received up to the current year for publications in each of the top 5 economics journals, giving a salient measure of the impact of a scholar’s work so far. An economist becomes “active” in the year of his or her first publication (in the set of journals included in our list), and remains active up to 18 years after his or her last publication in these journals.

This data base includes virtually all potential candidates for consideration as a Fellow of the ES or other honors in the field. In particular, all but 30 of the 1,021 Fellows selected from 1933 to 2019 are included in our data base of active publishers.<sup>3</sup> Likewise, our data base includes virtually all the economists elected as fellows of the AAAS, the NAS, or the AEA, or awarded a Sloan Fellowship.

For our main analysis, we conduct a hazard-style analysis of the probability that an economist who is not yet a Fellow is elected in a given year, conditional on his or her publications and citation record up to that point. Our analysis covers nearly a century of data, from 1933 to 2019. Recognizing that the ES places a special emphasis on “economic theory in its relation to statistics and mathematics” (Roos, 1933), our models distinguish between cumulative publications in each of the top-5 journals, e.g., allowing for a different weight for a publication in *Econometrica* versus the *Quarterly Journal of Economics*. We similarly allow for different weights on the cumulative citations for papers in each of the top 5. In our main models, we also include publications in each of the general interest and field journals listed in Appendix Table 1, which implicitly controls for field and methodological focus (theory, econometrics, or applied). We fit separate models for the earliest decades of the Econometric Society (1933-79), the next 20 years (1980-99), and the most recent 20 years (2000-19), allowing for different impacts of the various determinants—publications, citations, and gender—across these three time periods.

In all three time periods, we find that cumulative publications and citations are strong predictors

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<sup>3</sup>The 30 unmatched ES fellows are: Abel Gesevich Aganbegyan, Oskar N. Anderson, Maria Augustinovic, Albert Aupetit, Pasquale Boninsegni, Constantino Bresciani-Turroni, Bernard Chait, Clement Colson, Harold T. Davis, Nikolay P. Fedorenko, Bruno De Finetti, Eraldo Fossati, Robert Gibrat, Georges-Theodule Guilbaud, Arthur Hanau, William C. Hood, Heinz Konig, Wilhelm E. Krelle, Sten Malmquist, Kazuo Midutani, Egon S. Pearson, Hans Peter, Krzysztof Porwit, Howard Raiffa, Calyampudi R. Rao, Wieslaw Sadowski, Leonid Tornqvist, Witold Trzeciakowski, Gustavo Del Vecchio, and Sewall Wright. Of the Fellows elected since 1980, only one has no publications in our sample of journals and is thus missing from our data set (Heinz Konig, elected in 1986). Many of the Fellows who do not appear as active publishers were elected in the early years of the Society and published books or articles in their native country, rather than in the English language economics journals (e.g., Leonid Tornqvist). A few others, including Sewall Wright (sociology) and Bruno De Finetti (statistics) worked in other fields. We also dropped 4 fellows who published in the *Journal of the American Statistical Association* but never in any economic journals in our dataset: Egon S. Pearson, Howard Raiffa, Calyampudi R. Rao, and Sewall Wright.

of the likelihood of being selected as a Fellow in a given year, with pseudo R-squared measures around 0.24 in the earlier time period and 0.36 in the most recent period. Perhaps not surprisingly, the strongest determinant is the number of publications in *Econometrica* (EMA): each additional EMA publication increases the probability of selection by about 100 log points (s.e.=7) in the earliest decades and by 98 log points (s.e.=6) in the most recent period.<sup>4</sup> A publication in the *Review of Economic Studies* has the next largest impact, with an impact of 64 log points (s.e.=7) early on and 55 log points (s.e.=8) more recently.

Publications in the other top-5 journals have smaller effects on election probabilities, especially in the earlier decades when their impact is not statistically significant at conventional levels. Likewise we find a quantitatively large effect of cumulative citations on the probability of selection. In earlier decades citations to papers in *Econometrica* are especially salient, whereas in later decades citations to papers in the other top 5 journals are also significant predictors of election. Finally, cumulative numbers of publications in some of the field journals also matter for election rates, especially the theory and econometrics field journals.

While publications and cumulative citations exert relatively consistent effects on the likelihood of selection as a Fellow over the past seven decades, the effects of gender change dramatically, suggesting that the degree of recognition given to female scholars, *conditional on their publications and citations*, has shifted over the last century. In the first five decades of the Society (1933-79), we estimate a large *negative* coefficient of female gender on the probability of selection as a Fellow. The point estimate in our preferred specification implies a -195 log point female effect (with a standard error of 71 points,  $t=2.7$ ), implying in this earlier period female economists faced a significantly higher bar for selection as a Fellow, equivalent to about two extra *Econometrica*'s.

For the decades of the 1980s and 1990s, by comparison, we estimate much smaller and statistically insignificant effects of female gender on the probability of selection as a Fellow: around -11 log points (s.e.=52 points) for the 1980s, and -24 log points (s.e.=51 points) for the 1990s. Finally, we estimate a modest positive effect of +41 log points (s.e.=32 points) for the 2000-2009 period, and a larger, statistically significant positive effect of +112 log points (s.e.=23 points) for the 2010-2019 period. Thus, in the most recent decade, the effect of female gender has switched from the historically negative pattern to a significant positive benefit, roughly equivalent to having an additional *Econometrica* publication.

The changing gender patterns over the last century are readily apparent in the raw data. Figure 2, for example, shows the female share of newly elected fellows (purple line), together with the shares of females among all active publishers (red line), those with at least one *Econometrica* or *Review of Economic Studies* (blue line), and those with at least 3 top-5's (green line). Prior to 1980 the share of female Fellows was clearly below the share of female economists with 3 or more top 5 publications. By the early 1980s, however, the female share of Fellows had caught up, and the two shares trend upward together until about 2010. Thereafter, the female share of newly elected ES

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<sup>4</sup>Since the probability of selection as a Fellow is very low, the coefficients of the logit model are approximately the differences in the log of the probability of selection.

fellows rose sharply, clearly reversing the historical pattern.

Fellows of the Econometric Society are selected in two steps: first an economist has to be nominated; then she has to be elected by a vote of the existing Fellows. To gain additional insights into the gender gap in selection as an ES Fellow in recent years, if this proposal is accepted we will use confidential data on the list of nominees to compare the estimated gender effects in the probability of being nominated as a Fellow and the probability of being selected as a Fellow (i.e., nominated *and* voted into the Society).<sup>5</sup> We will also estimate a series of models for the probability of election as Fellow conditional on being nominated, and explore the strength of voters' preferences over female versus male candidates using data on the number of votes received by different candidates in each election.

Next, we address the question of whether the observed pattern of gender gaps in the probability of selection as a Fellow of the ES are specific to the Econometric Society, or reflect more general patterns in the profession. Specifically, we fit a parallel set of hazard-style models for the probabilities of selection as a Fellow of AEA (172 fellows elected since 1965), the AAAS (370 fellows elected since 1942), the NAS (119 fellows since 1968), and as a winner of an Alfred P. Sloan Foundation Fellowship (305 awards since 1981).

Remarkably, the patterns of gender gaps in selection as a fellow of the AAAS and NAS are quite similar to the pattern for the Econometric Society. In the period up to 1980 there appears to have been a higher bar for females to receive peer recognition from the AAAS and NAS. (In fact, in the years before 1980 there were no females selected as NAS Fellows). In the 1980s and 1990s the gender gap is smaller in magnitude and statistically insignificant for both Societies, and in the most recent decade we estimate sizable positive effects of female gender on the probability of selection as an AAAS or NAS fellow, with even larger magnitudes than the one for the ES.

The pattern of gender effects for selection as a Fellow of the AEA is somewhat different, with no evidence of a higher bar for female candidates in the period up to 2000, but again a sizable positive effect (+104 log points, s.e.=51 points) in the most recent decade. Finally, the estimated pattern of gender coefficients in our models for selection as an Alfred P. Sloan Fellow (which only started in 1981) show a modest and relatively consistent positive effect (around +50 log points) for female candidates.

Our final set of analyses focus on three different channels that potentially mediate gender differences in the probability of selection for an academic honor. First, we conjecture that female economists may have differential visibility to members of the ES because of lower (or higher) involvement in activities of the Society. To control for such visibility differences we expand our models to include measures of editorial roles at *Econometrica*. Second, female economists may be more or less connected to networks of researchers who are already Fellows of the ES. We therefore add controls to our models that measure the number of papers coauthored with current Fellows. We then expand this analysis and potentially distinguish between alternative explanations for

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<sup>5</sup>Interestingly, for the period from 1990 to 2000, Hamermesh and Schmidt (2003) find very small effects of female gender on the probability of election as a Fellow, conditional on being nominated.

apparent network effects by examining whether having coauthored papers with current Fellows of the ES affects the probability of selection as a Fellow of the AAAS or NAS, and conversely whether having coauthored papers with current Fellows of AAAS or NAS affects the probability of selection as a Fellow of the ES. Third, recent research by Sarsons (2018) has shown that female economists are less likely to receive credit for coauthored work than males. To assess this possibility we classify prior publications by coauthorship status and test whether coauthored works by women receive less weight in models for the probability of receiving honors.

We find that visibility *and* connections both matter in the Fellow selection process. Serving as Associate Editor of *Econometrica* leads to a nearly 200 log point increase in the probability of selection as a Fellow, but no effect on the probability of selection as an AAAS or NAS Fellow.<sup>6</sup> Importantly, however, the addition of this variable has almost no effect on the estimated gender gaps in any decade. Coauthorships with ES Fellows only matter for the selection as an ES Fellow, whereas coauthorships with AAAS fellows only matter for the selection as an AAAS Fellow, suggesting that these effects arise through networking or patronage (rather than as signals of quality). Moreover, though some commentators have speculated that networking and patronage effects tend to benefit males more than females (e.g., Nielson, 2015), we find that the addition of controls for previous coauthorships has little or no effect on the estimated gender gaps in our models.

Our findings with respect to the credit received for coauthored work are similarly inconsistent with some of the recent evidence studying disadvantages for female scholars. Focusing on the probability of selection as an ES Fellow, where we have the largest sample sizes and where we know that papers in *Econometrica* and the *Review of Economic Studies* are particularly salient, we find no evidence that women receive less credit for coauthored papers – even when their coauthor(s) have more previous publications and are therefore arguably the senior coauthor(s). We conclude that the pattern of gender gaps in our models for selection as an ES Fellow are unlikely to be driven by gender-related differences in coauthorship patterns or in differential credit for women who coauthor with men.

This project makes three main contributions. First, we contribute to an emerging literature within economics on gender-related differences in the evaluation of scientific work, including studies by Sarsons (2018) on coauthorship and promotions, Chari and Goldsmith-Pinkham (2017) and Hospido and Sanz (2019) on conference submissions, and Card et al. (2020) on journal submissions. In contrast to these recent papers, our analysis focuses on the determinants of recognition for the highest levels of academic achievement, rather than on gender gaps that affect earlier-stage success. This difference may be important if, for example, evaluators hold stereotyped priors on women at entry to the field that lead them to under-value the work of female researchers, leading to a paucity of women at higher levels. Under such circumstances, Fryer (2007) showed that beliefs may “flip,” leading to a presumption that successful females are actually better-qualified than men, consistent

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<sup>6</sup>Of course scholars who are selected as Associate Editors may also have extraordinary skills or accomplishments in addition to their publications and citations that are known to the Fellows, so we cannot conclude that the effect is entirely due to visibility. We also looked at the effect of serving as Editor but virtually all editors and co-editors were already Fellows by the time they served (or within the first year of their appointment).

with the findings by Bohren et al. (2019).<sup>7</sup>

Second, we contribute to a broader literature on the recognition of female scientists that originated with Rossiter (1993) and includes a variety of recent studies that document the underrepresentation of women in the American Academy of Physical Medicine and Rehabilitation (Silver et al., 2017), the American Academy of Neurology (Silver et al., 2018), and as winners of top prizes in the biomedical sciences (Uzzi, 2019) and the field of anesthesiology (Ellinas et al., 2019). Relative to these studies we contribute by adding information not only on the relative number of females in a given field who are potentially at risk to win an award, but also on the quantity and quality of their scientific contributions, as measured by the numbers of publications in various outlets and the numbers of citations received for their work.

Finally, we also contribute to the very limited literature on the selection of candidates for honors in Economics, including the previous studies of elections for Fellows of the ES by Hamermesh and Schmidt (2003) and for members of the AEA Executive Committee by Donald and Hamermesh (2006). As noted, our innovation is to consider the joint process of nomination and election, which is particularly important given the very low rates of nomination for such honors.

The rest of the analysis and proposal is structured as follows. We begin in Section 2 with an overview of our database, gender coding and summary statistics. In Section 3 we analyze the determinants of becoming a fellow of the Econometric Society and test if men and women have had a different likelihood over time. We then propose to use the confidential data, to see if the gender differences appear both at the nomination stage or the voting stage. In Section 4, we look at the gender differences with respect to the other peer recognitions. Section 5 is devoted to the analysis of mechanisms that might explain gender differences in peer recognition. Finally, Section 6 concludes.

## 2 Data and Summary Statistics

This project combines data from publicly available sources and confidential data obtained from the Econometric Society. We first present the data set of publishing economists built from public data sets, which we use for the proposed analysis in Sections 3.1, 4 and 5. We then discuss the confidential data, which we plan to use for the analysis in Section 3.2.

### 2.1 Data Set of Publishing Economists

**Sample of Journals and Articles.** We constructed our main sample of “actively publishing” economists from publicly available information on published articles in the list of journals in Appendix Table 1. These represent the most relevant journals in economics over the past century, including the top-5 journals, 8 other general interest journals (counting *AEA Papers and Proceedings* as a separate journal from the *American Economic Review*), and 23 top field journals (many of

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<sup>7</sup>Interestingly, Kahn (2011) argues that such a process may be at work in the evaluation of female researchers at an Australian university.

which only started publishing in the 1970s or later). Given the focus of the ES on contributions in theory and econometrics, we oversample field journals in theory and econometrics, and also include the *Journal of the American Statistical Association*.<sup>8</sup>

We downloaded metadata for all the published articles in this list of journals, starting from the date of first publication of each journal.<sup>9</sup> The resulting dataset includes 177,695 articles, many of which are actually notes, comments, editorial letters, and the like. After removing these articles we are left with a total of 103,307 publications.

