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Article

Gendered publication patterns in Socio-Economic Review

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Abstract

Creating interdisciplinary dialog in the field of socio-economics cannot be separated from the social diversity among scholarly voices within its community. In marking the 20th anniversary year of *Socio-Economic Review* (*SER*), this article examines the role of gender among authors and reviewers in *SER*. Our findings show that women remain underrepresented in terms of authorship and reviewing. While no gender differences exist in overall acceptance rates for submitted papers, a substantial gender gap exists in the number of submissions. Our analysis also highlights how the persistence of gender segregation is related to the predominance of male-only author teams and male-dominated research topics. The article concludes with suggestions for further research and a discussion on gender disparities in socio-economics and other social science fields.

Key words: gender, gender inequality, science

JEL classifications: A10, A11, A14

1. Introduction

Socio-economics is an interdisciplinary field focused on the socio-political foundations of the economy. *Socio-Economic Review* (*SER*) has promoted an ideal of disciplinary diversity and dialog for the last 20 years, drawing from a broad scholarly community spanning economics, political science, sociology, management and organization research, law, anthropology and more. However, creating interdisciplinary dialog should not be separated from promoting the diversity of scholarly voices within the community of socio-economics. In this article, marking *SER*'s 20th anniversary year, we bring attention to the role of gender and reflect on the role of women as authors and reviewers in *SER*.

The underrepresentation of women researchers persists in top journals across many social science fields such as political science (Teele and Thelen, 2017), organization and

management research (Auschra *et al.*, 2022), economics (Hengel, 2022) and sociology (Akbaritabar and Squazzoni, 2021; for the subfield of economic sociology, Bandelj, 2019). Such gender imbalance is likely to hamper knowledge advancement and scholarly plurality (McPherson *et al.*, 2001; e.g. Key and Sumner, 2019; Nielsen and Börjeson, 2019). The dominance of 'boys clubs' (male-only author teams) and 'male islands' (research topics dominated by men) in leading journals is likely to reproduce areas of isolated specialization (e.g. Auschra *et al.*, 2022), and ultimately discourage the innovative 'box breaking research' (Alvesson and Sandberg, 2014) that interdisciplinary journals like *SER* wish to promote. Furthermore, when prestigious journals in a given field continue to be dominated by male authors, this inequality is likely to reproduce other inequalities in the wider field, including fewer career opportunities for women (Pezzoni *et al.*, 2012; Weisshaar, 2017) and thus, underrepresentation of females among tenured faculty. Given that top publications are increasingly linked to salary and benefits (e.g. Aguinis *et al.*, 2020), such discrepancies also reproduce material inequalities among male and female academics (e.g. Leahey, 2007).

While adjacent fields have recently taken stock of gender disparities in areas such as journal submissions, reviewing, publications, co-authorship, research topic specialization and citations, the field of socio-economics has yet to take an introspective look to understand gender disparities related to publications. As a modest first step toward understanding gendered publication patterns in socio-economics, we focus on female representation in submitted papers, published papers and reviewers by analyzing data from the online submissions system of *SER*. We hope that this analysis will compel further research and discussion, both within socio-economics and in other social science fields.

2. Data and methods

Our analysis uses data on submitted papers between 2006 and mid-2022 retrieved from the *SER* submission system Manuscript Central.[1] Our data include all regular papers, state-of-the-art papers and special issue papers submitted to *SER* and all reviewers invited to review for *SER*. We exclude invited material such as Presidential Addresses, Discussion Forums or Book Symposium contributions, which are not peer reviewed. In addition to the submissions metadata, we generated variables concerning the gender of individual authors and reviewers, as well as the authorship constellation, reviewer constellation and the research topic of each submitted paper.

To determine the gender of authors and reviewers, we employed a data-based algorithm (Nielsen and Börjeson, 2019; see also Auschra *et al.*, 2022) using the services of gender API and genderize.io. Based on each individual's first name, we identified the gender using both algorithms, taking the result for each name from the algorithm that had the higher accuracy rating. This approach identified the gender of 99.0% of names among the 8489 total authors and 99.4% of names among the 15,430 total reviewers.[2] Afterwards, we hand-coded (e.g. looking up person's web pages) author and reviewer names in several steps: checking missing values for those cases not identified by the algorithm, manually checking

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1   SER adopted Manuscript Central for online submissions in 2006. To our knowledge, no submissions data exist for prior years.
2   As we excluded nonreviewed papers in a later step, these numbers apply to the overall data set based on all entries in Manuscript Central.

results from the algorithm with an accuracy probability of less than 0.8, and double-checking names that are more difficult to identify (e.g. Michelle) (overall 653 names for authors, 649 names for reviewers). After finishing this procedure, only 0.41% (35 names) of author names and 0.02% (3 names) of reviewer names could not be linked to any specific gender. Nonetheless, we would like to point out that our analysis is limited to a binary approach to gender identification and is based on assumptions related to first names, which is an inherent methodological limitation and potential bias in any research using (gendered) names as a proxy measure of gender.

