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I7A DP No. 17649

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JANUARY 2025



Initiated by Deutsche Post Foundation

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ISSN: 2365-9793

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IZA DP No. 17649 JANUARY 2025

ABSTRACT

The Delayed Acceptance of Female Research in Economics*

We investigate gender differences in the time taken to accept empirical articles. On average, female-authored economics articles take notably longer to accept. Acceptance delay is nine weeks longer when solo-authored and five weeks longer for all female teams. This gender gap cannot be attributed to differences in author affiliation, research productivity, research quality and novelty. Female-authored articles are of higher quality, as measured by citations, reflecting higher research thresholds for female-authored work. The gender composition of editorial boards does not affect acceptance time for female authors. Nevertheless, this gender gap narrows as female representation in an area of research deepens.

JEL Classification: J16

Keywords: gender, acceptance time, economics journals, social norms

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^{*} Alexandra Hertwig provided invaluable support with the collection of data.

I. Introduction

Females are underrepresented in economics (Bayer and Rouse, 2016; Committee on the Status of Women in the Economics Profession 2017; Auriol et al., 2022) and science in general (Astegiano et al., 2019). This underrepresentation is attributed to a wide range of factors, including: gender differences in salary, tenure, and slower career progression, underrepresentation among economics majors, differences in preferences and expectations about family, child rearing and other time commitments, conscious and unconscious bias, and the gender composition of editorial boards (Bettinger and Long, 2005; Bayer and Rouse, 2016; Bransch and Kvasnicka, 2022). A parallel stream of literature has investigated gender differences in the evaluation of economics research, revealing significant stereotyping in the attribution of credit for females based on the gender mix of co-authors (Sarsons, 2017; Sarsons et al., 2020; Hussey et al., 2022). Female researchers are less likely to be accepted at conferences (Hospido and Sanz, 2021), they have smaller collaboration network (Ductor et al., 2023), they are underrepresented in criticism of science (Klinowski, 2023), and they are held to higher standards (Krawczyk and Smyk, 2016; Hengel, 2022). There is evidence of greater productivity by male researchers (Astegiano et al., 2019; Ductor et al., 2023) but also that females produce research of higher quality as reflected in citations (Card et al., 2020).

Our paper investigates whether female researchers experience longer delays in the acceptance of their work for publication. Delays in accepting and publishing research slow the transmission of knowledge, affect career progression of female researchers and are a disincentive to conduct further research or to remain in the profession. Gender gaps in acceptance and publication of research may also discourage talented females away from economics research, potentially reducing scientific advances in economics. Card *et al.* (2020) assessed submissions to four leading economics journals and found no evidence of gender differences in decision time. In contrast, Hengel (2022) finds significant three-to-six-month

delays in *Econometrica* and *The Review of Economic Studies*, and Alexander *et al.* (2023) find that female-authored articles take longer to be assessed by referees, go through more rounds of review, and female authors take longer to revise, based on administrative data from 32 Elsevier journals in economics and finance.

Rather than investigating a few select journals, we have assembled an extensive empirical research database of all reported studies concerning 424 research areas with 62,098 findings reported across the entire spectrum of economics and other journals associated with disciplines of overlapping interest. It is important to look beyond the top five journals, as what happens there may not generalize. Moreover, while the top five are broadly considered the most prestigious, influential, and impactful journals, many influential and innovative papers are published outside the top five (Akerlof, 2020; Heckman and Moktan, 2020). It is important to assess how research is evaluated in economics journals, more broadly, as all research publications impact academic careers.

Prior studies analyze research that is published in specific journals (Card *et al.*, 2020; Hengel, 2022; Alexander *et al.*, 2023; Brodeur *et al.*, 2023). These studies typically use administrative data that pool estimates from diverse literatures. In contrast, we use estimate-level data from 424 meta-analyses, regardless of where the primary studies are published. Each meta-analysis assembles all comparable estimates on a given economic phenomenon or parameter and thereby enabling us to compare acceptance time for gender for the *same* research questions and hypotheses. Data, methods, and approaches may be idiosyncratic to specific research areas; thus, controlling these could be important in isolating and identifying the gender gap in the publication process. When averaged across research areas and topics (for example, if specific journals form the sampling frame), gender disparities may be due to differences in specific areas of research and to the distribution of gender across these areas of research. Our central results focus on 35,647 estimates reported in 2,773 empirical studies that were

published in 49 economics journals spanning 424 research areas. In addition, we also assess a further 28,595 estimates from 2,857 articles published in 652 other journals that report research in the same 424 research areas. Our unit of analysis is the individual empirical findings. Time to acceptance might well be influenced by both qualitative and quantitative aspects of reported research results. For example, time to acceptance might also be influenced by the reported level of statistical significance, the size of the reported effect sizes (*e.g.*, elasticities), whether the reported findings challenge prior findings in terms of sign reversal, and in general by the entire distribution of reported estimates including the extent of robustness checks. Dimensions such as the level of significance and sign reversal require data that maps the distribution of reported estimates for each given literature and differentiate the contributions of individual studies relative to all other studies that address the same research question. To model the effect of variables such as the reported level of statistical significance, we focus on individual test statistics relative to others in the same area of research.

Our analysis shows a noteworthy gender gap in acceptance time. Sample averages show that *all* female-authored articles take seven weeks longer (67.41 weeks for females compared to 60.77 weeks for all male-authored articles) while female solo-authored articles take 13 weeks longer to accept (68.93 weeks for females compared to 56.23 for male solo-authored articles) in the sample of 49 economics journals. Controlling for journal, time, and research area fixed effects along with controls explains about a third of this gap; however, a gender gap of five weeks remains for all female-authored articles and a gap of 10 weeks for solo female-authored articles.

We investigate several factors that might be driving this gender gap. A gender gap in acceptance time can arise from time allocation choices made by individual researchers. For example, females may take longer to complete revisions due to other time allocation pressures (Juster and Stafford, 1991; Jacobs and Gerson, 2004; Alexander *et al.*, 2023). Females are also

more risk averse (Croson and Gneezy, 2009) and because of risk of rejection, they may prefer to further develop the quality of their studies before resubmitting for further review (Hengel 2022). Longer acceptance times may arise from conscious and unconscious bias against females in general, and cognitive biases against female authors, resulting in reviewers and editors requiring females to undertake more demanding revisions (Bayer and Rouse, 2016; Alexander *et al.*, 2023). This gender gap can also arise from 'threat-based' causes of gender bias, whereby males restrict and make more difficult the entry of females into a profession to preserve male status, privilege, and economic rents (Akerlof and Kranton, 2000; Goldin, 2014; Hillman and Long, 2019). A gender gap can also result from idiosyncratic social norms (*i.e.*, informal rules of expected behavior) that vary between research areas, subdisciplines, and disciplines (Ellison, 2002). Authors, referees, and editors may heed such norms if they believe that they are expected to and expect *others* to do so as well.

We find that the gender gap in acceptance time does not appear to be driven by the anonymity of the review process (or its absence), author affiliation, or by research productivity differences. Further, this gender gap does not arise from research quality differences. Indeed, we find that female-authored studies receive, on average, 9% to 22% more citations, for multiple and solo-authored articles, respectively, indicating a higher research quality threshold for female-authored articles. Card *et al.* (2020) identify this higher threshold for females in research published in the top economics journals. We show that this exists beyond the most highly ranked journals.

We also explore the effect of the gender composition of editorial boards. Female editors may help reduce gender-stereotypes and bias against female authors, and they may serve as role models. They might also be more concerned about equity and fairness; hence female editors may not set a higher quality threshold for females. We find that while female editors are associated with reduced time to acceptance, overall, their presence on editorial boards does

not reduce the gender gap in acceptance time. While the gender distribution of editorial boards does not reduce this gender gap, the gender distribution of *authors* publishing in a research field does make a difference. Specifically, we find that as the share of female authors publishing in a field increases, the gender gap narrows and eventually becomes negligible. That is, this gender gap is largest in male-dominated research areas. As male dominance weakens, the acceptance time gender gap narrows, pointing to the importance of female representation in economics and the importance of a pool of female networks and reviewers.

More positively, we find no association between reporting statistically significant results and faster acceptance times. This is encouraging given the evidence of extensive publication bias in empirical economics research (Ioannidis *et al.*, 2017; Brodeur *et al.*, 2020; Brodeur *et al.*, 2023).

Ellison (2002) points to varying social norms as an explanation for subfield differences in acceptance times, in general. These social norms may also lead to differential acceptance times for females. Our results find important differences across research areas regardless of the journal. Thus, to isolate differential acceptance times by gender, variations in research areas must be controlled, which is exactly what each meta-analysis does. Specifically, our multiple meta-analyses data enable us to assess heterogeneity in the gender gap for individual research areas. Confirming Ellison (2002), we find significant time to acceptance differences between research areas. Through our large, and detailed, meta-analysis data, encompassing many specific areas of research, we can also aggregate to specific subfields in economics (e.g., labor or macroeconomics) and across different methods (observational vs experimental research). Thus, we can explore differences in acceptance times between research areas, subfields, disciplines, and journals. As a result, we find research area specific gender differences in acceptance time after controlling for journal and time fixed effects along with controls. For example, the gender gap is much larger for finance (16 weeks) and growth and

development research (also 16 weeks) but seems absent in experimental and macroeconomics research. These patterns are unlikely to reflect a self-selection of female authors. That is, it is dubious that less productive female researchers or those with greater non-research responsibilities self-select to publish in subfields with longer acceptance lags.

Our analysis is limited to empirical studies. Hence, important sub-fields of economics, such as theoretical macroeconomics are excluded from our analysis. Moreover, our findings need not generalize to other empirical studies. Nevertheless, our findings relate to 424 specific research areas where each one contains nearly all publicly reported estimates. Thus, the patterns we observe cannot be dismissed as sampling error or noise; they are characteristics of these economic research areas and female economists that study them.

Section II describes the data, the empirical strategy is presented in Section III, and the results are presented and discussed in Section IV. We consider alternative explanations for the acceptance time gender gap in Section V, including the effects of research productivity, research quality, research novelty, author anonymity, the role of editors, and the gender composition of research fields. The results are discussed in Section VI. Appendix 2 presents additional results and analysis.

II. Data

Our data come from the 424 meta-analyses listed and referenced in Appendix 2. Meta-analyses have two advantages for the analysis of the gender gap in acceptance time. First, each meta-analysis compiles a comprehensive set of comparable estimates on the *same* research area, enabling us to compare acceptance time for males and females studying the same topics. With meta-analyses data, we can include research area fixed effects to control for unobservable effects specific to a research area. The second advantage of these data is that we can assess factors such as statistical significance and sign reversal. Reported *t*-statistics (and levels of

significance) may vary between research areas. A study that reports findings opposite of the established prior literature may produce novel findings that affect acceptance time. The effect of sign reversal, and other features of the novelty of a published article, on acceptance time requires comparison with *all* prior reported estimates within each research area. Editors and reviewers consider the full distribution of reported results in an article, often demanding further analyses as part of the review process. Meta-analyses provide the necessary data for such comparisons.

To be included in our analysis, a meta-analysis had to meet three criteria: (1) include studies published in a leading economics journal; (2) include empirical studies that report acceptance time; and (3) report test statistics or effect sizes (e.g. elasticities, regression coefficients, correlations, or dollar values) and their standard errors. The collection of data proceeded as follows. First, we sought to be as inclusive and objective as possible and searched for as many meta-analyses of economics research for which data were publicly available either through data repositories or directly from authors.1 We searched for meta-analyses that reported the primary empirical studies covered, the journals in which they were published, and made available test statistics (e.g. effect sizes and their standard errors). We were able to collect data for 717 meta-analyses of distinct economic literatures (or research areas).² We then focused on those meta-analyses that include studies published in one of the leading economics journals. We use the Heckman and Moktan (2020) classification of the 55 leading economics journals. This includes the top 5 journals, the non-top 5 general interest, 18 tier A and 27 tier B journals.³ 540 meta-analyses met this criterion; the other 177 meta-analyses either contain no estimates published in an economics journal or they report estimates published in economics journals outside the Heckman and Moktan (2020) list of the top 55 economics journals.

Next, we use the list of studies included in a given meta-analysis and collect information on the submission and acceptance dates where this is available for the published papers. For each research area we collect acceptance time for as many studies as possible; published in any journal not just economics journals. Time to acceptance is available for 424 of the 540 meta-analyses. This final sample of 424 meta-analyses contains studies published in one of the 55 leading economics journals and for which we can identify acceptance time. That is, the other 116 meta-analyses include studies published in one of the 55 leading economics journals, but they do not report acceptance time for these studies.

Each of these 424 meta-analyses reports estimates of an effect size (e.g. an elasticity or a dollar value) and its standard error. To these data, we added information on time to acceptance, authors' gender, institutional affiliations, citations, research productivity, research novelty, and the gender composition of editors at the time that an article was submitted. It is important to note that each meta-analysis contains nearly all publicly reported estimates for the same hypothesis or economic phenomenon. That is, our data are neither random nor selected samples of relevant empirical estimates, but rather comprehensive collections of all available estimates. While we need to be cautious about drawing inferences for *all* empirical economics, some of which may not have been meta-analyzed, we can confidently draw inferences for these 424 areas of research and the experience of authors publishing therein.

We assess acceptance time in two groups of journals: (i) a 'core' or baseline group of 49 journals and (ii) every journal with acceptance time represented in the 424 research areas. To identify the 'core' sample, we commence with Heckman and Moktan's (2020) list of general interest, 'field A', and 'field B' journals. To these, we add economics journals that provide information on submission and acceptance time and for which we have at least 100 observations from at least 10 empirical studies, for which we can identify the authors' gender. In total, our sample includes 62,098 estimates reported in 5,548 studies and 701 scholarly peer-

reviewed journals that report information on submission and acceptance, for which we can identify the authors' gender, spanning many research areas and several disciplines.⁵ Our baseline results focus on 35,647 estimates reported in 2,773 studies published in the 49 economics journals listed in the Appendix.⁶ These studies were published between 1961 and 2023.⁷

To recap: our data collection commenced with a wide search for any meta-analysis of economic phenomena with publicly available data. From this search we identified 540 meta-analyses that included empirical studies published in one of the 55 leading economics journals. We then collected time to acceptance for as many published studies as possible. This process reveals 424 meta-analyses that provide econometric estimates reported in studies published in a leading economics journal that also report time to acceptance. We then assess time to acceptance for: (1) a core sample of 49 economics journals and (2) all journals represented in these 424 meta-analyses. We investigate gender differences in the time taken to accept submitted papers that eventually pass the review and editorial process.⁸ Acceptance for publication represents the culmination of the research. Authors can then claim their work as forthcoming and generally include this as evidence to hiring, tenure and promotion panels.

We follow Card *et al.* (2020), Huang *et al.* (2020), and Auriol *et al.* (2022), and identify gender as a binary variable: male or female. We use an author's first name for this assignment matched with photos from Scopus, Google Scholar, LinkedIn, and individual and institutional homepages. We also cross-referenced our assignment with the Worldwide Gender-Name Dictionary (Raffo, 2016). In cases where gender assignment was not straightforward, we accessed individual and institutional homepages (and individual CVs) to confirm name and authorship. In most of these cases gender is confirmed by descriptions containing 'he/his' or 'she/her' pronouns. There are 7,117 male and 2,472 female authors in the overall sample where articles report acceptance time. We cannot reliably confirm gender for 403 authors (or 4% of

all authors). In the articles published in the 49 economics journals that are our primary focus, there are 736 female and 2,993 male authors. Here we omit 55 authors (1.5% of all economics authors) of uncertain gender, corresponding to 741 observations (or 2% of the sample). ¹⁰

The solid black line in Figure 1 shows that the percentage of studies with at least one female co-author published in economics journals has increased in recent decades, from 8% in the 1980s to 38% by 2020. 11 By 2020, at least half of the authors were female in 23% of economics studies; yet, the majority of published economics research continues to be reported by all male research teams. Interestingly, the percent of studies with only female authors in our sample has not grown during this period (the gray dashed line).

FIGURE 1 HERE

Figure 2 presents the distribution of the time to acceptance for *all* male and *all* female (co)-authored articles in the 49 economics journals (*i.e.*, excluding articles authored by some mix of genders). ¹² Mean acceptance time is seven weeks longer for all female research teams. The median difference is nearly three weeks, which is also an important delay time, as these delays accumulate over a career.

FIGURE 2 HERE

Our primary interest is gender differences in acceptance time, or the difference in the number of weeks between submission and acceptance of an article. The sample mean (median) submission to acceptance time is 61.29 (53.71) weeks, for all studies regardless of gender. The mean (median) time between submission to acceptance has increased substantially over time, with average time rising from 41.59 (33) weeks for studies published prior to 1980 to over 61.84 (56) weeks for studies published after 2000. Acceptance time has been growing steadily by about half a week, per annum.

Figure 3 illustrates the mean acceptance time for increasing proportions of female coauthors. Figure 4 illustrates substantial variation in the acceptance time gender gap between
research areas. This gender gap is again calculated comparing all female to all male authored
studies, excluding the mixed-gender studies (mixed-gender studies are included in the
econometric analysis below). Summing up, there is substantial variation in acceptance time
over time, the gender composition of research teams, and research area. We model this
variation by controlling for journal, year, and research area fixed effects along with a range of
controls including differences in the gender composition of editorial boards.

FIGURES 3 AND 4 HERE

III. Empirical strategy

Our primary focus is to investigate gender differences in acceptance time using data from 424 meta-analyses. There is substantial heterogeneity in acceptance time over gender, time, journal and research area. Recall that each of these meta-analyses reports *all* comparable reported estimates on a specific research area. The benefit of these data is that they enable us to control journal, time, and research area differences, thereby enabling us to isolate acceptance delay for the same journal, year, research question, and hypothesis. We conduct this analysis for all 424 research areas combined.

Our core model regresses log acceptance time in weeks on the proportion of female authors and a range of controls and fixed effects:

$$\ln (Acceptance \ time)_{is} = \beta_0 + \beta_1 Female_s + \mathbf{x}_{is} \mathbf{y} + \mathbf{\alpha}_i + \mathbf{\alpha}_\alpha + \mathbf{\varepsilon}_{is}, \tag{1}$$

where i is the ith estimate reported by study s. Female is the proportion of female authors ranging from 0 to 1, x denotes a vector of controls, α_i are time invariant effects unique to a journal, α_t are time fixed effects that reflect unobservable period effects affecting all journals,

and α_{α} are research area fixed effects. The dependent variable is the natural logarithm of the number of weeks from first submission to acceptance. Journal fixed effects allow for unobservable effects such as journal specific differences in editorial policies and procedures, while time fixed effects can account for any unobservable changes in norms and attitudes over time affecting all journals. Research area specific effects, α_m , control for unobservable variations in acceptance times or their delays across research areas. For example, female authors might be more prominent in some research areas (e.g., Claudia Goldin and the genderwage gap), and this may affect acceptance time. There might also be unobservable research area specific differences in methods and data that need to be accommodated. Following Blanco-Perez and Brodeur (2020) and Askarov et al. (2023), we cluster standard errors at the study level; Appendix 2 reports results using alternate clustering by journal and by research area.

Our unit of analysis is the individual reported empirical result. This level enables us to assess the impact of gender on acceptance time, after controlling dimensions such as the statistical significance of reported test statistics. To avoid giving undue weight to studies that report more estimates, Equation (1) is estimated using weighted least squares, with the inverse number of estimates, per study, as weights. This ensures that each study is assigned equal weight, but still enables us to control for factors that vary at the level of individual test statistics. In Appendix 2 we report results using OLS with study level averages.