The meta data for each published article includes its doi (digital object identifier), as well as the title, authors, volume, issue, pages, month and year of publication. After disambiguating author names, these data allow us to construct an author×year database that has an annual record for each economist who has published at least one paper in the set of relevant journals, giving the list of papers published up to that point in each of the relevant journals.

**Disambiguating Names.** To reconstruct author’s publication records we need to disambiguate the author names in the journal metadata. We begin by replacing all non-English characters and accented characters with their corresponding English characters. (For example, “á” is replaced with “a” and “ñ” is replaced with “n”). We then translate all names into a standardized format, capitalizing the first letter of first, middle, and last names, adding a dot after first or middle initials, and dropping all suffixes (including “Jr.”). For example, “Trent W Appelbe” is changed to “Trent W. Appelbe”, “Ramon van den Akker” is changed to “Ramon Van Den Akker”, and “James D. Dana Jr.” is changed to “James D. Dana”. Third, we move a first initial after the middle name if the middle name is not an initial. For example, “J. Bradford DeLong” is converted to “Bradford J. DeLong” and “D. Mark Anderson” is changed to “Mark D. Anderson”.<sup>10</sup>

After taking these steps, there are still two main complications in linking together an author’s publications: 1. (*alternate spelling and name formats*) an author’s name may appear in slightly different ways in different articles (e.g., “Ted Bergstrom” versus “Theodore Bergstrom”); 2. (*incomplete names*) some journals, especially before 1980, identify authors only by their first initial(s) and last name (e.g., “K. Binmore” versus “Kenneth G. Binmore”). Both issues create multiple “names” for the same economist, leading to duplicate records and incomplete publication records. They also complicate our gender coding procedure (described below) which relies in part on first names.

We assume that the combination of first, middle, and last names uniquely identifies each

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<sup>8</sup>To help identify the set of journals most relevant in the Fellow selection process, we collected information from an annual article in *Econometrica* listing the most important contributions of each newly elected Fellow, selecting a maximum of six publications for each Fellow. Out of this pool of 6,086 publications, more than 20% were published in *Econometrica*. We consider a journal relevant to the Fellow selection process if papers in that journal account for more than 1% of the 6,086 mentioned contributions (i.e. 61 publications) over the whole sample period, or more than 2% of the mentioned contributions for Fellows selected in any of 4 sub-samples (1933-59, 1960-79, 1980-99, 2000-2019). We complemented this list with any remaining general interest or top field journals, resulting in the list in Appendix Table 1.

<sup>9</sup>The oldest journal is *The Quarterly Journal of Economics*, which started publishing articles in 1886. The most recent journals are the four *American Economic Journals*, *Quantitative Economics*, and *Theoretical Economics*.

<sup>10</sup>We realize that in many cases the leading first initial is part of the person’s correct name but we decided on this procedure to simplify our disambiguation procedure.



economist. We then follow three approaches to link all the records for the same person. First, if there are two names on the list with the *same last name* and a *matching first initial*, and no other names in the list with the same surname, we assume the two names are the same person. Thus, “S. Afriat” and “Sydney Afriat” are assumed to be the same person. Similarly, we assume that two names with the same first name and same last name are the same person regardless of middle initial if there is only one name with that combination of first and last names. Thus “Henry Aaron” and “Henry J. Aaron” are assumed to be the same person if there is no other name “Henry  $x$ . Aaron” with  $x \neq J$  in our data base.

Second, a team of undergraduate research assistants, supervised by us, checked the list of author names, looking for common short forms of names (e.g., Larry versus Lawrence) and likely spelling mistakes or errors in the journal metadata.

Third, as detailed below, the research assistants performed an internet lookup of all names that could not be assigned a gender based on the first name. In practice this provided a full first name for many listed authors with only a first initial, and allowed us to correct many misspelled first names. After merging and correcting records, we were able to construct a database of actively publishing economists with over 40,000 unique names.

A final issue is how long to keep an economist in the author-year sample and be considered “at risk” to become a fellow of the ES or receive other honors. Given that some honors arrive late in professional life, we consider an economist to be an “active publisher” until 18 years after his or her last publication.<sup>11</sup>

**Citations.** To supplement our data on publications we add information on cumulative citations received by each author up to the current year. Specifically, for each paper published in a top 5 journal we downloaded the corresponding citation record from SSCI/Web of Science for each year following publication. We then use these records to assign to each economist the cumulative number of citations she or he has received for prior publications for each of the top 5 journals.<sup>12</sup>

**Fellowships.** Information regarding the selection as a Fellow of the Econometric Society, the American Academy of Arts and Sciences, the National Academy of Sciences, the American Economic Association, and the Alfred P. Sloan Foundation was obtained from webpages from the respective institutions. For all economists in our sample, we identify whether an author was ever elected fellow and also the year in which he or she was elected to be a fellow.

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<sup>11</sup>Using the sample of elected fellows, we noticed that virtually all were elected within 18 years after the last publication in our set of journals. Indeed, only about 10 were elected to the ES more than 10 years after the date of their last publication in this set of journals.

<sup>12</sup>Ideally we would have liked to have citations to *all* published papers by a researcher, not just those the top 5 journals. This proved infeasible, however, as it was not possible to obtain the citations for a particular author from the SSCI site with sufficient accuracy. An especially serious issue is the fact that the citation record for the years before 1998 are stored with first initial only. Furthermore, even in cases in which the full name is used, there often are non-economists sharing the same first and last name, conflating the citation records of separate researchers. Thus, we elected to create a citation record for each paper in the top 5 journals and link each author to papers he or she has published on these journals. Since this is very time-consuming, we do it only for the top 5 journals. For around 80% of the top 5 papers we are able to directly download the citation records of a paper from SSCI using the *doi* number. The remaining papers, however, use a different format of *doi* number from SSCI. We thus downloaded citations to these papers using their journal, volume, issue and pages information.

**Gender Coding.** We identify the gender of the actively publishing scholars using a protocol laid out in Online Appendix Figure 1 of Card et al. (2020). The protocol relies on a combination of (1) public lists of given names that include the shares of males with that name in the U.S. and Germany; (2) lists of female economists obtained from several sources; (3) a list of common Chinese first and last names; (4) internet search by a team of research assistants. We begin by classifying an author as **female** if *both* the US and German lists in (1) report that less than 1% of people with that first name are male, or if the full name is present in one of the lists of female economists. Likewise, we classify an author as **male** if one of the US or German names lists shows that over 99% of people with that name are male and the other shows at least 50% are male. (We exclude 170 economists with common Chinese first and last names in this step). Among the remaining names, we identify the gender using the lists of female economists in (2), as well as lists of economists with gender that we developed in Card et al. (2020).

This first stage of the process left 5,518 names with ambiguous gender, including a substantial number of author names that include only a first initial. In a second step, a team of undergraduate research assistants looked up all 5,518 names. The research assistants first checked if an ambiguous gender name was a misspelled version of a name whose gender was already identified, or if the first initial and surname matched a name whose gender was already identified.<sup>13</sup> If not, they performed an internet search for the name using information in the two most recent published papers with that name, trying to verify the name and the gender of the author, which can often be identified by a picture or other posted information. After this process, the list of names with ambiguous gender was reduced to 2,617 names (roughly 6.1% of all names of actively publishers).

**Measure of Connection.** We create a variable representing the cumulative number of papers coauthored with any Econometric Society Fellow in a given year. This variable will increment when an economist publishes a new paper coauthored with an existing Fellow, or when a coauthor of a previously published paper is elected as a Fellow.<sup>14</sup> We create a parallel set of variables representing the cumulative number of papers published with Fellows of the AAAS and NAS.

**Measures of Coauthorship.** We classify each author’s papers in *Econometrica* and *Review of Economic Studies* into 5 categories based on the size of the author team and junior/senior status: (i) single-authored; (ii) senior author of a 2-author paper; (iii) junior author of a 2-author paper; (iv) senior author of a 3+ author paper; (v) junior author of a 3+ author paper. We select as senior author the one(s) with the highest cumulative number of ECA and RES papers up to and including the year of publication; in case of ties, the more published authors are all denoted as senior authors.<sup>15</sup> We then keep track of each author’s cumulative ECA and RES papers in each

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<sup>13</sup>In some cases we had the initials of the author’s first and middle names, making the matching easier. The assistants only matched an initial and last name to a complete name when the combination of first initial and last name was unique among actively publishing economists.

<sup>14</sup>For example, suppose that author A becomes “active” by publishing her first paper in 2001, then publishes a paper in 2003 coauthored with B (who had been made a Fellow in 1990) and a third in 2005 with coauthor C, who is made a Fellow in 2007. Then A’s cumulative number of papers coauthored with ES Fellows will be 0 in 2001 to 2002, rising to 1 in 2003 when her paper with B is published, and then rising to 2 in 2007 when C is made a Fellow.

<sup>15</sup>For example, suppose authors A, B, and C publish a paper together in REStud. Up to and including that year, A has 5 papers in ECTA and REStud, B has 5, and C has 3. Then A and B are senior coauthors and C is a junior

category.

## 2.2 Confidential Nomination Data

If this proposal is approved, we will also obtain confidential data containing the list of nominees for election as an ES Fellow in each year, as well as the number of votes received by each nominee (left censored at 20 votes). The list of nominees will also include an indicator for whether the nomination came from the Nominating Committee or from a Fellow, and in the latter case a count of the number of other Fellows who endorsed the nomination.

Our understanding is that information on the list of nominees prior to 2006 is unavailable, but if possible we would like to receive earlier lists of nominees, without information on total votes or the source of the nomination, as that would be sufficient to estimate the key specification outlined in Section 3.2.

## 2.3 Summary Statistics

Tables I and II show summary statistics for our author $\times$ year data base of actively publishing economists and for the set of newly elected ES Fellows, respectively. We present data separately for the 1933-79 period (columns 1-3), for 1980-99 (columns 4-6) and for the last two decades (columns 7-9). Within each time period we present characteristics of all authors/Fellows and for males and females separately.

We note that the female share of actively publishing economists was only 5.5% in the 1933-79 period, but has since risen to just under 20%. Among newly elected ES Fellows the female share is far smaller. Indeed, in the 1933-79 period only 3 women were made Fellows (Dorothy Brady in 1950, Irma Adelman in 1968, and Anne Carter in 1973). As suggested in Figure 1, however, the female share has risen over the 2000-2019 period, when 12.3% of newly elected Fellows were women.

The second panel of Table I gives the shares of all active publishers who have been selected as Fellows of the ES, AAAS, NAS, AEA, and as Sloan Foundation Fellows. ES Fellows are the most common, in part reflecting the longer history of the ES Fellows program, and also the low numbers of new Economics fellows selected by the AAAS and NAS. Looking at the corresponding panel in Table II we see that even among newly elected ES Fellows only a small share are AAAS or NAS fellows, whereas since 1980 a relatively large share have previously received a Sloan Foundation Fellowship (15% of all new Fellows in 1980-99 and 27% in 2000-2019). In the two most recent decades, in fact, a remarkable 44% of newly elected female Fellows had received a Sloan award.

The remaining rows of Tables I and II summarize the publication and citation records of active publishers and newly elected Fellows. Focusing first on top 5 publications, we see that publishing in these journals is relatively rare, with fairly stable cumulative averages of about 0.15 *Econometrica* papers, 0.10 *Review of Economic Studies* papers, and 0.20 *AER papers* per person. Among newly elected Fellows, by comparison, the averages are much higher, with around 1.9 *Econometrica* papers, 

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coauthor.

1.1 *Review of Economic Studies* papers, and 1.5 *AER papers* per new Fellow in the most recent decade. Citations to papers in the top 5 journals tell the same story. In the most recent decades, for example, newly elected Fellows have on average about 400 cumulative citations to their top 5 publications, compared to an average of 45 among all actively publishing economists.

Table III will show the summary statistics on nominees and newly elected ES Fellows based on confidential data we will receive from the Econometric Society. We will compare the mean characteristics of nominees and those who are elected as Fellows, both overall and by gender, to help understand whether elected nominees are more or less academically successful than those who are nominated but not elected, and to compare the relative characteristics of elected versus nominated female and male candidates.

### **3 Are Female and Male Economists Equally Likely to Be Elected Fellows of the Econometric Society?**

Are the nomination and election processes for Fellows of the Econometric Society gender neutral? According to the 1952 constitution of the Society (Econometric Society, 1952) potential Fellows “... must have published original contributions to economic theory or to such statistical, mathematical, or accounting analyses as have a definite bearing on problems in economic theory...” The constitution does not lay out other bases for selecting candidates but implicitly the process would seem to be based on scientific contributions rather than personal attributes (see Gordon, 1997).

We begin by studying this question using publicly available data on elected Fellows to estimate simple logistic regression models for the probability of being selected as a new Fellow in a given year, conditional on cumulative publications and citations up to that point.<sup>16</sup> If our proposal is approved we will then use the confidential data on nominees to decompose the gender gap in the probability of being selected as a Fellow into gaps in the probability of being nominated and in the probability of being elected, conditional on nomination. We will also look for potential interactions between gender and other features of nominees, including the number of supporting endorsements received from existing Fellows.

#### **3.1 Results on Election to Fellows**

Table IV summarizes some of the main coefficients from our logistic models of the probability of selection as a new Fellow in a given year, fit to the set of actively publishing economists in that year who are not yet Fellows. To account for long term changes in the underlying environment, including the entry of many new field journals, changes in the numbers of active economists, and changes in citation practices, we estimate the model separately for the periods 1933-79, 1980-99 and 2000-2019. All the models include a full set of year fixed effects to account for year to year

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<sup>16</sup>As noted by Efron (1988), this specification closely approximates a standard discrete time hazard model.

differences in the numbers of Fellows selected relative to the size of the risk set.<sup>17</sup>

In the first specification for each time period we control only for a scholar's cumulative number of papers in each of the the top-5 journals. In the second column we add additional controls for the inverse hyperbolic sine of total cumulative citations to the author's prior publications in each of the top-5 journals.<sup>18</sup> In the third column, we add further controls for cumulative publications in each of the other general interest and field journals listed in Appendix Table 1. The coefficients on these variables are reported in Appendix Table 2.

