The female finance penalty: why are women less successful in academic finance than related fields?

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The female finance penalty: Why are women less successful in academic finance than related fields? ☆

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ABSTRACT

We study the publication patterns of male and female finance scholars, contrasting them with their counterparts in the related fields of accounting, economics and general management by analysing a large sample of more than 400,000 journal outputs spanning over two decades. We show that, in particularly stark contrast to accounting and management publications, women are vastly under-represented as authors of finance ones. Further, our results demonstrate that work produced by female finance academics is published in lower-rated journals and garners fewer citations, a phenomenon we refer to as the 'female finance penalty'. We find that the topics on which women in academic finance work and the methodological approaches they use are highly associated with this penalty. In particular, we show that female finance authors are more likely to engage in interdisciplinary and qualitative work, and to investigate topics that are linked with lower research success. Moreover, when it comes to journal placement, we find that female-authored work in finance is 'penalised' more for its interdisciplinarity than that authored by men. Finally, we show that female finance authors are less likely to be affiliated to US-based or highly ranked institutions – factors that typically increase both publication success and future citation – and when they are, there is some evidence that their citation rates are less likely to benefit from these affiliations than those of their male colleagues.

1. Introduction

A wealth of literature has documented the low share of research produced historically by female academics and the under-representation of women in many disciplines (e.g. Ceci et al., 2014; Lundberg and Stearns, 2019; Hengel and Phythian-Adams, 2022; Auschra et al., 2022). While recent decades have seen large strides made in the proportion of women among academic authors, the rate and degree of this increase has differed strongly by academic discipline. Although fields such as sociology have almost achieved gender parity in the authorship of academic publications (Ductor et al., 2023), economics and finance lag behind in their share of female authors (Brooks et al., 2014; Lundberg and Stearns, 2019; Adams and Xu, 2022). On the face of it, the differential

advancement of women across academic disciplines, especially when these operate within the same institutional context – such as a business school – seems puzzling. In this context, academics in different business and management disciplines operate within a fairly homogeneous work environment, facing similar performance measurement systems and being subject to the same parental leave frameworks. Hence, understanding why female representation is lower in the field of finance than in the related fields of business and management, and whether gender-specific differences in research activities and output success exist, are pressing questions – not only for finance scholarship but also for improved insight into why women specialise in particular fields and research areas and the factors that impact female scholars' academic career advancement.

Publications in high-quality journals and citation numbers are primary measures of scholarly esteem and are crucial criteria for promotion decisions (see, for example, Beattie and Goodacre, 2012; Walker et al., 2019a; Heckman and Moktan, 2020). Determining the extent to which there are gender-specific differences in these measures of 'research performance' is an important step in addressing the question of differential female advancement in academia.[1] Existing research has examined the publishing patterns of women and the differential impact of their research in various disciplines, including finance (Keys et al., 2009; Sherman and Tookes, 2022; Adams and Xu, 2022), economics (Card et al., 2020; Ductor et al., 2023; Hengel, 2022; Hengel and Moon, 2022) and management (Auschra et al., 2022). Much of this body of work has focused on disciplines in isolation – although notable exceptions have examined multiple fields, which we will discuss below – and many have restricted their analysis to research published only in the 'top' journals or by 'top' researchers. By focusing only on a select set of publications, the research design of such work may fail to identify differing research patterns and citation effects for a large proportion of the (female) academic community. By contrast, our study examines a broader spectrum of research, published at different journal quality levels, to ensure a wide representation of the research conducted by female academics in different but related disciplines. Our aim is to examine the nature of research conducted by female scholars and to explore its link to important research outcomes, including the placement of their work within journals and its research impact. More specifically, we ask whether work produced by women is published in less prestigious outlets or garners lower citation counts, and whether this is associated with the characteristics of their work, such as the methodological approach used or the topics investigated, and their background affiliations. In so doing, we utilise machine-learning techniques to identify complex patterns of gendered specialisation regarding research topics and methods.

We contextualise our findings within the well-defined discipline of academic finance, because there is ample evidence in the existing literature that this field stands out compared to others in business and management. Despite its apparent epistemological foundations alongside economics, finance is distinctive in several critical ways that make it a particularly relevant focus for investigating gender disparities in research outcomes. First, it is a fairly young, self-contained discipline (Agarwal and Hoetker, 2007; Alexander Jr and Mabry, 1994), lacking a strong critical stream and the paradigmatic diversity seen in other social sciences, including economics. Qualitative methods, such as interviews or case studies, and interdisciplinary investigations are rarely used (Brooks and Schopohl, 2018), and its interest in ethics research is particularly low (Bernardi et al., 2008). This comparatively rigid methodological structure may have implications for the kinds of research questions pursued and, consequently, for who advances in the field.