Controls, x_s , include the number of authors, the study's temporal rank and the authors' share of estimates in a given research area, sign reversal, whether the results are reported to be statistically significant, and the share of authors employed at a top university. Larger teams may bring greater knowledge, insights, and resources, potentially increasing the quality of submitted work and hence be accepted sooner. On the other hand, they may present more ambitious and novel work, at odds with accepted knowledge, and thereby taking longer to

accept. Larger teams may reflect more complex research that takes longer for reviewers and editors to assess. Larger teams may also take longer (or less) time to complete revisions due to various coordination issues, competing time allocation demands, or divisions of labor. Temporal rank reflects the position of a study in the evolution of a research area. Earlier studies may be more influential, on average, and accepted more readily and later studies on the same topic may take longer to accept, ceteris paribus. The authors' share of estimates is included to reflect dominance of research teams and also to reflect learning by doing and research area specific human capital which may affect time to acceptance. Dominance by research teams may also lead to information monopolies and/or inbreeding (Ioannidis, 2012). ¹³ Authors' share also reflects the extent to which the authors are known in a specific literature, potentially by editors and referees and this may speed up the review process.¹⁴ Sign reversal is constructed by comparing the sign of the reported effect in a study relative to a weighted average of all estimates up to the year prior to when the study was submitted for review. 15 For example, if the weighted average gives a positive elasticity but a study reports a negative elasticity, then we code this as sign reversal. Perhaps such estimates take longer to convince reviewers and editors, or they are accepted sooner because of their novelty. Statistical significance (|t-statistic| > 1.96) is included as there is much evidence that referees and journals prefer to publish statistically significant results (e.g., Brodeur et al., 2016, Ioannidis et al., 2017; Askarov et al., 2023; Bartoš et al., 2023). 16 We also control for whether an author is employed at a top university. We use the Times Higher Education classification of the top 100 universities. In constructing the authors' share, temporal rank, and sign reversal variables we use all studies that have been reported in a research area; i.e. we include all studies published in journals and books as well as unpublished working papers, reports, conference papers, and Theses.

These controls are added because there are reasons to believe that they may play a role in determining acceptance times. Hence, our model may be mis-specified if they are omitted,

and they may also be important in isolating the gender differences. For example, longer acceptance time may reflect temporal rank rather than gender; thus, controlling for temporal rank could be critical if female authored articles arrive later chronologically (recall Figure 1).

IV. Results

Table 1 presents our baseline results.¹⁷ The dependent variable is the natural logarithm of the number of weeks from submission to acceptance and the key variable of interest is the proportion of female authors, *Female*.¹⁸ Column (1) reports results without any fixed effects or controls, suggesting that articles authored entirely by females take, on average, 10% (or six weeks) longer to receive an accept decision. Journal and time fixed effects are introduced in Column (2) and research area specific effects are added in Column (3). The number of authors, the study's temporal rank, and the share of authors employed at a top 100 university are added in Column (4).¹⁹ In Column (5) we add the authors' share of estimates, sign reversal, and whether the results are reported to be statistically significant.²⁰ The results reported in Column (5) imply a one-week acceptance time gender gap when evaluated at the sample mean proportion of female co-authors (0.17), a two and a half weeks gap when half of the authors are female, and a larger five week gender gap in acceptance time for *all* female-authored articles, on average.^{21,22}

TABLE 1 HERE

Table 2 reports robustness to different groups of journals. Some journals do not give the exact submission and acceptance *date* but instead specify only the month and year. In our baseline results, Table 1, we assume that these articles are submitted/accepted in the first week of the month, potentially biasing our estimates.²³ We remove these estimates in Table 2, Column (1). In Column (2) we narrow the sample to the six leading general interest journals that report time to acceptance.²⁴ Higher ranked journals attract the best research and the review

and editorial process in higher ranked journals might be under greater scrutiny. There may thus be less (or more) room for editorial and reviewer bias among these journals. These estimates suggest no gender gap in acceptance time. However, the sample is in this case much smaller and less representative of publishing in economics in general. Longer delays may be expected at higher ranked journals because of the nature of the higher quality work that is under review or because editors and reviewers at these journals may be busier. But this should not translate into lengthier review process for *female-authored* work, unless, for example, females are forced to present higher quality work than males, in order to get published in the same research areas and journals of equal ranking, or if females targeting these journals self-select to take longer. In Column (3) we remove these general interest journals. In Column (4) we focus only on studies with a single author. The gender time to acceptance gap is larger among solo authored studies, nine weeks compared to five weeks when all studies are assessed (recall Table 1).

Column (5) looks at other groups of journals in our sample. Recall that our core sample includes all top economics journals identified in Heckman and Moktan (2020) and any other economics journal with at least 100 estimates from at least 10 primary studies. In Column (5) we include all other journals. These include: economics journals with fewer observations, 'business' journals (accounting, business, management, and finance journals), and all other journals, primarily: education, psychology, health, medicine, and science. The gender gap in these journals is comparable to our core 49 economics journals reported in Table 1. Column (6) combines all journals. Columns (7) and (8) divide the sample according to research design: observational vs. experimental research. Although there seems to be a sharp contrast between these methods, the number of observations is much smaller for experimental research and confidence intervals overlap. Nevertheless, Table 2 suggests that there is, on average, no

gender gap in these 82 experimental research areas compared to the 335 observational areas of research.

TABLE 2 HERE

Summing up, the analysis presented in this section indicates an economically significant gender gap in acceptance and publication time that also holds for large groups of different journals.

V. Explaining the gap

What might explain this gender gap in acceptance time? Gender-specific time to acceptance differences can arise at different stages of the review process: editors taking longer to assign articles for review, reviewers taking longer to complete reviews and/or asking for more demanding revisions, female authors taking longer to complete revisions due to other time commitments, female authors preferring to devote more time to improve the quality of the research, and editors taking longer to reach a final decision once an article has been revised. Explanations of the gender wage gap range from differences in time allocation and productivity differences to outright bias and discrimination (Stanley and Jarrell, 1998; Jarrell and Stanley, 2004; Hengel, 2022). Perhaps, females submit lower quality papers, and these take longer to progress through the review process? Or, females are unable to devote as much time to revisions as males do, due to other competing and time-consuming tasks? On the other hand, if there is bias against females, editors could take longer to submit articles for review or longer to reach a decision, and/or reviewers could: take longer to complete their reviews and/or be more demanding, thereby requiring female authors to devote more time revising.

While we cannot directly test these alternative explanations as this information is not publicly available, we perform several supplementary analyses to shed light on some of the factors behind the gender acceptance time gap. Specifically, we consider factors relating to author and study characteristics and the review process: research quality, novelty, research

productivity, double anonymous review, the effect of the gender composition of editorial boards and the gender distribution of authors publishing in a research area.

A. Research quality

Following Card *et al.* (2020), we investigate citations as an indicator of research quality in Table 3. The dependent variable is the research area log standardized citations received by each study (Lundberg, 2007). ²⁸ Column (1) shows that controlling for journal, time, research area fixed effects and the same set of controls as Tables 1 to 3, female-authored articles receive 9% *more* citations, suggesting that female-authored articles are not of an obvious lower quality, at least not by the observed research interests of their peers. To rule out the possibility that females receive more citations because they self-select to join research teams that produce higher quality research, we restrict the sample to solo-authored articles in Column (2), and the coefficient on *Female* notably increases. ²⁹ Note that these regression coefficients imply that female-authored papers receive between 9% and 22% more citations.

To shed light into possible underlying mechanisms, we re-estimate Column (1) controlling for a study's acceptance time; see Column (3). In Column (4) we interact *Female* with acceptance time. Column (4) suggests that all-male authored articles are cited *less* the longer they take to accept while the opposite applies for all-female authored articles. The results presented in Table 3 are consistent with the findings of Card *et al.* (2020) of a higher hurdle for female authors; *ceteris paribus*, females need to produce studies of higher quality to get published.³⁰

TABLE 3 HERE

One of the controls included in these regressions is the share of authors employed at a top 100 university (*Share Top 100*). This variable can also be considered a proxy for study quality when authors from top universities produce higher quality research. Studies published

by these authors tend to receive about 16% more citations, though this does not appear to be a factor for solo authored research. Nevertheless, this variable may also be picking up other factors, such as author reputation and recognition.

Finally, in Columns (5) and (6) we re-estimate the time to acceptance model reported in Table 1, Column (5), adding citations as an explanatory variable, for the 49 economics journals and all other journals, respectively. Citations have a negative coefficient, suggesting that more highly cited articles are accepted faster. The coefficient on *Female* shows that gender gap in acceptance time remains, suggesting that the gap is unlikely to be driven by differences in research quality as proxied by citations.

B. Research novelty

Novel research carries an increased risk for author, as it has a high variance in citations and often receives attention only years after publication (Wang *et al.*, 2017). Based on differences in risk preferences between the genders (Croson and Gneezy, 2009), differences in the novelty of articles between female and male authors could be expected. Novel research tends to be published quicker (Teplitskiy *et al.*, 2022), and gender differences in content or novelty of submitted research may explain acceptance time gaps.³¹ If females produce less novel research, then this may lead to longer delays for female authored articles.

In the last decade, a number of novelty indicators have been introduced based on new combinations of existing knowledge (analyzed often based on cited references) or novelty of research topics (analyzed based e.g. on keywords) (see e.g. Uzzi *et al.*, 2013; Lee *et al.*, 2015; Wang *et al.*, 2017; Bornmann *et al.*, 2019). To investigate the novelty of research, we calculate a slightly modified version of novelty index following Bornmann *et al.* (2019), *Novelty.* For each study within each specific research area, we measure research novelty as the proportion of new keywords for an existing research question, whereby keywords are considered new if

they have not been used for a specific research question before. This index takes values between 1 (complete novel research where none of the topics/keywords have already been addressed for the research question) and 0 (all keywords covered have already been addressed for the research question in papers considering a specific topic).

In Table 4, Column (1), we re-estimate the time to acceptance model with the inclusion of research novelty. The coefficient on *Novelty* is positive but statistically non-significant. The gender acceptance time gap remains. In Columns (2) to (5), we explore whether females produce less novel research. The dependent variable in these columns is the novelty index. The sample in Column (2) is our core sample of 49 economics journals with time to acceptance data. In Column (3) we broaden this to all economics studies published in these journals, even those that do not report time to acceptance. The sample used for Column (4) includes all studies in all journals regardless of discipline (i.e. including non-economics journals) which report acceptance time. Column (5) includes all studies for all disciplines, including those without acceptance time. The coefficient on *Female* is negative in nearly all cases but is borderline statistically significant only in the larger sample that includes non-economics journals with acceptance time. In the largest sample, Column (5), the coefficient on *Novelty* is effectively zero. We conclude that for the research areas covered in our sample, novelty differences do not account for the acceptance time gender gap in economics journals.³³

TABLE 4 HERE

C. Research productivity

To assess the effect of research productivity, we consider the number of articles published. For this analysis we focus on solo-authored articles to better isolate the effects of individual productivity on acceptance time and remove the effects of complementarities and interdependence involved in co-authored studies. For each solo-authored article in our sample,

we count the total number of articles published by the author in the four prior years in all journals and top 5 journals, respectively. 34 This serves as a proxy for research productivity and also time allocated to research. Separating publications in the top 5 journals also serves as a proxy for whether an author is generally prominent in research. These results are presented in Table 5, Columns (1) and (2), respectively. In Columns (3) and (4), we also control the number of articles published in the same year as a given article and the number of articles published in the *subsequent* three years. This also serves as a proxy for research productivity but also as a proxy for effort that might affect time for revisions. Authors are likely to be working on and revising several publications, and this might affect time devoted to completing revisions of the current article. That is, authors are producing and reporting research across several journals (and sometimes several research areas) and we control for this effect. Table 5's results suggest that the acceptance time gender gap is not driven by past or subsequent total research productivity as reflected in published journal articles. The coefficient on *Female* is essentially the same as when research productivity is not included in the analysis; recall Column (4), Table 2, where the coefficient on Female is 0.168. Nevertheless, Columns (2) and (4), report that each prior publication in a top five journal reduces acceptance time lag by about 6% to 8%, or about five weeks. This suggests that author prominence as reflected by past publications in top five economics journals may influence acceptance time. The gender gap remains, however, even after controlling research productivity.³⁵

TABLE 5 HERE

D. Author anonymity

If reviewers are a source of acceptance delays, then they need to identify authors. There is limited evidence on the impact of double versus single anonymous review on gender-related outcomes.³⁶ Blank (1991) finds that double anonymous review is slightly better for females, but the effect is very small and statistically non-significant.³⁷ Several journals have switched

from double anonymous to single anonymous. For example, The Quarterly Journal of Economics abandoned double-anonymous review in 2005 and The American Economic Review abandoned this practice in 2011, due to the ability of search engines to identify authors (AER, 2011). In Table 6, Column (1) we follow Hengel (2022) to remove estimates reported after 1998, focusing on the period during which reviewers were less able to use internet search engines to identify authors. Submissions after 1998 are assessed in Column (2). The sample is smaller for the earlier period. Nevertheless, these results suggest that the gender gap was essentially the same in the later period where authors became easier to identify. Columns (1) and (2) include journals that switch from single to double anonymous review or vice-versa or kept the same type of review throughout the sample period. Our sample includes 14 journals that always use double anonymous review.³⁸ Column (3) repeats the analysis for only these journals, finding a large gender gap to the entire sample. Table 6 confirms the existence of a gender gap before and after the internet spread and also during double anonymous review. One explanation for these results is that reviewers can often identify authors, in general. Alternatively, acceptance time delays are unrelated to type of review and likely driven by other factors.

TABLE 6 HERE

E. Female editors

Do female editors reduce the acceptance-time gender gap? Although we collect information on whether a female editor was present at the time an article was submitted and the proportion of editors who are female, the specific editor in charge of a given article is not known for most of our sample.³⁹ In Table 7 we control for the size of the editorial board and the gender composition of editors. The number of editors may affect the ability to process manuscripts and changes in editors could also affect (either disrupt or bring new energy) editorial process. In Column (1) we add the number of editors and co-editors and the change in the number of

editors and co-editors. We add the proportion of female editors in Column (2), which has a large negative time-to-acceptance coefficient, suggesting that female editors are associated with reduced time to publication for all authors.⁴⁰

TABLE 7 HERE

Next, we consider interactions between female authors and female editors. The gender composition of editorial boards may affect the gender gap. Female editors may be more concerned about equity and fairness and mitigate gender-stereotypes and bias against female authors. Female editors may also serve as role models that encourage females to submit their research for review. Female editors may thus reduce some of the barriers that female authors face, they may be more sympathetic to female authors and more attentive at completing the review process in a timely manner, and they may not demand higher research thresholds for female authors.⁴¹ In such cases, the interaction term may have a negative coefficient. However, this coefficient will be positive if female editors are harsher on female authors, or if male editors become harsher as a response to changes in the gender composition of the editorial board. Alternatively, there will be no effect if the longer acceptance time is due to factors unrelated to the actions of editors and reviewers. The coefficient on Female and its standard error change little after adding Female editors; this is a signal that female editors do not influence acceptance time for female authors. In Column (3) we interact Female with Female editors and find that the gender composition of editorial boards does not improve outcomes for females in terms of reducing acceptance time. 42 The coefficient on the interaction term is positive though it is not statistically significant. To rule out the effect of multicollinearity, Column (4) reports results with just the interaction term indicating that female editors do not influence acceptance time for females. A positive coefficient on the interaction (Column (3)) between female authors and female editors suggests that it takes longer to accept a femaleauthored article with greater female representation on the editorial boards. This is consistent with the findings of Bagues *et al.* (2017) on the effects of the gender composition of Italian and Spanish scientific committees. One plausible explanation for this finding is Akerlof and Kranton's (2000) identity theory of gender. For example, a small increase in female composition of editorial board might be tolerated by male editors. However, in journals where males consider the role of an editor to be a 'male job', an increasing share of female editors may be seen as a loss in male identity. This may trigger a response from male editors to be more demanding of female-authored manuscripts.

F. Female representation

Gender stereotypes may be stronger in male-dominant research areas, and this may affect time to acceptance of submitted manuscripts. Hence, we also investigate the effects of the gender composition of research fields. Editors tend to draw reviewers from the pool of authors publishing in a field, and female reviewers may, on average, be more sympathetic towards female authors. To explore this dimension, we calculate the proportion of female authors researching in each area of economic research (*Female representation*). This proportion is calculated chronologically and recursively, up to the year a study was submitted for review. For each of the 424 research areas, we approximate the proportion of female researchers by the proportion of *unique* female authors who have published a study in one of 80 economics journals. This includes the top economics journals as listed by Heckman and Moktan (2020): the top 5, the non-top 5 general interest and the 'Tier A' and 'Tier B' journals. We also include any other journal that forms our core sample of 49 journals. To better reflect female presence and representation, we include in the construction of *Female representation* the gender of authors of studies that do not report acceptance time. The *Female representation* variable also serves as a proxy for the extent of male dominance in a research area. As female

representation rises, e.g. through greater presence in seminars, conferences, working papers, and published articles, a research area becomes less male dominated. Greater female representation means a larger pool of available female reviewers. Moreover, with greater female representation, editors and male reviewers may become less differentially demanding of female authors and time to acceptance becomes less influenced by authors' gender. *Female representation* is also a proxy for potential networks of female authors working on the same research issue from which to get advice and fair treatment. Higher representation may also mean that female researchers become more integrated into the community of researchers who serve as reviewers and editors.

TABLE 8 HERE

In Table 8 we interact *Female representation* with *Female* i.e. the share of females working in a research area is interacted with the share of female authors of an article. The coefficient on *Female* now estimates the gender gap in acceptance time in a fully male dominated research area and the interaction reflects the change in this gender gap as female representation increases. Column (1) includes only fixed effects. Controls are added in Column (2). In Column (3) we also control for editors: the number of editors, the proportion of new editors and the gender composition of editorial boards. The negative coefficient on the interaction suggests that the gender gap is *declining* as female representation rises; the greater the share of females researching a topic, the lower is the acceptance time gender gap. Evaluating the marginal effects shows that the gender gap is positive and statistically significant up until roughly 30% of female authors in a research area. Beyond that, the gender gap becomes statistically non-significant and is practically negligible when about 50% of authors are female. See Appendix 2 for the associated marginal effects. Nearly 90% of the estimates in our sample come from research areas with less than 30% of female authors, which

is consistent with the persistence of this gender gap. These results suggest that increasing female representation and the pool of available female reviewers and the size of potential networks may play an important role in reducing this gender gap.

VI. Discussion

The above results indicate a significant gender gap in acceptance and publication time. On average, it takes all female-authored articles 9%, or about five weeks, longer to be accepted for publication (Table 1). Acceptance time is 19%, or 10 weeks, longer for female solo-authored articles (Table 2). This gap cannot be explained by observable research quality differences (Table 3) or the novelty of reported research (Table 4). It remains after controlling author affiliation and research productivity (Table 5). The gap existed before and after the introduction of the internet and exists even with double anonymous review (Table 6) suggesting that that process does not prevent identification of author identity and/or that other factors are driving this gender gap. The gender composition of editorial boards appears to have no net effect on this gender gap (Table 7). However, the gender distribution of authors working on a given research area (or the degree of male dominance) appears to reduce this gap, pointing to the importance of representation and the implied networks of female reviewers and female researchers (Table 8).

This gender gap can arise if female authors: are required to do more by editors and reviewers, take longer to revise because of other time commitments (*e.g.*, child rearing), or prefer to spend more time developing their studies. These factors are not mutually exclusive. At the same time, female-authored papers do not take longer to be accepted because they are of lower quality. We find that female-authored articles are of higher quality, on average, as evidenced by citations (Table 3). A higher quality hurdle for females may in part explain why it takes longer to complete revisions. Reviewers and editors might be more demanding of

female authors, requiring more extensive revisions and more rounds of revisions (Alexander *et al.*, 2023). Additionally, female authors might need to take longer to complete revisions to ensure these higher hurdles are met even if not requested by referees, *e.g.*, because they prefer to resubmit a more developed manuscript, they expect to be held to higher standards, or because they are more risk averse (Croson and Gneezy, 2009).