The main variable of interest in these models is the female coefficient, which we allow to have a different effect within each decade of the two later periods. We pool the female coefficient for the first 5 decades given the relatively small number of female economists in the publishing sample and especially the very small number of female economists elected over this time period (just 3). The estimated coefficient for female scholars provides a measure of the difference in the probability of being selected as a Fellow of the ES in a given year between male and female scholars with similar scholarly output. Since the underlying probability of selection is low, the coefficient can be interpreted as (approximately) the gender gap in the log of the probability of election, holding constant output.

Looking first at the coefficients associated with publications and citations, we note that in all three time periods these variables are strong predictors of the likelihood of being selected as a Fellow in a given year. Perhaps not surprisingly, the strongest determinant is the number of publications in *Econometrica* (EMA): each additional EMA publication increases the probability of selection by about 100 log points (s.e.=7) in the earliest decades and by 98 log points (s.e.=6) in the most recent period. A publication in the *Review of Economic Studies* has the next largest impact, with an impact of 64 log points (s.e.=7) early on and 55 log points (s.e.=8) more recently. Publications in the other top-5 journals have smaller coefficients, especially in the earlier decades when their impact is not statistically significant at conventional levels.

In the next set of columns (2, 5, and 8), we add measures of cumulative citations in the top-5 journals. We find a quantitatively large effect of cumulative citations on the probability of selection, especially to papers published in *Econometrica*. In the most recent decades, for example, the elasticity of the selection probability with respect to cumulative EMA citations is approximately 0.28, while the elasticities with respect to cumulative citations in the other top 5 journals are in the range of 0.04 to 0.16.

Our most comprehensive specifications (columns 3, 6, and 9) add controls for the cumulative numbers of publications in each of the other general interest and field journals listed in Appendix Table 1. We find sizable impacts of publications in some of the field journals, including the *Journal of Economic Theory*, the *Journal of Econometrics*, and the *Journal of Monetary Economics*, particularly in the earliest years of our sample (see Appendix Table 2, columns 1-3). In the latest

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<sup>17</sup>Years in which no individuals are elected as fellows, such as 1934 or 1969, are automatically dropped in the logit specification given the presence of year fixed effects.

<sup>18</sup>We use the *asinh* transformation to approximate the natural logarithm but accommodate zero citations. We note that for  $x > 2$ ,  $asinh(x) \approx \log(2x)$ .

(2000-2019) period, we also find relatively large effects of publications in several journals that did not exist until recently, including *AEJ: Applied*, *AEJ: Macro* and the *Journal of the European Economic Association*. Articles in the *AEA Papers and Proceedings* also appear to be strong predictors of selection as an ES Fellow in the period since 1980.

Controlling for the effects of prior publications and citations, gender exerts an effect on selection rates that varies substantially over time, suggesting that the recognition given to female scholars, *conditional on their publications and citations*, has changed over the last century. In the first five decades of the Society (1933-79), we estimate a large *negative* coefficient of female gender on the probability of selection. The point estimate in our preferred (and richest) specification implies a -195 log point female effect, with a standard error of around 70 points ( $t=2.7$ ). This suggests that prior to 1980 female economists faced a significantly higher bar than males, equivalent to about two extra *Econometrica* publications, for selection as an ES Fellow.

For the decades of the 1980s and 1990s, by comparison, we estimate much smaller and statistically insignificant effects of female gender on the probability of selection as a Fellow: around -11 log points (s.e.=52 points) for the 1980s, and -24 log points (s.e.=51 points) for the 1990s. Finally, we estimate a modest positive effect of +41 log points (s.e.=32 points) for the 2000-2009 period, and a larger, statistically significant positive effect of +112 log points (s.e.=23 points) for the 2010-2019 period. Thus, in the most recent decade, the effect of female gender has switched from the historically negative pattern to a positive benefit, roughly equivalent to having an additional *Econometrica* publication.

### 3.2 Decomposing Differences in Election Probabilities

The selection of Fellows for the ES follows a two-step process. First, an economist needs to be nominated to be considered as new Fellow. Then, in a second stage, existing Fellows cast votes for the nominees. To be elected as a Fellow a nominee must receive votes from at least 30% of the Fellows who participate in a given election. In this section we present a series of analyses designed to understand what fraction of the observed gender gap documented in 3.1 arises at the nomination stage and what fraction arises at the voting stage. This analysis is restricted to the confidential data we obtained from the Econometric Society.

As shown in columns 1-6 of Table V, our approach is to estimate a model for the probability of selection as an ES Fellow (similar to the models in Table IV) and a parallel model for the probability of nomination as a Fellow. By comparing the magnitudes of the estimated female coefficients in these models we obtain a simple estimate of the share of the gender gap in Fellow selection attributable to differences in the probability of being nominated versus the probability of being voted in, conditional on nomination.

Specifically, the probability of selection as a fellow in a given year, conditional on gender ( $g \in \{F, M\}$ ) and variables summarizing the publication record ( $x$ ) can be written as the product of the

probability of nomination and the probability of election, conditional on nomination:

$$P[fellow|g, x] = P[nominated|g, x] \times P[elected|nominated, g, x]$$

Thus the gender gap in the log of the probability of selection as a fellow decomposes into the **sum** of a gap in the probability of nomination and a gap in the probability of election:

$$\begin{aligned} \ln P[fellow|F, x] - \ln P[fellow|M, x] &= \ln P[nominated|F, x] - \ln P[nominated|M, x] \\ &\quad + \ln P[elected|nominated, F, x] \\ &\quad - \ln P[elected|nominated, M, x] \end{aligned}$$

Given the low probabilities of selection and nomination, the female coefficient from a logistic model for selection as a fellow ( $\beta_{Female}^f$ ) is approximately equal to the difference in log selection probabilities between females and males:

$$\beta_{Female}^f \approx \ln P[fellow|F, x] - \ln P[fellow|M, x]$$

while the female coefficient from a parallel model for the probability of nomination ( $\beta_{Female}^n$ ) is approximately equal to the difference in log nomination probabilities between females and males:

$$\beta_{Female}^n \approx \ln P[nominated|F, x] - \ln P[nominated|M, x].$$

The difference between these two coefficients is therefore an estimate of the gender gap in the probability of election, conditional on nomination:

$$\begin{aligned} \beta_{Female}^f - \beta_{Female}^n &\approx \ln P[elected|nominated, F, x] \\ &\quad - \ln P[elected|nominated, M, x]. \end{aligned}$$

While for power reasons our preferred approach is to estimate the nomination and selection models using the full sample of actively publishing scholars who are not yet Fellows, we can also directly examine gender gaps in voting outcomes for male versus female candidates, for the nominated candidates. One simple approach (columns 7-9 of Table V) is to estimate logit models for the probability of winning at least 30% of the votes in an election.<sup>19</sup>

We also plan to consider more detailed outcomes of the election process. In particular nominations for the ES can be received from Fellows or submitted by the Nominating Committee. In addition, in recent years the ES has automatically re-nominated people from the previous year's list who were not elected but received a substantial number of votes. Nomination by a Fellow are often accompanied by a list of other Fellows who have endorsed the candidate.

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<sup>19</sup>Since the probability of election conditional on nomination is in the range of 20-40% each year, the coefficients of this model will not mechanically equal the difference between the coefficients in the logit models for selection as a Fellow and nomination as a Fellow, but they will be closely related.

Table VI lays out a proposed set of models that will focus on these features. In Columns 1-2 versus 3-4 we estimate if there is a difference in the determinants of nomination by committee, versus by existing fellows. These models will be estimated using information on the set of nominees in the 2006-2019 period, treating the set of actively publishing economists in these years who are not yet Fellows as the population of interest. Next, we estimate Poisson and Negative Binomial models for the determinants of the number of endorsements, and for the number of votes received by nominees in each election, using only the sample of nominated fellows. For these additional models, envisioned in Columns 5-10, we will add additional controls available from the nomination forms, such as the tier and geographic location of the nominees’ home institution. Given the much smaller sample for these models, we may use a Lasso model, or a related approach, to identify a subset of controls to avoid over-fitting.

## 4 Peer Recognition in Other Societies: AAAS, NAS, AEA, Sloan

Are the observed patterns of gender effects in Table IV unique to the Econometric Society or do we observe similar patterns of gender gaps in peer recognition for other major honors? In this section we extend our analysis to four other highly salient honorific Fellowships: AAAS, NAS, AEA and the Sloan Foundation.

The processes for selecting fellows of the AAAS and NAS are broadly similar to the one used by the ES. In both cases nominations are received from one or more existing fellows, and then the entire population of existing fellows vote for names on the nominee list. The AAAS considers nominees from groups of at least two fellows, one of whom must be from the U.S. The NAS also collects nominations from existing fellows: NAS fellows must be U.S. citizens, although a small number of “Foreign Associates” is also selected.

Sloan Foundation Fellowships are substantially different. These fellowships are limited to economists up to 6 years from the PhD (up to 2019) or untenured (but tenure-track) scholars (since 2019) at U.S. and Canadian universities. Nominations are submitted by department chairs, with a maximum of 3 nominees per department. Fellows are selected by a committee of 3 senior scholars, and receive a substantial monetary reward.

Finally, AEA Distinguished Fellows are nominated by the association’s Nominating Committee and voted on by a combination of the Nominating Committee and the AEA Executive Committee. Past presidents of the AEA are automatically recognized as Distinguished Fellows; up to four additional scholars are recognized each year for “lifetime research contributions.”

Table VII presents the main control variables from our proposed analysis of these fellowships. As in our models for ES Fellow selection, we propose to use logistic regression models fit to the set of scholars who have not yet been elected to a particular honor. For the Sloan fellows, to mimic the eligibility restrictions of the fellowship, we limit the sample to individuals up to 8 years since their first publication, a proxy for time of PhD.<sup>20</sup>

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<sup>20</sup>The results are insensitive to varying the window from first publication.



The specifications follow the same structure as those in Table IV, with a baseline model that controls only for cumulative publications in each of the the top-5 journals, and a second specification that adds additional controls for cumulative citations for papers in each of the top 5 journals and for the cumulative numbers of publications in each of the other general interest and field journals listed in Appendix Table 1. (The coefficients associated with these other journal controls are reported in Appendix Tables 2 and 3). Instead of estimating separate models for each time period we estimate a single model but fully interact all the controls with indicators for the different periods (pre-1980, 1980-1999, and 2000-2019). This approach yields identical coefficient estimates to the approach in Table IV. For reference columns 1 and 2 replicate the results from Table IV for the selection into ES Fellowships, while columns 3-10 present models for other Fellowships.

Interestingly, we find that the pattern of gender gaps in the models for selection into the AAAS and NAS (Columns 3-6) are quite similar to those we estimated for selection as a Fellow of the ES. In all three cases we find evidence of a higher bar for female candidates in the earlier period, conditional on publications and citations. Indeed, in the case of NAS Fellows the female coefficient cannot be estimated since no woman was elected to the NAS until 1989.

In the 1980s and 1990s the estimated gender gaps from our richer specifications (columns 4 and 6) are smaller in magnitude and statistically insignificant for both Societies, similar to the pattern we see for the ES. Finally, in the most recent decades we estimate sizable positive effects of female gender on the probability of selection as an AAAS or NAS fellow, with a magnitude even larger than the one for the ES (around +193 log points for the AAAS in 2010-19, s.e.=34 points; around +211 log points for NAS in 2010-19, s.e.=63 points).

The specifications in columns 4 and 6 include controls for publications in the 36 journals, as well as citations in the top-5 journals, with coefficients reported in Appendix Table 2. Compared to the ES model, publications in *Econometrica* and in the *Review of Economic Studies* are less predictive of election, with generally more weight on citations to papers in the other top-5 journals. Publications in some applied journals, such as the *Journal of Economic History* and the *Journal of Labor Economics* carry more positive weight for the AAAS and NAS models, though the field journal weights have parallels with the weights for the ES models.

Turning to the model for selection as a Fellow of the AEA in columns 7 and 8, the pattern of gender gaps is somewhat different, with no evidence of a higher bar for female candidates in the period up to 2000, but again a sizable positive effect (+104 log points, s.e.=51 points) in the most recent decade. Finally, the estimated pattern of gender coefficients in our models for selection as an Alfred P. Sloan Fellow (which only started in 1981) show a modest and relatively consistent positive effect (around +50 log points) for female candidates. Appendix Table 3 displays the coefficients on publications and citations for these journals.

It is interesting that the three fellowships with a similar selection model — with nominations by other fellows and then voting by the full body of fellows — yield a similar pattern of gender gaps over time, with a higher bar for female candidates in the pre-1980 period and a significantly lower bar in the most recent decade. The two fellowships that rely on a committee mechanism for

selecting new Fellows display a more stable pattern of moderately positive female advantage over time.

While the focus of this paper is mainly on election to prestigious fellowships, we also consider as an additional outcome election as President or Vice-President of the American Economic Association, as considered by Donald and Hamermesh (2006). The President is chosen by the Executive Committee of the AEA and runs unopposed, while the two Vice-Presidents are chosen via ballot out of 4 candidates. We estimate a model with all the controls in Appendix Table IV.<sup>21</sup>

As Column 1 shows, in the years from 1933 to 1973, the selection to president or vice president appears to have been approximately gender-neutral, with an estimated female coefficient in the logit model of +17 log points (s.e.=60 points). In the next four decades, we instead estimate very substantial coefficients favoring female candidates, from 214 log points (s.e.=60 points) in 1980-89 to 386 log points (s.e.=60 log points) in the most recent decade. Thus, the election to AEA president or vice-president exhibited a preference for female candidates predating by at least two decades the other fellowships.

## 5 Mechanisms: Visibility, Networks and Credit for Collaboration

In this section, we examine three potential mechanisms that can potentially help to explain gender differences in peer recognition in Economics. Building from the models in Tables IV and VII, we add additional mediating variables that can (at least in part) capture the effects of the alternative mechanisms, and compare the estimated gender effects with and without these extra variables.