Second, finance has a strong bias towards 'elite' institutions. The authorship of work published in the top-rated journals in finance is dominated to a much greater extent than in other disciplines by scholars from a narrow set of prestigious institutions (Brooks et al., 2019). In addition, these journals appear able to exert a more significant influence over the research agendas of lower-rated journals than is the case in

other fields, further concentrating academic power (Brooks and Schopohl, 2018). This dynamic is heightened by the geographic concentration of finance scholars in US institutions, with 90 % of papers in the top-rated journal (the *Journal of Finance*) having at least one US-based co-author. The result is that, compared to the related discipline of economics or other Science, Technology, Engineering and Medicine (STEM) fields, 'top' scholars in finance are the least geographically diverse (Adams and Xu, 2022). Moreover, the research of finance is less geographically diverse and less inclusive of data from emerging markets than that of economics (Brooks et al., 2019). Finally, the academic discipline of finance is considered to be more insular and less related to its corresponding industry than is the case for other disciplines (Gendron and Smith-Lacroix, 2015).

These unique features of finance – its insularity, lack of methodological and geographic diversity, and concentration of academic power – make it a particularly interesting case for the study of gender disparities. The relationship between these field-specific characteristics and gender disparities is critical, given ongoing debates around whether women face a 'female penalty' in academic publishing. While the extensive review and meta-analysis by Ceci et al. (2023) suggests that broad-based gender discrimination in areas such as journal acceptance and grant funding may be limited, they do highlight field-specific differences. Finance's structural insularity and elite bias, combined with its limited methodological diversity, may impact women disproportionately. These characteristics may affect the type of research women pursue, the visibility of their work and, ultimately, their success in publishing and career advancement. Exploring how these factors interact with gender should provide deeper insight into the drivers of research outcomes for women in finance, which may differ significantly from those in the related fields of business and management.

In this study, we compare women's research patterns in finance to those of three cognate disciplines – accounting, economics and management – to understand whether the effects identified are finance-specific or can be observed across related fields. Such a comparison is of particular interest because all four subjects are social sciences that are frequently co-located in business schools, meaning that differences in gender-specific publishing patterns in finance relative to these closely related fields are more likely to relate to subject-specific features, which may, in turn, help to identify barriers to female advancement in academia.

While an analysis of publishing patterns of women across multiple disciplines is rare in the literature, we are not the first to look at more than one discipline to understand the gendered publishing landscape. For instance, Thelwall (2020) studied the citation numbers for 27 subject fields across six countries, observing that overall, female-authored work was cited significantly more frequently in the arts, humanities and social science, although there are some disparities across disciplines, countries and years. This occurred despite same-gender citation biases, a majority of authors being male, and men's greater propensity to self-cite. Elsewhere, Lynn et al. (2019) analysed citation patterns across flagship journal publications in economics, political science and sociology, and found male- and female-authored work cited at approximately the same rate when other variables were controlled for. They argued that this gender balance arises because most of the mechanisms that result in inequalities in other contexts do not apply to citations. Finally, Maddi and Gingras (2021) used a large database of publications spanning both economics and management to consider the citation impacts of male- and female-authored work. They highlighted the advantage in terms of citation counts of mixed-gender research teams over both single-author publishing and single-sex teams. However, we differ from existing studies in several critical ways. Compared to these studies, we focus on a very broad spectrum of publications across various journal quality measures, instead of primarily looking at publications in the 'top' journals. We also use a variety of affiliation and research characteristics to investigate, and to attempt to explain, gendered differences in publication outcomes, including measures for

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[1] We acknowledge that the ranking of a journal in which a piece of research is published, as well as the citations of that work, do not represent a complete measure of the 'performance' or 'success' of an academic. For instance, they do not capture activities in the teaching and service domain, which also represent important areas of scholars' activities. Even at the level of the assessment of research, journal rankings might not provide a measure of aspects such as the wider impact and relevance that a piece of work has for policymakers and practitioners. However, owing to the importance of these two metrics in scholars' career advancement and their integration into many performance evaluation systems, we consider them to be crucial – albeit not comprehensive – measures of a researcher's performance and success.

the topic selection, methodology and interdisciplinary nature of the research. Hence, we aim to explore whether male- and female-authored publications differ in their characteristics. Finally, and perhaps most importantly, we adopt a comparative approach, focusing not on pooling disciplines but on contrasting gendered publication patterns in finance with those in related fields, in an effort to gain deeper insights into the underlying drivers of gendered research differences.