Using data on the gender of individual authors, we created a (co-)authorship metric for each publication indicating whether the article was written by single or multiple authors. On this basis, we distinguished five different authorship constellations: female single author, male single author, all-female team, all-male team and mixed team (i.e. including both men and women). We used a similar classification for reviewer teams: all-female reviewers, all-male reviewers and mixed reviewers (i.e. including both men and women).

Finally, we used topic modeling of paper abstracts to determine the research topic of each manuscript. Topic modeling methods are most often used to compare the vocabulary of texts and uncover latent patterns. These patterns, known as topics, are represented as clusters of words that co-occur frequently throughout the corpus (Hannigan *et al.*, 2019). In this article, we relied on quantitative text analysis using the 'stm' package in R to analyze the abstracts of all papers submitted to *SER* between 2006 and June 2022. For this analysis, we selected a model that identified 50 topics.[3] Using the highest probability keywords from the 'stm' package, each paper was matched with one of these topics. Since quantitative text analysis delivers keywords for the topics that do not always allow a meaningful topic interpretation, we next investigated and labeled the topics manually by reviewing the titles and abstracts of papers. At this stage, we excluded 22 topics for which either the number of published authors was less than 10 or a consistent interpretation of the content was not possible. Small topics were harder to interpret and the small number of authors does not allow robust conclusions about gendered publication patterns within these topics. After this procedure, the 28 remaining topics were used for our analysis.

3. Findings: gendered authorship and reviewer patterns

In the following, we present our findings on gendered authorship and reviewer patterns. First, to investigate gender discrepancies between male and female authors in *SER*, we analyzed published articles by male and female authors between 2006 and 2022. In addition, we also looked at authorship constellations, the gap between submissions and accepted publications and the gender segregation of topics published in *SER*. Second, we looked at gendered reviewer patterns, using the internal data on *SER* submissions. We present findings on the share of women among reviewers, reviewer constellations, the link between reviewer and authorship constellations and recommendations made by male and female reviewers.

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3 The topic model results were kindly provided by Ke Nie, Amy Knight and Bernardo Mackenna who conducted this research as part of our SER 20th year anniversary project.
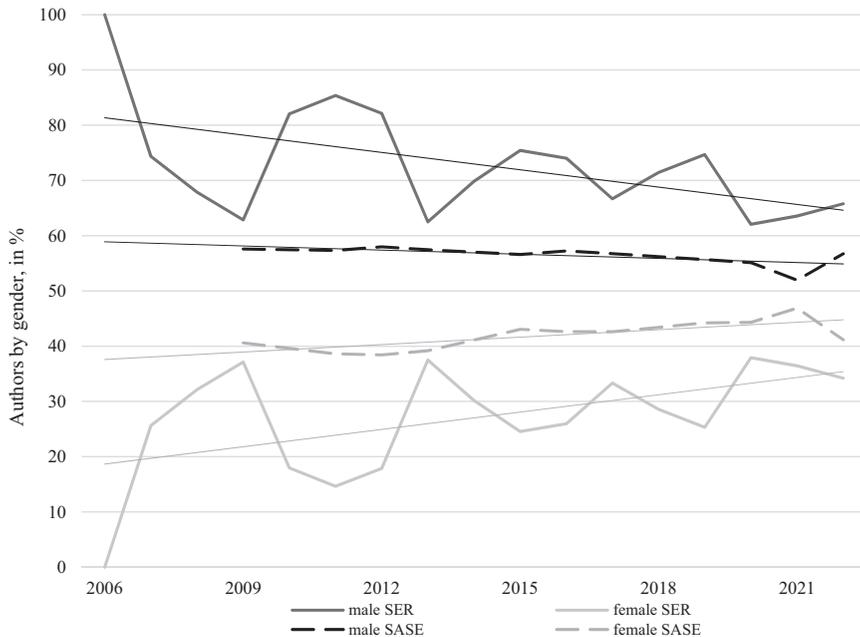
Figure 1 Development of authorship by gender between 2006 and 2022 (author level), in percent.

Note. Based on all regular papers published in *SER* 2006 to June 2022 (in terms of published on the *SER* webpage, publication of an issue can be delayed). For *SASE* data some years are missing due to lack of data, while existing data start in 2009. We extrapolated the missing years. For *SASE* data, data structure changes between 2013 and 2015 (2014 is missing). From 2016 onwards, gender was self-reported by participants. Beforehand (2009–2015), we used the list of participants and the genderize.io algorithm to identify binary gender.

3.1 Share of women publishing in SER

Figure 1 depicts the share of women publishing in *SER* showing a general increase from a low average of 25% female authors between 2006 and 2017 to an average of 32% female authors in the last 5 years (2018–2022).

The current level of around 30% female representation in *SER* is broadly similar to adjacent fields, such as management and organization studies (Auschra *et al.*, 2022) and other business disciplines (Joanis and Patil, 2022), political science (Teele and Thelen, 2017) and sociology (Akbaritabar and Squazzoni, 2021). For instance, if we restrict the *SER* sample to the years 2006–2017 also covered by Teele and Thelen (2017) and Auschra *et al.* (2022), then *SER* has 25% female authors and is thereby slightly below the 26.5% of female authors in top 10 US political science journals and similar to the 24.9% in the 14 leading organization and management journals. Yet, the comparison to specific journals also reveals one important caveat: *SER* remains far behind journals with almost parity in female representation, such as *Administrative Science Quarterly* with 47% or *Organization Studies* with 45% (in 2017, reported by Auschra *et al.*, 2022).