First we consider the potential role of visibility of a scholar to existing Fellows. In the case of the ES, one potential indicator of visibility is being named to the editorial board of *Econometrica*.<sup>22</sup> To test whether this variable actually measures visibility or is better interpreted as a signal of quality we can compare the effect of being named to the editorial board of *Econometrica* on the probability of selection as a Fellow of the ES versus the the probability of selection as a Fellow of AAAS or NAS. A pure visibility channel would imply that it only affects the probability of being named an ES Fellow, whereas if it is a signal of quality it should also affect the other fellowship rates.

Next we consider the potential role of personal connections or “networking.” Specifically, we examine the effect of having previously coauthored published papers with existing fellows of the various societies, again contrasting the effect of coauthoring with a Fellow of the ES on the probabilities of election as Fellow of the ES versus the AAAS or NAS. In this case we can also examine the symmetric impacts of previously coauthoring with an AAAS or NAS Fellow on the probabilities of selection into each of the three societies.

Table VIII presents our proposed models for the effects of the first two channels on the probabilities of selection as an ES, AAAS, or NAS Fellow. For reference we show the gender coefficients

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<sup>21</sup>We do not formally analyze the election to ES President, a position that up until this year has been held only by men.

<sup>22</sup>We also considered the impact of being named coeditor or editor at *Econometrica*. Since virtually all editors and co-editors are already Fellows at the start of their term, however, this measure is not very useful.

from our baseline models from Table VII in columns 1, 3, and 5. These models include controls for the number of prior publications in each top 5 journal, the number of cumulative citations to publications in each of these 5 journals, and the numbers of publications in each of the other journals in Appendix Table 1. Next, in columns 2, 4 and 6 we present models that include an indicator for being appointed as Associate Editor of *Econometrica* and controls for the numbers of previous papers coauthored with existing fellows of the ES, AAAS, and NAS.

We find that having served as Associate Editor at *Econometrica* has a large positive effect on being selected as an ES Fellow, but no discernible effect on election probabilities for the other two societies. We also find that previous coauthorships with ES Fellows have a significant effect on the probability of being selected as an ES Fellow, but no effect on being selected as an AAAS or NAS Fellow, whereas previous coauthorships with AAAS Fellows have a significant effect on the probability of being selected as an AAAS Fellow and as an NAS Fellow, but no effect on being selected as an ES Fellow.

Taken together these results suggest that visibility and connections both matter, particularly for election as Fellow of the ES. Nevertheless, the estimated gender gaps in our models for all three societies are essentially unchanged when we add controls for visibility and connections.

Finally, we consider the possibility that females receive different credit for their coauthored works than males, as has recently been suggested by Sarsons (2018) in the context of tenure decisions. Table IX presents a series of models for the probability of selection as an ES Fellow that add controls for 4 types of previous coauthorships of papers in *Econometrica* and the *Review of Economic Studies* – the two most important outlets for ES Fellows. Specifically, as discussed in Section 2.1, we add controls for the numbers of previous publications in these two journals in which the scholar was (a) senior author of a 2-author paper; (b) junior author of a 2-author paper; (c) senior author of a 3+ author paper; (d) junior author of a 3+ author paper. Since the models also control for the total numbers of papers in these two journals, the implicit omitted category is previous single-authored papers. The specification in column 2 of Table IX adds the 4 coauthor controls, while the model in column 3 adds these controls and their interactions with whether the scholar is female – thereby allowing for different levels of credit for various coauthored works by males versus females. These interaction terms provide a test of whether female economists get less credit for coauthored work, as in Sarsons (2018).

These models point to three main conclusions. First, we find that coauthored papers where the scholar was the senior coauthor have a *smaller* effect on the probability of being selected as an ES Fellow than coauthored papers where the scholar was a junior coauthor. The coefficient of -0.161 in column 2 associated with the first of the 4 coauthorship variables implies that having one additional 2-author where the scholar was the senior author reduces the probability of being selected as an ES Fellow by about 16 log points relative to having one more sole-authored paper. In contrast, each additional 2-author paper written as the junior author raises the probability by about 15 log points. Similarly, an additional paper with 3+ coauthors where the scholar was the senior coauthor of the team reduces the probability of selection as a Fellow by 21 log points relative

to a sole authored paper, whereas an additional paper with 3+ coauthors where the scholar was a junior coauthor raise it by about 25 log points.

We conjecture (though we have no direct evidence to this) that these effects may capture differences in quality across the papers, above and beyond what is captured by the citation controls.<sup>23</sup> Card and DellaVigna (forthcoming) find that papers with more highly-published coauthors tend to receive more citations in the long run. For scholars who are not yet ES Fellows but have a chance of becoming one (i.e., have a reasonable publication record) many of the papers in which they were the junior coauthor may have been written with a highly distinguished coauthor whose presence on the team indicates an important paper. In contrast, papers in which they were the senior coauthor were mainly written with relatively junior scholars and may be less influential.

Second, and in contrast to Sarsons (2018), we find no evidence that coauthored works are differentially downweighted for female scholars. We have also estimated specifications that mimic those in Sarsons (2018) and find the same result.

Third, and most importantly, we find no impact of allowing for differential credit for coauthored work on the estimated gender gaps in the probability of selection as an ES Fellow. The estimated gender gaps from the specification in column 3 of Table IX are very similar to the gaps in our baseline specification in column 1. Thus, it does not appear that differing credit for coauthored work by female scholars can account for the pattern of gender gaps in the probability of being selected as an ES Fellow.

## 6 Discussion and Conclusion

How does gender affect peer recognition in Economics? We start analyzing whether men and women have the same likelihood of being elected Fellows of the oldest and most prestigious society in Economics, that is, the Econometric Society. We take a comprehensive approach studying not only the probability of election but also proposing to study in more detail the two stages that lead to being elected: the probability of being nominated and the probability of being elected if nominated. We then extend the study of the role of gender to other important societies: AAAS, NAS, AEA and Sloan Foundation.

Controlling for the effects of prior publications and citations, we find that gender exerts an effect on selection rates that varies substantially over time, suggesting that the recognition given to female scholars, *conditional on their publications and citations*, has changed over the last century. In the first five decades of the Society (1933-79), we estimate a large *negative* coefficient of female gender on the probability of selection. For the decades of the 1980s and 1990s, by comparison, we estimate much smaller and statistically insignificant effects of female gender on the probability of selection as a Fellow. Finally, we estimate a modest positive effect for the 2000-2009 period, and a larger, statistically significant positive effect for the 2010-2019 period. Thus, in the most recent

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<sup>23</sup>Our SSCI citation measures only count citations in published papers, which tend to accumulate slowly even for impactful papers.

decade, the effect of female gender has switched from the historically negative pattern to a positive benefit.

In addition, similar evolving patterns of gender are present in AAAS and NAS, the two institutions that have a similar election system, where existing Fellows vote for the new fellows. In contrast, the two fellowships that rely on a committee mechanism for selecting new Fellows (Sloan Foundation Fellowships and the AEA Distinguished Fellow awards) display a more stable pattern of moderately positive female advantages over time.

Methodologically, we view these estimates as illustrating the benefit of our approach of estimating the selection of fellows out of the underlying population of active economists while controlling for a rich set of publication and citation measures. Our estimates allow us to obtain relatively precise estimates of gender difference in peer recognition, and benchmark their magnitudes against the effects of publications and citations, which are highly predictive of peer honors. In addition, our approach has the benefit that our models could be used to help identify highly deserving candidates who are not currently Fellows.

Our findings raise the question of what factors can account for the changing pattern of gender gaps in peer recognition in economics. Although an answer is beyond the scope of this proposal, we believe that the pattern of effects in the 1933-1980 period – when the accomplishments of female scholars appear to have been systematically under-rewarded – will not be too surprising to most readers. Our estimates confirm that the “Matilda Effect” hypothesized by Rossiter (1993) was in fact present in the election of Fellows to the ES (and quite likely in the election of Fellows to the AAAS and NAS) until the 1970s. In this era we estimate that women were about 5 times less likely to be selected as ES Fellows as men with comparable records.

More surprising is our finding that in the period from 1980 to 2000 or so, there were relatively small differences between males and females in the probability of being selected as a Fellow of the ES, AAAS, NAS, conditional on academic achievements as measured by publications and citations. We caution that this finding has to be interpreted carefully in light of growing evidence that female scholars may face somewhat higher barriers to publishing in the field. Specifically, recent studies by Ginther and Kahn (2004), Hengel (2018), Sarsons (2018), and Card et al. (2020) all point in this direction. If so, then those women who do succeed in publishing in top journals may in fact be better scholars than males with the same record – a possibility noted by Fryer (2007) in the context of a dynamic model of statistical discrimination.

Finally, our most surprising finding is that in the past two decades, and especially after 2010, it appears that female economists are more likely to be selected as Fellows of ES, AAAS, NAS than males with similar publication records and citations. Such a positive preference for females was found by Donald and Hamermesh (2006) in their study of AEA officer elections, though this setting is somewhat different because voters in the AEA election are not voting to admit members to a society of which they themselves are already members. Our estimates suggest that holding constant publications and citations, women were more than twice as likely as men to be selected as a Fellow of the ES, AAAS or NAS in the last decade.

There are at least three possible explanations for this positive preference for female candidates. The first is that as economists have become more aware of the higher bar for publishing and career success faced by female economists, they have lowered the bar for subsequent honors (consistent with the “belief flipping” hypothesized by Fryer, 2007). A second possibility is that Fellows of these Societies may have decided to try to redress the past under-recognition of female scholars. If so, then we might expect the positive female effects in the selection process for new Fellows to eventually disappear – though even after a decade or more of positive preferences, the fractions of female Fellows in the ES is still relatively low. A third possibility is that Fellows may believe there is some value in admitting a share of females that is approximately equal to the share of females in the broader population of active publishers. Such a choice could have the benefit of demonstrating to current and future scholars that successful economists value the contributions of female scholars and do not practice statistical or other forms of discrimination against them.

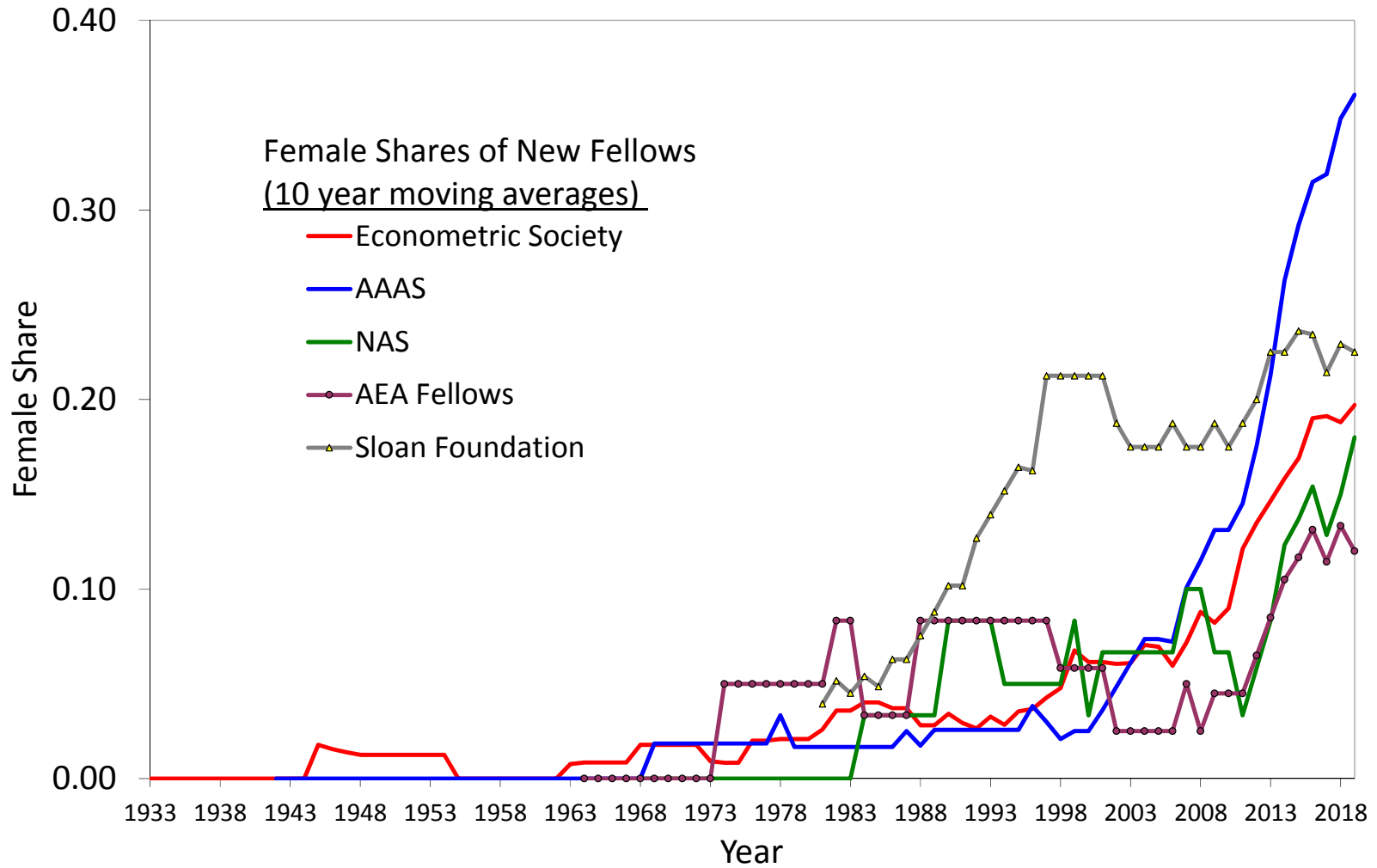
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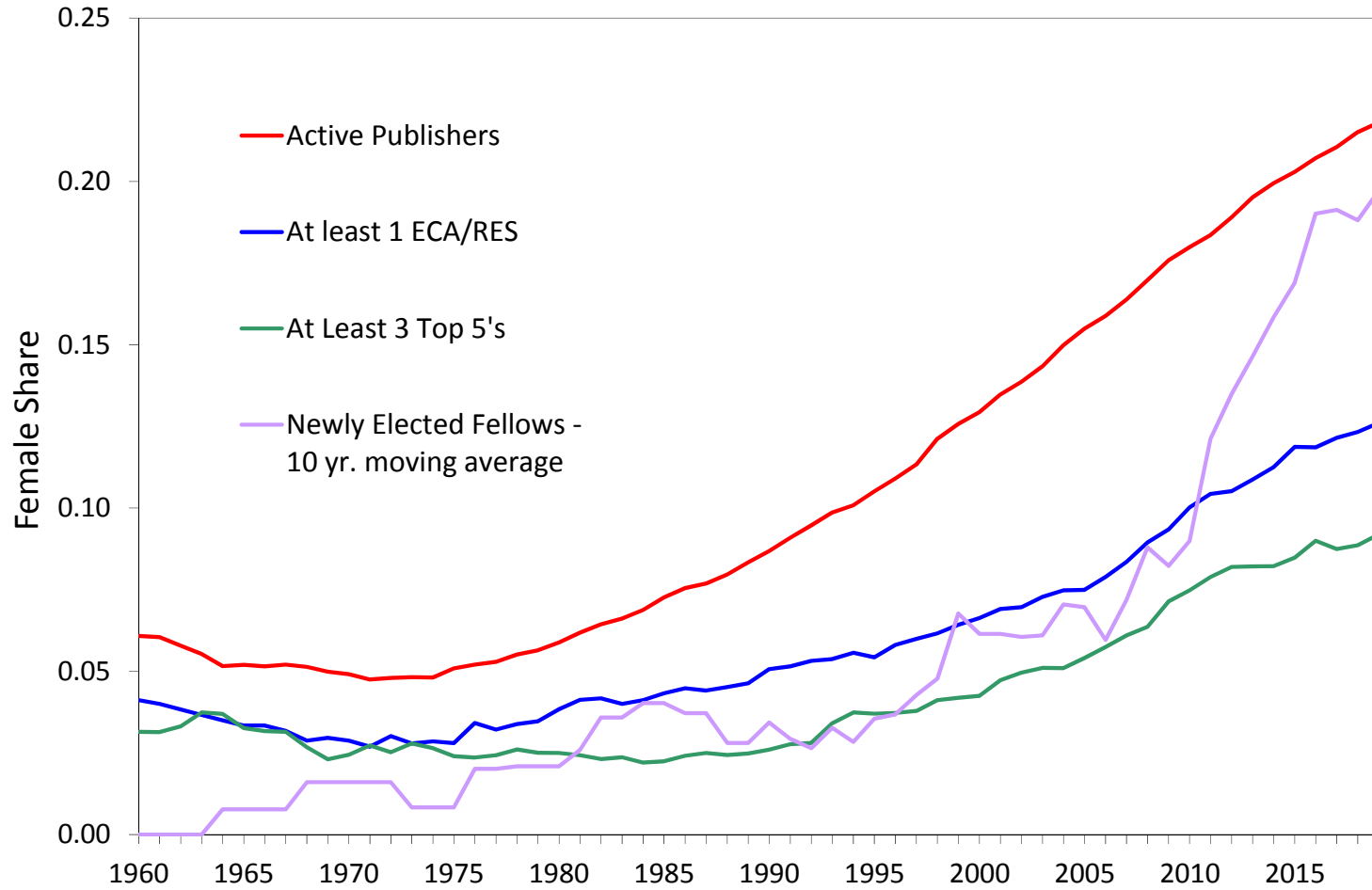