Surveying a sample of more than 400,000 journal outputs in the areas of finance, economics, accounting and general management published between 1997 and 2022, we find that outputs written by women are more under-represented in finance than in accounting and management. In terms of the characteristics of the work produced by male and female academics, we find that women tend to investigate a different set of research topics and are more likely to engage in interdisciplinary work and research using qualitative methodologies. Furthermore, female finance authors appear to place their work in higher-quality journals less frequently than men, and also less frequently than female academics in related fields.[2] In addition, work by female finance academics is cited less frequently than work by their male peers, as well as female-authored work in other fields. We term these differences in journal placement and citations the 'female finance penalty' and we show that this is strongly associated with some of the characteristics of the work of female finance academics (i.e. interdisciplinarity, qualitative work, topic focus), as well as authorship affiliations. However, we also show that some of these factors seem to affect work by female finance authors differently when compared to their male peers, revealing evidence that suggests that female-authored publications gain less benefit from association with US-based authors and those in prestigious institutions. In addition, we find that in terms of publication in highly rated journals, female-authored work in finance is 'penalised' more for being interdisciplinary than work produced by men.

The remainder of the paper proceeds as follows: Section 2 provides an overview of the existing literature on the research patterns of female academics and derives testable hypotheses, while Section 3 describes the data and methods we employed to investigate the latter; Section 4 presents our results, and we conclude in Section 5 with a discussion of the implications of our findings.

2. Literature review and hypotheses development

There is a growing interest in understanding the drivers of the under-representation and lack of advancement of women in academic fields, examining, in particular, whether this stems from gender-based discrimination or factors related to different interests and life choices being made by women relative to men (e.g. Brooks et al., 2014; Sherman and Tookes, 2022; Adams and Lowry, 2022a; Adams and Xu, 2022; Hengel, 2022; Sarsons et al., 2021; Zhou et al., 2024; Card et al., 2020; Ductor et al., 2023; Auschra et al., 2022; Ceci et al., 2023). One key focus of this literature is the extent to which female scholars succeed in placing their work in high-quality journals, as well as the citations this work receives, given the importance of these metrics in promotion

decisions and pay awards (see, for example, Beattie and Goodacre, 2012; Walker et al., 2019a; Heckman and Moktan, 2020).

Both in science and most social sciences, female researchers produce fewer papers, on average, than their male counterparts over their lifetimes (Penas and Willett, 2006; Bird, 2011; Ceci et al., 2023). Ceci et al. (2023) suggest that the disparity may arise, in part, because men experience fewer career interruptions – for example, owing to family reasons – and it is exacerbated by a small percentage of very productive researchers who are disproportionately male. In addition, women tend to specialise to a lower extent than men, meaning that their research is spread across more sub-fields, which may preclude the production of a high volume of research from one specific area (Leahey, 2006) and prevent women becoming very well known for work on a particular topic. Further, when women are part of a scientific research team, they are less likely to be credited as authors of the resulting paper(s) than their male counterparts: Ross et al. (2022) document gaps of 13 % around outputs and 58 % around patents in the probability that women in a research team will be named as authors relative to their male fellows.

The gender productivity gap is compounded by disparities in journal placement. For instance, some studies have suggested that women in some disciplines are disadvantaged when it comes to placing their work in the highest-ranked journals (Brooks et al., 2014), although findings vary by field. Thus, in engineering, women tend to publish in higher-rated journals than their male counterparts, but their work receives fewer citations (Ghiasi et al., 2015), while in sociology, men are no more likely than women to publish in the highest-rated outlets, despite producing significantly more papers (Castonguay, 2024; Leahey, 2006). In their meta-analysis of gender differences in journal acceptances, Ceci et al. (2023) do not find broad-based evidence for a gender bias.