Another important benchmark is how authorship relates to the gender distribution among the membership of the *Society for the Advancement of Socio-Economics* (*SASE*), the parent organization of *SER*. Over the years (2009–2022), a stable level of around 42% of participants in the *SASE* annual conference identified as female (see graphs with dashes in Figure 1).[4] Compared to *SER*, we thus see a large gap between 42% female researchers participating in *SASE* conferences and 33% share of female authors publishing in *SER*. This gap suggests a decreasing, but still persistent male legacy in *SER*.

3.2 Authorship constellations and gender

Extant research concludes that authorship constellations are gendered. Gender homophily plays a strong role in the formation of collaborative ties among researchers (e.g. Ibarra, 1992; Dahlander and McFarland, 2013; Whittington, 2018). Given the lower representation of women in many disciplines, women may face a competitive disadvantage in finding research collaborators (Jordan *et al.*, 2008), reflected in many all-male teams and fewer all-female teams (Young, 1995; Teele and Thelen, 2017; Fox *et al.*, 2018; Mihaljević and Santamaría, 2020; Auschra *et al.*, 2022).

Figure 2 shows the gendered author constellations of articles published in *SER*, revealing a strong dominance of 'old boy networks' (McDowell *et al.*, 2006, p. 153). The most common constellation remains 'men's clubs' (all-male authored papers), whereas 'women's clubs' continue to be the exception (similar for related fields, see e.g. Teele and Thelen, 2017; Akbaritabar and Squazzoni, 2021; Auschra *et al.*, 2022). In particular, Figure 2 shows that the share of articles written by men only (two dark gray boxes at the bottom) remained over 50% until very recently. Although male dominance has declined recently, male-only authorship by single authors or all-male teams has still been over 50% in 2 out of the last 5 years. In comparison, articles written by women only (two light grayish boxes at the top) peaked at around 30% of articles in some years, while showing large annual fluctuations. However, most of these articles are single authored, while all-female teams remain stagnant at a low level. The share of articles with mixed-gender constellations (papers written by male and female authors, the stripped boxes in the middle) is around 20–30% in recent years, but the level of mixed authorship appears to stagnate in recent years.[5]

Taken together, the patterns of authorship constellation suggest different publication pathways for women and men. For women, mixed-gender teams are the most frequent form of publishing in *SER*. Around 58% of all publications by women were published in a mixed-gender team. The other routes for women to publish in *SER* are far less relevant, with 28% published as single-authored papers and 14% published in a team with all-female

4   We do not have data for all *SASE* conferences between 2009 and 2022, but only 11 out of 14 years. Numbers for PhD candidates exist for the years 2015–2022. Interestingly, and similar to political science (Teele and Thelen, 2017), female representation among PhD students is slightly higher compared to all members, suggesting a slight difference in female representation between younger and more established scholars.

5   One distinctive aspect of *SER* is the persistence of single authored papers. Other studies show an overall trend towards more collaboration and ever larger groups of authors (e.g. Auschra *et al.*, 2022). Instead, in *SER* single authored papers stayed relevant over the years and in some recent years single authored papers were the majority form of authorship.
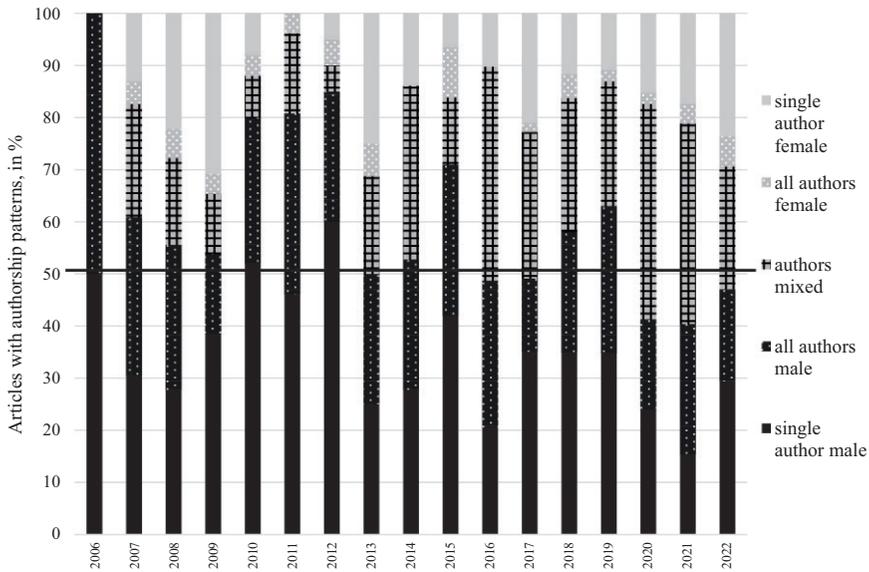
Figure 2 Authorship constellations across *SER* publications over time (publication level), in percent. *Note*. Based on all regular papers published in *SER* 2006 to June 2022.

colleagues. Thus, the most important entry point for female researchers into *SER* is publishing in a mixed-gendered team, which is a key driver of the increasing share of female authors.