In the four years prior and three years after a given article is published in our sample, the mean (median) number of published articles is 7.32 (6) for female vs 11.40 (9) for male solo-authors, respectively. In some ways, the lower average research productivity is compensated by female-authored studies being more highly cited; 9% more citations. Surveys attribute lower female research productivity to more active engagement with child rearing (Derrick *et al.*, 2022). Females are also more involved in faculty service duties (Guarino and Borden, 2017). Our findings are consistent with the explanation that non-research time commitments may affect not only the number of articles produced, but also how long they take to publish, at least in some sub-fields.⁴⁴

One explanation for the overall results of a five-week time to acceptance gender gap is 'threat-based' theories of gender bias. For example, in Goldin's (2014) 'pollution' theory, males may deem the entry of females into an occupation or economic activity to be 'polluting' or otherwise diminishing the status of that activity. In the case of research, referees (and some editors) often publish in the same research area as the article they are asked to evaluate. Male reviewers publishing in these research areas may seek to preserve their status and prestige by restricting publications by female authors if these submissions are viewed as reducing the status of the work already published in that area. In Goldin's model, mechanisms that increase information help to promote integration and gender diversity. Peer review provides such information, signalling that female work is judged by experts to be of high enough quality to publish. Hence, peer reviewed female authored articles should not reduce the status of men's

work in the same research area. Nevertheless, the review process is not an independent provider of information when male reviewers are also publishing and, hence, competing with females. The review process provides some reviewers with the opportunity to express any potential for bias against female authors. Akerlof and Kranton's (2000) identity theory of gender provides a similar explanation, *e.g.*, male reviewers may feel a loss in male identity if they consider a given area of research area to be the domain of males and consequently, seek to restrict the entry of female authors. ⁴⁶ These considerations may also help explain the higher quality threshold for female authored work. Male reviewers and editors may demand more from females to ensure that female-authored research is of higher quality and hence does not diminish, in their eyes, the quality of research in a given area of inquiry. Table 8 suggests that this gender gap is affected by the degree of male dominance; as female representation rises in a research area, the gender gap narrows, on average.

Figure 4 indicates research area differences in the acceptance time gender gap. This is further supported by our model which includes journal, time, and research area fixed effects. These fixed effects are jointly statistically significant. In our baseline results (Table 1, Column (5)), the F-test for the joint statistical significance of the research area fixed effects is 13742.18 (p < .0001). This points to significant research area and subfield of research heterogeneity in acceptance times. Females tend to focus on education, health, and labor subfields and are underrepresented in finance and macroeconomics (Chari and Goldsmith-Pinkham 2017; Beneito $et\ al.$, 2021). In Table 9, we explore the sensitivity of our estimates to several subfields.⁴⁷ To increase statistical power and external validity, we use data from all journals in the sample of 424 meta-analyses.

TABLE 9 HERE

Each column in Table 9 reports results for various subfields, according to the magnitude of the estimated coefficient on *Female*. The largest gender gap appears in finance research

where all female-authored research takes 32% longer to accept, followed by growth (28%), industrial organization (22%), and labor research (19%); or between 11 and 16 weeks longer, to accept. In contrast, there is no gender gap in the other sub-fields, most notably energy and macroeconomics research.⁴⁸

Evidently, there is significant heterogeneity between and within journals and disciplines. This suggests that the review process is an important driver and reviewers in some research areas do not make incrementally higher demands on female authors. The observed heterogeneity would be consistent with a non-biased review process, if the less productive females, and/or females with child rearing and other non-research time commitments selfselect to publish in research areas (or journals and disciplines) with longer acceptance lags for females, while those without these commitments self-select to publish in other research areas (or journals) that have shorter or no gender gap in acceptance time. This heterogeneity between research areas and subfields, is consistent with differences in social norms. ⁴⁹ As Ellison (2002, p. 987) points out: "if one believes arbitrary social norms develop within academic communities, then because economists mostly referee papers in their field and receive reports written by others in their field, one would expect that norms are somewhat different across fields." These social norms can also pave the way for gender biases to differentially affect the acceptance time for female-authored research. The assignment of referees is not random. It is usually based on the availability of subject matter experts, people nominated by authors, and reviewers known by editors to provide timely and informative evaluations. This assignment process enables network effects and permits the creation of research-area specific norms and potential biases.

Our results may not generalize for all areas and journals beyond our survey. Nevertheless, at least for the 424 research areas included in our survey, there is significant heterogeneity that cannot easily be explained as choices and preferences of female researchers.

Many of these differentials are of a consequential magnitude, especially when one considers that female-authored articles are, on average, of higher quality.

Such a large gender gap has potentially wide-ranging implications. For example, it can contribute to the fewer promotions and slower career progression of females that is observed in economics (Ceci *et al.*, 2014; Ginther and Kahn, 2004; Sarsons, 2017; Auriol *et al.*, 2022), which in turn affects academic salaries (Ginther and Hayes, 2003). At the margin, the *cumulative* effect of longer acceptance and publication time may adversely affect the timing of promotion and career advancement.

This gender gap may also serve as a disincentive for females to choose academia as a profession, or at least economics and potentially move into other disciplines. This disincentive is strongest for females who prefer to solo author or collaborate with all female author teams. Figure 1 shows essentially no increase in the share of all female-authored articles in our sample, while the share of female authors in mixed teams has increased. Our results may offer an explanation for this. While decisions to co-author are many and varied, co-authoring with males might be one way to expedite the publication process. Nevertheless, our results suggest that the strength of this disincentive will vary between subfields. For example, recall from Table 9 that the coefficient on *Female* is negative for macroeconomics research, suggesting that all female-authored articles are accepted quicker. In our sample, the proportion of all female authored articles in macroeconomics research increased from 2% pre-1980 to 19% in the most recent decade (2010 to 2020).

Prior studies have predominantly focused on the top five journals. This focus is understandable given the importance and dominance of the top five (Heckman and Moktan, 2020). The top five do not necessarily represent the distribution of female authors' experience with the review process, in general. Our findings for general interest journals are similar to Card *et al.* (2020). And our findings corroborate prior studies finding that female-authored

articles tend to pass a higher quality threshold, as evidenced by higher citations (e.g., Card et al., 2020). We assess a larger pool of journals and find a sizeable gender gap in acceptance time in economics journals, on average, though there is significant subfield variation.

We find that changing the gender composition of editorial boards has not sufficiently benefited female authors, at least not in terms of acceptance time. However, one could argue that the results support the argument that female editors have a preference for equality and fairness. Specifically, we do not find a significant faster or slower review process for femaleauthored articles by female editors and yet female editors are associated with a generally faster review process, which could be interpreted as evidence of a fairer review process for all authors. Nevertheless, there is emerging evidence that editors can guide reviewers to make a difference. For example, Blanco-Perez and Brodeur (2020) show that journals can improve the quality of the research they publish by providing guidance to reviewers. interventions may improve the publication process for female authors. Perceptions about social norms, gender and race are known to be slow to change; however, editors and reviewers can make a difference. As already noted, there is considerable heterogeneity in this gender gap across research areas, suggesting the possibility that these social norms can change over time. Importantly, we find that the pool of female authors working on the same research issues appears to play an important role. As male dominance diminishes and female representation rises, the gender gap narrows. This points also to the importance of female networks, e.g. supervisors, co-authors, colleagues, etc.

Turning to the other controls, we find that temporal rank matters. Studies that are submitted later in the development of a research literature take longer to accept. One explanation for this might be that newer studies need to provide new insights, and the contribution of later research may be more difficult for reviewers to access. Our model also controls for *Sign* and *Statistical Significance*. *Sign* is a binary variable whether reported

estimate is the opposite of what prior published studies report, and *Statistical Significance* denotes whether a reported test statistic is significant at the 5% level. The coefficients on *Sign* and *Statistical Significance* are negative but they are statistically non-significant. For the thousands of econometric studies included in our sample, there is no solid evidence that reporting a non-statistically significant result causes additional delays to published papers. This is a 'positive' result as faster acceptance times for statistically significant results would add to the already strong incentives to engage in publication selection bias (Ioannidis *et al.*, 2017; Brodeur *et al.*, 2020). ⁵⁰

Several limitations need to be highlighted. While our data span 424 research areas, we cannot claim that they necessarily generalize to economics research as a whole, or all the economics research published in these 49 journals. Further, our analysis is limited to empirical studies, which excludes important sub-fields of economics, such as theoretical game theory or theoretical macroeconomics from our analysis. Moreover, we assess articles that are ultimately published, which potentially leads to a selection bias that likely makes the estimated gender bias *smaller*. If unpublished studies are disproportionally female-authored, then the gender gap in acceptance time could be much longer. We do not have information on prior submissions. Thus, we cannot exclude the possibility that male authored articles were submitted more frequently and hence were already more developed when submitted to the journal in which they are accepted, and this influenced time to acceptance. Further, to the extent that this gender gap discourages all female author teams, then our estimates of the coefficient on *Female* might be *downward* biased just as the gender-wage gap is thought to be biased downward because it acts as a disincentive to join the workforce and become employed. Secondary of the coefficient of the coefficient

VII. Conclusion

Acceptance and publication times have increased in economics (Ellison, 2002). We document that acceptance time is also differentially longer, on average, for female authors. It takes an economics journal nearly three weeks longer to accept an article when half of the authors are female, and five weeks longer when all authors are female. This gender gap is even larger, 10 weeks, for solo female research. Yet, studies authored by females receive higher citations, indicating that female-authored research makes important contributions to economic science. For individuals, research satisfies inquiring minds and career objectives, and for society, the knowledge created and disseminated in published articles is a public good. Hence, it is important that quality research is published in a timely manner and that frictions in the publication process are minimized. Moreover, gender diversity benefits science (Nielsen *et al.*, 2018) and increasing the representation and participation of females in economics is a stated objective of the profession (Buckles, 2019). The cumulative effect of longer acceptance and publication times potentially slows female academic career advancement and can serve as a disincentive to enter, remain, and contribute to economics research.

Acceptance delay may reflect preferences and family and time allocation decisions. It can also emerge from the editorial and review process if there exists conscious or unconscious bias against female authors, or if greater gender diversity in economics journals encounters resistance from male reviewers and editors. We find that the gender gap in acceptance time remains after controlling researcher productivity, research novelty, affiliation, a range of controls, and several types of fixed effects. We also find significant heterogeneity in this gender gap; it is very large in some subfields and does not exist in others, and it is pronounced in observational research but not in experimental research, at least for the 424 research areas in our analysis. This heterogeneity points to differences in social norms in the review process and potential biases against female authors within research areas and subfields.

Female representation on editorial boards has increased. While this appears to have improved acceptance times for submitted articles, this does not appear to have reduced the gender gap in acceptance time. Nonetheless, representation of females in a research area appears to play an important role. As the dominance of male authors weakens, the gender gap narrows. While there is an element of randomness in the review process, it also appears that idiosyncratic social norms and potential biases influence acceptance times differentially for males and females, at least on average. Our finding of noteworthy differences within economic fields suggests that it might be possible to change social norms in favor of greater equity in the review process. Explicit editorial policies and advice to reviewers may reduce the likelihood of bias and other frictions in the review process and may help to change evolving social norms towards assessing research fairly. Our findings also show that greater female representation, in terms of more females working on a given research topic, narrows and eventually removes this gender gap, possibly because of the availability of more female reviewers and greater opportunities for expanded networks and research collaborations.

Our survey investigates 424 research areas and 62,549 empirical research findings. Nevertheless, this is only a fraction of the total number of articles published in economics. Our study includes only journal articles which report time to acceptance and thus might not necessarily reflect the review process in other journals. Moreover, our sample is exclusively based on empirical studies; hence, authors of purely theoretical papers or policy discussions may have a different experience. It remains for future research to assess how far our findings generalize and to investigate why gender diversity and integration in economics research has not been uniform.

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APPENDIX 1

Economics journals included in baseline analysis

General interest	Tier B	Other
(top 5 and non-top 5)		
Econometrica (250)	Journal of Applied Econometrics (475)	Journal of Asian Economics (322)
European Economic Review	Journal of Economic Behavior and	Journal of Comparative
(1,494)	Organization (382)	Economics (1,110)
International Economic Review (110)	Journal of Economic Dynamics and Control (119)	Journal of Economic Psychology (241)
Economic Journal (430)	Labour Economics (1,003)	Journal of International
		Economics (810)
Review of Economic Studies (341)	Other	Journal of International Trade and Economic Development (313)
Review of Economics and Statistics (2,918)	American Journal of Agricultural Economics (467)	Journal of Macroeconomics (655)
Tier A	Cambridge Journal of Economics (163)	Journal of Policy Modeling (752)
Health Economics (600)	China Economic Review (490)	Journal of Population Economics (492)
Journal of Business & Economic Statistics (373)	Economic Systems (940)	Journal of Urban Economics (1,035)
Journal of Development Economics (3,142)	Economics Letters (1,565)	Manchester School (255)
Journal of Econometrics (116)	Economics of Education Review (1,041)	Regional Science and Urban Economics (398)
Journal of Financial Economics (1,598)	Economics of Transition and Institutional Change (343)	Research in Economics (156)
Journal of Health Economics (269)	Empirical Economics (824)	Scandinavian Journal of Economics (313)
Journal of Human Resources (715)	Energy Economics (539)	Southern Economic Journal (796)
Journal of Monetary Economics (877)	Environmental and Resource Economics (125)	Structural Change and Economic Dynamics (241)
Journal of Money Credit and Banking (2,022)	European Journal of Political Economy (1,321)	, ,
Journal of Public Economics (1,637)	Experimental Economics (137)	
Public Choice (640)	Journal of Applied Economics (304)	

Notes: Number of estimates with author gender identified reported in brackets. Classification of General Interest, Tier A, and Tier B journals based on Heckman and Moktan (2020). The other journals assessed are listed in Appendix 2.

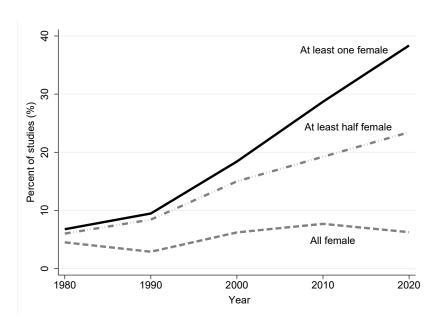


Figure 1 Percent of studies with a female (co)author

Notes: The solid line denotes studies with at least one female co-author; the dash-dot-dot line denotes studies that have at least half female co-authors, and the dashed line represents single or multiple all female-authored articles. Studies published in 49 economics journals.

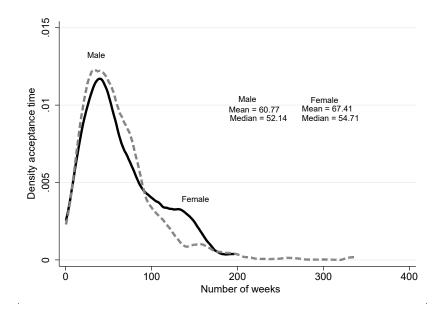


Figure 2 Distribution of time to acceptance (weeks)

Notes: Male and female refer to single gender authored papers. Mixed gender authored studies excluded. Studies published in 49 economics journals.

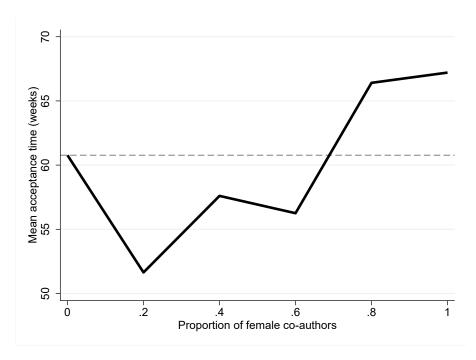


Figure 3 Mean acceptance time at different proportions of female co-authors

Notes: The dashed horizontal line denotes the sample mean acceptance time for male-only articles. The solid bold line represents sample mean acceptance time for studies as a function of the proportion of female co-authors. Studies published in 49 economics journals.

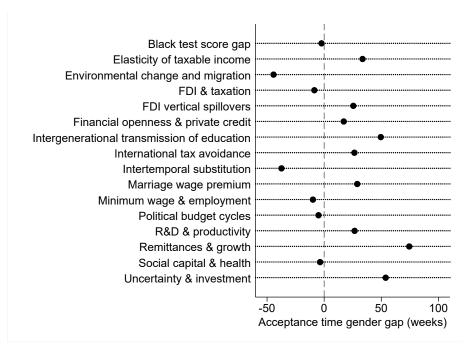


Figure 4 Gender gap in acceptance time, specific research areas

Notes: The dashed vertical line denotes the same time to acceptance for all female-authored articles as all male-authored articles. Positive (negative) values represent a longer (shorter) time to acceptance for all female-authored articles. Mixed-gender studies excluded.

Table 1 Gender and time to acceptance

	No controls	Plus journal and time fixed effects	Plus research area fixed effects	Plus controls	Plus controls
	(1)	(2)	(3)	(4)	(5)
Female	0.097	0.108	0.135	0.104	0.085
	(0.045)	(0.042)	(0.044)	(0.041)	(0.040)
Journal fixed effects		YES	YES	YES	YES
Time fixed effects		YES	YES	YES	YES
Research area fixed effects			YES	YES	YES
Controls				YES	YES
Mean, all female	67.41	67.41	67.41	67.41	64.89
Mean, all male	60.77	60.77	60.77	60.77	60.73
J	49	49	49	49	49
A	424	424	424	424	417
S	2,773	2,773	2,773	2,773	2,693
N	35,647	35,647	35,647	35,647	33,503

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. Female is the proportion of female authors. J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. Controls in Columns (4) include: the number of authors, a study's temporal rank, and the share of authors employed by a top 100 university. Column (5) includes the author(s)' share of reported estimates, sign reversal, and whether results are statistically significant at 5% level. Figures in brackets are standard errors clustered at the journal article level. WLS estimates. Coefficients on controls reported in Appendix 2, Table S1.

Table 2 Gender and time to acceptance, groups of journals

	Exclude	General	Non-	Solo	All other	All journals	Observation	Experimental
	estimates	interest	general	authored	journals	combined	al	
	without	journals	interest					
	stated day		journals					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	0.096	-0.034	0.134	0.168	0.114	0.087	0.097	-0.033
	(0.042)	(0.121)	(0.043)	(0.076)	(0.040)	(0.028)	(0.044)	(0.101)
Controls, with all fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Mean, all female	64.84	94.29	63.89	68.93	53.08	59.84	66.87	71.16
Mean, all male	59.35	79.07	56.44	56.18	42.56	52.59	60.65	61.76
J	43	6	43	49	652	701	49	34
A	383	184	393	237	360	423	335	82
S	2,112	448	2,245	774	2,857	5,548	2,310	383
N	26,909	5,152	28,351	10,912	28,595	62,098	32,021	1,482

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. Female is the proportion of female authors. Controls include: the number of authors, a study's temporal rank, the author(s) share of reported estimates, sign reversal, whether results are statistically significant at 5% level and share of authors employed at top 100 universities. J, A, S, A denote the number of journals, research areas, studies and observations, respectively. WLS estimates. Figures in brackets are standard errors clustered at the journal article level. Coefficients on controls reported in Appendix 2, Table S2.

Table 3 Gender and citations

		Citations			_	
	49 economics journals	Solo authored	With acceptance time	Interaction	Time to acceptance, 49 economics journals	Time to acceptance, all journals
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.083 (0.054)	0.198 (0.104)	0.094 (0.055)	-0.092 (0.262)	0.088 (0.040)	0.089 (0.028)
Share Top 100	0.155 (0.043)	0.018 (0.085)	0.156 (0.043)	0.156 (0.043)	0.040 (0.036)	-0.010 (0.026)
Acceptance time			-0.089 (0.023)	-0.095 (0.026)		
Female * Acceptance time				0.047 (0.066)		
Citations					-0.040 (0.017)	-0.030 (0.012)
Controls, journal, time & research area fixed effects	YES	YES	YES	YES	YES	YES
J A S N	49 413 2,581 31,940	49 232 755 10,363	49 413 2,581 31,940	49 413 2,581 31,940	49 417 2,693 33,503	689 423 5,493 62,027

Notes: The dependent variable is the natural logarithm of standardized citations in Columns (1) to (4) and the natural logarithm of the number of weeks from submission to acceptance in Columns (5) and (6). Female is the proportion of authors that are female. J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. Controls include the number of authors, a study's temporal rank, the author(s) share of reported estimates, sign reversal, whether results are statistically significant, and author affiliation. Columns (1) and (2) use citations for studies that report acceptance time. Column (3) includes the natural log of acceptance time and Column (4) interacts Female with acceptance time. WLS estimates. Figures in brackets are standard errors clustered at the journal article level. Coefficients on controls reported in Appendix 2, Table S3.