When women do publish in comparable journals to their male counterparts, several studies have found that their work is cited less frequently (Beaudry and Larivière, 2016; Davenport and Snyder, 1995; Helmreich et al., 1980; Rossiter, 1993; Ward et al., 1992), although this result is not ubiquitous across all disciplines and samples. Aksnes et al. (2011) conducted a pan-disciplinary study of Norwegian researchers and found women to be cited less than men to only a modest degree. In a study of management research, Judge et al. (2007) found no evidence that the gender of the first author of a paper was significant in determining its citation rate. Similarly, Penas and Willett (2006) and Tower et al. (2007) found no differences in citation rates by author gender in, respectively, the field of information science and the 'top' six journals in the world across disciplines. Indeed, Ductor et al. (2023) and Card et al. (2020) showed that in a sample of publications in 'top' economics journals, female-authored papers achieved greater impact in terms of the number of citations of the work. Sherman and Tookes (2022) and Adams and Xu (2022) documented a similar citation premium for female-authored work in the most prestigious finance journals and for the 'top' finance researchers. The contrasting findings in the existing research suggest that there is a strong field-specific component in the research outcomes for men and women. Furthermore, there is scant evidence for whether these findings also apply to research published in lower-ranked journals or whether the magnitude of these effects differs between cognate fields. This leads us to our first research hypothesis, which we separate into two related strands:

H1a. Compared to men in the same field, women publish in lower-rated journals and their work is cited less frequently.

H1b. The gap between the publication and citation success of women and men is larger in finance than in related fields.

A related strand of the literature analyses whether differences exist in the types of topics in which men and women specialise (e.g. Dolado et al., 2012; Key and Sumner, 2019; Nielsen and Börjeson, 2019) and the methodologies that they employ (e.g. van Rijnsoever and Hessels, 2011; Card et al., 2020). While there is a well-documented gender separation

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[2] It is important to clarify that women publishing a lower proportion of their work in highly rated journals does not necessarily imply that they have been less 'successful' in this regard, because we cannot identify what their publication objectives were at the point of submission. There is evidence to indicate that women are more likely than men to select away from 'top' journals, self-rating the quality of their research lower or fearing that it is not sufficiently novel (see Basson et al., 2023). Women sometimes prefer to submit their studies to journals, even when lower-rated, where they feel there is a better 'fit' or the work is more likely to be accepted, because of a lower willingness to take risks given their more limited time for research and post-review study revision (Closa et al., 2020). When there is no gender difference in actual performance, men tend to be more 'bullish' about their expected future performance at work-related tasks (Reuben et al., 2014) and, in a similar vein, are more inclined to 'take a shot' at publication in a leading journal.

at the discipline level, with women being under-represented in fields such as economics, finance and STEM subjects, a few recent studies have suggested that within disciplines, women tend to work on different topics to their male colleagues (Nielsen and Börjeson, 2019). For instance, female economists are found to specialise in areas such as labour economics, public economics, health and education (Nielsen and Börjeson, 2019; Auriol et al., 2022; Lundberg and Stearns, 2019; Davies, 2022; Sierminska and Oaxaca, 2021), while they are less likely to work in the areas of macroeconomics, monetary economics and finance (Davies, 2022; Chari and Goldsmith-Pinkham, 2017). However, in accounting, Gago and Macias (2014) found no significant differences in men's and women's choices of sub-fields. Nielsen and Börjeson (2019) suggest that women tend to specialise in topics that address social or human-centred questions while men are more prone to working on technical or operational research topics. In line with this notion, van der Linden et al. (2024), based on analysis of all research outputs on Scopus between 2018 and 2022, find that women comprise the majority of active researchers on topics related to the United Nations Sustainable Development Goals, including education, gender equality, reduced inequalities and peace and justice. Women may also prefer non-mainstream research areas (Dolado et al., 2012). Such choices of subject matter may be consequential if some align better with the preferences of the leading journals than others (an issue we return to in our empirical work below). Our second research hypothesis builds on these notions:

H2. The likelihoods of women publishing in lower-rated journals and their papers receiving fewer citations are linked to the topics that they work on, and the effect is stronger in finance than other fields.

Besides topic specialisation, some studies suggest that female academics might rely on different methodological approaches to their work, such as the selection of empirical or theoretical analyses, quantitative or qualitative approaches, and whether to engage in interdisciplinary work (van Rijnsoever and Hessels, 2011; Rafols et al., 2012). Such relationships are particularly relevant because the methodology adopted has been found to be linked to both the likelihood of 'top' journal placement and citations (Card et al., 2020) and researchers' career development (Fini et al., 2022). Methodological choices might therefore serve as a channel by which to explain women's under-representation in the highest-rated journals in specific fields. van Rijnsoever and Hessels (2011)), focusing on academics in the fields of science, geosciences and biomedicine, found that female researchers were more likely to engage in interdisciplinary research, which is less advantageous to researchers' career development and progression than a focus on work within one's own discipline. Relatedly, in a study of the submission and publishing behaviour of political scientists, Djupe et al. (2019) reported that men were more likely than women to submit work based on quantitative statistical methods. A similar finding has been observed in sociology (Grant et al., 1987). Van der Linden et al. (2024) also document that publications involving women are more inter- and multidisciplinary across a broad range of disciplines than those involving men, and they report the starkest differences for researchers in the areas of economics and finance. Some studies have suggested that the lack of highly rated interdisciplinary journals or field journals welcoming interdisciplinary work may make it harder for women to place their research in leading outlets (Leahey, 2006). However, less is known about whether such gender-specific differences in methodological choice exist in finance and the related fields of accounting, economics and management, and whether these potential differences help to explain the situation of women in finance academia.