In comparison, only 32% of men publish in mixed-gender teams, which is roughly half of the female level. Instead, men most often work in all-male teams, constituting 42% of all publications by men and is followed by 26% as single-authored papers. Male authors thus have wider access to opportunities for collaboration, since men work frequently in either mixed-gender or all-male teams compared to the use of mixed-gender or all-female teams by women.

3.3 Submissions, acceptance rate and revision process by gender

Prior studies suggest that the gendered publication gap can be traced back to a submission gap, that is women submitting fewer articles to leading journals than men (see e.g. Djupe *et al.*, 2019 for political science). We analyzed the gender patterns for all articles submitted to *SER* between 2006 and 2022. During this period, *SER* has seen a drastic rise in overall submissions from under 100 articles in the early years to around 500 annual submissions since 2019. Figure 3 depicts the share of submissions by male authors and female authors, demonstrating a clear dominance of submissions by male authors (straight black line). The share of women among submitting authors climbed from a low share of around 20% to a little more than 30% in recent years (straight gray line). Considering the share of women and men among *SASE* conference participants (Figure 1), women remain underrepresented in submissions to *SER*.

Figure 3 depicts also the acceptance ratio of submissions by male and female authors (dotted lines). While acceptance ratios have declined at *SER* in parallel to the rapid rise in
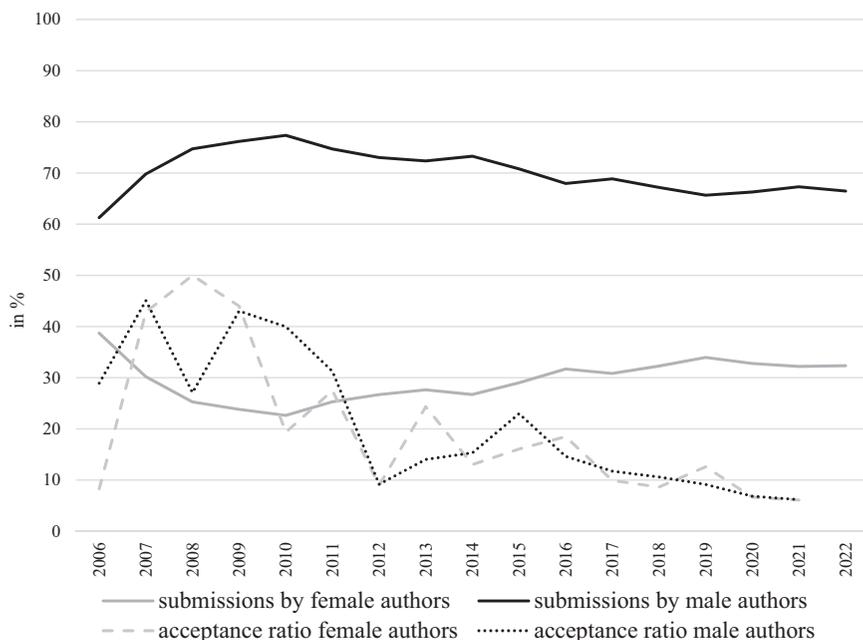
Figure 3 Submitting authors and acceptance ratio, by gender in percent.
Note. Based on all regular papers submitted to *SER* 2006 to June 2022. Submitted papers in 2022 do not have an acceptance rate in our data yet, therefore this year is missing.

overall submissions, female and male authors have almost identical chances of acceptance (men 12.5%; women 13%).[6] Notably, the 'desk reject' of a paper without sending it into peer review represents the most drastic 'gatekeeping' function of a journal. Submissions may be desk rejected due to a perceived lack of relevance to the journal's focus, as well as for reasons of overall quality. Again, we also find no significant difference by gender. Thus, the main gap in overall published articles appears related to lower levels of female submissions, whereas the acceptance decisions and 'leaky pipeline' of the review process are not the main sources of gender differences on aggregate (similarly, see e.g. Breuning *et al.*, 2018 for *American Political Science Review* or Grossman, 2020 for *European Journal of Political Research*).

Hence, while we found no gender difference in the final acceptance ratio, women go through more rounds in the review process for a successful publication. Table 1 shows robust differences in the revision process between different authorship constellations. Three

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6   Whereas no overall differences in success rate between male and female authors exist, authorship constellations matter: Female authors are particularly successful when publishing as single authors (16% acceptance rate), clearly fairing higher than their male counterparts (12% acceptance rate for male single authors). In contrast, female authors publishing together with other female researchers were the least successful (9% acceptance rate), surpassed by authors in mixed teams (13% acceptance rate) and male teams (15% acceptance rate).