Table 4 Gender and research novelty

	Table 4 Gender and research novelty				
			I	Research novelt	y
	Time to	49	49	All studies	All studies
	acceptance	economics	economics	with	
		journals	journals, all	acceptance	
		with	estimates	time	
		acceptance			
		time			
	(1)	(2)	(3)	(4)	(5)
Female	0.106	0.002	-0.005	-0.006	0.003
	(0.043)	(0.022)	(0.020)	(0.016)	(0.011)
Share Top 100	0.014	0.074	0.081	0.051	0.040
	(0.039)	(0.018)	(0.016)	(0.013)	(0.009)
Novelty	0.046				
·	(0.045)				
Controls, journal, time & research area fixed effects	YES	YES	YES	YES	YES
J	49	49	71	594	1,417
A	413	413	418	422	424
S	2,417	2,417	2,890	4,730	11,088
N	31,511	31,511	37,530	54,926	130,805
	-	•	-	•	•

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance in Column (1) and the novelty index in Columns (2) to (5). Female is the proportion of authors that are female. J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. Controls include the number of authors, a study's temporal rank, the author(s) share of reported estimates, and author affiliation. Novelty is included as a covariate in Column (1). The sample in Column (2) is only economics studies with acceptance time. Column (3) also includes economics studies without acceptance time. Column (4) includes all studies in all journals with acceptance time. Column (5) includes all studies with and without acceptance time and for all disciplines. WLS estimates. Figures in brackets are standard errors clustered at the journal article level.

Table 5 Gender and research productivity, solo authored articles

	Prior Top 5 articles	All prior articles	All Top 5 articles	All articles
	(1)	(2)	(3)	(3)
Female	0.167	0.191	0.168	0.184
	(0.076)	(0.076)	(0.076)	(0.078)
Prior Top 5 publications	-0.069	-0.086	-0.064	-0.078
	(0.049)	(0.050)	(0.048)	(0.049)
Prior Non-top 5 publications	-	0.012	-	0.016
		(0.006)		(0.007)
Future Top 5 publications	-	-	-0.013	-0.011
			(0.038)	(0.039)
Future Non-top 5 publications	-	-	-	-0.007
				(0.005)
Controls, journal, time & research area fixed effects	YES	YES	YES	YES
J	49	49	49	49
A	237	237	237	237
S	774	774	774	774
N	10,912	10,912	10,912	10,912

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. Female is the proportion of female authors. Prior publications is the total number of articles published by an author in the four prior years. Future publications is the total number of articles published by an author in the same year as a given article plus the number of articles published in the subsequent three years. J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. All regressions include journal, time and research area fixed effects, and controls. Controls include the number of authors, a study's temporal rank, the author(s) share of reported estimates, sign reversal, whether results are statistically significant, and author affiliation. WLS estimates. Figures in brackets are standard errors clustered at the journal article level. Coefficients on controls reported in Appendix 2, Table S4.

Table 6 Pre and post internet and double anonymous review

	Submission pre-1998 (1)	Submission post-1998 (2)	Double anonymous review journals (7)
Female	0.086 (0.105)	0.073 (0.039)	0.147 (0.093)
Controls, journal, time & research area fixed effects	YES	YES	YES
J	39	49	14
A	162	393	228
S	571	2,122	678
N	6,407	27,096	8,042

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. Female is the proportion of authors that are female. J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. WLS estimates. Figures in brackets are standard errors clustered at the journal article level.

Table 7 Editors, gender, and time to acceptance

	Editorial board size and change	Female editor	Interaction with female editors	Only interaction
	(1)	(2)	(3)	(4)
Female	0.083	0.086	0.070	-
	(0.040)	(0.040)	(0.048)	
Female editors	-	-0.634	-0.689	-
		(0.203)	(0.236)	
Female author *	-	-	0.261	0.005
Female editor			(0.334)	(0.225)
Editorial board size & change in editors	YES	YES	YES	YES
Controls, journal, time & research area fixed effects	YES	YES	YES	YES
J	49	49	49	49
A	417	417	417	417
S	2,688	2,688	2,688	2,688
N	33,432	33,432	33,432	33,432

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. Female is the proportion of female authors. Column (1) adds as controls the size of the editorial board and the proportion of new editors. Column (2) controls for the proportion of female editors. Column (3) interacts Female with the share of female editors. Controls include: the number of authors, a study's temporal rank, the author(s) share of reported estimates, sign reversal, and whether results are statistically significant at 5% level. J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. WLS estimates. Figures in brackets are standard errors clustered at the journal article level.

Table 8 Gender, female representation and time to acceptance

	With fixed effects	Plus controls	Plus editors
	(1)	(2)	(3)
Female	0.211	0.216	0.212
	(0.069)	(0.065)	(0.065)
Female representation	0.017	0.008	-0.029
	(0.208)	(0.205)	(0.204)
Female * Female	-0.291	-0.490	-0.458
representation	(0.217)	(0.227)	(0.227)
Journal, time & research area fixed effects	YES	YES	YES
Controls		YES	YES
Editors			YES
J	49	49	49
\overline{A}	424	417	417
S	2,773	2,693	2,688
N	35,647	33,503	33,432

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. *Female* is the proportion of female authors. Female representation is calculated for the top 76 economics journals. *J*, *A*, S, and *N* denote the number of journals, research areas, studies, and observations, respectively. WLS estimates. Figures in brackets are standard errors clustered at the journal article level.

Table 9 Gender and time to acceptance, subfields, all studies

	Finance	Growth	IO	Labour	Micro
	(1)	(2)	(3)	(4)	(5)
Female	0.274	0.249	0.201	0.177	0.087
	(0.101)	(0.079)	(0.099)	(0.084)	(0.068)
J	69	150	147	137	212
A	36	64	34	63	58
S	452	680	404	602	1,074
N	5,868	8,946	4,073	6,135	3,280
	Education	Political	International	Energy	Macro
	& Health	economy			
	(6)	(7)	(8)	(9)	(10)
Female	0.071	0.047	0.023	-0.013	-0.117
	(0.083)	(0.115)	(0.087)	(0.136)	(0.130)
J	193	76	110	146	92
A	62	22	22	27	36
S	772	247	350	443	550
N	9,925	3,803	8,902	3,122	8,757

Notes: See notes to Table 1. All regressions include journal, time, and research area fixed effects and controls.

¹ We used several search engines, including *Scopus*, *Google Scholar*, and *Econlit*, as well as searching individual economics journals websites. Search terms included: 'meta-analysis', 'meta-regression', 'economics', 'econometrics', 'systematic review', various sub-fields, such as 'macroeconomics', 'labor (and labour) economics', and various effect size measures, such as 'elasticity', 'willingness to pay' and 'correlation'. For further details, see Section G of Appendix 2.

- ² We use the most recent meta-analysis where a particular research area has received more than one meta-analysis.
- ³ For the list of these journals see Heckman and Moktan (2020) or Table S8 of our Appendix 2.
- ⁴ By way of comparison, Ioannidis et al. (2017) assess 159 research areas and Askarov *et al.* (2023) assess 345 meta-analyses. Ioannidis et al. (2017) assess statistical power in economics research, whereas Askarov et al. (2023) investigate the effects of data sharing on research credibility in the top journals. We assess an entirely different phenomenon. Our sample includes most of the meta-analyses included in Askarov et al. (2023). The latter focussed on the top 31 journals, whereas we assess many more journals across many more research areas.
- ⁵ The 424 meta-analyses contain 216,564 estimates reported in theses, government reports, working papers, conference papers, book chapters, or published in academic journals. Acceptance time is reported only for some of these journals.
- ⁶ Some articles published in these 49 journals do not report acceptance time. Section I of Appendix 2 shows that our sample is broadly representative of all articles published in these journals, though the proportion of female authors is lower (0.11) in articles published in journals with missing time to acceptance data compared to articles published in the *same* journals with this data (0.17). However, this difference is a consequence of the increasing representation of female economists over time; see Figure 1 below. The missing time to acceptance occurs for studies published in earlier years.
- ⁷ Our sample of 424 meta-analyses includes 95% of estimates on acceptance time. As a final robustness check, we also include any study in the initial 717 meta-analyses identified at the start of the search for studies i.e. for robustness we also include meta-analyses that do not include any studies with acceptance time published in a leading economics journal; these results are reported in Appendix 2, Table S12.
- ⁸ One explanation for greater success of males in academia is higher research productivity, particularly a higher number of submissions to journals. Ideally, we would also investigate the acceptance *rate*, but we do not have data on submissions that are rejected (*e.g.*, desk rejected or after review) or the full submission histories.
- ⁹ This is the case for various Chinese and Korean first names and for unisex names.
- ¹⁰ In comparison, Card *et al.* (2020) were unable to assign gender to 3% of their economics sample. Gender identification is missing for studies where an author's first name is abbreviated and several Chinese and Korean names for which there is no additional information (*e.g.*, personal, and institutional webpages).
- ¹¹ Figures 1 to 4 reflect the proportion of studies, rather than estimates.
- ¹² The graph looks similar if we partition the sample into at least half vs less than half of the authors being female.
- ¹³ Doucouliagos and Stanley (2013) find that competition between rival economics researchers reduces publication selection bias and thereby increases the credibility of research.
- ¹⁴ For example, reviewers may not examine technical details or explanations as intensely for well-known authors. On the other hand, if journals want to encourage new talent and broaden the literature, they may look more favorably to newcomers. If females have fewer networks and collaborations, then this may affect their acceptance time, but the direction is unclear. Being part of a well-known network of authors may speed up acceptance time. Alternatively, editors may prefer to allocate journal space to less-known authors.
- ¹⁵ We use the unrestricted weighted least squares (UWLS) to calculate this meta-average (Stanley and Doucouliagos, 2015). The weights used are the inverse variance of the effect size (*e.g.*, an elasticity, dollar value, or correlation). UWLS does not correct the evidence base for publication bias; hence, it is likely to *overstate* the underlying effect (Stanley and Doucouliagos, 2015; Askarov *et al.*, 2023).
- ¹⁶ Most studies in our data report effect sizes (*e.g.*, elasticities) and their estimated standard errors. However, when some studies report effect sizes without standard errors (or the associated test statistic), we lose these observations if statistical significance is a control variable.
- ¹⁷ We focus on the coefficient on *Female*. Table S1 of Appendix 2 reports descriptive statistics and the results for other controls.
- ¹⁸ The pattern in Figure 3 suggests non-linearity. However, we find no evidence of non-linearity after controlling for journal, time, and research area fixed effects. The quadratic term is statistically insignificant and a likelihood-ratio test of the linear against the non-linear model is 1.72 with a *p*-value of 0.190.
- ¹⁹ The coefficient on *Share Top 100* is 0.035 (s. e. = 0.036). Results are similar if we use the share of the top 30 universities; see Table S1 of Appendix 2.
- ²⁰ The sample is smaller here because of missing standard errors in some studies which does not allows us to calculate statistical significance.
- ²¹ Table S1 of Appendix 2 adds journal and research area specific trends. The gender time to acceptance gap is 0.088 (standard error = 0.031) allowing for journal specific trends, and it is 0.082 (standard error = 0.034) allowing

for research area specific trends. However, journal/research area specific trends require sufficient observations over time which we do not have for some of the journals.

- 22 We applied Oster's (2019) approach to test the robustness of our results to potential unobserved omitted variable bias. This method estimates the ratio of the degree of selection on unobservable factors to the degree of selection on observable factors. The results suggest that unobservable variables would have to be three times more important than the observables included in our model; δ = 2.96. Hence, our findings are unlikely to be driven by omitted variables.
- ²³ A priori, it is not possible to determine the direction of this bias.
- ²⁴ These are: Econometrica, European Economic Review, International Economic Review, Economic Journal, Review of Economic Studies, and Review of Economics and Statistics.
- ²⁵ This finding differs from Hengel (2022) who finds that female-authored articles published in *Econometrica* and *Review of Economic Studies* take 3 to 6 months longer to review but is in line with findings of Card *et al.* (2020) who based their analysis on all top 5 journals.
- ²⁶ Hengel (2022) hypothesizes that longer review times for female-authored research may be due to higher writing standards.
- ²⁷ Boschini and Sjögren (2007) and Hospido and Sanz (2021) find that women are more likely to solo-author than males. This is not the case in our data, with 19.1% solo-authored studies published by females compared to a mean share of females of 21.8% for multiple authored studies.
- ²⁸ The study citation z-score is normalized by research area and calculated as: $z_i = ((S_i + 1) \mu_i)/\sigma_i$, where S_i is number of citations for study i; μ_i is the average value of the number of citations from the same research area as study i; σ_i is the standard deviation, and all values are in natural logarithms (Lundberg, 2007). Citations were collected from CrossRef (crossref.org, accessed 14 December 2024) for all published journal articles. We remove the more recent articles from this sample defined as articles published in the past 5 years, i.e., excluding articles published since 2018.
- ²⁹ Sarsons *et al.* (2020) note that because women receive less credit for co-authored research, higher ability females may choose to produce solo-authored articles to get credit for promotion and tenure. Our findings are consistent with this 'ability-based sorting' mechanism.
- ³⁰ Grossbard *et al.* (2021) find higher citations for female-authored articles in two economics journals.
- ³¹ However, some novel research takes longer to assess and review, and the net effect is an empirical matter.
- ³² OpenAlex was used to retrieve keywords (accessed December 2024). The novelty indicator is calculated for a slightly reduced set of articles since in exceptional cases articles were not listed in OpenAlex and/or did not mention keywords.
- ³³ Table S5 of Appendix 2 shows that conditional on controls and fixed effects, the novelty index is not statistically significant when added as a variable in the analysis of citations.
- This information was collected primarily from the Leibniz Information Centre for Economics (https://www.zbw.eu/en/search), supplemented by Scopus, Google Scholar, and where necessary individual websites and CVs. Card *et al.* (2020) and Hospido and Sanz (2021) measure productivity as the number of publications in top journals in the past 5 years. We broaden this the productivity measure to include articles published in *all* journals.
- ³⁵ In Table S4 of Appendix 2 we report similar results after controlling for the number of years since an author's first article. This serves as a proxy for experience in writing and revising academic articles and is also a proxy for a researcher's age.
- ³⁶ Laband and Piette (1994) find that articles going through double-anonymous review process receive more citations.
- ³⁷ Ferber and Teiman (1980) find that females experience a higher acceptance *rate* under a double anonymous review process. Goldin and Rouse (2000) find that the introduction of anonymous auditions for musicians increased the likelihood that a female would be selected in the final round.
- ³⁸ This information was collected from journal homepages. Table S17 of Appendix 2 lists these journals.
- ³⁹ Data on editor identities were collected from journal webpages and back copies of published issues. In several cases we collected data from individual editor's CVs.
- 40 The proportion of female editors ranges from 0 to 1, with a mean proportion of 0.070. There are only 186 observations published with an all-female editorial board.
- ⁴¹ Female editors may also be more inclined to invite female reviewers.
- ⁴² Of course, female editors might have other effects, such as more likely to accept female-authored articles (as opposed to time taken to acceptance), but we cannot test this with our data *e.g.*, we do not have data on articles submitted but rejected.
- ⁴³ The number of researchers in a research area will include authors who are researching but have not yet published. The number of unique authors who have published is a reasonable proxy for the overall number of active researchers. This variable may understate female representation when the gender of an author is unknown.

⁴⁴ Females leave academia more frequently than their male counterparts. Moreover, at each career stage the share of remaining females becomes smaller; a phenomenon coined as a 'leaky pipeline' (Ginther and Kahn, 2004; Ginther and Kahn, 2021). To check the effect of this on our estimates, we again focus on solo-authored articles. Recall from Table 2 that female solo-authored articles take 18% longer to accept. When we remove from the sample female authors who did not publish in subsequent years, the gender gap *rises* to 37% (coefficient = 0.314, s. e. = 0.092), suggesting that the leaky pipeline does not explain this gender gap.

⁴⁵ These perceived threats may be individual or collective. Individual reviewers (and editors) may be motivated by perceived threats to their own status, privilege, or economic rents or they may view a collective threat against males.

⁴⁶ An additional factor is that reviewers who have already published in a research area may seek to protect economic rents (e.g., in the form of citations and reputation) by restricting competition from other authors by rejecting articles or demanding higher thresholds for publication of potential competitors.

⁴⁷ We define subfield as groups of research areas that fall under a broad *JEL* classification code, *e.g.*, labor or macroeconomics research.

⁴⁸ Some research areas can be cross classified into more than one subfield. For example, some meta-studies could be classified as macroeconomics or growth. We largely follow the JEL classification codes: https://www.aeaweb.org/jel/guide/jel.php. Under macroeconomics, we include research on: (i) monetary policy, (ii) financial regulation, (iii) consumption/investment/fiscal policy, and (iv) business cycles. This is essentially the JEL code Macroeconomics and Monetary policy with the addition of fiscal policy. Under growth, we include several studies on: (i) development aid, (ii) institutions, (iii) determinants of economic growth with focus on developing nations, (iv) development and poverty reduction, and (v) innovation and technological change.

⁴⁹ In our sample, there are very few authors publishing in the 49 economics journals *and* in non-business, non-economics journals. This is consistent with the differences in social norms explanation. However, we do not know the extent of overlap, if any, of referees between these groups of journals.

⁵⁰ However, this seeming 'positive' outcome needs to be highly qualified. We have data only on published studies. Hence, we do not know whether non-statistically significant results and their studies were, in general, more likely to be rejected thereby experiencing, effectively, an infinite delay.

⁵¹ We exclude these studies because they are not included in any of the meta-analyses that form our data. Studies that encompass both theory and empirics are included, but purely theoretical studies are never included in meta-analyses; meta-analyses focus on the quantitative synthesis of empirical estimates of economic phenomena.

⁵² Not correcting for selection bias is estimated to greatly bias the gender-wage gap downward (Stanley and Jarrell, 1998).

APPENDIX 2

The Delayed Acceptance of Female Research in Economics

Table of Contents

	Page number
A. Other controls Baseline results and journal and research area specific trends Full results for groups of journals Full results for citations Full results for research productivity	1-4 1 2 3 4
B. Citations and research novelty	5
C. Alternate standard errors	5
D. Study level results	6
E. Robustness to individual journals	7–8
F. Non-linearities	9–10
G. The meta-survey PRISMA diagram List of the leading economics journals	11–12 11 12
H. Research areas included in survey	13–22
I. Comparison of included to excluded studies Studies with missing data published in included journals Excluded meta-analyses Unknown authors	23–24 23 24 25
J. Author affiliation	26
K. List of other journals	27–30
L. Double anonymous journals	31
M. References for included meta-analyses	31–42

A. Other controls

A1. Baseline results and journal and research area specific trends

Table 1 in the main article focuses on the coefficient on *Female*. Table S1 reports the full results with controls in Columns (2) and (3), which correspond to Columns (4) and (5) of Table 1, respectively. In Column (4) we replace the share of authors in the top 100 universities with the share of authors in the top 30 universities. In Column (5), we re-estimate Column (3) with the addition of journal specific trends and in Column (6) we add research area specific trends. Column (1) reports the mean and standard deviation.

Table S1 Other controls and robustness to trends

	Table 51			ness to trends		
	Mean (standard deviation)	Plus controls	Plus controls	Author affiliation, top 30	Journal specific trends	Research area specific trends
	(1)	(2)	(3)	(4)	(5)	(6)
In(acceptance)	3.863 (0.738)	.,				
Female	0.174 (0.304)	0.104 (0.041)	0.085 (0.040)	0.084 (0.040)	0.088 (0.031)	0.082 (0.034)
Number of authors	2.083 (0.909)	0.018 (0.014)	0.021 (0.014)	0.021 (0.014)	0.020 (0.011)	0.021 (0.013)
Temporal rank	12.734 (7.813)	0.154 (0.013)	0.159 (0.013)	0.159 (0.013)	-0.008 (0.009)	-0.003 (0.024)
Share Top Universities	0.232 (0.375)	0.031 (0.035)	0.035 (0.036)	-0.001 (0.048)	0.047 (0.028)	0.026 (0.030)
Author share of estimates	0.051 (0.077)	-	0.228 (0.205)	0.228 (0.205)	0.159 (0.162)	0.109 (0.193)
Sign reversal	0.247 (0.356)	-	-0.024 (0.022)	-0.024 (0.022)	0.013 (0.016)	0.020 (0.018)
Statistically significant	0.573 (0.391)	-	-0.015 (0.019)	-0.015 (0.019)	-0.007 (0.014)	-0.001 (0.015)
Journal, time, and research area fixed effects		YES	YES	YES	YES	YES
Journal specific trends		NO	NO	NO	YES	NO
Research area specific trends		NO	NO	NO	NO	YES
J		49	49	49	49	49
A		424	417	417	417	417
S N		2,773 35,647	2,693 33,503	2,693 33,503	2,693 33,503	2,693 33,503
14		33,071	33,303	33,303	22,203	33,303

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. *Female* is the proportion of female authors. J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. WLS estimates. Figures in brackets are standard errors clustered at the journal article level.