Several features of academic finance as a discipline may suggest that the gender disparities in publication outcomes may be particularly stark in comparison to its cognate disciplines, especially when looking at the entire body of research across all quality levels. Finance, being younger and more insular than disciplines such as economics, tends to operate within a narrower set of paradigms (Brooks and Schopohl, 2018). The resulting limits on the use of qualitative and interdisciplinary research approaches may restrict the diversity of research questions explored, creating disadvantages for anyone whose work deviates from the field's predominant quantitative focus (Brooks et al., 2019). The rigidity around acceptable methods in finance may thus serve as a barrier to female scholars who, according to prior studies, are more inclined to engage in interdisciplinary research (van Rijnsoever and Hessels, 2011), a tendency less well-aligned with the norms of finance publication. Given the influence of elite journals in shaping the research agenda in finance (Brooks and Schopohl, 2018), women's topic choices may make it more difficult for them to publish in top-rated outlets.

In addition, finance's 'top' journals are often dominated by scholars from elite, primarily US-based, institutions, contributing to the field's lack of geographic and institutional diversity (Brooks et al., 2019; Adams and Xu, 2022). This concentration of academic influence, particularly among a small number of highly prestigious institutions, can pose significant challenges for researchers, and especially for women, who may not have the same access to influential networks or resources as their male counterparts (Pezzoni et al., 2012). The gate-keeping of 'top' finance journals, heavily reliant on institutional pedigree, compounds these barriers and may exacerbate gender disparities in publishing success. Overall, this leads to our final research hypothesis:

H3. The likelihoods of women publishing in lower-rated journals and their papers receiving fewer citations are linked to the methodological characteristics of their work, including the use of qualitative or interdisciplinary approaches, and the effect is stronger in finance than other fields.

3. Data and methodology

3.1. Data collection

We retrieved most of the variables employed in this study via Elsevier Scopus's Application Programming Interface (API), which allows us to download a broad range of publication- and author-level data in a consistent manner. We began with the 2018 version of the Chartered Association of Business School's Academic Journal Guide (CABS AJG; also known as 'the ABS list'), which is a comprehensive list of journals spanning 22 fields in business and management (including economics). Survey evidence indicates that the ABS list is referred to widely, in many countries – especially the UK, where almost 90 % of business school academics report using it – with the US constituting the next biggest user (Walker et al., 2019a). The list has been updated several times, with additional journals incorporated and regrading taking place each time. Changes to the list are made following consultation with a panel of subject-matter experts.

While a substantive literature discusses the performative effects and other implications of journal ratings schemes and the AJG in particular (e.g. Humphrey and Gendron, 2015; Willmott, 2011; Mingers and Willmott, 2013; Picard et al., 2019; Andrew et al., 2020; Brooks et al., 2023), there is evidence that it is widely used in hiring and promotion decisions and to access resources (see, for example, Beattie and Goodacre, 2012; Walker et al., 2019a; Heckman and Moktan, 2020). Thus, publishing in journals that are, according to the ABS list, more

Table 1
Publication-level summary statistics.

Panel A: Summary Statistics	N	Mean	Stdev	Min	Max
AbsRank	414,108	2.53	1.01	1.00	5.00
Citations	414,108	2.39	6.08	0.00	470.25
Female (%)	414,108	0.26	0.34	0.00	1.00
QSRank	414,108	0.35	0.48	0.00	1.00
locUS	414,108	0.35	0.48	0.00	1.00
Qual	414,108	0.12	0.33	0.00	1.00
Variety	414,108	2.85	2.09	1.00	20.00
NumAuthor	414,108	2.21	1.13	1.00	88.00

Panel B: Correlation Matrix	AbsRank	Citations	Female (%)	QSRank	locUS	Qual	Variety	NumAuthor
AbsRank	1.00							
Citations	0.24	1.00						
Female (%)	−0.05	0.01	1.00					
QSRank	0.23	0.07	−0.03	1.00				
locUS	0.23	0.07	−0.05	0.15	1.00			
Qual	−0.06	0.02	0.07	−0.03	−0.04	1.00		
Variety	0.01	0.15	0.11	−0.06	−0.09	0.18	1.00	
NumAuthor	0.06	0.10	0.09	0.09	0.00	0.07	0.18	1.00