Table 1 Authorship constellations and rounds of revision(s) per paper, in percent

Rounds of review	Authorship constellations					
	Single author female	All authors female	Authors mixed	All authors male	Single author male	Average across authorship patterns
1	15	17	16	21	21	19
2	33	33	**54**	**46**	**41**	**44**
3	**43**	**50**	23	26	26	28
4	9	0	5	4	11	7
5	0	0	1	2	1	1
Total	100	100	100	100	100	100
Average number of review rounds	2.47	2.33	2.22	2.20	2.28	2.27

Note. Based on all published papers in *SER* 2006–June 2022.
Highest value for each authorship constellation in bold.

review rounds were the most common for solo female authors (43% of papers) and all-female teams (50%), whereas two review rounds were the most frequent pattern among solo male authors (41% of papers), all-male teams (46%) and among mixed teams (54%). The reasons for these differences could be multiple, including higher levels of criticism throughout the peer review process of women's submissions (Siler and Strang, 2014) or more cautious and modest language used by women in their correspondence with the editorial office (Bettecken *et al.*, 2022). Given the substantial time and effort that goes into completing a review round, the review process might be among the factors hindering women from submitting more papers.

3.4 Gender segregation by article topics

Next, we examined gender among the topics of articles published in *SER*. Gendered topic specialization exists in many social sciences, including political science (Young, 1995; Key and Sumner, 2019), economics (Dolado *et al.*, 2012) and sociology (Leahey, 2006; Light, 2013). Topic specialization can become problematic for knowledge development because homogenous groups with isolated specialization could hinder the emergence of diverse views (McPherson *et al.*, 2001) and 'box-breaking' research (Alvesson and Sandberg, 2014). Moreover, gender segregation across topics is relevant for gender equality because topics most frequently chosen by women are often less present in top journals (Platt, 2007; Johnson *et al.*, 2017; Key and Sumner, 2019; Blackburn and Heppler, 2020; Dion and Mitchell, 2020).

Following the sociological literature on gender segregation in occupations (Reskin and Hartmann, 1986; Reskin, 1993), we disaggregate the distribution of male and female authors of published articles in *SER* according to the topic. Table 2 reports the gender segregation within topics among the 28 selected topics in *SER* based on two criteria: 'large' topics

Table 2 Female and male authors by selected topic, in percent

Topic label	Published papers		'Popularity'	'Success'
	Male authors	Female authors	Percent difference in the share of female-to-male submissions	Percent difference in female-to-male acceptance rate
Comparative capitalism studies	84	16	−35	−33
Welfare state, pensions	82	18	−4	−51
Fiscal politics, fiscal policy, and sovereign debt crisis	81	19	−5	−46
Models of growth and development	80	20	−52	16
Income distribution and income shares	80	20	−41	−5
Innovation in industrial production and manufacturing	80	20	−3	−42
Entrepreneurship and innovation	80	20	15	−52
Finance and financialization	79	21	−23	−24
Corporate governance	78	22	1	−39
Corruption, credit	76	24	−8	−24
Job security, job satisfaction	76	24	4	−32
Uncertainty, information	75	25	7	−31
Regulation	75	25	16	−36
Industrial relations	74	26	−1	−22
Economic sociology and economics	72	28	−35	33
Voting behavior	70	30	−20	16
Trade	70	30	1	−6
Migration, unemployment	69	31	51	−34
Taxation	69	31	−6	6
Business elites	67	33	−12	27
Income inequality	64	36	4	23
Households, gender, poverty	63	37	48	−11
Alternative forms of organization	60	40	3	45
Financial markets, foreign direct investment, currencies	59	41	1	52
Child welfare, health, housing	47	53	88	35
Political preferences and attitudes toward redistribution	46	54	3	153
Segmentation of work, non-regular work, platform work	44	56	62	76
Human resource management, training	43	57	48	96

Note: This table reports a selection of 28 major topics for all regular papers published in *SER* 2006 to June 2022. The acceptance rate refers to the level of individual authors, whereas the previous section reports accept ratios of papers with different authorship constellations.

The percent differences are calculated as the share of submissions (acceptance rate) for each topic among women minus the share of submissions (acceptance rate) among men, divided by the male share.

having 10 or more authors in terms of published papers and topics that were easily identified as being coherent in terms of content.[7]

The top of Table 2 indicates the most segregated topic areas: (a) comparative capitalism studies, including those dealing with institutional typologies or conceptualizing different varieties of capitalism; (b) welfare state and pensions; (c) fiscal politics, fiscal policy and sovereign debt crises; (d) models of growth and development; (e) income distribution and income shares. Turning to the small share of topics with gender equality or a slight female majority reported at the bottom of Table 2, we identified these topics as being related to the following substantive research areas: (a) human resource management, including training; (b) the segmentation of work, including non-regular work and platform work; (c) political preferences and attitudes toward redistribution and (d) child welfare, including issues around health and housing. For an overview of all identifiable topics, see Table 2.

To further visualize the sharp gender segregation within topics (share of men and women within each topic), Figure 4 illustrates differences between three groups. First, a large group of 20 topics are strongly male dominated with a share of male authors of 65% or higher (see the two gray-shaded areas), and another 4 topics show a male majority with a share of male authors falling between 55% and 65% (see white areas). Second, two topics show almost no segregation, thus being gender equal (orange-shaded areas). Third, two topics have a female majority, achieving a slightly higher share of female authors (green-shaded areas). Importantly, the majority of females is much lower compared to those for men in male majority topics. Hence, we may conclude that research topics do matter for patterns of gender segregation and that most topics in *SER* are male dominated.