A2. Full results for groups of journals

Table S2 reports the full set of results for the groups of journals analysis, Table 2 of the main article. The list of journals used for Columns (5) and (6) are listed in Tables S14 and S15 below.

Table S2 Gender and time to acceptance, groups of journals, full results

	Exclude	General	Non-	Solo	All other	All journals	Observation	Experiment
	estimates	interest	general	authored	journals	combined	al	al
	without	journals	interest					
	stated day		journals		2=5	4.50		(0)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	0.096	-0.034	0.134	0.168	0.114	0.087	0.097	-0.033
	(0.042)	(0.121)	(0.043)	(0.076)	(0.040)	(0.028)	(0.044)	(0.101)
Number of	0.015	0.040	0.009	-	-0.011	0.004	0.027	-0.009
authors	(0.014)	(0.034)	(0.016)		(0.011)	(0.008)	(0.016)	(0.027)
Temporal rank	0.230	0.097	0.210	0.129	0.194	0.168	0.151	0.286
,	(0.015)	(0.027)	(0.017)	(0.020)	(0.019)	(0.010)	(0.014)	(0.029)
Author share of	0.355	0.323	0.269	0.200	-0.187	0.026	0.168	0.549
estimates	(0.241)	(0.542)	(0.228)	(0.534)	(0.171)	(0.124)	(0.230)	(0.428)
Sign reversal	-0.007	0.039	-0.033	-0.060	0.008	-0.020	-0.033	-0.013
	(0.022)	(0.033)	(0.023)	(0.033)	(0.020)	(0.015)	(0.023)	(0.056)
Statistically	-0.017	0.001	-0.016	-0.015	-0.014	-0.016	-0.007	-0.067
significant	(0.020)	(0.028)	(0.020)	(0.027)	(0.017)	(0.013)	(0.019)	(0.050)
Share Top	0.084	-0.133	0.052	0.015	-0.077	-0.012	0.025	0.003
Universities	(0.038)	(0.077)	(0.041)	(0.064)	(0.039)	(0.026)	(0.039)	(0.080)
Journal, time, and research area fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
J	43	6	43	49	652	701	49	34
A	383	184	393	237	360	423	335	82
S	2,112	448	2,245	774	2,857	5,548	2,310	383
N	26,909	5,152	28,351	10,912	28,595	62,098	32,021	1,482

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. *Female* is the proportion of female authors. J, A, S, and N denote the number of journals, research areas, studies and observations, respectively. WLS estimates. Figures in brackets are standard errors clustered at the journal article level.

A3. Full results for citations

Table S3 reports the full set of results for citations analysis, Table 3 of the main article.

Table S3 Gender and citations, full results

	49	Solo	With	Interaction
	economics	authored	acceptance	
	journals (1)	(2)	time (3)	(4)
Female	0.083	0.198	0.094	-0.092
1 emate	(0.054)	(0.104)	(0.055)	(0.262)
Number of authors	0.096		0.096	0.097
	(0.019)		(0.019)	(0.019)
Temporal rank	-0.072	-0.100	-0.073	-0.073
	(0.013)	(0.025)	(0.012)	(0.012)
Author share of	1.269	2.366	1.269	1.265
estimates	(0.242)	(0.776)	(0.241)	(0.241)
Sign reversal	0.042	-0.027	0.041	0.040
	(0.029)	(0.045)	(0.029)	(0.029)
Statistically significant	0.018	-0.037	0.015	0.015
	(0.024)	(0.038)	(0.023)	(0.023)
Share Top 100	0.155	0.018	0.156	0.156
	(0.043)	(0.085)	(0.043)	(0.043)
Acceptance time			-0.089	-0.095
			(0.023)	(0.026)
Female * Acceptance				0.047
time				(0.066)
Journal, time & research area fixed	YES	YES	YES	YES
effects				
J	49	49	49	49
A	413	232	413	413
S	2,581	755	2,581	2,581
N	31,940	10,363	31,940	31,940

Notes: The dependent variable is the log of standardized citations. Female is the proportion of authors that are female. J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. WLS estimates. Figures in brackets are standard errors clustered at the journal article level.

A4. Full results for research productivity

Table S4 reports the full set of results for the research productivity analysis, Table 5 of the main text. In Columns (5) and (6) we consider the number of years since the first article (*First article*); this is the number of years since the publication of an author's first article and the year the current article was accepted. *First article* serves as a proxy for the number of years a researcher has been publishing and reflects experience in writing and revising articles and also serves as a proxy for a researcher's age.

Table S4 Gender and research productivity, solo authored articles, full results

	Prior Top 5 articles	All prior articles	All Top 5 articles	All articles	First article	All articles and first article
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.167	0.191	0.168	0.184	0.180	0.188
	(0.076)	(0.076)	(0.076)	(0.078)	(0.076)	(0.077)
Prior Top 5 publications	-0.069	-0.086	-0.064	-0.078		-0.082
	(0.049)	(0.050)	(0.048)	(0.049)		(0.050)
Prior Non-top 5		0.012		0.016		0.015
publications		(0.006)		(0.007)		(0.007)
Future Top 5 publications			-0.013	-0.011		-0.010
			(0.038)	(0.039)		(0.039)
Future Non-top 5				-0.007		-0.007
publications				(0.005)		(0.005)
First article					0.004	0.002
					(0.004)	(0.005)
Temporal rank	0.128	0.125	0.127	0.123	0.128	0.123
•	(0.020)	(0.021)	(0.021)	(0.021)	(0.020)	(0.021)
Author share of estimates	0.212	0.155	0.215	0.204	0.194	0.205
J	(0.531)	(0.524)	(0.528)	(0.521)	(0.537)	(0.523)
Sign reversal	-0.058	-0.049	-0.059	-0.046	-0.059	-0.049
	(0.033)	(0.034)	(0.033)	(0.033)	(0.033)	(0.034)
Statistically significant	-0.017	-0.015	-0.017	-0.015	-0.018	-0.017
, 0,	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.026)
Share Top 100	0.026	0.031	0.030	0.035	0.013	0.035
	(0.065)	(0.066)	(0.068)	(0.068)	(0.064)	(0.068)
Journal, time & research area fixed effects	YES	YES	YES	YES	YES	YES
J	49	49	49	49	49	49
A	237	237	237	237	237	237
S	774	774	774	774	774	774
N	10,912	10,912	10,912	10,912	10,912	10,912

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. Female is the proportion of female authors. J, A, S, and N denote the number of journals, research areas, studies and observations, respectively. All regressions include journal, time and research area fixed effects. WLS estimates. Figures in brackets are standard errors clustered at the journal article level.

B. Citations and research novelty

In Table S5 we assess the effects of research novelty on citations. We again remove from the citations analysis studies published in the past 5 years. The sample in Column (1) is economics journals and in Column (2) we look at all journals. Columns (3) and (4) add journal, time and research area fixed effects and controls.

Table S5 Citations and research novelty

Table 83 Citations and research novelty						
	Economics journals,	All journals, no controls	Economics journals,	All journals, with		
	no controls		with	controls		
	(1)	(2)	controls (3)	(4)		
Novelty	0.373 (0.060)	0.300 (0.044)	0.015 (0.056)	-0.051 (0.041)		
Controls with all fixed effects			YES	YES		
J	49	544	49	558		
A	407	420	399	434		
S	2,306	4,379	2,239	4,220		
N	28,618	49,345	27,965	48,099		

Notes: The dependent variable is the log of standardized citations. *Novelty* is the novelty index (0 to 1). J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. WLS estimates. Figures in brackets are standard errors clustered at the journal article level.

C. Alternate standard errors

The main text reports results with standard errors clustered at the study level, following Brodeur *et al.* (2020) and Askarov et al. (2023). We reproduce these in Table S6, Column (1), and compare them to results using standard errors clustered at the journal level (Column 2), and research area level (Column 3), respectively.

Table S6 Alternate standard errors

	Standard errors clustered at the study level	Standard errors clustered at the journal level (2)	Standard errors clustered at the research area level (3)
Female	0.085 (0.040)	0.085 (0.045)	0.085 (0.044)
Controls with all fixed effects	YES	YES	YES
N	33,503	33,503	33,503

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. Female is the proportion of female authors. N denotes the number of observations. All regressions include journal, time and research area fixed effects, and controls. WLS estimates. Figures in brackets are standard errors clustered at the journal article level.

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¹ Brodeur, Abel, Nikolai Cook, and Anthony Heyes (2020). "Methods Matter: p-Hacking and Publication Bias in Causal Analysis in Economics." *American Economic Review*, 110(11), 3634–3660. Askarov, Z., Doucouliagos, A., Doucouliagos, H. and Stanley, T.D. 2023. The Significance of Data-Sharing Policy. *Journal of the European Economic Association*, 21:1191–1226.

D. Study level results

Results in the main text use weighted least squares because the unit of analysis is the individual test score. The weights are constructed to give each study equal weight while allowing the analysis to control for dimensions such as the reported level of statistical significance and sign reversal. In Table S7 the unit of analysis is study level *averages*. In these estimates each study contributes one estimate. These are estimated using OLS. Columns (1) to (5) use the core sample of 49 economics journals. Column (6) includes all studies published in all journals.

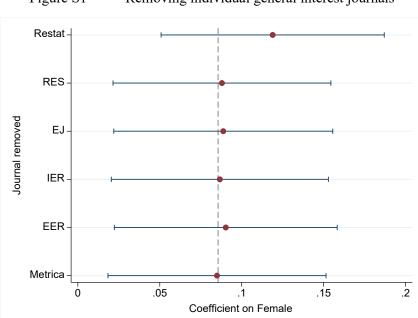
Table S7 Gender and time to acceptance, study level analysis

140	ies/	ender and time	to acceptance	c, study icve	i allalysis	
		49 e	conomics journ	nals		
	No controls	Plus journal and time fixed	Plus research area fixed	Plus controls	Plus controls	All studies, all journals
	(4)	effects	effects		. - \	(6)
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.096 (0.045)	0.109 (0.043)	0.136 (0.049)	0.105 (0.045)	0.089 (0.044)	0.086 (0.031)
Journal fixed effects		YES	YES	YES	YES	YES
Time fixed effects		YES	YES	YES	YES	YES
Research area fixed effects			YES	YES	YES	YES
Controls				YES	YES	YES
J A S N	49 424 2,773 2,773	49 424 2,773 2,773	49 424 2,773 2,773	49 424 2,773 2,773	49 417 2,693 2,693	713 423 5,523 5,523

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. Female is the proportion of female authors. J, A, S, and S denote the number of journals, research areas, studies, and observations, respectively. Controls in Columns (4) include: the number of authors, a study's temporal rank, the author(s) share of reported estimates, sign reversal, and whether results are statistically significant at 5% level. Column (5) includes the share of authors employed by a top 100 university. Standard errors reported in brackets. OLS estimates.

E. Robustness to individual journals

Figures S1 to S4 explore the sensitivity of the results to removing the stated journal from the sample, for general interest, 'Tier A', 'Tier B', and all other journals, respectively.



Removing individual general interest journals Figure S1

Notes: Gray dashed line is the coefficient on Female using all 49 economics journals. 90% confidence intervals illustrated. EER = European Economic Review. IER = International Economic Review. EJ = Economic Journal. RES = Review of Economic Studies. ReStat = Review of Economics and Statistics.

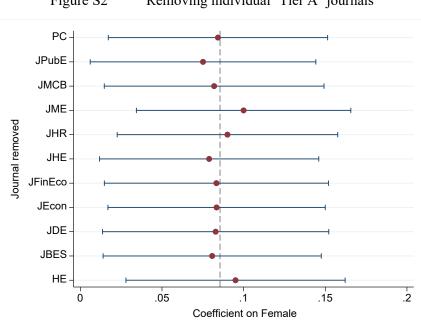
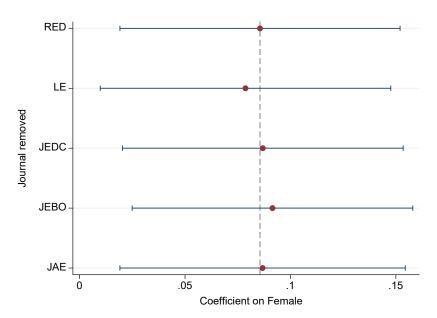


Figure S2 Removing individual 'Tier A' journals

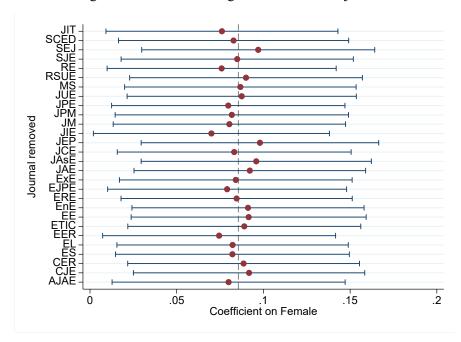
Notes: Gray dashed line is the coefficient on Female using all 49 economics journals. 90% confidence intervals illustrated. HE = Health Economics. JBES = Journal of Business and Economic Statistics. JDE = Journal of Development Economics. JEcon = Journal of Econometrics. JfinEco = Journal of Financial Economics. JHE = Journal of Health Economics. JHR = Journal of Human Resources. JME = Journal of Monetary Economics. JMCB= Journal of Money Credit and Banking. JpubE = Journal of Public Economics. PC = Public Choice.

Figure S3 Removing individual 'Tier B' journals



Notes: Gray dashed line is the coefficient on Female using all 49 economics journals. 90% confidence intervals illustrated. JAE = Journal of Applied Econometrics. JEBO = Journal of Economic Behavior and Organization. JEDC = Journal of Economic Dynamics and Control. LE = Labour Economics. RED = Review of Economic Dynamics.

Figure S4 Removing individual 'other' journals



Notes: Gray dashed line is the coefficient on Female using all 49 economics journals. 90% confidence intervals illustrated. AJAE = American Journal of Agricultural Economics. CJE = Cambridge Journal of Economics. CER = China Economic Review. ES = Economic Systems. EL = Economics Letters. EER = Economics of Education Review. ETIC = Economics of Transition and Institutional Change. EE = Empirical Economics. EnE = Energy Economics. ERE = Environmental and Resource Economics. EJPE = European Journal of Political Economy. ExE = Experimental Economics. JAE = Journal of Applied Economics. JasE = Journal of Asian Economics. JCE = Journal of Comparative Economics. JEP = Journal of Economic Psychology. JIE = Journal of International Economics. JM = Journal of Macroeconomics. JPM = Journal of Policy Modeling. JPE = Journal of Population Economics. JUE = Journal of Urban Economics. MS = Manchester School. RSUE = Regional Science and Urban Economics. RE = Research in Economics. SJE = Scandinavian Journal of Economic Development.

F. Non-linearities

Figure S5 illustrates marginal effects associated with the interaction of *Female* and *Acceptance time* on citations, reported in Table 3, Column (4).

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Figure S5 Marginal effects of female authors and time to acceptance interactions

Note: Marginal effects on citations calculated from coefficients reported in Table 3, Column (4) of the main manuscript.

Figure S6 illustrates marginal effects associated with the interaction of *Female* and *Female editors* on acceptance time reported in Table 7, Column (3).

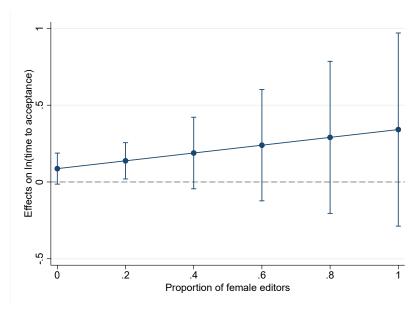
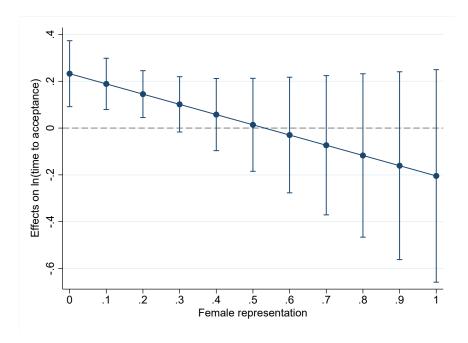


Figure S6 Marginal effects of female authors and female editors interactions

Note: Marginal effects on acceptance time calculated from coefficients reported in Table 7, Column (3) of the main manuscript.

Figure S7 illustrates marginal effects associated with the interaction of *Female* and *Female* representation on acceptance time reported in Table 8, Column (3).

Figure S7 Marginal effects of female authors and female representation interactions



Note: Marginal effects on acceptance time calculated from coefficients reported in Table 8, Column (3) of the main manuscript.

G. The meta-survey

The data come from meta-analyses that collect all reported and comparable effect sizes (e.g., elasticities, correlations, dollar values) for a specific research area. We identified meta-studies using search engines (Econlit, Scopus, and Google Scholar), publisher sites (e.g., Science Direct, Sage, and Wiley), and webpages of researchers known to publish meta-analyses. We also searched all volumes of individual journals that are known to publish meta-analyses, e.g., Journal of Economic Surveys, World Development, Public Choice, European Journal of Political Economy, Oxford Economic Papers, European Economic Review, and Ecological Economics. The search for meta-analyses was not limited to economics journals; we include several meta-analyses published in industrial relations, business research, political science, international relations, and psychology (e.g., Management Science and Psychological Bulletin) but which relate to economics issues. We used the following search terms: 'meta-analysis', 'meta-regression', 'meta-regression analysis', 'research synthesis', 'systematic review', 'quantitative review', 'economics', 'economics research', 'applied economics', 'empirical economics', and 'applied econometrics'. We also used field search terms such as 'microeconomics', 'macroeconomics', 'experimental economics', 'industrial relations', 'labor (labour) economics', and 'international economics'. Where a research area has received more than one meta-analysis or systematic review, we include the most recent and comprehensive study. The search for meta-analyses ended 30 June 2024. Some studies report the meta-analysis data as part of the study or as an online appendix. Where meta-analysis data were unavailable, we contacted authors via email. We had a 74% response rate from 109 contacted authors. In most cases, the published or emailed meta-analysis data did not contain journal names, but they almost always contained author names. We used reference lists to manually match author names to journals. Where we could not identify the journal with 100% certainty, we omitted these observations.

Figure S8 presents a PRISMA diagram of the identification, selection, and inclusion process.

Meta-analyses with publicly available data (n = 717)

Reasons for exclusion:

1. No studies published in leading economics journals (n = 177)

2. Insufficient data on acceptance time in leading economics journals (n = 116)

Meta-analyses included (n = 424)

Figure S8 Identification, screening and inclusion of studies

Our initial search for meta-analysis of economics research with publicly available data identified 717 studies. There are, of course, many other meta-analyses, but the data is not publicly available through data repositories or directly from authors. We then identified those meta-analyses that included studies published in a leading economics journal. We use the Heckman and Moktan (2020) classification of the 55 leading economics journals. This includes the top 5 journals, the non-top 5 general interest, 18 tier A and 27 tier B journals. These journals are listed in Table S8. 540 of the 717 meta-studies included studies published in at least one of these 55 journals; the other 177 meta-analyses do not include any study published in one of the 55 leading economics journals. We then collected data on acceptance time for all studies included in these 540 meta-analyses. We subsequently removed 116 meta-analyses from our sample because they did not include sufficient observations on acceptance time: 114 meta-analyses included no study published in a leading economics journal and reported acceptance time, and 2 meta-analyses reported only a small number of studies with acceptance time (less than 100 observations). This includes studies published in journals that never report acceptance time, or studies published in journals that at some point did not report acceptance time (see Section I below for further discussion on this.) This leaves a final group of 424 meta-analyses that include empirical studies: (1) published in a leading economics journal and (2) report acceptance time; see Table S9 below.