Figure I: Female Share of Newly Elected Fellows



Notes. The figure presents a moving average of the fraction of female economists among the newly elected fellows to 5 distinguished fellowships.

Figure II  
 Female Shares of Active Economists (not yet Fellows) and Newly Elected Fellows



Notes. The figure presents a moving average of the fraction of female economists among the sample of active publishers (Table I), among a sample of economists with at least 1 *Econometrica* or *Review of Economic Studies* publications, among economists with at least 3 “top-5” publications, and among the newly elected Econometric Society fellows.

TABLE I  
SUMMARY STATISTICS FOR DATA SET OF ACTIVELY PUBLISHING ECONOMISTS

	Economists with at Least One Paper Published in Set of Leading Journals								
	1933-1979			1980-1999			2000-2019		
	All	Male	Female	All	Male	Female	All	Male	Female
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Fraction Female	0.055	0	1	0.101	0	1	0.188	0	1
Fraction Ambiguous Gender	0.112	--	--	0.067	--	--	0.038	--	--
<i>Fellowships (as of current year)</i>									
Current Fellow of ES Society (1933+)	0.019	0.023	0.003	0.025	0.030	0.006	0.020	0.025	0.005
Current Fellow of AAAS (1942+)	0.003	0.003	0.000	0.007	0.009	0.002	0.008	0.010	0.002
Current Fellow of NAS (1968+)	0.001	0.001	0.000	0.002	0.003	0.000	0.002	0.003	0.000
Current Fellow of AEA (1965+)	0.001	0.001	0.000	0.003	0.004	0.002	0.003	0.004	0.001
Recipient of Sloan Fellowship (1981+)	0.000	0.000	0.000	0.005	0.006	0.005	0.007	0.008	0.006
<i>Cumulative publications in top-5 journal</i>									
Econometrica	0.159	0.171	0.061	0.195	0.219	0.051	0.149	0.181	0.037
REStud	0.097	0.102	0.064	0.118	0.130	0.046	0.099	0.117	0.037
AER	0.246	0.267	0.204	0.219	0.245	0.110	0.195	0.226	0.100
QJE	0.231	0.255	0.157	0.136	0.153	0.063	0.103	0.120	0.045
JPE	0.269	0.293	0.218	0.186	0.212	0.072	0.121	0.145	0.041
<i>Cumulative citations in top-5 journals</i>									
Econometrica	0.834	0.932	0.187	4.565	5.275	0.892	11.412	14.189	2.013
REStud	0.219	0.243	0.059	1.546	1.770	0.361	3.888	4.727	1.132
AER	0.763	0.868	0.440	4.414	5.078	1.500	13.148	15.478	5.950
QJE	0.346	0.391	0.197	1.590	1.797	0.704	8.249	9.899	2.983
JPE	0.559	0.635	0.319	4.032	4.711	0.834	9.892	12.163	2.440
<i>Cum. publ. in gen. interest journals</i>									
JEP+JEL	0.006	0.007	0.008	0.041	0.045	0.036	0.075	0.085	0.049
AEA Papers&Proceedings	0.187	0.205	0.138	0.162	0.172	0.163	0.176	0.184	0.170
JEEA	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.043	0.033
EJ	0.209	0.196	0.199	0.156	0.165	0.083	0.154	0.171	0.096
REStat	0.212	0.228	0.192	0.237	0.254	0.188	0.179	0.200	0.119
Economica+IER	0.149	0.150	0.108	0.202	0.218	0.106	0.177	0.202	0.091
<i>Cum. publications in field journals</i>									
Theory (JET+ET+GEB+JGT+JMaE+TE)	0.069	0.076	0.032	0.263	0.287	0.127	0.517	0.590	0.254
Econometrics (EcT+JEc+JASA)	0.153	0.165	0.120	0.250	0.269	0.121	0.328	0.373	0.147
Micro (AEJMicro)	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.014	0.008
Macro (AEJMacro+JME)	0.010	0.011	0.008	0.063	0.069	0.040	0.109	0.125	0.061
AEJ Applied	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.015	0.029
Quantitative Economics	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.008	0.006
Development (JDE)	0.010	0.010	0.019	0.077	0.077	0.086	0.122	0.123	0.124
Finance (JF)	0.209	0.234	0.106	0.246	0.277	0.094	0.183	0.215	0.080
Health (JHE)	0.000	0.000	0.000	0.038	0.037	0.064	0.107	0.100	0.146
History (JEH)	0.073	0.075	0.069	0.078	0.078	0.075	0.055	0.057	0.039
International (JIE)	0.017	0.019	0.010	0.066	0.072	0.054	0.105	0.113	0.088
Industrial Organization (RAND)	0.028	0.031	0.013	0.080	0.086	0.068	0.079	0.089	0.047
Labor (JoLE)	0.000	0.000	0.000	0.025	0.025	0.035	0.045	0.047	0.046
Public (JPubE+AEJPolicy)	0.020	0.022	0.020	0.098	0.106	0.077	0.180	0.196	0.143
Number of Year-Author Observations	149,789	125,525	7,913	212,713	181,127	17,565	380,851	304,157	65,157
Number of Authors	10,686	8,895	593	18,178	15,129	1,835	33,648	26,054	6,318

Notes. Data set contains person-year observations on "actively publishing" economists. An economist becomes active upon publishing a paper in one of the journals listed in Appendix Table 1, and remains active for 18 years after the last publication. Gender is based on name or internet search -- see text. Citations in top 5 journals are measured from Web of Science SSCI and are cumulative up to current year.

TABLE II  
SUMMARY STATISTICS FOR ECONOMETRIC SOCIETY FELLOWS IN ELECTION YEAR

	Newly Elected Fellows in Year of Election								
	1933-1979			1980-1999			2000-2019		
	All	Male	Female	All	Male	Female	All	Male	Female
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Fraction Female	0.009	0	1	0.034	0	1	0.123	0	1
Fraction Ambiguous Gender	0	--	--	0	--	--	0	--	--
<i>Fellowships (as of current year)</i>									
Fellow of Econometric Society (1933+)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Fellow of AAAS (1942+)	0.006	0.006	0.000	0.013	0.013	0.000	0.069	0.054	0.179
Fellow of NAS (1968+)	0.000	0.000	0.000	0.003	0.003	0.000	0.003	0.004	0.000
Fellow of AEA (1965+)	0.006	0.006	0.000	0.000	0.000	0.000	0.006	0.004	0.026
Sloan Fellow (1981+)	0.000	0.000	0.000	0.150	0.153	0.091	0.267	0.244	0.436
<i>Cum. publications in top-5 journals</i>									
Econometrica	1.293	1.305	0.333	2.235	2.266	1.364	1.931	2.032	1.205
REStud	0.764	0.772	0.000	1.113	1.133	0.545	1.110	1.176	0.641
AER	0.650	0.646	1.333	1.034	1.062	0.273	1.541	1.556	1.436
QJE	0.689	0.692	0.667	0.799	0.802	0.727	1.107	1.029	1.667
JPE	0.798	0.807	0.000	0.972	0.981	0.727	0.962	1.014	0.590
<i>Cum. citations in top-5 journals</i>									
Econometrica	6.587	6.622	4.667	53.630	55.091	12.727	102.896	102.100	108.590
REStud	2.849	2.882	0.000	13.856	14.221	3.636	39.201	36.495	58.564
AER	4.707	4.720	4.667	23.696	24.377	4.636	101.412	97.799	127.256
QJE	2.405	2.412	2.333	12.166	12.377	6.273	115.223	94.767	261.564
JPE	3.755	3.798	0.000	26.959	27.636	8.000	67.469	69.362	53.923
<i>Cum. Publ. in gen. interest journals</i>									
JEP+JEL	0.017	0.017	0.000	0.191	0.195	0.091	0.500	0.470	0.718
AEA Papers&Proceedings	0.442	0.447	0.000	0.614	0.617	0.545	1.057	0.946	1.846
JEEA	0.000	0.000	0.000	0.000	0.000	0.000	0.453	0.430	0.615
EJ	0.610	0.614	0.333	0.404	0.416	0.091	0.541	0.520	0.692
REStat	0.567	0.556	2.000	0.342	0.354	0.000	0.450	0.430	0.590
Economica+IER	0.638	0.646	0.000	1.028	1.042	0.636	0.701	0.710	0.641
<i>Cum. publications in field journals</i>									
Theory (JET+ET+GEB+IJGT+JMaE+TE)	0.453	0.458	0.000	2.122	2.127	2.000	3.085	3.308	1.487
Econometrics (EcT+JEc+JASA)	0.578	0.576	1.000	1.172	1.211	0.091	1.469	1.487	1.333
Micro (AEJMicro)	0.000	0.000	0.000	0.000	0.000	0.000	0.088	0.079	0.154
Macro (AEJMacro+JME)	0.014	0.014	0.000	0.304	0.312	0.091	0.604	0.613	0.538
AEJ Applied	0.000	0.000	0.000	0.000	0.000	0.000	0.119	0.093	0.308
Quantitative Economics	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.039	0.103
Development (JDE)	0.020	0.020	0.000	0.100	0.104	0.000	0.186	0.176	0.256
Finance (JF)	0.097	0.098	0.000	0.266	0.276	0.000	0.255	0.262	0.205
Health (JHE)	0.000	0.000	0.000	0.006	0.006	0.000	0.110	0.079	0.333
History (JEH)	0.031	0.032	0.000	0.044	0.036	0.273	0.035	0.032	0.051
International (JIE)	0.048	0.049	0.000	0.285	0.295	0.000	0.245	0.240	0.282
Industrial Organization (RAND)	0.063	0.063	0.000	0.451	0.451	0.455	0.503	0.513	0.436
Labor (JoLE)	0.000	0.000	0.000	0.169	0.169	0.182	0.170	0.165	0.205
Public (JPubE+AEJPolicy)	0.066	0.066	0.000	0.470	0.484	0.091	0.695	0.642	1.077
Number of Observations	351	347	3	319	308	11	318	279	39

Notes: Table presents characteristics of economists who were elected as Fellows of the Econometric Society, as of the year of their election. See note to Table I.