To what extent does gender segregation by topic in published papers reflect the pipeline of submissions or the differential success of men and women in those topics? While men submit more papers overall, important differences exist in the popularity of topics by gender. Table 2 also reports the difference in the relative share of submissions on each topic made by women and men—for example, if a topic accounts for 3% of submissions made by women and 2% of submissions made by men, then the difference in shares is 50%. Here, topics tend to fall along a broad continuum, whereby men were more likely to submit certain topics, many of which are among the more highly segregated ones. In contrast, women tend to submit more to less segregated topics. This evidence suggests that the popularity of different topics within the submissions pipeline plays an important role. Likewise, acceptance rates are often highly gendered at the level of topics—despite the fact that these differences balance out into an identical overall acceptance rate of male and female authors. Table 2 reports the percentage difference in the acceptance ratios for women and men by topic. For example, looking at the male-dominated topic 'comparative capitalism', men were about 35% more likely than women to submit work on this topic and had a 33% higher acceptance rate. In contrast, for the female majority topic 'human resource management, including training', women are about 48% more likely than men to submit papers

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7 We stress caution in interpreting the topic model results, since topics are identified based on relative differences in word co-occurrence between topics. Such co-occurrences may or may not correspond well to authors' own understanding of substantive fields of research. Our team coded these topics, and we report topics for which clear consensus emerged. However, a more definitive mapping of topics in *SER* would require detailed further investigation.
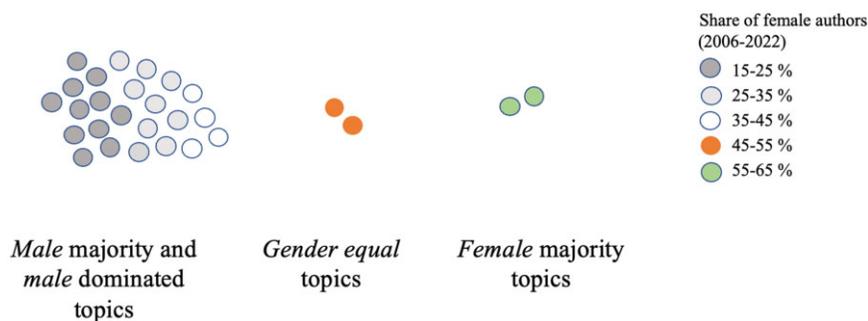
Figure 4 Topics and the share of women for all papers published in *SER*, in percent.

Note. Based on all regular papers published in *SER* 2006 to June 2022, based on 28 topics after qualitative topic interpretation.

and had a 96% higher acceptance rate. Given the overall identical acceptance rates by gender, the differences at the topic level are striking and quite substantial.

To conclude, we find a strong male legacy of topics covered in *SER*. Most women publish on topics that are either male majority or very often male dominated. Men are more likely to publish on topics that they do not share with women, whereas women do not have such strongly gendered 'islands'. Looking back critically, the last two decades of *SER* have relatively few topics with low gender segregation or those that reflect strongly established 'female spaces'. In sum, our analysis suggests that such gender segregation is influenced both by gendering in the initial choice of topic as well as differential success within some topics. These dynamics are potentially self-perpetuating, since lesser success of women in male-dominated topics may influence the pipeline of submissions and/or vice versa.

3.5. Gendered review process

By using the data on *SER* submissions, we are able to go beyond past research on gendered publication patterns and examine the proportion of male and female individuals reviewing for a journal. For *SER*, we find that women constitute on average 30% of the annual reviewers, which is a similar level to published articles. Interestingly, no gender differences existed in declining the request to review, and therefore willingness to accept reviews is not a key driver of the lower representation of women.[8] Compared to the share of female researchers at *SASE*, female scholars lack representation in the role of reviewers.

Figure 5 examines the gendered reviewer constellations for each submitted paper. We identified the following reviewer constellations: male-only reviewers, female-only reviewers and mixed reviewers. Figure 5 shows a striking picture. All-male reviewer teams existed in around 60% of papers in 2006. This figure has fallen steadily to above one-third of submissions in 2021. Meanwhile, the share of papers with only women reviewing is very low and has remained stagnant. This finding underscores the legacy and persistence of 'male islands'