Note: See Section 3 for variable definitions.

highly rated is likely to benefit an author's career and standing, making it worthwhile investigating the impact that gender might have on the likelihood of publishing in such journals. Using the list's ratings also has the advantage that they are publicly available for a large number of outlets on a comparable basis, although a drawback of journal-level ratings is that there is considerable variation in the scientific influence of individual outputs within any given journal (Seglen, 1992; Baum, 2012). While acknowledging the limitations of such measures,[3] we adopted a journal's rating and the number of citations a paper receives as measures of 'research success' and, therefore, as indicators of 'performance'.

We downloaded information on all listed journals in four fields: finance, economics, accounting and management. For each publication within these journals, we retrieved the list of authors (including first and last names), the list of affiliations of the authors at the time of publication (including the associated geographic locations, i.e. the city and country hosting the affiliated institution), the title, abstract, keywords, year of publication, volume and issue number, reference list and up-to-date citation counts. We labelled a publication as belonging to a specific field (finance, economics, accounting, management) according to the categorisation of the journal concerned in the ABS list. To evaluate the standing of the work, we also labelled each paper – as 4, 3, 2 or 1 – according to the rating of the journal concerned in the 2018 ABS list. In addition, we created a further rating, of 5, for so-called 'Journals of Distinction' (JoD), a classification that denotes the 'top' journals in each field.[4] We termed this five-value measure the *AbsRank*; it constitutes one of our two key dependent variables.

3.2. Identifying authors and their gender

We used the first name of each author as the primary method by which to determine gender, employing three different approaches to identify whether a name was more likely associated with males or females: common lists of male and female names, the Python package 'gender-guesser', and zero-shot text classification, which is based on a pre-trained natural language inference (NLI) model.[5] We reconciled the predictions from these three different approaches and checked the robustness of the results. For cases where the gender remained unknown or for which the three name-based approaches did not arrive at a majority conclusion, we complemented this primary gender-identification method with a web-scraping program that identifies gender on the basis of the pronouns used in the online research profiles of authors. Overall, these methods successfully identified 99 % of authors' genders.[6]

When merging this gender identification back to our publication-level datasets, we removed any publication for which we had been unable to determine the gender of one or more authors. While our database has publication records dating back to 1852, to conduct our analysis on more recent and therefore reliable data, we limited the publication year to the range of 1997 to 2022 inclusive. Our final sample consisted of 414,108 publication observations and 368,530 unique authors.

3.3. Variable definitions

3.3.1. Dependent variables

We employed two measures of research 'performance': one based on the rating of the journal in which the publication was placed, and the other based on the number of citations to the publication. Thus, we

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[3] There is now quite a substantial literature discussing the disadvantages of journal ratings lists as a way to measure research performance. For instance, research managers often presume that work in higher-rated journals is always of superior quality, but this is not the case (Starbuck, 2005). The use of journal ratings lists to evaluate research has been accused of encouraging a focus on incremental rather than substantive problems (Heckman and Moktan, 2020), reducing scholarly job satisfaction (Tourish, 2011). The highest-rated journals commonly have a limited focus that appears to favour certain topics and approaches to the exclusion of others (e.g. Alvesson and Sandberg, 2013).

[4] JoD align closely to other norm mappings; for example, to the so-called 'Top Five' elite economics journals – the *American Economic Review*, *Econometrica*, the *Journal of Political Economy*, the *Quarterly Journal of Economics* and the *Review of Economic Studies* (as well as *Annals of Statistics*) and the 'Top 3' journals in finance: the *Journal of Finance*, the *Journal of Financial Economics*, and the *Review of Financial Studies*.

[5] Our use of the names of authors listed on the publication as the method to determine their gender closely follows conventions in the prior literature (see, for example, Joanis and Patil, 2022; Nielsen, 2017; West et al., 2013).