Table S8 Heckman and Moktan (2000) list of the leading economics journals

Top 5	Non-Top 5 General interest
American Economic Review	Review of Economics and Statistics
Econometrica	Economic Journal
Journal of Political Economy	Journal of Tthe European Economic Association
Quarterly Journal of Economics	European Economic Review
Review of Economic Studies	International Economic Review
Tier A	Tier B
Journal of Development Economics	World Development
Journal of Economic Growth	Economic Development and Cultural Change
	World Bank Economic Review
Journal of Econometrics	Journal of Applied Econometrics
Journal of Business and Economic Statistics	Econometric Theory
-	Journal of the American Statistical Association
Journal of Financial Economics	Review of Financial Studies
Journal of Finance	Journal of Financial and Quantitative Analysis
	Mathematical Finance
Journal of Economic Theory	Journal of Economic Behavior and Organization
Games and Economic Behavior	Economic Theory
	Journal of Risk and Uncertainty
Journal of Health Economics	Health Services Research
Health Economics	Int. Journal of Health Care Finance and Economics
	Economics and Human Biology
RAND Journal of Economics	International Journal of Industrial Organization
Journal of Industrial Economics	Journal of Economics and Management Strategy
	Industrial and Corporate Change
Journal of Labor Economics	Labour Economics
Journal of Human Resources	Industrial and Labor Relations Review
-	Industrial Relations
Journal of Monetary Economics	Journal of Economic Dynamics and Control
Journal of Money, Credit and Banking	Review of Economic Dynamics
	Macroeconomic Dynamics
Journal of Public Economics	National Tax Journal
Public Choice	Review of Income and Wealth
	Int. Tax and Public Finance

Note: Reproduced from Heckman and Moktan (2000).

H. Research areas included in the survey

Table S9 lists the 424 research areas included in the analysis. Column (1) presents the mean acceptance time for all studies in a research area and Columns (2) and (3) report mean acceptance time when less than half of the authors are female and when at least half of the authors are female, respectively. Acceptance times in Columns (1) to (3) are in weeks.

Table S9 Research areas included (Ordered by mean acceptance time for studies with more than 50% female authors.

Means based on all studies reporting acceptance time)

•	ng acceptance Mean	Mean	Mean
	acceptance	acceptance	acceptance
	time (weeks)	time < 0.5	time ≥ 0.5
Research area		females	females
(meta-study)	(1)	(weeks)	(weeks)
Monopsony in labor markets (Sokolova & Todd Sorensen 2018)	(1)		` `
Unions & intangible capital (Doucouliagos et al. 2017)	92.33	72.84	172.29
Food consumption elasticities, fish (Green et al. 2017)	75.41	71.63	169.86
	84.20	63.45	160.29
Own price elasticity of labor (Lichter et al. 2015) Impact of uncertainty on investment (Koetse et al. 2006)	103.79 112.65	100.88	139.54 128.98
		79.99	
Minimum wage & US employment post 2000 (Belman & Wolfson 2014)	48.28	42.52	128.86
Labor market policies (Vooren 2019)	89.56	65.71	123.29
M&A & value (Meckl & Röhrle 2016)	98.71	89.51	121.71
Race to the bottom – welfare (Costa-Font et al. 2014)	75.51	44.32	119.87
FDI & economic performance in enlarged Europe (Cipollina & Bruno 2018)	88.21	45.67	119.43
Minimum wage & employment world data (Chletsos & Giotis 2015)	83.71	34.14	116.49
Community monitoring interventions & test scores (Molina et al. 2017)	113.71	Na	113.71
Trade openness & private credit (Doucouliagos et al. 2020)	67.23	56.56	109.90
Student employment and education (Kroupova et al. 2021)	67.58	63.61	108.94
Unions & productivity levels (Doucouliagos et al. 2017)	40.08	22.26	108.63
Shareholder activism (Bajzík et al. 2023)	50.21	40.37	107.09
Shedding light on the shadows of informality (Floridi et al. 2019)	69.95	58.36	106.85
Effects of inequality on growth (Neves et al. 2016)	95.12	90.82	106.57
Participation & productivity labor managed firms (Doucouliagos 2015)	70.93	35.71	106.14
Food consumption elasticities, meat (Green et al. 2013)	90.11	77.12	104.96
Remittances & private credit (Doucouliagos et al. 2020)	69.59	23.40	104.24
Government transfers & growth (Churchill & Yew 2017)	82.69	58.17	103.57
Corporate hedging & shareholder value (Bessler et al. 2019)	79.87	69.51	100.83
Non-debt tax shield (Hang et al. 2018)	78.39	56.16	99.18
Student dropout, sixth year (Ibsen & Rosholm 2024)	98.57	Na	98.57
Paying people to protect the environment - during payment (Maki et al. 2016)	69.17	61.93	98.14
Corporate structure & earnings volatility (Hang et al. 2018)	58.19	45.00	97.38
Habit formation in consumption (Havranek et al. 2017)	60.99	58.30	95.77
Elasticity of taxable income (Neisser 2018)	69.75	59.57	95.47
Immigration & employment (Longhi et al. 2010)	95.06	95.14	95.00
Immigration & wages (Longhi et al. 2010)	95.06	95.14	95.00
Natural resources & growth (Havranek et al. 2016)	70.08	64.91	94.86

Inflation & private credit (Doucouliagos et al. 2020)	78.34	73.74	93.08
Beta Convergence (Abreu et al. 2005)	72.55	65.04	92.72
Beer elasticity (Stanley & Doucouliagos 2012)	57.10	51.72	91.87
School choice & student achievement, school (Jabbar et al. 2019)	61.55	61.41	91.14
Corporate capital structure & RD (Hang et al. 2018)	60.33	30.51	89.54
Publication bias & stock returns (Chen & Zimmerman 2020)	58.73	57.13	89.24
Substitution, polluting & nonpolluting inputs, labor (Liu & Shumway 2016)	58.76	58.22	89.21
Substitution elasticities, polluting & nonpolluting inputs, capital (Liu & Shumway 2016)	57.51	57.07	89.21
Effectiveness of RD subsidies (Dimos & Pugh 2016)	89.10	89.10	89.09
The income-elasticity of calories (Santeramo & Shabnam 2015)	64.10	39.38	88.81
Wine elasticity (Stanley & Doucouliagos 2012)	58.57	51.91	87.55
Land diversity and jobs (Stevens 2017)	86.14	Na	86.14
RD & productivity in OECD firms & industries (Ugur et al. 2016)	64.08	60.88	86.23
Employee ownership (O'Boyle et al. 2016)	79.43	77.44	86.05
Inertia as motive for aid allocation (Doucouliagos and Paldam no date)	57.07	28.43	85.71
Vertical spillovers from FDI authors (Havranek & Irsova 2011)	98.75	102.70	85.35
Indivisible labor, micro & macro elasticities (Chetty et al. 2012)	99.05	106.36	84.43
Growth & RD in the EU (Kokko et al. 2015)	66.37	64.23	84.43
Profit sharing and productivity (Doucouliagos et al. 2020)	69.24	63.74	84.16
Horizontal spillovers from FDI authors (Havranek & Irsova 2013)	101.75	106.93	83.57
Do some countries discriminate more than others (Quillian et al. 2019)	56.57	43.43	82.86
Corporate capital structure - growth opportunities (Hang et al. 2018)	66.20	49.69	82.54
Corporate structure & Profitability (Hang et al. 2018)	58.76	46.37	82.54
Spirits price elasticity (Stanley & Doucouliagos 2012)	46.17	42.76	79.99
Corporate capital structure & Tangible Assets (Hang et al. 2018)	59.55	47.08	79.70
Corporate capital structure & Firm Size (Hang et al. 2018)	56.11	44.19	79.70
Food consumption elasticities, sweets (Green et al. 2013)	80.23	81.29	78.11
Ownership & performance later sample (Wang & Shailer 2018)	72.45	70.98	78.10
International tax avoidance (Beer et al. 2019)	54.72	47.71	77.27
RD Spillovers & productivity (Ugur et al. 2019)	68.16	66.13	77.15
Production of knowledge (Neves & Sequeira 2018)	78.01	78.13	77.00
Spillovers in the production of knowledge (Neves & Sequeira 2018)	73.11	72.50	77.00
How to Solve the Price Puzzle 18 months (Rusnak et al. 2013)	82.41	82.75	76.14
How to Solve the Price Puzzle 12 months (Rusnak et al. 2013)	82.41	82.75	76.14
How to Solve the Price Puzzle 6 months (Rusnak et al. 2013)	82.41	82.75	76.14
How to Solve the Price Puzzle 3 months (Rusnak et al. 2013)	82.08	82.40	76.14
How to Solve the Price Puzzle 36 months (Rusnak et al. 2013)	80.81	81.07	76.14
Financial openness & private credit (Doucouliagos et al. 2020)	77.61	78.79	75.03
Food consumption elasticities, dairy (Green et al. 2013)	63.36	58.02	74.89
Conditional cash transfers & attendance rate (AidGrade 2019)	47.21	19.57	74.86
Food consumption elasticities, fats (Green et al. 2013)	77.62	80.34	74.59
Hospital ownership & performance (Shen et al. 2007)	74.14	Na	74.14
Discrimination in the laboratory (Lane 2016)	92.49	95.92	73.73
Gender differences in cooperation (Balliet et al. 2011)	55.76	46.36	73.73
Anchoring in economics (Li et al. 2021)	75.02	75.46	72.86
Inflation targeting and growth volatility (Balima et al. 2020)	64.93	33.49	72.79

Intergenerational transmission of education (Fleury & Gilles 2018)			
	46.41	28.67	72.65
Corporate tax competition (Heimberger 2021)	62.88	57.29	72.07
Wage curve (Babecky et al. 2008)	38.40	18.16	71.24
Group affiliates and firm growth (Lin et al. 2019)	63.71	62.48	71.14
Wage impact of teacher unions (Merkle & Phillips 2018)	62.14	44.29	71.07
Education & mortality (Hamad et al. 2018)	92.93	115.00	70.86
Social influences on unethical behavior (Belle & Cantarelli 2017)	46.21	29.71	70.21
Food consumption elasticities, fruit (Green et al. 2013)	66.65	63.54	70.00
Income elasticity of VSL (Doucouliagos et al. 2014)	78.10	79.15	69.71
German labor market (Popp 2023)	52.73	46.90	69.63
Saving accounts take up (Knowles 2018)	69.57	Na	69.57
Saving accounts utilization (Knowles 2018)	69.57	Na	69.57
Substitution, polluting & nonpolluting inputs, land (Liu & Shumway 2016)	58.26	58.13	69.57
Government spending & per capita income (Churchill et al. 2017)	73.15	74.18	69.09
Relative risk aversion (Elminejad et al. 2023)	73.23	73.89	68.60
Personality self-control (Thielmann et al. 2020)	41.28	38.67	68.43
Water quality treatment & access (Andres et al. 2018)	29.10	13.54	68.00
Firm size & returns (Astakhov et al. 2017)	54.56	51.74	67.82
Efficiency wages & productivity (Krassoi-Peach & Stanley 2009)	67.71	Na	67.71
Rose effect (Havranek 2010)	68.17	68.52	67.64
Urban residential water demand (Jegnie et al. 2023)	54.65	48.82	67.59
Taking games (Flage 2023)	57.58	51.25	67.42
Reciprocal trade agreements (Cipollina & Salvatici 2010)	59.67	57.43	67.13
Financial education & financial knowledge (Kaiser et al. 2020)	57.10	48.69	66.73
Food consumption elasticities, other (Green et al. 2013)	70.81	78.97	66.53
Marriage wage premium (de Linde Leonard & Stanley 2015)	48.09	41.54	66.53
Financial Incentives & Performance (Cala et al. 2022)	55.28	50.68	66.42
FDI & productivity (Demena & van Bergeijk 2017)	66.83	67.02	66.03
Competition & cooperation in corporate governance (van Essen et al. 2013)	62.84	59.28	65.89
Education & economic growth (Benos & Zotou 2014)	46.13	45.00	65.86
Contact hypothesis re-evaluated (Palluck et al. 2019)	31.38	14.36	65.43
Social capital and growth (Xue et al. 2024)	58.66	56.42	65.15
Does growth attract FDI (Iamsiraroj & Doucouliagos 2015)	41.64	39.97	64.57
Property tax limitation & property revenues (Martin 2015)	60.62	57.57	64.43
Productivity of public capital (Bom & Ligthart 2014)	49.66	47.37	63.96
Post-privatization ownership & performance (Iwasaki & Mizobata 2018)	43.61	35.52	63.27
International capital mobility (Bineau 2010)	25.76	24.47	63.05
FDI & growth (Iamsiraroj 2008)	55.05	46.84	62.59
Cheap talk (Penn & Hu 2019)	46.57	41.07	62.59
Intertemporal substitution (Havranek 2015)	67.28	67.56	62.39
Paradox of plenty direct effects (Dauvin & Guerreiro 2017)	67.86	72.11	62.00
Does FDI affect inequality (Huang et al. 2020)	62.41	66.00	61.25
Turnover rates and organizational performance (Park & Shaw 2012)	36.92	17.62	61.14
Rebound effect, fuel efficiency (Dimitropoulos et al. 2018)	39.91	34.98	60.95
Intergenerational transmission of education, siblings (Prag et al. 2019)	88.42	116.52	60.32
Negative ratings (Hubler et al. 2019)			
1.05mil. 3 Intiligo (11moloi et al. 2017)	47.93	42.56	60.06

Food compression electricities compele (C			
Food consumption elasticities, cereals (Green et al. 2013) Local immigration and support for anti-immigration parties (Cools et al.	79.64	80.53	60.00
2021)	51.67	48.96	59.80
Globalization & government spending (Heimberger 2020)	51.21	50.41	59.40
Workplace mistreatment, sex (McCord et al. 2018)	53.03	37.87	58.76
Income elasticity of gasoline demand (Havranek & Kokes 2015)	42.49	42.30	58.71
Major industrial accidents (Carpentier & Suret 2021)	50.08	44.68	58.71
Aid & growth (Doucouliagos & Paldam 2013b)	58.74	58.78	57.99
Rebound effect, fuel price (Dimitropoulos et al. 2018)	31.41	25.89	57.83
Macroprudential policy & house prices (Araujo et al. 2020)	46.31	36.55	57.57
Macroprudential policy & household credit (Araujo et al. 2020)	51.71	51.60	57.57
Urban advantages (Donovan et al. 2024)	56.33	56.09	57.51
Immigration & house prices (Larkin et al. 2019)	79.18	87.70	57.40
Aid conditionality good policy (Doucouliagos & Paldam 2010)	64.23	85.03	56.43
Aid conditionality medicine model (Doucouliagos & Paldam 2010)	71.25	83.74	56.43
Capital structure choice & company taxation (Feld et al. 2013)	70.45	71.50	56.39
Ownership & performance earlier sample (Wang & Shailer 2015)	44.14	32.05	56.00
Remittances & education (Askarov & Doucouliagos 2020)	46.50	28.11	55.96
Child penalty (de Linde Leonard & Stanley 2015)	60.51	76.21	55.75
School choice & student achievement, student (Jabbar et al. 2019)	57.83	58.50	55.68
Conditional cash transfers & education (AidGrade 2019)	43.65	39.43	54.21
Positive ratings (Hubler et al. 2019)	40.78	36.30	54.20
Is private production of hospital services cheaper (Bel & Esteve 2020)	55.14	55.65	53.81
Spillovers & exports (Duan et al. 2019)	52.43	51.97	53.17
Personality risk taking (Thielmann et al. 2020)	51.09	50.65	53.09
Property values & water quality (Guignet et al. 2022)	45.81	44.72	52.76
Inequality and crime (Pazzona 2024)	63.69	63.84	52.57
Residential water demand (Dalhuisen et al. 2003)	47.23	45.91	52.14
Retirement & health (Filomena & Picchio 2023)	49.52	48.34	51.49
Wage response to corporate taxes (Knaisch & Pöschel 2024)	33.88	20.72	51.43
Gambling demand (Gallet 2015)	28.98	22.02	51.26
Stake size in game (Larney 2019)	41.63	38.00	51.09
Discrimination in hiring (Zschirnt & Ruedin 2016)	51.00	Na	51.00
Alcohol elasticity (Stanley & Doucouliagos 2012)	36.25	32.75	50.81
Gender differences in risk attitudes (Filippin & Crosetto 2016)	66.84	71.26	50.62
Soccer games & stock markets (Geyer-Klingeberg et al. 2018)	38.41	38.29	50.43
Active lab or market programs (Card et al. 2018)	50.83	51.11	50.13
Conscientiousness and earnings (Vella 2024)	50.90	52.58	49.88
Openness and earnings (Vella 2024)	50.89	52.58	49.61
Paradox of plenty indirect effects (Dauvin & Guerreiro 2017)	90.88	92.04	49.00
Natural disasters, indirect (Lazzaroni & van Bergeijk 2014)	48.95	48.95	48.86
Effectiveness of fiscal incentives for innovation (Jose & Sharma 2019)	57.54	68.29	48.35
Inflation targeting and interest rate volatility (Balima et al. 2020)	48.29	Na	48.29
FDI & taxation (Feld & Heckemeyer 2011)	60.66	66.41	48.01
Forward spillovers from FDI (Havranek & Irsova 2013)	106.38	113.62	47.89
Feedback & energy conservation (Karlin et al. 2015)	62.52	63.86	47.86
Effect of warming on agriculture (Huang & Sim 2018)	43.34	42.98	47.69
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2425	21.10	48.00
		47.62
		47.41
		47.14
	58.08	46.71 46.38
37.02	34.99	
		46.25
66.77	67.78	45.92
42.44	24.19	45.48
39.97	36.78	45.13
38.82	34.83	44.92
59.95	85.09	44.83
66.39	70.11	44.57
45.89	46.02	44.29
55.71	64.65	44.20
37.60	34.84	44.10
46.58	52.58	44.04
48.07	54.49	43.99
46.40	52.58	43.68
46.40	52.58	43.68
60.11	62.85	43.56
57.25	80.29	43.43
49.25	55.65	43.38
99.92	115.34	43.31
60.33	86.68	42.65
59.56	60.72	42.29
55.10	55.95	42.29
24.92	19.13	42.29
38.53	35.71	42.29
29.10	22.67	41.95
41.31	41.20	41.95
34.26	25.14	41.76
37.53	35.53	41.74
55.10	58.36	41.50
63.87	81.19	41.38
60.71	68.69	40.79
49.02	50.68	40.75
47.47	49.35	40.57
36.95	26.43	40.45
53.23	63.34	40.25
50.95	54.14	40.16
46.92	50.58	39.85
34.22	30.80	39.78
29.03	24.30	39.61
	36.08	39.60
44.59	46.33	39.36
40.16	40.75	39.23
	36.36 66.77 42.44 39.97 38.82 59.95 66.39 45.89 55.71 37.60 46.58 48.07 46.40 46.40 60.11 57.25 49.25 99.92 60.33 59.56 55.10 24.92 38.53 29.10 41.31 34.26 37.53 55.10 63.87 60.71 49.02 47.47 36.95 53.23 50.95 46.92 34.22 29.03 36.65 44.59	31.62 28.36 57.94 68.73 56.55 58.08 37.02 34.99 36.36 33.64 66.77 67.78 42.44 24.19 39.97 36.78 38.82 34.83 59.95 85.09 66.39 70.11 45.89 46.02 55.71 64.65 37.60 34.84 46.58 52.58 48.07 54.49 46.40 52.58 46.40 52.58 46.40 52.58 46.40 52.58 46.33 86.68 59.99 115.34 60.33 86.68 59.56 60.72 55.10 55.95 24.92 19.13 38.53 35.71 29.10 22.67 41.31 41.20 34.26 25.14 37.53 35.53 55.10 </td