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8 Reviewing is an important service to research communities such as those publishing in *SER*. However, reviewing is also a time-consuming endeavor that prevents researchers from other important tasks. We, therefore, looked at the share of positively answered reviewer requests as compared between men and women.
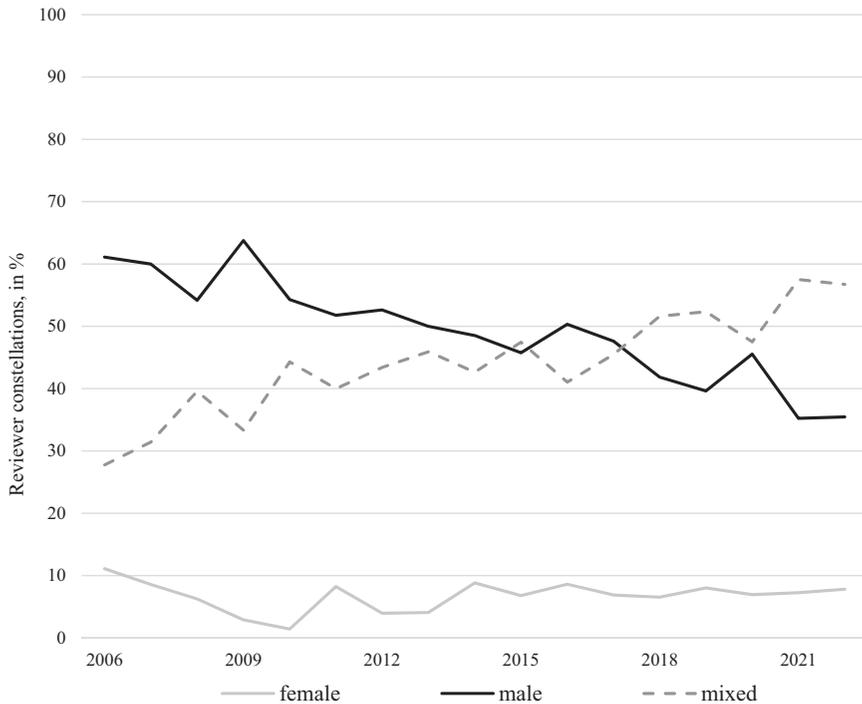
Figure 5 Reviewer constellations per paper over time, in percent.

Note. Based on all regular papers submitted to *SER* 2006 to June 2022 and those reviewers agreed to review the paper.

within the *SER* review process. Similar to authorship, the increasing share of female reviewers reflects a growth in papers reviewed by both men and women in a mixed constellation.

Figure 6 links reviewer constellations to authorship constellations, giving an interesting picture of who is reviewing whom. Notably, up to 50% of papers written by male single authors and male teams are exclusively reviewed by male reviewers. In contrast, the share of female reviewers is very slightly higher for papers written by women only. This finding highlights the persistence of closed networks wherein papers written by men have a high chance of being reviewed by men only, whereas the same is not true among women. This result likely reflects the gender segregation of topics, as well as the overall high proportion of men among authors and reviewers. Taken together, the review process may be a factor that potentially perpetuates the dynamics of 'male islands' in terms of gendered topics and authorship constellations.

We also analyzed whether gendered differences exist in the reviewer recommendations to reject, revise or accept manuscripts. Here, no significant gendered pattern was visible: women were not more or less likely to accept or reject papers than men. Yet, some subtle differences seem to exist across the different rounds of review: Women were more likely to recommend rejection in the first round, but recommend 'conditional acceptance' in earlier
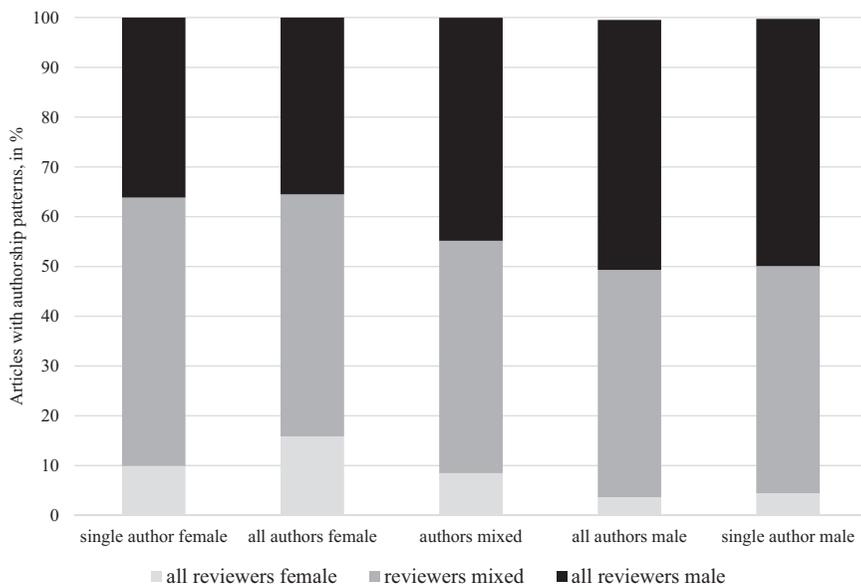
Figure 6 Reviewer constellations and author constellations per paper, in percent.

Note. Based on all regular papers submitted to *SER* 2006–June 2022 and reviewers that agreed to review the paper.

rounds than men. Men, in contrast, more often recommend 'revise and resubmission' across various rounds.

4. Discussion

This article brings the discussion of gendered publication patterns to the interdisciplinary field of socio-economics and provides insights based on the experience of *SER*. The representation of female authors at *SER* has increased over time and reached a level in the 30% range that is similar to the average in other social sciences (Teele and Thelen, 2017; Akbaritabar and Squazzoni, 2021; Auschra *et al.*, 2022). While this is good news, we underline that *SER* still falls short relative to those most gender equal journals in adjacent fields. By using data on submissions and reviews of SER, we are also able to go beyond existing literature that relies exclusively on post-publication data. Here we find identical acceptance ratios for female and male authors overall, which is a positive sign, despite some interesting differences across specific authorship constellations.