TABLE III  
SUMMARY STATISTICS FOR NOMINEES AND ELECTED FELLOWS, 2006-2019

	Characteristics of Nominated/Elected Fellows in Year of Election								
	Nominated			Elected			Ratio: Elected/Nominated		
	All	Male	Female	All	Male	Female	All	Male	Female
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Fraction Female	X	X	X	X	X	X	X	X	X
<i>Other Fellowships Held</i>									
Fellow of AAAS (1942+)	X	X	X	X	X	X	X	X	X
Fellow of NAS (1968+)	X	X	X	X	X	X	X	X	X
Fellow of AEA (1965+)	X	X	X	X	X	X	X	X	X
Sloan Fellow (1981+)	X	X	X	X	X	X	X	X	X
<i>Cum. publications in top-5 journals</i>									
Econometrica	X	X	X	X	X	X	X	X	X
REStud	X	X	X	X	X	X	X	X	X
AER	X	X	X	X	X	X	X	X	X
QJE	X	X	X	X	X	X	X	X	X
JPE	X	X	X	X	X	X	X	X	X
<i>Cum. citations in top-5 journals</i>									
Econometrica	X	X	X	X	X	X	X	X	X
REStud	X	X	X	X	X	X	X	X	X
AER	X	X	X	X	X	X	X	X	X
QJE	X	X	X	X	X	X	X	X	X
JPE	X	X	X	X	X	X	X	X	X
<i>Cum. Publ. in general interest journals</i>									
JEP+JEL	X	X	X	X	X	X	X	X	X
AEA Papers&Proceedings	X	X	X	X	X	X	X	X	X
JEEA	X	X	X	X	X	X	X	X	X
EJ	X	X	X	X	X	X	X	X	X
REStat	X	X	X	X	X	X	X	X	X
Economica+IER	X	X	X	X	X	X	X	X	X
<i>Cum. publications in field journals</i>									
Theory (JET+ET+GEB+IJGT+JMaE)	X	X	X	X	X	X	X	X	X
Econometrics (EcT+JEC+JASA)	X	X	X	X	X	X	X	X	X
Micro (AEJMicro)	X	X	X	X	X	X	X	X	X
Macro (AEJMacro+JME)	X	X	X	X	X	X	X	X	X
AEJApplied	X	X	X	X	X	X	X	X	X
Development (JDE)	X	X	X	X	X	X	X	X	X
Finance (JF)	X	X	X	X	X	X	X	X	X
Health (JHE)	X	X	X	X	X	X	X	X	X
History (JEH)	X	X	X	X	X	X	X	X	X
International (JIE)	X	X	X	X	X	X	X	X	X
Industrial Organization (RAND)	X	X	X	X	X	X	X	X	X
Labor (JoLE)	X	X	X	X	X	X	X	X	X
Public (JPubE+AEJPolicy)	X	X	X	X	X	X	X	X	X
Number of Observations	X	X	X	X	X	X	X	X	X

*Notes:* Columns 1-3 presents characteristics of economists who were nominated to be Fellows of the Econometric Society, as of the year of their nomination. Columns 4-6 present characteristics of nominees who were elected Fellows, as of the year of their election. Columns 7-9 present ratios of mean characteristics of elected versus nominated economists. See note to Table I.

TABLE IV  
PREDICTORS OF SELECTION AS ECONOMETRIC SOCIETY FELLOW

	Logit Regression for Selection as Econometric Society Fellow in Year t:								
	1933-79			1980-99			2000-19		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Female × (pre-1980)	-2.191 (0.723)	-2.261 (0.798)	-1.947 (0.708)	--	--	--	--	--	--
Female × (1980-89)	--	--	--	-0.339 (0.606)	-0.273 (0.607)	-0.109 (0.524)	--	--	--
Female × (1990-99)	--	--	--	-0.940 (0.515)	-0.602 (0.568)	-0.235 (0.507)	--	--	--
Female × (2000-09)	--	--	--	--	--	--	0.328 (0.325)	0.372 (0.313)	0.405 (0.318)
Female × (2010-19)	--	--	--	--	--	--	0.784 (0.219)	1.064 (0.220)	1.123 (0.226)
# Papers in <i>Econometrica</i>	1.002 (0.067)	0.685 (0.099)	0.547 (0.099)	0.828 (0.061)	0.419 (0.066)	0.352 (0.063)	0.980 (0.055)	0.674 (0.088)	0.709 (0.077)
Asinh citations in <i>Econometrica</i>	--	0.427 (0.086)	0.499 (0.082)	--	0.463 (0.053)	0.498 (0.053)	--	0.277 (0.050)	0.244 (0.050)
# Papers in <i>Rev. of Econ. Studies</i>	0.644 (0.070)	0.405 (0.096)	0.420 (0.113)	0.443 (0.075)	0.218 (0.107)	0.098 (0.104)	0.550 (0.079)	0.297 (0.121)	0.264 (0.109)
Asinh citations in <i>REStud</i>	--	0.334 (0.116)	0.197 (0.131)	--	0.174 (0.081)	0.161 (0.077)	--	0.126 (0.068)	0.122 (0.062)
# Papers in <i>Am. Econ. Review</i>	0.099 (0.054)	-0.136 (0.093)	-0.170 (0.094)	0.170 (0.072)	0.035 (0.102)	0.060 (0.105)	0.294 (0.063)	0.036 (0.088)	0.060 (0.088)
Asinh citations in <i>AER</i>	--	0.182 (0.100)	0.198 (0.106)	--	0.006 (0.071)	0.006 (0.070)	--	0.145 (0.056)	0.152 (0.051)
# Papers in <i>Quarterly J. of Econ.</i>	0.040 (0.018)	-0.006 (0.037)	-0.031 (0.055)	0.299 (0.077)	0.189 (0.098)	0.150 (0.139)	0.488 (0.064)	0.388 (0.085)	0.250 (0.109)
Asinh citations in <i>QJE</i>	--	0.315 (0.090)	0.327 (0.101)	--	0.149 (0.075)	0.107 (0.081)	--	0.038 (0.058)	0.028 (0.059)
# Papers in <i>J. of Political Economy</i>	0.057 (0.029)	-0.032 (0.066)	-0.008 (0.062)	0.104 (0.049)	-0.055 (0.060)	-0.136 (0.086)	0.150 (0.074)	-0.015 (0.088)	0.038 (0.087)
Asinh citations in <i>JPE</i>	--	0.256 (0.092)	0.240 (0.102)	--	0.254 (0.057)	0.249 (0.059)	--	0.160 (0.049)	0.175 (0.047)
Controls for publications in general interest/field journals	No	No	Yes	No	No	Yes	No	No	Yes
N	116,032	116,032	116,032	190,626	190,626	190,626	357,067	357,067	357,067
Pseudo R-squared	0.186	0.216	0.237	0.245	0.291	0.344	0.290	0.318	0.358

Notes: Standard errors, clustered by author, in parentheses. Table entries are logistic regression coefficients: models are fit to set of active economists in a given year who are not yet Fellows of the Econometric Society. Measures of publications and citations represent numbers of papers published, and citations received, up to current year. All models include year fixed effects and indicators for unknown gender × decade.

TABLE V  
NOMINATION AND ELECTION AS FELLOW, 2006-2019

	Logit Regression for Selection/Nomination as Econometric Society Fellow in Year <i>t</i>								
	Models for Selection as Fellow			Models for Nomination as Fellow			Models for Selection as Fellow, Conditional on Nomination		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Authors' Genders (Omitted: Male Author)</i>									
Female Economist	X	X	X	X	X	X	X	X	X
<i>Cum. Publ. and Citations in top-5 journals</i>									
# Papers in <i>Econometrica</i>	X	X	X	X	X	X	X	X	X
Asinh citations in <i>Econometrica</i>		X	X		X	X		X	X
# Papers in <i>Rev. of Econ. Studies</i>	X	X	X	X	X	X	X	X	X
Asinh citations in <i>REStud</i>		X	X		X	X		X	X
# Papers in <i>Am. Econ. Review</i>	X	X	X	X	X	X	X	X	X
Asinh citations in <i>AER</i>		X	X		X	X		X	X
# Papers in <i>Quarterly J. of Econ.</i>	X	X	X	X	X	X	X	X	X
Asinh citations in <i>QJE</i>		X	X		X	X		X	X
# Papers in <i>J. of Pol. Economy</i>	X	X	X	X	X	X	X	X	X
Asinh citations in <i>JPE</i>		X	X		X	X		X	X
Controls for publications in general interest/field journals	no	no	yes	no	no	yes	no	no	yes
N	X	X	X	X	X	X	X	X	X
Pseudo R-squared	X	X	X	X	X	X	X	X	X

Notes: Standard errors, clustered by author, in parentheses. Table entries are logistic regression coefficients -- see note to Table IV. Models in columns 1-6 are estimated over all observations in the sample of actively-publishing economists eligible for nomination/selection as a Fellow 2006-2019. Models in columns 7-9 are estimated over set of nominated individuals only. All models include year fixed effects and indicator for ambiguous gender.

TABLE VI  
NOMINATION AND ELECTION TO FELLOWS 2006-2019, ADDITIONAL EVIDENCE

Specification:	Logistic Model				Poisson Model			Censored Poisson Model		
Dependent Variable:	Nomination by Committee		Nomination by Fellows		Number of Endorsements			Number of Votes for Nominees		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>Authors' Gender (Omitted: Male Author)</i>										
Female Economist	X	X	X	X	X	X	X	X	X	X
<i>Cumulative Publications in top-5 journals</i>										
# Papers in <i>Econometrica</i>	X	X	X	X	X	X	X	X	X	X
Asinh citation in <i>Econometrica</i>		X		X		X	X		X	X
# Papers in <i>Rev. of Econ. Studies</i>	X	X	X	X	X	X	X	X	X	X
Asinh citation in <i>REStud</i>		X		X		X	X		X	X
# Papers in <i>Am. Econ. Review</i>	X	X	X	X	X	X	X	X	X	X
Asinh citation in <i>AER</i>		X		X		X	X		X	X
# Papers in <i>Quarterly J. of Econ.</i>	X	X	X	X	X	X	X	X	X	X
Asinh citation in <i>QJE</i>		X		X		X	X		X	X
# Papers in <i>J. of Pol. Economy</i>	X	X	X	X	X	X	X	X	X	X
Asinh citation in <i>JPE</i>		X		X		X	X		X	X
<i>Controls for Home base (omitted: US outside top 10)</i>										
Europe Based							X			X
Asia Based							X			X
Top US Department							X			X
Controls for publications in general interest/field journals	no	yes	no	yes	no	no	yes	no	no	yes
Extra Control Variables	No	No	No	No	No	No	Yes	No	No	Yes
N	X	X	X	X	X	X	X	X	X	X
Pseudo R-squared	X	X	X	X	X	X	X	X	X	X

Notes: Standard errors, clustered by author, in parentheses. Table entries are logistic or Poisson regression coefficients -- see note to Table IV. All models include year fixed effects and indicator for unknown gender. Columns 1-4 include all observations in the sample of actively-publishing economists eligible for nomination in years 2006-2019. Columns 5-10 include only nominated individuals. Columns 7 and 10 include additional control variables obtained from the nomination forms.



TABLE VII  
MODELS FOR ELECTION TO OTHER FELLOWSHIPS

	Logit Regression for Selection as Fellow in Year t:									
	Econ. Society		AAAS		NAS		AEA		Alfred P. Sloan	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>Authors' Gender (Omitted: Male Author)</i>										
Female × (pre-1980)	-2.191 (0.723)	-1.947 (0.708)	-1.033 (1.009)	-0.908 (0.978)	--	--	0.071 (1.020)	0.815 (1.051)	--	--
Female × (1980-89)	-0.339 (0.606)	-0.109 (0.524)	-0.687 (1.022)	-0.228 (0.993)	0.320 (1.027)	0.363 (1.110)	0.065 (1.027)	0.196 (1.084)	0.333 (0.531)	0.286 (0.537)
Female × (1990-99)	-0.940 (0.515)	-0.235 (0.507)	-0.400 (0.594)	0.417 (0.718)	-0.235 (1.030)	0.188 (1.057)	0.426 (0.760)	0.629 (0.711)	0.513 (0.319)	0.626 (0.322)
Female × (2000-09)	0.328 (0.325)	0.405 (0.318)	0.277 (0.434)	0.865 (0.441)	0.158 (0.756)	1.541 (0.830)	-1.188 (1.022)	-0.142 (1.060)	0.518 (0.320)	0.407 (0.334)
Female × (2010-19)	0.784 (0.219)	1.123 (0.226)	1.271 (0.279)	1.927 (0.338)	0.821 (0.567)	2.112 (0.626)	0.033 (0.482)	1.044 (0.510)	0.354 (0.304)	0.543 (0.309)
Restrict to ≤8 yrs. since 1st pub.	No	No	No	No	No	No	No	No	Yes	Yes
Controls for Citations in Top 5 Journals × 3 Time Periods	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Controls for publications in general interest/field journals × 3 Time Periods	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
N	663,725	663,725	654,589	654,117	618,442	607,104	626,485	618,013	239,320	234,061
Pseudo R-squared	0.254	0.325	0.229	0.367	0.229	0.400	0.189	0.347	0.240	0.304

Notes: Standard errors, clustered by author, in parentheses. Table entries are logistic regression coefficients: see note to Table IV. All models include controls for the number of publications in each of the top 5 journals, interacted with indicators for the periods (pre-1980), (1980-99) and (2000-19). The models also include controls for year fixed effects and indicators for unknown gender × decade. Sample periods vary by fellowship: see text. Models for Sloan Fellowships are restricted to up to 8 years from the first publication in the sample.

TABLE VIII  
EFFECT OF VISIBILITY AND CONNECTIONS ON PROBABILITY OF SELECTION AS FELLOW

	Logit Regression for Selection as Fellow in Year t:					
	Econometric Society		AAAS		NAS	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Authors' Gender (Omitted: Male Author)</i>						
Female × (pre-1980)	-1.947 (0.708)	-1.907 (0.686)	-0.908 (0.978)	-0.908 (0.979)	0.000 (.)	0.000 (.)
Female × (1980-89)	-0.109 (0.524)	-0.169 (0.578)	-0.228 (0.993)	-0.260 (0.986)	0.363 (1.110)	0.345 (1.125)
Female × (1990-99)	-0.235 (0.507)	-0.219 (0.519)	0.417 (0.718)	0.425 (0.721)	0.188 (1.057)	0.162 (1.063)
Female × (2000-09)	0.405 (0.318)	0.408 (0.321)	0.865 (0.441)	0.879 (0.443)	1.541 (0.830)	1.466 (0.821)
Female × (2010-19)	1.123 (0.226)	1.112 (0.231)	1.927 (0.338)	2.106 (0.343)	2.112 (0.626)	2.037 (0.647)
<i>Measure of Visibility:</i>						
Associate Editor at <i>Econometrica</i>	--	1.848 (0.205)	--	-0.024 (0.391)	--	0.000 (.)
<i>Measures of Connections:</i>						
# Papers with ES Fellows	--	0.107 (0.019)	--	0.021 (0.018)	--	-0.052 (0.030)
# Papers with AAAS Fellows	--	-0.047 (0.034)	--	0.069 (0.027)	--	0.075 (0.044)
# Papers with NAS Fellows	--	-0.028 (0.052)	--	-0.137 (0.052)	--	0.032 (0.048)
N	663,725	663,725	654,117	654,117	607,104	605,389
Pseudo R-squared	0.325	0.339	0.367	0.372	0.400	0.404

Notes: Standard errors, clustered by author, in parentheses. Table entries are logistic regression coefficients in models for selection as a fellow of the Econometric Society (columns 1-2), the AAAS (columns 3-4) and the NAS (columns 5-6). See notes to Table IV. All models include controls for the number of publications in each of the top 5 journals, citations to publications in each of the top 5 journals, and the number of publications in general interest and field journals; all these controls are interacted with indicators for the periods (pre-1980), (1980-99) and (2000-19). The models also include controls for year fixed effects and indicators for unknown gender × decade. Sample periods vary by fellowship: see text.