[6] The Online Appendix (Appendix B) provides further details of these procedures. We also performed a validation exercise for our main first-name-based gender-identification strategy, in which we randomly selected 100 author names from our sample and applied the pronoun-based web-scraping program to identify their genders. For those for which an online research profile could be identified, we achieved a match of 90 % between the genders identified through the first-name-based and web-scraping approaches. Hence, we are confident that our first-name-based gender-identification approach offers a high accuracy rate.
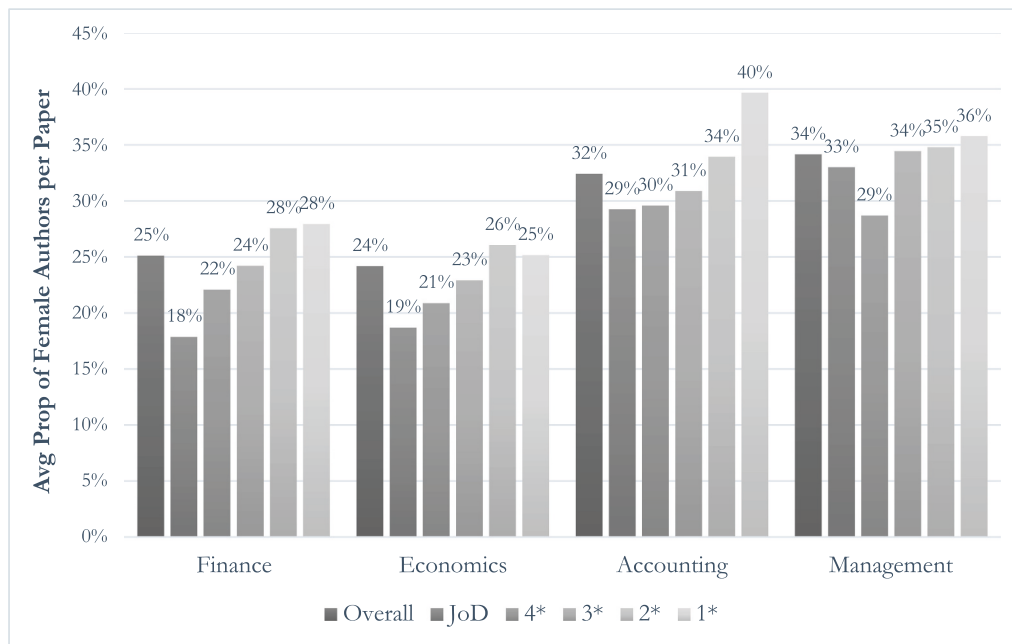
Fig. 1. Proportion of Female Authors per Paper by Field and Journal Ranking.

Table 2
Authorship pattern summary statistics (%).

	Share of women in authorship team				
	0 %	>0 % & ≤ 33 %	>33 % & ≤67 %	>67 % & < 100 %	100 %
Finance	54.93 %	14.74 %	14.90 %	6.76 %	8.67 %
JoD	64.90 %	14.48 %	11.75 %	3.96 %	4.90 %
4*	59.51 %	14.68 %	13.41 %	5.15 %	7.25 %
3*	55.68 %	15.23 %	14.94 %	6.31 %	7.83 %
2*	51.49 %	14.68 %	15.66 %	8.48 %	9.69 %
1*	53.05 %	13.30 %	15.67 %	5.61 %	12.36 %
Economics	59.60 %	10.68 %	14.46 %	4.77 %	10.50 %
JoD	66.25 %	10.94 %	12.71 %	3.16 %	6.95 %
4*	63.45 %	10.81 %	13.54 %	4.36 %	7.84 %
3*	60.43 %	11.47 %	14.28 %	4.65 %	9.17 %
2*	57.27 %	10.63 %	15.10 %	5.22 %	11.77 %
1*	59.95 %	9.08 %	14.13 %	4.51 %	12.33 %
Accounting	46.00 %	15.47 %	16.48 %	8.41 %	13.63 %
JoD	50.30 %	16.38 %	14.12 %	6.60 %	12.60 %
4*	46.20 %	21.86 %	12.52 %	9.15 %	10.27 %
3*	48.12 %	15.32 %	16.40 %	7.32 %	12.84 %
2*	44.08 %	14.75 %	17.54 %	9.37 %	14.26 %
1*	38.30 %	12.65 %	19.15 %	11.25 %	18.65 %
Management	44.06 %	15.05 %	17.11 %	8.57 %	15.21 %
JoD	43.18 %	17.60 %	18.01 %	8.39 %	12.82 %
4*	49.94 %	16.04 %	15.97 %	6.56 %	11.49 %
3*	43.05 %	15.73 %	17.05 %	9.40 %	14.77 %
2*	45.22 %	13.32 %	16.61 %	7.64 %	17.21 %
1*	42.41 %	13.88 %	18.28 %	8.88 %	16.55 %