Financial crime and punishment (de Batz & Kočenda 2024)	67.20	74.27	20.06
Gender differences in investment (Nelson 2018)	67.20	74.37	39.06
Punishment & cooperation (Balliet et al. 2011)	68.38	117.43	38.94
Do risk preferences change (Batteux 2019)	47.86	48.68	38.76
Affiliation (Thielmann et al. 2020)	32.28	28.92	38.69
	41.98 52.86	43.75	38.43 38.39
Information strategies & energy conservation (Delmas et al. 2013)	52.60	54.58	20.07
Kaldor effect (List 2018)	46.75	46.80	37.86
Income inequality & well-being (Ngamaba et al. 2018)	45.77	51.14	37.71
Child mortality, growth, other health outcomes (Andres et al. 2018)	26.90	24.80	37.43
Sensitivity of consumption to income (Havranek & Sokolova 2019)	66.31	72.21	36.95
Black test score gap (Huntington-Klein 2018)	41.08	43.54	36.78
Volatility & growth (Bakas et al. 2019)	46.45	47.00	36.71
Sunk costs (Roth et al. 2015)	45.65	48.19	36.33
Border effects of trade (Havranek & Irsova 2015)	49.70	65.59	36.13
ICT & growth (Stanley et al. 2018)	59.09	77.28	35.69
Observability affect prosociality (Bradley et al. 2018)	31.41	29.13	35.45
Employment vs unemployment instability (Alderotti et al. 2021)	34.66	33.50	35.24
Employment vs unemployment instability (Alderotti et al. 2021)	34.37	32.70	35.12
Income elasticity of air travel (Gallet & Doucouliagos 2014)	38.09	38.59	34.97
Armington elasticities (Bajzik et al. 2019)	43.21	52.20	34.56
Female representation on boards & firm performance (Pletzer et al. 2015)	58.98	78.60	34.46
Democracy & growth (Colagrossi et al. 2020)	36.91	37.24	33.99
Personality trust propensity (Thielmann et al. 2020)	36.35	37.26	33.77
Creditor protection & private credit (Doucouliagos et al. 2020)	48.97	52.15	33.49
Inflation targeting and level of inflation (Balima et al. 2020)	62.50	87.48	33.45
Bank capital & regulation (Malovaná et al. 2023)	38.04	48.70	33.30
Environmental change and internal migration (Hoffman et al. 2020)	29.74	21.68	33.14
Inflation targeting and level of GDP (Balima et al. 2020)	30.01	25.95	33.05
Sheep skin effect (Rodríguez & Muro, 2015)	54.58	63.95	35.05
China's financial sector & growth (Ljungwall & Tingvall 2012)	105.90	121.81	33.00
Private vs public services (Bel et al. 2010)	33.00	Na	33.00
Forward premium puzzle (Zigraiova et al. 2021)	41.98	43.12	32.89
Belief in a just world (Thielmann et al. 2020)	32.76	Na	32.76
Greed on unethical behavior (Belle & Cantarelli 2017)	38.68	45.59	32.46
Transparency & depth (Bar 2021)	53.71	66.49	32.43
Employment protection & unemployment (Heimberger 2019)	54.38	54.56	32.14
Minimum wage & education (Doucouliagos & Zigova 2024)	47.73	49.41	32
Dishonest behavior (Gerlach et al. 2019)	33.86	34.14	31.95
Power (Thielmann et al. 2020)	21.17	20.19	31.86
Finance & growth in Latin America (Iwasaki 2022)	35.94	37.33	31.75
Distribution of school spending (Jackson & Mackevicius 2021)	47.64	55.63	31.68
Employment instability time limited (Alderotti et al. 2021)	34.95	49.38	31.35
Family firm performance over the business cycle (Hansen et al. 2018)	42.84	48.40	31.15
Discrete choice experiments, sensitivity (Quaife et al. 2018)	59.10	73.14	31.00
Discrete choice experiments, specificity (Quaife et al. 2018)	59.10	73.14	31.00
Household action on climate change (Nisa et al. 2019)			
Trousenord action on enmate change (1918a et al. 2017)	35.64	37.08	30.95

Minimum wage & employment in USA (Doucouliagos & Stanley 2009)	20.02	42.55	20.01
	39.02	43.27	30.91
Tariff reductions & tax in developing countries (Cirera et al. 2011)	30.29	Na	30.29
Income & democracy (Broderstad 2018) Unit based pricing & bayesheld waste collection (Pol & Gradus 2016)	25.63	25.43	29.86
Unit-based pricing & household waste collection (Bel & Gradus 2016)	29.62	29.91	29.29
Municipality efficiency (Aiello & Bonanno 2019)	48.44	61.67	29.18
Can war foster cooperation (Bauer et al. 2016)	29.46	30.43	29.14
Ethnic discrimination in housing markets (Auspurg et al. 2019)	42.74	45.89	29.10
Environmental performance & financial performance (Hang et al. 2018)	41.20	43.94	29.02
Inflation & stock market (Doucouliagos et al. 2020) Export led adoption of environmental practices (Liston-Heyes and Heyes	97.48	112.70	29.00 28.97
2019)	34.72	35.71	20.71
Employment instability (Alderotti et al. 2021)	33.65	49.38	28.93
Ethnic diversity & trust (Dinesen et al. 2020)	41.28	50.17	28.64
Price elasticity of gasoline demand (Havranek et al. 2012)	51.81	52.87	28.46
Tuition & demand for higher education (Havranek et al. 2018)	69.76	71.34	28.39
Individual discount rates (Matousek et al. 2019)	39.99	50.16	28.27
Business cycle correlations (Campos et al. 2019)	36.54	39.10	28.19
Deworming & height for age (AidGrade 2019)	31.76	37.18	27.43
Deworming & height (AidGrade 2019)	27.69	28.11	26.64
Government spending & inequality (Anderson et al. 2017)	48.62	49.39	26.48
Transparency & spread (Bar 2021)	44.25	54.62	26.29
Beauty & professional success (Bortnikova et al. 2024)	42.48	54.51	26.18
Unions and contracting (Lu et al. 2024)	28.60	29.29	25.86
Forgiveness (Thielmann et al. 2020)	19.89	17.96	25.67
Covid & lockdowns (Herby et al. 2022)	14.65	12.35	25.57
Social capital and health (Xue et al. 2020)	31.20	35.25	25.38
Child labor interventions hours of work (Alves et al. 2023)	54.29	73.67	25.21
Hedge fund performance (Havranek et al. 2024)	53.87	49.78	25.20
Education & overweight female (Ljungdahl & Bremberg 2015)	25.19	Na	25.19
Education & overweight male (Ljungdahl &Bremberg 2015)	25.19	Na	25.19
French law & private credit (Doucouliagos et al. 2020)	51.43	53.46	25.00
Deworming & nutrition (Croke et al. 2016)	33.10	34.45	25.00
Military & growth (Churchill et al. 2018)	24.35	24.35	24.35
Prices & nudges electricity (Buckley 2020)	37.57	41.67	24.33
Diarrhea & enteric disease reduction (Andres et al. 2018)	25.21	25.44	24.31
Integrity (Thielmann et al. 2020)	22.89	21.89	24.23
Impact of smoking bans absolute sales (Cornelsen et al. 2014)	24.00	Na	24.00
Corporate capital structure & Tax (Hang et al. 2018)	50.10	52.27	23.57
Corporate capital structure & Firm Growth (Hang et al. 2018)	42.70	44.01	23.57
Rule of law & private credit (Doucouliagos et al. 2020)	22.29	Na	22.29
Rule of law & stock market (Doucouliagos et al. 2020)	22.29	Na	22.29
Democracy & private credit (Doucouliagos et al. 2020)	23.05	23.43	22.29
Concrete victim honesty (Kobis et al. 2019)	32.02	33.34	21.43
Populist backlash (Scheiring et al. 2024)	54.42	58.20	21.05
Economic freedom & investment (Doucouliagos & Ulubasoglu 2006)	18.57	17.81	20.86
Economic freedom & growth (Doucouliagos & Ulubasoglu 2006)	24.62	25.02	20.86
Health shocks & labour supply (Shawa et al. 2024)	20.57	61.86	20.86
*** '	40.57	01.00	20.00

Skilled and unskilled labor (Havranek et al. 2020)	78.84	81.59	20.71
Disinflation & central bank independence (Iwasaki & Uegaki 2019)	25.48	29.03	20.71
Economic diplomacy & international economic flows (Moons & van Bergeijk			
2017) Deworming & Hemoglobin (AidGrade 2019)	42.03	43.35	20.14
Improving learning outcomes in South Asia, native language (Asim et al.	25.81	31.86	19.76
2016)	19.71	Na	19.71
Improving learning outcomes in South Asia, math score (Asim et al. 2016)	19.71	Na	19.71
Land tenure in China (Li 2019)	34.78	43.79	19.64
Financial constraints on firm performance (Ahamed et al. 2023)	57.18	66.65	19.29
Psychological strategies for household recycling (Varotto & Spagnolli 2017)	18.72	19.22	18.22
Present bias (Imai et al. 2021)	24.96	37.75	18.56
Rebound effect, fuel cost elasticity (Dimitropoulos et al. 2018)	38.04	46.07	17.90
Bank competition & stability (Zigraiova & Havranek 2016)	45.55	54.03	15.92
Effect of trade openness on exchange rate (Jaffur et al. 2019) Pass through rate for beer (Nelson & Moran 2019)	72.74	76.31	14.48
Unions & profitability (Doucouliagos et al. 2017)	21.89	29.36	14.43
Time preference (Asenso-Boadi et al. 2008)	40.39 46.03	40.64 49.57	14.43
Tax on sugar sweetened beverages & obesity (Escobar 2013)	25.52		10.51
Economic status & subjective well-being (Howell & Howell 2008)	27.53	30.00	12.71
Returns to education in China (Churchill et al. 2018)	13.53	29.33	11.04
Government education spending & growth (Churchill et al. 2017)	50.02	57.29	10.96
Transport and employment commute time (Bastiaanssen et al. 2020)	18.93 24.20	42.18 26.13	10.29 8.71
Government spending & poverty (Anderson et al. 2018)	50.32	53.57	8.00
Tax & growth (Alinaghi & Reed, 2018)	41.81	43.52	6.86
Corporate tax cuts & growth (Gechert & Heimberger 2022)	89.56	91.80	6.86
Remittances and inequality (Anwar et al. 2024)	30.56	30.72	5.14
Investors rationality for IPOs (Jindal & Chander 2015)	6.50	8.71	4.29
Inflation targeting and exchange rate volatility (Balima et al. 2020)	54.87	70.26	4.29
Egocentrism on unethical behavior (Belle & Cantarelli 2017)	39.13	17.62	0.29
Group affiliates and firm performance (Lin et al. 2019)	143.32	143.32	Na
Group affiliates and financial performance (Lin et al. 2019)	143.32	143.32	Na
Inflation & central bank independence (Klomp and de Haan 2010)	135.44	135.44	Na
Macroprudential policy & capital flow (Araujo et al. 2020)	115.38	115.38	Na
Wage flexibility & labor market institutions (Clar et al. 2007)	105.39	105.39	Na
Threat effect (Filges & Hansen 2017)	103.32	103.32	Na
Trade openness & stock market (Doucouliagos et al. 2020)	92.09	92.09	Na
R&D tax credits across industries (Castellacci & Lie 2015)	91.71	91.71	Na
Wage effects of on-the-job training (Haelermans & Borghans 2012)	88.15	88.15	Na
Financial openness & stock market (Doucouliagos et al. 2020)	82.01	82.01	Na
Retirement savings behavior after intervention (Miller et al. 2014)	80.00	80.00	Na
Government size & per capita income, total spending (Churchill et al. 2017)	79.18	79.18	Na
Institutional quality & stock market (Doucouliagos et al. 2020)	79.07	79.07	Na

Age & reemployment speed (Wanberg et al. 2016)	78.57	78.57	Na
Age & reemployment status (Wanberg et al. 2016)	78.57	78.57	Na
Aid & democracy (Askarov & Doucouliagos 2013)	78.57	78.57	Na
Financial liberalization & growth (Bumann et al. 2013)	76.68	76.68	Na
Institutional quality & private credit (Doucouliagos et al. 2020)	73.08	73.08	Na
Alcohol & human capital (Lye & Hirschberg 2010)	72.17	72.17	Na
Health care elasticity, mortality (Gallet & Doucouliagos 2017)	69.64	69.64	Na
Substitution between capital & labor in USA (Knoblach 2019)	67.16	67.16	Na
Prediction markets (Forestal et al. 2020)	66.66	66.66	Na
Saving promotion interventions & poverty (Steiner et al. 2018)	66.29	66.29	Na
Saving promotion interventions & assets (Steiner et al. 2018)	66.29	66.29	Na
Saving promotion interventions & food security (Steiner et al. 2018)	66.29	66.29	Na
Saving promotion interventions & business profits (Steiner et al. 2018)	66.29	66.29	Na
Saving promotion intervention & business investment (Steiner et al. 2018)	66.29	66.29	Na
Health care elasticity, life expectancy (Gallet & Doucouliagos 2017)	65.85	65.85	Na
Macroprudential policy & economic activity (Araujo et al. 2020)	60.64	60.64	Na
Education & obesity (Hamad et al. 2018)	58.20	58.20	Na
Globalization & capital taxation (Adam et al. 2013)	57.93	57.93	Na
Demand & unemployment Australia (Doucouliagos 1997)	57.24	57.24	Na
Peer-to-peer, negative on prices (Jiao et al. 2021)	56.52	56.52	Na
Macroprudential policy & corporate credit (Araujo et al. 2020)	56.51	56.51	Na
Advertising ban elasticity non-USA (Nelson, 2006)	55.90	55.90	Na
Social cost of carbon (Havranek et al. 2015)	55.37	55.37	Na
Value of statistical life (Bellavance et al. 2009)	54.88	54.88	Na
Conditional cash transfers & labor force participation (AidGrade 2019)	52.57	52.57	Na
Conditional cash transfers & probability unpaid work (AidGrade 2019)	52.57	52.57	Na
Aid & governance (Askarov & Doucouliagos 2013)	52.13	52.13	Na
Aid & investment (Doucouliagos & Paldam 2006)	51.72	51.72	Na
US aid allocations human rights (Askarov et al. 2020)	49.96	49.96	Na
Peer-to-peer, positive on prices (Jiao et al. 2021)	48.98	48.98	Na
School choice & student achievement, county (Jabbar et al. 2019)	48.61	48.61	Na
Financial liberalization & inequality (Ni & Liu 2019)	48.06	48.06	Na
US aid allocations democracy (Askarov et al. 2020)	47.41	47.41	Na
French law & stock market (Doucouliagos et al. 2020)	47.08	47.08	Na
French law & stock market (Doucouliagos et al. 2020) Saving promotion interventions & savings (Steiner et al. 2018)	47.08 46.29	47.08 46.29	Na Na

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Getting teachers back to the classroom-students (Guerrero et al. 2013)	44.14	44.14	Na
Getting teachers back to the classroom – teachers (Guerrero et al. 2013)	44.14	44.14	Na
Minimum wage & UK employment (de Linde Leonard et al. 2014)	43.71	43.71	Na
Unemployment & government popularity (Ludvigsen 2009)	42.43	42.43	Na
Oil & democracy (Ahmadov 2014)	41.38	41.38	Na
Education & hypertension (Hamad et al. 2018)	40.21	40.21	Na
Education & inequality (Abdullah et al. 2015)	37.43	37.43	Na
Discrepancies between selling & buying absolute prices (Yechiam et al. 2017)	37.24	37.24	Na
Shame prone (Thielmann et al. 2020)	37	37	Na
Minimum wage & training (Doucouliagos & Zigova 2024)	35.70	35.70	na
Aggregate demand & employment (Doucouliagos 1997)	35.68	35.68	Na
Advertising ban elasticity USA (Nelson 2006)	34.89	34.89	Na
Unions & productivity growth (Doucouliagos et al. 2017)	34.06	34.06	Na
Earthquakes & house prices (Koopman 2017)	33.49	33.49	Na
Population & growth (Headey & Hodge, 2009)	33.03	33.03	Na
Discrepancies between selling & buying prices (Yechiam et al. 2017)	32.68	32.68	Na
Real wages and employment (Doucouliagos 1997)	32.50	32.50	Na
Creditor protection & stock market capitalization (Doucouliagos et al. 2020)	32.14	32.14	Na
Education & smoking (Hamad et al. 2018)	31.83	31.83	Na
Governance & private credit (Doucouliagos et al. 2020)	29.94	34.31	Na
Growth as motive for aid allocation (Doucouliagos & Paldam 2013a)	29.63	29.63	Na
Pass through rate for spirits (Nelson & Moran 2019)	29.36	29.36	Na
Education & BMI female (Ljungdahl &Bremberg 2015)	28.57	28.57	Na
Natural resources & conflict (O'Brochta 2019)	28.17	28.17	Na
Group affiliates and market performance (Lin et al. 2019)	27.92	27.92	Na
Institutions & economic performance (Efendic et al. 2011)	27.86	27.86	Na
Saving promotion interventions & financial literacy (Steiner et al. 2018)	25.64	25.64	Na
Education & obesity male (Ljungdahl &Bremberg 2015)	25.19	25.19	Na
Education & obesity female (Ljungdahl & Bremberg 2015)	25.19	25.19	Na
Personality collectivism (Thielmann et al. 2020)	21.97	21.97	Na
Microcredit & the poor, well-being (Chliova et al. 2014)	21.86	21.86	Na
Airport noise & hedonic property values (Nelson, 2004)	20.89	20.89	Na
Sadism (Thielmann et al. 2020)	17.2	17.2	Na
Pass through rate, wine (Nelson & Moran 2019)	17.14	17.14	Na
Corruption information and vote share (Incerti, 2020)	11.10	11.10	Na
Matee: No denotes no female outhored extinles in this part of a research except	0 11		

Notes: Na denotes no female authored articles in this part of a research area for articles with acceptance time.

I. Comparison of included to excluded studies

I.1 Studies with missing data published in included journals

In this subsection we compare the studies included in our sample to studies excluded due to missing data on time to acceptance. Column (1) of Table S10 reports several study characteristics for the studies and journals included for the 49 baseline economics journals; these are the primary studies for which we can calculate time to acceptance. Column (2) looks at studies published in these same journals which did not report time to acceptance. The focus of Column (3) is all other top economics journals for which we have no acceptance time; these are leading economics journals that never publish acceptance time.² Column (4) looks at all other journals including 'business' journals (accounting, management, finance, etc.) journals, and all other disciplines (science, psychology, medicine, education, social science, etc.). The economics studies included in our survey have a larger proportion of females (0.168) – Row (1) - than those studies in the same journals for which we have no information on acceptance time (0.110), and slightly larger than for all other leading economics journals in the sample (0.143). This difference principally reflects changes over time in the composition of research teams; some of the 49 economics journals in our sample did not report acceptance time in the earlier years and this coincides with the period where there were also fewer female authors present in economics research in general. The sample of 49 journals also includes a larger proportion of all female authored articles; Row (4). Nevertheless, these groups of journals are similar in terms of the median: number of authors, author share of estimates, t-statistics, and temporal rank. The proportion of female authors is much higher (0.241) in other disciplines (Column (4)).

Table S10 Comparison of included to excluded studies

Characteristic		49 economics journals, with time to acceptance	Same 49 economics journals, without time to	Other leading economics journals	All other journals
		(1)	acceptance (2)	(3)	(4)
Proportion of female authors	(1)	0.168 (0.299)	0.110 (0.239)	0.143 (0.276)	0.241 (0.308)
Proportion statistically significant	(2)	0.580 (0.388)	0.599 (0.391)	0.579 (0.389)	0.558 (0.412)
Proportion with sign reversal	(3)	0.246 (0.354)	0.221 (0.368)	0.238 (0.357)	0.244 (0.364)
Proportion all female authors	(4)	0.072	0.024	0.054	0.069
Number of authors	(5)	2	2	2	2
abs(t-statistic)	(6)	2.436	2.490	2.387	2.245
n(Sample size)	(7)	5.704	5.429	6.041	5.635
Author share of estimates	(8)	0.022	0.019	0.022	0.018
Temporal rank	(9)	12	10	10	14
Year published	(10)	2008	2001	2004	2011

Note: log denotes natural logarithm. Cells in rows (1) to (3) report the mean (and standard deviations in brackets); all other rows report the median. All calculations are made at the study level. Sample size is not available for many primary studies.