TABLE IX  
EFFECT OF COAUTHORSHIP ON PROBABILITY OF SELECTION AS ES FELLOW

	Logit Regression for Selection as Fellow of ES:		
	(1)	(2)	(3)
<i>Authors' Gender (Omitted: Male Author)</i>			
Female × (pre-1980)	-1.947 (0.708)	-1.966 (0.738)	-1.953 (0.739)
Female × (1980-89)	-0.109 (0.524)	-0.131 (0.538)	-0.059 (0.538)
Female × (1990-99)	-0.235 (0.507)	-0.201 (0.512)	-0.155 (0.515)
Female × (2000-09)	0.405 (0.318)	0.412 (0.321)	0.350 (0.327)
Female × (2010-19)	1.123 (0.226)	1.087 (0.226)	0.991 (0.281)
<i>Measures of Coauthorship</i>			
EMA-RES papers with 2 coauthors, Senior Coauthor	--	-0.161 (0.068)	-0.156 (0.070)
EMA-RES papers with 2 coauthors, Junior Coauthor	--	0.153 (0.079)	0.158 (0.082)
EMA-RES papers with 3+ coauthors, Senior Coauthor	--	-0.212 (0.097)	-0.222 (0.098)
EMA-RES papers with 3+ coauthors, Junior Coauthor	--	0.252 (0.095)	0.250 (0.099)
<i>Measures of Coauthorship interacted with Female</i>			
EMA-RES papers with 2 coauthors, Senior Coauthor × Female	--	--	-0.086 (0.215)
EMA-RES papers with 2 coauthors, Junior Coauthor × Female	--	--	0.027 (0.200)
EMA-RES papers with 3+ coauthors, Senior Coauthor × Female	--	--	0.502 (0.472)
EMA-RES papers with 3+ coauthors, Junior Coauthor × Female	--	--	0.034 (0.182)
N	663,725	663,725	663,725
Pseudo R-squared	0.325	0.329	0.329

Notes: Standard errors, clustered by author, in parentheses. Table entries are logistic regression coefficients in models for selection as a fellow of the Econometric Society. See notes to Table IV. All models include controls for the number of publications in each of the top 5 journals, citations to publications in each of the top 5 journals, and the number of publications in general interest and field journals; all these controls are interacted with indicators for the periods (pre-1980), (1980-99) and (2000-19). The models also include controls for year fixed effects and indicators for unknown gender × decade.

**Appendix Table 1. Journals Used for Publication Counts**

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American Economic Journal: Applied Economics	Journal of Econometrics
American Economic Journal: Macroeconomics	Journal of Economic History
American Economic Journal: Microeconomics	Journal of Economic Literature
American Economic Journal: Economic Policy	Journal of Economic Perspectives
<b>American Economic Review</b>	Journal of Economic Theory
AER (AEA) Papers and Proceedings	Journal of Finance
<b>Econometrica</b>	Journal of Health Economics
Econometric Theory	Journal of International Economics
Economica	Journal of Labor Economics
Economic Journal	Journal of Mathematical Economics
Economic Theory	Journal of Monetary Economics
Games and Economic Behavior	<b>Journal of Political Economy</b>
International Economic Review	Journal of Public Economics
International Journal of Game Theory	<b>Quarterly Journal of Economics</b>
Journal of American Statistical Association	Review of Economics and Statistics
Journal of Development Economics	<b>Review of Economic Studies</b>
Journal of the European Economic Association	The RAND Journal of Economics
Quantitative Economics	Theoretical Economics

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Notes: Top 5 journals are shown in bold.

Appendix Table 2  
 PREDICTORS OF SELECTION AS ES, AAAS, AND NAS FELLOWS

	Logit Regression for Selection as Fellow in Year t:								
	Econometric Society			AAAS			NAS		
	1933-79	1980-99	2000-19	1933-79	1980-99	2000-19	1933-79	1980-99	2000-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
<i>Authors' Genders (Omitted: Male Author)</i>									
Female × (pre-1980)	-1.947 (0.708)			-0.908 (0.978)			0.000 (.)		
Female × (1980-89)		-0.109 (0.524)			-0.228 (0.993)			0.363 (1.110)	
Female × (1990-99)		-0.235 (0.507)			0.417 (0.718)			0.188 (1.057)	
Female × (2000-09)			0.405 (0.318)			0.865 (0.441)			1.541 (0.830)
Female × (2010-19)			1.123 (0.226)			1.927 (0.338)			2.112 (0.626)
<i>Cum. Publ. and Cites in top-5 journals</i>									
# Papers in <i>Econometrica</i>	0.547 (0.099)	0.352 (0.063)	0.709 (0.077)	0.153 (0.089)	-0.086 (0.074)	0.237 (0.056)	-0.004 (0.103)	-0.057 (0.084)	0.066 (0.096)
Asinh citations in <i>Econometrica</i>	0.499 (0.082)	0.498 (0.053)	0.244 (0.050)	0.266 (0.135)	0.422 (0.072)	0.254 (0.055)	0.948 (0.227)	0.447 (0.136)	0.310 (0.120)
# Papers in <i>Rev. of Econ. Studies</i>	0.420 (0.113)	0.098 (0.104)	0.264 (0.109)	0.100 (0.156)	0.017 (0.119)	0.084 (0.105)	-0.024 (0.167)	-0.038 (0.126)	-0.039 (0.100)
Asinh citations in <i>REStud</i>	0.197 (0.131)	0.161 (0.077)	0.122 (0.062)	0.011 (0.175)	0.246 (0.096)	0.119 (0.074)	0.408 (0.187)	0.222 (0.136)	0.296 (0.147)
# Papers in <i>Am. Econ. Review</i>	-0.170 (0.094)	0.060 (0.105)	0.060 (0.088)	-0.025 (0.124)	-0.110 (0.116)	-0.043 (0.085)	-0.258 (0.204)	0.072 (0.151)	0.053 (0.093)
Asinh citations in <i>AER</i>	0.198 (0.106)	0.006 (0.070)	0.152 (0.051)	0.507 (0.129)	0.049 (0.086)	0.132 (0.063)	0.369 (0.265)	0.176 (0.183)	-0.042 (0.125)
# Papers in <i>Quarterly J. of Econ.</i>	-0.031 (0.055)	0.150 (0.139)	0.250 (0.109)	-0.181 (0.147)	-0.122 (0.149)	0.287 (0.084)	-0.227 (0.269)	-0.559 (0.325)	-0.037 (0.119)
Asinh citations in <i>QJE</i>	0.327 (0.101)	0.107 (0.081)	0.028 (0.059)	0.186 (0.185)	0.297 (0.091)	0.192 (0.067)	0.252 (0.218)	0.341 (0.182)	0.193 (0.118)
# Papers in <i>J. of Political Economy</i>	-0.008 (0.062)	-0.136 (0.086)	0.038 (0.087)	-0.149 (0.100)	-0.123 (0.059)	0.002 (0.059)	0.183 (0.083)	-0.045 (0.070)	0.029 (0.066)
Asinh citations in <i>JPE</i>	0.240 (0.102)	0.249 (0.059)	0.175 (0.047)	0.181 (0.149)	0.343 (0.070)	0.210 (0.061)	-0.044 (0.192)	0.049 (0.146)	0.273 (0.137)
<i>Cumulative Publications in other Journals</i>									
Papers in <i>AEA P&amp;P</i>	0.022 (0.076)	0.373 (0.067)	0.159 (0.068)	0.190 (0.093)	0.552 (0.072)	0.230 (0.054)	0.430 (0.136)	0.374 (0.129)	0.218 (0.057)
Papers in <i>Economic Theory</i>	0.000 (.)	0.077 (0.211)	-0.006 (0.091)	0.000 (.)	-0.217 (0.390)	-0.181 (0.159)	0.000 (.)	-0.472 (0.666)	0.225 (0.142)
Papers in <i>Econometric Theory</i>	0.000 (.)	0.214 (0.073)	0.134 (0.051)	0.000 (.)	0.089 (0.047)	-0.014 (0.152)	0.000 (.)	0.000 (.)	-0.837 (0.429)
Papers in <i>J. of Econometrics</i>	0.327 (0.398)	0.214 (0.054)	0.101 (0.035)	0.369 (0.334)	0.235 (0.065)	0.020 (0.078)	0.000 (.)	-0.103 (0.165)	0.165 (0.074)
Papers in <i>J. of Econ. Theory</i>	0.559 (0.147)	0.180 (0.068)	0.175 (0.049)	-0.161 (0.194)	0.156 (0.062)	0.073 (0.049)	-0.127 (0.244)	0.106 (0.076)	0.093 (0.068)
Papers in <i>J. of Math. Econ.</i>	0.747 (0.204)	0.275 (0.107)	-0.131 (0.124)	1.090 (0.177)	0.282 (0.131)	-0.002 (0.171)	1.031 (0.246)	0.332 (0.099)	-0.040 (0.158)
Papers in <i>Rand J. of Econ.</i>	0.560 (0.345)	0.245 (0.071)	0.069 (0.066)	0.426 (0.287)	0.248 (0.106)	-0.187 (0.119)	-0.197 (0.622)	0.302 (0.129)	-0.030 (0.070)
Papers in <i>Int. J. of Game Theory</i>	-0.098 (0.405)	0.213 (0.077)	0.102 (0.149)	0.274 (0.286)	0.085 (0.149)	-0.204 (0.308)	0.484 (0.293)	0.110 (0.194)	0.129 (0.238)

NOTE: table continues

PREDICTORS OF SELECTION AS ES, AAAS, AND NAS FELLOWS -- CONTINUED

	Logit Regression for Selection as Fellow in Year t:								
	Econometric Society			AAAS			NAS		
	1933-79	1980-99	2000-19	1933-79	1980-99	2000-19	1933-79	1980-99	2000-19
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Papers in <i>AEJ: Applied Econ.</i>	0.000 (.)	0.000 (.)	0.636 (0.187)	0.000 (.)	0.000 (.)	0.507 (0.195)	0.000 (.)	0.000 (.)	0.061 (0.274)
Papers in <i>AEJ: Econ. Policy</i>	0.000 (.)	0.000 (.)	-0.112 (0.290)	0.000 (.)	0.000 (.)	0.626 (0.379)	0.000 (.)	0.000 (.)	0.743 (0.338)
Papers in <i>AEJ: Micro</i>	0.000 (.)	0.000 (.)	-0.081 (0.351)	0.000 (.)	0.000 (.)	-0.501 (0.285)	0.000 (.)	0.000 (.)	0.235 (0.274)
Papers in <i>AEJ: Macro</i>	0.000 (.)	0.000 (.)	0.739 (0.180)	0.000 (.)	0.000 (.)	0.784 (0.286)	0.000 (.)	0.000 (.)	-0.592 (0.736)
Papers in <i>J. of Econ. Perspectives</i>	0.000 (.)	0.188 (0.083)	-0.009 (0.195)	0.000 (.)	-0.045 (0.195)	0.324 (0.095)	0.000 (.)	-0.084 (0.500)	0.184 (0.063)
Papers in <i>J. of Econ. Literature</i>	-0.726 (0.418)	-0.282 (0.345)	-0.096 (0.255)	0.496 (0.833)	0.509 (0.253)	0.103 (0.210)	-1.565 (0.756)	0.845 (0.365)	0.314 (0.314)
Papers in <i>Games and Econ. Behavior</i>	0.000 (.)	0.318 (0.131)	0.074 (0.063)	0.000 (.)	0.188 (0.160)	0.203 (0.089)	0.000 (.)	0.240 (0.316)	-0.001 (0.092)
Papers in <i>Int. Econ. Review</i>	0.057 (0.136)	0.005 (0.070)	-0.232 (0.079)	0.385 (0.131)	-0.134 (0.099)	-0.452 (0.139)	0.191 (0.194)	0.069 (0.191)	-0.185 (0.154)
Papers in <i>Review of Econ. and Stat.</i>	0.040 (0.049)	-0.474 (0.115)	-0.247 (0.098)	0.067 (0.070)	-0.366 (0.119)	-0.242 (0.101)	0.180 (0.073)	-0.065 (0.116)	-0.143 (0.230)
Papers in <i>Economica</i>	-0.006 (0.076)	-0.053 (0.106)	-0.158 (0.224)	0.179 (0.137)	-0.188 (0.086)	-0.395 (0.261)	0.155 (0.151)	0.087 (0.122)	0.174 (0.198)
Papers in <i>Economic J.</i>	0.005 (0.039)	0.089 (0.051)	-0.009 (0.086)	-0.156 (0.154)	0.064 (0.058)	0.107 (0.086)	0.086 (0.060)	0.150 (0.070)	0.011 (0.079)
Papers in <i>J. of Development Econ.</i>	1.199 (0.320)	0.003 (0.152)	-0.047 (0.160)	0.583 (0.619)	0.391 (0.177)	-0.022 (0.131)	0.000 (.)	-0.081 (0.466)	0.120 (0.176)
Papers in <i>J. of European Econ. Assoc</i>	0.000 (.)	0.000 (.)	0.519 (0.090)	0.000 (.)	0.000 (.)	0.099 (0.084)	0.000 (.)	0.000 (.)	0.072 (0.125)
Papers in <i>J. of Finance</i>	-0.295 (0.229)	0.003 (0.085)	-0.126 (0.091)	-1.293 (0.668)	0.069 (0.092)	0.154 (0.037)	-0.781 (0.900)	-0.178 (0.264)	-0.016 (0.072)
Papers in <i>J. of Health Econ.</i>	0.000 (.)	-0.728 (0.534)	-0.091 (0.109)	0.000 (.)	0.288 (0.103)	-0.140 (0.120)	0.000 (.)	0.000 (.)	0.028 (0.089)
Papers in <i>J. of Inter. Econ.</i>	0.285 (0.384)	0.202 (0.082)	0.105 (0.076)	-0.160 (0.337)	0.251 (0.078)	0.081 (0.069)	0.000 (.)	-0.714 (0.538)	0.220 (0.112)
Papers in <i>J. of Monetary Econ.</i>	0.623 (0.330)	0.147 (0.079)	0.079 (0.065)	0.000 (.)	0.089 (0.091)	0.080 (0.057)	0.000 (.)	0.012 (0.225)	-0.179 (0.132)
Papers in <i>J. of Labor Econ.</i>	0.000 (.)	0.850 (0.146)	-0.087 (0.169)	0.000 (.)	0.587 (0.209)	0.251 (0.099)	0.000 (.)	0.124 (0.292)	0.099 (0.148)
Papers in <i>J. of Public Econ.</i>	-0.026 (0.444)	0.161 (0.084)	-0.000 (0.059)	0.472 (0.189)	0.091 (0.099)	-0.051 (0.081)	0.000 (.)	0.004 (0.127)	-0.180 (0.099)
Papers in <i>J. of Econ. History</i>	-0.251 (0.277)	0.065 (0.120)	-0.024 (0.183)	0.236 (0.148)	0.410 (0.080)	0.183 (0.068)	0.819 (0.184)	0.302 (0.191)	0.294 (0.085)
Papers in <i>J. of Am. Stat. Assoc.</i>	0.130 (0.032)	-0.026 (0.071)	-0.159 (0.124)	-0.079 (0.109)	0.122 (0.065)	0.099 (0.095)	0.090 (0.143)	0.144 (0.063)	0.037 (0.109)
Papers in <i>Quantitative Economics.</i>	0.000 (.)	0.000 (.)	1.211 (0.194)	0.000 (.)	0.000 (.)	-0.103 (0.902)	0.000 (.)	0.000 (.)	-0.142 (0.465)
Papers in <i>Theoretical Economics.</i>	0.000 (.)	0.000 (.)	0.150 (0.243)	0.000 (.)	0.000 (.)	0.728 (0.278)	0.000 (.)	0.000 (.)	-0.266 (0.787)
N	116,032	190,626	357,067	93,332	196,355	364,430	49,294	189,946	367,864
Pseudo R-squared	0.237	0.344	0.358	0.195	0.370	0.431	0.498	0.295	0.422