Nonetheless, our analysis offers several critical insights into the dynamics of female under-representation. First, our data suggest that the biggest cause of the underrepresentation of women is related to the overall pool of submissions—a finding also confirmed for other fields, including political science (Djupe *et al.*, 2019; e.g. Closa *et al.*, 2020). A substantial gap remains between the proportion of female participants at *SASE* conferences, on one hand, and both submissions and published articles in *SER*, on the other. Lower submissions by women can have many reasons, including women being risk averse and not

submitting their work to the most prestigious journals (Brown and Samuels, 2018; Djupe *et al.*, 2019), women having less time for research because of higher care responsibilities at home or higher non-research-related tasks at work (Alter *et al.*, 2018), women doing more time-intensive research, such as using qualitative research methods (Breuning and Sanders, 2007; Teele and Thelen, 2017), journals inviting fewer women to submit their work (Holman *et al.*, 2018) or women benefitting less from co-authorship (Teele and Thelen, 2017).

Second, authorship constellations play an important role here, given the relative prevalence of all-male teams relative to all-female teams. The majority of women continue to publish in teams with men, while relatively few men publish with women (Bozeman and Corley, 2004; Teele and Thelen, 2017; see also Auschra *et al.*, 2022).

Third, the gendered nature of certain substantive research topics plays an important role. Many of the most male-dominated topics are also relatively more popular with men than women and male authors have somewhat higher success publishing in these fields—reflecting some potentially self-perpetuating dynamic within 'male islands'.

Future research is needed to better map gendered topics in socio-economic research, as well as to understand scholars' choices of topics and the selection of collaboration partners. Academic familism, spillover effects between disciplines and methodological preferences of researchers could be further important exploratory factors (Bandelj, 2019). However, we believe that our findings raise some important practical questions for *SER* and the *SASE* community.

First, *how can the submission gap between women and men be reduced*? Given that female authors in SER are still underrepresented in comparison to female participants at *SASE* conferences suggests considerable scope for encouraging women to submit their best work to *SER*. Changes in several practices might be helpful here. *SASE* members might place greater emphasis on developing more mixed-gender and all-female teams and reducing all-male teams. *SER* might give greater spotlight to female majority topics through special issues or invited submissions, including new topics in socio-economics that have not been well represented in the journal. Systematically increasing the number of female reviewers could provide an entry point for these reviewers to submit their research to *SER*. Finally, to the extent that journal editors and reviewers find ways to shorten the publication process by requiring fewer revisions (e.g. issuing conditional acceptance at an earlier step) without sacrificing quality, such practices may particularly benefit female authors by reallocating scholarly energy from revision toward making fresh submissions.

Second, *how can women play a greater role in the review process*? Our results revealed a very substantial underrepresentation of female reviewers—an issue evidenced across countries, regions and research fields (Zhang *et al.*, 2022). Raising the number of female reviewers could not only have an influence of the success of women within the review processes but also encourage them to submit papers to *SER*. A direct remedy is for editors to identify and make greater use of female reviewers. Here, increasing the number of female editors and editorial board members,[9] as well as establishing norms around mixed-gender review teams, remain important. Yet, a practical challenge persists in that reviewers are often recruited from the pool of established authors who have previously published in *SER* or

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9   The proportion of women on the editorial board increased from 38% in 2014 to 69% in 2022. At the time of drafting this article in 2023, the team of editors is balanced between women and men.

in other high-quality journals. Here, we must also keep in mind the substantial number of strongly male-dominated topics within the orbit of *SER*. Gender gaps in the publication are thus likely to influence gender gaps in the review process and perpetuate male gatekeepers, 'male islands' and male authors again becoming male reviewers. Thus, finding new ways to enlarge the pool of female topics and reviewers for SER would seem to be an important issue.

Radical steps may be needed to solicit reviews from a wider pool of female researchers that goes beyond star researchers. Encouraging *SASE* members to register as reviewers and developing further training in writing good reviews in a time-efficient way may be helpful measures. Beyond that, *SER* would need to solicit more reviewers from adjacent fields to give fresh insights on those topics that remain 'male islands.' Getting fresh inputs from a new generation of reviewers has the potential to break the cycle of 'boxed-in' topic development (Alvesson and Sandberg, 2014) and may promote scientific innovation by giving more critical insights on an existing topic area, as well as generate meaningful connections and points of discussion with other disciplines and topics. Moreover, our findings suggest that the current behavior of female reviewers may support female authors by shortening the number of revision rounds—by being more critical in earlier rounds, but more generous in recommending conditional acceptance at an earlier stage. Finally, all *SASE* members can help to remedy challenges on institutional levels. If reviews represent an important service work that is indispensable for the scientific community, then initiatives to increase recognition and value of reviewing within the academic workplaces are important factors in encouraging women to engage in reviewing.

Altogether, these steps may help to leverage the full potential of scholarly diversity in terms of gender to bring forward knowledge creation in *SER* in the next 20 years. As such, we hope this contribution broadens and extends the discussion of diversity in *SASE*, in which gender is only one dimension (see Jackson, 2022 for a discussion of Global South scholarship).

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