Dynamics, National Tax Journal, Rand Journal of Economics, Review of Income and Wealth, Review of Financial Studies, World Bank Economic Review, World Development, Journal of Economics and Management Strategy, Journal of Financial and Quantitative Analysis. This list is drawn from Heckman and Moktan (2020).

² This includes the following journals: the four American Economic Journals, American Economic Review, Quarterly Journal of Economics, Journal of Political Economy, Journal of the European Economic Association, Journal of Risk and Uncertainty, Economic Development and Cultural Change, Games and Economic Behavior, Health Services Research, Industrial and Labor Relations Review, Industrial Relations, Journal of Economic Growth, Journal of Industrial Economics, Macroeconomic

Section E above shows that our findings are robust to removing individual journals from the sample. In Table S11 we remove *groups* of journals with missing acceptance time data. For each of the 49 economics journals we first calculate the ratio of the number of studies published without acceptance time to the total number of studies published (with and without acceptance time). This identifies journals with the most missing observations on acceptance time. In Column (1), we remove 6 of the 49 journals with the most missing observations on acceptance time (ratio of the number of excluded studies to total number of studies > 0.30). In Columns (2) and (3) we remove a further 7 and 4 journals, respectively, representing studies with greater than 20% and 15% of missing observations, respectively. The coefficient on *Female* increases as we reduce the sample. That is, our finding of a significant acceptance time gender gap is not driven by including in the analysis economics journals with missing observations on acceptance time in earlier years.

Table S11 Gender and time to acceptance, robustness to removal of groups of journals

	> 30% missing	> 20% missing	> 15% missing
	(1)	(2)	(3)
Female	0.094	0.117	0.122
	(0.042)	(0.047)	(0.051)
Controls, with all fixed effects	YES	YES	YES
J	43	36	32
A	414	384	361
S	2,562	2,104	1,838
N	31,785	26,641	23,076

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. Female is the proportion of female authors. J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. Controls include: the number of authors, a study's temporal rank, the author(s) share of reported estimates, sign reversal, whether results are statistically significant at 5% level, and the share of authors employed by a top 100 university. Figures in brackets are standard errors clustered at the journal article level. WLS estimates. Columns (1), (2), and (3) remove journals where the ratio of studies without acceptance time to all studies (with and without acceptance time), is greater than 0.30, 0.20, and 0.15, respectively.

I2. Excluded meta-analyses

As stated in Section G, our data collection initially identified 717 meta-analyses with publicly available data, 540 of which included studies published in at least one of the 55 leading economics journals. We ultimately use 424 of these 540 research areas, as 116 of the meta-analyses did not report acceptance time for studies published in one of the 55 leading economics journals. While the excluded meta-analyses contain no economic studies with acceptance time published in a leading economics journal, they do contain studies published in *other* journals that do report acceptance time. Table S12 explores the robustness of our findings to different meta-analyses samples. Column (1) repeats the findings from Table 1 of the main text for our baseline sample of studies published in 49 economics journals in 424 research areas. Column (2) repeats the findings from Table 2 of the main text for all studies published in these 424 research areas. Column (3) considers acceptance time in all journals in all of the initially identified 717 meta-analyses (recall Figure S8), including research areas without any study published in a leading economics journal. Taken together, Tables S11 and S12 show that our results are robust to the inclusion of journals and meta-analyses.

Table S12 Gender and time to acceptance, robustness to journals and research areas

	49 economics journals	All journals 424 research	All journals
	424 research	areas	areas
	areas	(2)	(2)
	(1)	(2)	(3)
Female	0.085	0.087	0.072
	(0.040)	(0.028)	(0.026)
Controls, with all fixed effects	YES	YES	YES
J	49	701	771
S	2,693	5,548	6,217
N	33,503	62,098	65,525

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. *Female* is the proportion of female authors. *J*, S, and *N* denote the number of journals, studies, and observations, respectively. Controls include: the number of authors, a study's temporal rank, the author(s) share of reported estimates, sign reversal, whether results are statistically significant at 5% level, and the share of authors employed by a top 100 university. Figures in brackets are standard errors clustered at the journal article level. WLS estimates. Column (1) repeats Column (5) of Table 1. Column (2) repeats Column (6) of Table 2. Columns (1) and (2) use the 424 research areas that include studies with acceptance time published in one of the 55 journals listed in Heckman and Moktan (2020). In Column (3) we include all studies with acceptance time published in any of the initially identified 717 meta-analyses, including research areas without any studies in a leading economics journal.

I3. Unknown authors

We are unable to identify the gender of several authors in the sample; these studies were removed from our analysis. As a robustness check, in Table S13 we report results including these studies in the sample. For this analysis we add a dummy variable, *Unknown*, taking the value of 1 if the study has at least one author whose gender we could not identify. Columns (1) and (2) include all studies and solo-authored studies for our core sample of 49 economics journals, respectively. Columns (3) and (4) include all studies and solo-authored studies for all journals, respectively.

Table S13 Gender and time to acceptance, alternate treatment for unknown gender

	All authors, 49 economics	Solo-authors, 49 economics	All authors, all journals	Solo-authors, all journals
	journals (1)	journals (2)	(3)	(4)
Female	0.084 (0.040)	0.163 (0.076)	0.087 (0.027)	0.114 (0.052)
Unknown	YES	YES	YES	YES
Controls, with all fixed effects	YES	YES	YES	YES
J	49	49	747	289
A	418	237	423	313
S	2,741	778	5,866	1,339
N	34,239	10,979	64,929	16,834

Notes: The dependent variable is the natural logarithm of the number of weeks from submission to acceptance. Female is the proportion of female authors. J, A, S, and N denote the number of journals, research areas, studies, and observations, respectively. Controls include: the number of authors, a study's temporal rank, the author(s) share of reported estimates, sign reversal, whether results are statistically significant at 5% level, and the share of authors employed by a top 100 university. Figures in brackets are standard errors clustered at the journal article level. WLS estimates.

J. Author affiliation

Table S14 lists the top 30 and top 100 universities in our sample, using the Times Higher Education classification of universities.

Table S14 List of top universities in the sample

Top 30 Top 100 Top 100					
Top 30	•				
(1)	(2)	(3)			
University of Oxford	Column (1) plus:	Fudan University			
Harvard University	University of California, San Diego	University of Sydney			
University of Cambridge	Ludwig Maximilians Universität	Seoul National University			
	München				
Stanford university	University of Melbourne	Hong Kong University of Science and			
		Technology			
MIT	King's College London	Wageningen University			
California Institute of Technology	London School of Economics	Brown University			
Princeton University	British Columbia	Kyoto University			
University of California, Berkeley	University of Heidelberg	Delft University of Technology			
Yale University	Monash University	Boston University			
Imperial College	Georgia Institute of Technology	University of New South Wales			
Columbia University	University of Tokyo	University of Groningen			
ETH Zurich	Catholic University of Leuven	University of Bristol			
University of Chicago	Chinese University of Hong Kong	Erasmus University			
University of Pennsylvania	McGill University	Emory University			
Johns Hopkins University	University of Illinois at Urbana-	University of Glasgow			
	Champaign				
Tsinghua University	University of Texas at Austin	McMaster University			
Peking university	Manchester University	City University of Hong Kong			
University of Toronto	Washington University in St. Louis				
National University of Singapore	Australian National University				
Cornell University	University of California, Davis				
University of California, Los Angeles	University of California, Santa Barbara				
University College London	University of Southern California				
University of Michigan	University of Utrecht				
Duke University	University of North Carolina, Chapel Hill				
Northwestern University	State University of Leiden				
University of Washington	University of Wisconsin at Madison				
Carnegie Mellon University	Sorbonne				
University of Edinburgh	Humboldt Universität zu Berlin				
Technische Universität München	University of California, Irvine				

K. List of other journals

Tables S15 and S16 list the journals included in the analysis of all other journals. Table 5 lists business journals and Table S16 lists all other, non-economics journals.

Table S15 List of 'business' journals (includes economics journals with less than 100 observations)

Accounting forum Acta oeconomica Agribusiness

Agricultural and resource economics review

Agricultural economics Agricultural economics - Czech Anatolia Annals of tourism research

Applied economics Applied economics and finance

Applied energy

Applied spatial analysis and policy

Areuea journal

Asia pacific journal of financial studies Asian business and management Asian economic journal

Asian journal of finance and accounting Asian pacific economic literature Atlantic economic journal Auco Czech economic review

Baltic journal of economics
Bank i kredit
Borsa Istanbul review
Brazilian administration review
Bulletin of economic research
Business research

Business strategy and the environment

Cambridge journal of regions economy and society Canadian journal of agricultural economics Canadian journal of development studies Central European management journal

China economic journal
Cogent economics and finance
Comparative economic studies
Computers in entertainment
Contaduria y administración

Contemporary economic policy Corporate governance

Corporate governance: an international journal

Corporate social responsibility and environmental management

Cross cultural and strategic management

Defence and peace economics
Ecological economics
Econometrics journal
Economia
Economia politica

Economic analysis and policy

Economic annals Economic bulletin

Economic change and restructuring

Economic inquiry
Economic modelling

Economic research international

Economic systems research

Economica

Economics and politics
Economics and sociology
Economics bulletin
Economics of governance

Economics of innovation and new technology

Economics of planning

Economics: the open-access open-assessment

Journal of central banking theory and practice Journal of Chinese economic and business

Journal of choice modelling Journal of commodity markets Journal of consumer affairs Journal of consumer marketing Journal of consumer policy Journal of consumer research

Journal of contemporary accounting and economics

Journal of development studies
Journal of east-west business
Journal of economic development
Journal of economic inequality
Journal of economic integration
Journal of economic studies
Journal of economic theory
Journal of economics and business
Journal of empirical finance

Journal of environmental economics and management Journal of environmental planning and management

Journal of family business strategy Journal of finance and economics Journal of financial econometrics Journal of financial intermediation Journal of financial services research Journal of financial stability

Journal of financial stability
Journal of forest economics
Journal of happiness studies
Journal of housing economics
Journal of industry competition

Journal of industry competition and trade Journal of institutional and theoretical economics Journal of international business studies Journal of international development

Journal of international financial management

Journal of international food and agribusiness marketing

Journal of international marketing Journal of king Saud university Journal of management

Journal of management and organization Journal of multinational financial management Journal of neuroscience psychology and economics

Journal of operations management Journal of policy analysis and management Journal of product and brand management Journal of property research

Journal of property research
Journal of public affairs
Journal of public economic theory
Journal of regional science
Journal of rural development
Journal of strategy and management
Journal of the academy of marketing science

Journal of the association of environmental and resource

economists

Journal of the economic science association Journal of the Japanese and international economies

Journal of the knowledge economy Journal of the royal statistical society Journal of transnational management

Journal of wine research

Journal on innovation and sustainability

Korea and the world economy

Labour: review of labour economics and industrial relations

Education economics Emerging markets review

Energy policy

Ensayos sobre política económica Environment and development economics Environmental economics and policy studies Environmental innovation and societal transitions

European accounting review European journal of finance European journal of marketing

European journal of operational research

European management journal

European review of agricultural economics

Experimental economics Finance research letters Financial theory and practice

Finanzarchiv Food policy

Food quality and preference

Giornale degli economisti e annali di economia

Global finance journal Growth and change

Hitotsubashi journal of economics

Housing studies

Human resource management journal Ieb international journal of finance Information and management Information economics and policy

Intangible capital

International advances in economic research

International business research International business review International economic journal International interdisciplinary business International journal of economics an.. International journal of energy economics International journal of financial studies

International journal of health care finance and economics International journal of health policy and management

International journal of innovation m.. International journal of manpower

International journal of operations and production management

International journal of production economics International journal of productivity and performance

International journal of research in marketing International review of applied economics International review of economics International review of economics and.. International review of financial analysis International review of law and economics

Iran journal of economic studies Italian economic journal

Iza journal of development and migration Japan and the world economy Journal of accounting and economics Journal of accounting research

Journal of advertising Journal of African business Journal of African economies

Journal of agricultural and applied economics Journal of agricultural and resource economics

Journal of agricultural economics Journal of banking and finance

Journal of behavioral and experimental economics Journal of behavioral and experimental finance Journal of business economics and management

Journal of business ethics

Journal of business finance and accounting

Journal of business research Journal of business venturing Latin American economic review

Macroeconomics and finance in emerging market economies

Management and organization review

Management decision

Management international review

Management revue Management science

Managerial and decision economics

Manchester school

Marketing intelligence and planning

Marketing science Metroeconomica

Migration and development

Mind and society

New Zealand economic papers

Nova economia

Open access journal of resistive economics Pacific rim property research journal

Pacific-basin finance journal

Panoeconomicus

Papers in regional science Post-communist economies

Problems and perspectives in management Public finance analysis

Quarterly review of economics and finance Regional studies

Research in international business and finance

Research policy

Resource and energy economics

Resources and energy Resources policy

Review of development finance Review of financial economics Review of international organizations Review of political economy Review of radical political economics

Review of social economy

Review of urban and regional development Revista de administraço contempornea Revista de economia e agronegocio Seoul journal of economics

Sinergie Italian journal of management

Small business economics

Spanish journal of agricultural research

Spatial economic analysis

Sustainable development

Strategic management journal

Springer plus

Telematics and informatics The accounting review The annals of regional science The Australian economic review The British accounting review The developing economies The journal of corporate finance The journal of futures markets The journal of socio-economics

The north American journal of economics. Tijdschrift voor economische en socia..

Tourism management Transition studies review Utilities policy Water economics and policy

Wine economics and policy Work employment and society

World economy

Table S16 List of all other journals

Accident analysis and prevention

Acta paediatrica Acta psychologica Addiction

African journal of agricultural research

Aging and mental health

Agricultural and forest meteorology

Alcoholism: clinical and experimental research American educational research journal American journal of clinical nutrition American journal of epidemiology

American journal of political science

Annals of agricultural and environmental medicine

Annals of epidemiology

Annals of the association of American geographers

Anxiety stress and coping

Appetite

Applied ergonomics

Applied research in quality of life Archives of gerontology and geriatrics Asian journal of social psychology

Australian and New Zealand journal of public health

Rehaviormetrika Biological psychology Biology letters Biomass and bioenergy Biopsychosocial medicine

Bmc geriatrics

Bmc health services research Bmc pregnancy and childbirth

Bmc psychology Bmc public health Bmj

Bmj open Brain research

British journal of nutrition British journal of psychology British journal of social psychology Bulletin of the world health organization Canadian journal of forest research Canadian journal of soil science Chilean journal of agricultural research

Children and youth services review Ciencia y sociedad Climatic change Clinical infectious diseases

Cliometrica Cognition

Cognitive neuropsychiatry

Community dentistry and oral epidemiology

Decision support systems Democratization

Early childhood research quarterly Education policy analysis archives Educational evaluation and policy analysis

Educational research Electoral studies Emotion

Energy Energy and buildings Energy efficiency

Energy research and social science Environment and planning a: economy a.. Environment and planning c: government & policy Environmental health and preventive medicine

Environmental research letters

Environmental science and pollution research

Epidemiology

Epidemiology and health Ethnicity and health Ethology

European environment

Journal of gerontology

Journal of gerontology:social science Journal of integrative agriculture Journal of medical microbiology

Journal of neuroscience

Journal of personality and social psychology

Journal of politics

Journal of applied psychology Journal of behavioral decision making Journal of cleaner production

Journal of climate

Journal of clinical epidemiology Journal of consumer psychology

Journal of educational and behavioral statistics Journal of environmental management Journal of environmental psychology

Journal of epidemiology

Journal of epidemiology and community health Journal of ethnic and migration studies Journal of experimental psychology Journal of experimental psychology: applied

Journal of experimental psychology: general Journal of experimental psychology: learning memory & cognition

Journal of experimental social psychology

Journal of faculty of agriculture Kyushu University

Journal of hygiene

Journal of psychosomatic research Journal of research in personality Journal of research in science teaching Journal of research on educational effectiveness Journal of studies on alcohol

Journal of the experimental analysis of behavior Kasetsart journal of social sciences Learning and individual differences

Letters on evolutionary behavioral science Marine policy

Medical decision making

Mitigation and adaptation strategies for global change

Natural hazards

Nature

Nature climate change Nature communications Nature human behaviour

Neuron

Njas: wageningen journal of life sciences Organizational behavior and human decisions

Peeri

Personality and individual differences Personality and social psychology bulletin

Physiology and behavior

Plos one

Political research quarterly Population research and policy review Proceedings biological sciences

Proceedings of the national academy of sciences Proceedings of the royal society: series b

Psychological medicine Psychological science Psychology and aging Psychology and health

Psychology health and medicine Psychology of addictive behaviors Psychonomic bulletin and review Psychosomatic medicine

Public health

Quality of life research

Quarterly journal of experimental psychology

Regional environmental change

Renewable and sustainable energy reviews

Renewable energy

Research in social stratification and mobility

European journal of clinical nutrition European journal of epidemiology European journal of neuroscience European journal of personality European journal of social psychology

European planning studies European sociological review Evolution and human behavior Evolutionary psychology Experimental gerontology Experimental psychology

Forest science

Frontiers in behavioral neuroscience Frontiers in human neuroscience

Frontiers in psychology

Geriatrics and gerontology international

Global and planetary change Global environmental change Global health action

Group dynamics: theory research and practice Group processes and intergroup relations

Health and place Health education research Health psychology Health sociology review Higher education Hormones and behavior

Human behavior and evolution society

Human brain mapping

Ieee transactions on industrial electronics Indian journal of community health

Intelligence

International journal for equity in health International journal of biometeorology International journal of energy research International journal of energy resources International journal of environmental. International journal of information and International journal of Japanese sociology International journal of medical informatics International journal of mental health. International journal of nursing studies International journal of obesity International journal of psychology International journal of public health

Irrigation and drainage

Journal material cycles and waste management

Journal of abnormal psychology Journal of anxiety disorders Journal of applied behavior analysis

Journal of applied environmental & biological sciences

Journal of applied gerontology Journal of general internal medicine Resources conservation and recycling Revista de investigacion clinica Revista de saude publica Royal society open science

Rural sociology Science Science advances

Science education Science of the total environment

Scientific reports

Social cognitive and affective neuroscience

Social indicators research Social influence Social neuroscience

Social psychiatry and psychiatric epidemiology

Social psychology

Social science and medicine Social science research Social work research Society and natural resources

Sustainability

Sustainable energy technologies and assessments Technological forecasting and social change Tertiary education and management

The American journal of tropical medicine

The gerontologist

The international journal of health planning and management

The journal of higher education The journal of nutrition The journal of psychology The journal of social psychology

The journals of gerontology series b: psychological sciences &

social sciences

The journals of gerontology: series a

The leadership quarterly
The professional geographer
The social science journal
Thinking and reasoning

Tohoku journal of experimental medicine

Transactions of the royal society of tropical medicine & hygiene

Transfusion and apheresis science

Transport reviews
Transportation

Transportation planning and technology

Transportation research part a: policy and practice Transportation research part b: methodological

Transportation research part e: logistics and transportation review Transportation research part f: traffic psychology and behaviour

Urban studies
Waste management
Water resources research
Weather climate and society
World applied sciences journal

L. Double anonymous journals

Table 6 in the main article estimates the gender gap for journals in our sample that have always been double anonymous during the sample period. Table S17 lists these journals.

Table S17 Double anonymous journals

American Journal of Agricultural Economics	Journal of Applied Economics
Cambridge Journal of Economics	Journal of Comparative Economics
China Economic Review	Journal of Financial Economics
Comparative Economic Studies	Public Choice
Economic Change and Restructuring	Journal of Business and Economic Statistics
Economic Modelling	Journal of Economic Behavior and Organization
Economic Systems	Journal of Macroeconomics
Environmental and Resource Economics	Journal of International Trade and Economic Development
Health Economics	

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(*denotes study reporting more than one meta-analysis. There are 424 meta-analyses in total)

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