Notes: Standard errors, clustered by author, in parentheses. See notes to Table VII. The table entries are coefficients from the models summarized in columns 2, 4, and 6 of that Table. All models include year fixed effects and indicator for unknown gender × time period.

Appendix Table 3  
PREDICTORS OF ELECTION TO AEA AND SLOAN FELLOW

Specification:	Logit Regression for Selection as Fellow in Year t:				
Fellowship:	American Economic Association			Sloan Fellow	
	1933-79	1980-99	2000-19	1980-99	2000-19
	(1)	(2)	(3)	(4)	(5)
<i>Authors' Genders (Omitted: Male Author)</i>					
Female × (pre-1980)	0.815 (1.051)				
Female × (1980-89)		0.196 (1.084)		0.286 (0.538)	
Female × (1990-99)		0.629 (0.711)		0.626 (0.322)	
Female × (2000-09)			-0.142 (1.060)		0.407 (0.334)
Female × (2010-19)			1.044 (0.510)		0.543 (0.309)
<i>Cum. Publ. and Citations in top-5 journals</i>					
# Papers in <i>Econometrica</i>	0.184 (0.099)	0.149 (0.102)	0.003 (0.062)	0.365 (0.138)	1.296 (0.202)
Asinh citations in <i>Econometrica</i>	0.185 (0.177)	0.127 (0.117)	0.297 (0.076)	0.347 (0.107)	0.167 (0.108)
# Papers in <i>Rev. of Econ. Studies</i>	-0.323 (0.365)	-0.081 (0.128)	-0.415 (0.134)	0.572 (0.272)	0.187 (0.481)
Asinh citations in <i>REStud</i>	0.167 (0.265)	0.205 (0.104)	0.262 (0.092)	-0.061 (0.202)	0.180 (0.176)
# Papers in <i>Am. Econ. Review</i>	0.082 (0.140)	0.422 (0.148)	0.200 (0.072)	0.913 (0.283)	1.210 (0.204)
Asinh citations in <i>AER</i>	0.067 (0.198)	-0.046 (0.187)	0.147 (0.102)	-0.264 (0.170)	-0.041 (0.094)
# Papers in <i>Quarterly J. of Econ.</i>	-0.424 (0.250)	-0.912 (0.248)	-0.173 (0.107)	0.649 (0.263)	1.126 (0.298)
Asinh citations in <i>QJE</i>	0.588 (0.195)	0.605 (0.156)	0.239 (0.090)	0.174 (0.167)	0.099 (0.125)
# Papers in <i>J. of Political Economy</i>	-0.056 (0.068)	0.143 (0.046)	0.230 (0.079)	0.501 (0.228)	1.177 (0.364)
Asinh citations in <i>JPE</i>	0.601 (0.161)	0.130 (0.141)	0.052 (0.103)	0.200 (0.135)	0.039 (0.145)
<i>Cumulative Publications in other Journals</i>					
Papers in <i>AEA P&amp;P</i>	0.458 (0.103)	0.462 (0.113)	0.159 (0.053)	0.227 (0.314)	0.433 (0.161)
Papers in <i>Economic Theory</i>	0.000 (.)	0.752 (0.254)	0.077 (0.157)	0.374 (0.237)	-0.760 (0.503)
Papers in <i>Econometric Theory</i>	0.000 (.)	0.000 (.)	-0.420 (0.266)	0.454 (0.122)	0.305 (0.146)
Papers in <i>J. of Econometrics</i>	0.000 (.)	-1.229 (0.455)	0.166 (0.049)	0.027 (0.164)	0.029 (0.145)
Papers in <i>J. of Econ. Theory</i>	0.359 (0.267)	-0.065 (0.168)	0.142 (0.057)	0.239 (0.126)	0.134 (0.150)
Papers in <i>J. of Math. Econ.</i>	0.000 (.)	0.138 (0.217)	0.022 (0.109)	0.060 (0.224)	0.113 (0.329)
Papers in <i>Rand J. of Econ.</i>	-0.648 (0.475)	-0.297 (0.172)	0.024 (0.078)	0.125 (0.159)	-0.822 (0.579)
Papers in <i>Int. J. of Game Theory</i>	0.000 (.)	0.195 (0.261)	0.295 (0.083)	0.413 (0.156)	-1.536 (0.694)

NOTE: table continues

PREDICTORS OF ELECTION TO AEA AND SLOAN FELLOW -- CONTINUED

	Logit Regression for Selection as Fellow in Year t:				
	Econometric Society			AAAS	
	1933-79	1980-99	2000-19	1980-99	2000-19
	(1)	(2)	(3)	(4)	(5)
Papers in <i>AEJ: Applied Econ.</i>	0.000 (.)	0.000 (.)	-0.222 (0.307)	0.000 (.)	0.602 (0.330)
Papers in <i>AEJ: Econ. Policy</i>	0.000 (.)	0.000 (.)	-0.587 (0.857)	0.000 (.)	0.795 (0.456)
Papers in <i>AEJ: Micro</i>	0.000 (.)	0.000 (.)	-1.746 (0.571)	0.000 (.)	0.453 (0.621)
Papers in <i>AEJ: Macro</i>	0.000 (.)	0.000 (.)	-0.374 (0.549)	0.000 (.)	0.826 (0.338)
Papers in <i>J. of Econ. Perspectives</i>	0.000 (.)	-0.066 (0.372)	0.227 (0.075)	0.628 (0.420)	0.409 (0.283)
Papers in <i>J. of Econ. Literature</i>	0.456 (0.683)	0.151 (0.237)	0.354 (0.237)	-0.795 (1.383)	0.010 (1.176)
Papers in <i>Games and Econ. Behavior</i>	0.000 (.)	0.000 (.)	-0.333 (0.136)	-0.686 (0.518)	0.054 (0.221)
Papers in <i>Int. Econ. Review</i>	-0.251 (0.242)	0.093 (0.241)	-0.017 (0.121)	-0.079 (0.251)	-1.065 (0.700)
Papers in <i>Review of Econ. and Stat.</i>	0.167 (0.065)	0.065 (0.112)	-0.327 (0.125)	-0.217 (0.245)	-1.192 (0.443)
Papers in <i>Economica</i>	0.432 (0.111)	0.065 (0.130)	0.371 (0.139)	-2.210 (1.086)	0.000 (.)
Papers in <i>Economic J.</i>	-0.233 (0.203)	0.098 (0.069)	-0.023 (0.079)	-0.323 (0.421)	-0.974 (0.513)
Papers in <i>J. of Development Econ.</i>	0.000 (.)	0.069 (0.272)	-0.079 (0.178)	-1.033 (0.456)	-0.552 (0.443)
Papers in <i>J. of European Econ. Assoc</i>	0.000 (.)	0.000 (.)	-0.605 (0.256)	0.000 (.)	-0.441 (0.343)
Papers in <i>J. of Finance</i>	0.183 (0.172)	0.016 (0.122)	-0.263 (0.176)	0.020 (0.213)	-0.089 (0.244)
Papers in <i>J. of Health Econ.</i>	0.000 (.)	0.216 (0.208)	-0.053 (0.115)	0.182 (0.266)	-1.438 (0.718)
Papers in <i>J. of Inter. Econ.</i>	-0.743 (0.513)	-0.211 (0.187)	0.103 (0.080)	0.149 (0.232)	-0.128 (0.372)
Papers in <i>J. of Monetary Econ.</i>	0.000 (.)	-0.591 (0.415)	-0.083 (0.079)	0.076 (0.174)	0.216 (0.212)
Papers in <i>J. of Labor Econ.</i>	0.000 (.)	-0.243 (0.269)	-0.081 (0.161)	-0.397 (0.391)	-0.694 (0.750)
Papers in <i>J. of Public Econ.</i>	-0.207 (0.248)	-0.381 (0.189)	-0.021 (0.069)	0.300 (0.165)	-0.212 (0.333)
Papers in <i>J. of Econ. History</i>	0.378 (0.170)	0.211 (0.108)	0.322 (0.059)	0.698 (0.121)	0.703 (0.282)
Papers in <i>J. of Am. Stat. Assoc.</i>	0.121 (0.110)	-0.026 (0.129)	0.110 (0.035)	0.288 (0.152)	-0.097 (0.319)
Papers in <i>Quantitative Economics.</i>	0.000 (.)	0.000 (.)	-0.006 (0.737)	0.000 (.)	-0.143 (0.792)
Papers in <i>Theoretical Economics.</i>	0.000 (.)	0.000 (.)	-0.587 (0.767)	0.000 (.)	0.726 (0.251)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Indicator for Unknown Gender*Decades	Yes	Yes	Yes	Yes	Yes
N	66,947	183,311	367,755	83,017	151,044
Pseudo R-squared	0.357	0.271	0.380	0.245	0.350

Notes: Standard errors, clustered by author, in parentheses. Table entries are logistic regression coefficients. See notes to Table VII. The table entries are coefficients from the models summarized in columns 8 and 10 of that Table. All models include year fixed effects and indicator for unknown gender x time period.



Appendix Table 4  
PREDICTORS OF ELECTION TO AEA PRESIDENT OR VICE-PRESIDENT

Specification:	Logit Regression for Selection in Year $t$ as:		
Fellowship:	American Economic Association President or Vice President		
	1933-79	1980-99	2000-19
	(1)	(2)	(3)
<i>Authors' Genders (Omitted: Male Author)</i>			
Female Economist*(pre-1980)	0.172 (0.594)		
Female Economist*(1980-89)		2.136 (0.598)	
Female Economist*(1990-99)		2.497 (0.626)	
Female Economist*(2000-09)			3.409 (0.639)
Female Economist*(2010-19)			3.856 (0.597)
<i>Cum. Publ. and Citations in top-5 journals</i>			
Papers in <i>Econometrica</i>	0.222 (0.088)	-0.129 (0.223)	-0.067 (0.110)
Asinh citations in <i>Econometrica</i>	-0.198 (0.178)	0.130 (0.152)	0.089 (0.095)
Papers in <i>Review of Economic Studies</i>	-0.029 (0.162)	-0.103 (0.137)	-0.205 (0.202)
Asinh citations in <i>REStud</i>	0.616 (0.160)	0.212 (0.121)	0.255 (0.123)
Papers in <i>American Economic Review</i>	-0.174 (0.159)	0.136 (0.132)	0.028 (0.112)
Asinh citations in <i>AER</i>	0.367 (0.211)	0.076 (0.155)	0.947 (0.364)
Papers in <i>Quarterly Journal of Eco.</i>	-0.019 (0.177)	-0.285 (0.213)	0.065 (0.110)
Asinh citations in <i>QJE</i>	0.331 (0.226)	0.244 (0.153)	0.136 (0.156)
Papers in <i>Journal of Political Economy</i>	0.072 (0.037)	0.117 (0.157)	0.019 (0.146)
Asinh citations in <i>JPE</i>	0.230 (0.135)	0.193 (0.153)	0.296 (0.126)
Controls for publications in general interest/field journals	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Indicator for Unknown Gender*Decades	Yes	Yes	Yes
N	129,439	185,761	353,609
Pseudo R-squared	0.286	0.321	0.560

Notes: Standard errors, clustered by author, in parentheses. Table entries are logistic regression coefficients.