Notes: We use continuous authorship measures based on Female (%). '=0 %' represents publications in which the share of female authors is equal to zero; '>0 % and ≤33 %' represents publications in which the share of female authors is higher than zero but smaller or equal to 33 %, and so on, until '=100 %' which represents publications in which the share of female authors is equal to 100 %, so all authors are female. The numbers in bold are computed at the field level and the remaining figures are calculated at each journal-rating category.
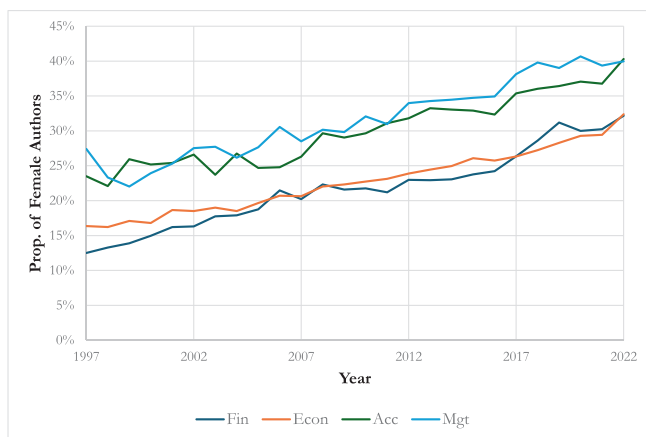
Fig. 2. Proportion of Female Authors per Paper by Field over Time.

defined a journal rating dummy, *AbsRank*, taking a value between 1 and 5 as described above, and a *Citations* count, calculated as the up-to-date citations count for the paper divided by the number of years since its publication.[7]

3.3.2. Key independent variables

Gender – We created a variable that captures the proportion of female authors per publication, which we termed *Female (%)* and which takes a value between 0 and 1: a value of 0 indicates that there are no female author(s) on the publication, meaning that the paper is either written by a solo male author or a team of men; a value of 1 indicates that the work is exclusively authored by women, either a team of women or a solo female author; values between 0 and 1 are indicative of mixed-gender teams, higher values being associated with greater proportions of women among the authors.

Gendered Topic Segregation – We examined the topics that each paper focused on to investigate whether different subject-matter specialisations could explain gendered publishing 'success' and citation. We used machine-learning techniques to identify topics on the basis of keyword clusters, identifying 33 topics for economics publications, 24 for finance, 14 for accounting, and 23 for management.[8] The clusters were labelled according to the most frequent keywords within each, and based on applying our own judgement. The topics were then sorted on the basis of the gender segregation of a specific topic within the field (*genderseg*), which we defined as the proportion of papers produced by male authors (i.e. where *Female (%)* = 0) minus the proportion of papers produced by female authors (i.e. where *Female (%)* = 1).[9] Hence, topics with a higher gender-segregation measure are the most 'male-dominated' and those with lower scores feature higher proportions of female authors. We then normalised this gender-segregation measure (*GenderSeg*) to give values between 0 and 1 by taking each value minus the minimum value in the field, and dividing by the difference between the maximum and minimum within each field. Thus, higher *GenderSeg* values indicate a more

gender-segregated (i.e. male-dominated) topic.

Interdisciplinarity – We captured whether a publication was interdisciplinary in nature by examining its reference list to determine the field(s) from which its citations derive. Here, the idea is that a paper is more likely to be interdisciplinary if its references draw on methods and insights from more than one field. Specifically, we retrieved all the journal names from the Elsevier Scopus References API and counted how many fields from the ABS list featured among a publication's references.[10] There is strong evidence that business and management scholars align closely to AJG fields, with 98 % of faculty sampled in a large-scale survey allocating themselves to these fields (Walker et al., 2019b). Our measure of interdisciplinarity, *Variety*, counts the number of disciplines that a paper's references incorporate.[11]

Qualitative Methodology – We captured whether a paper used a qualitative methodology, which we determined by creating a word list associated with the description of qualitative studies.[12] We defined a paper as qualitative (*Qual*) if at least one such word appeared in the abstract or title, and non-qualitative if none of the words was present.[13]

Author Affiliation to Elite Institutions – Publications and citations in the 'top' journals are concentrated in 'elite' universities, while the same is not the case for lower-ranked journals (Brooks and Schopohl, 2018). We capture elite university affiliation by tracing all the affiliations of a paper's authors and generating a dummy variable (*QSRank*) that takes a value of 1 if at least one affiliation is to an institution ranked in the Top

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[7] In robustness tests, reported in the Online Appendix (Appendix E, Tables E.1 and E.3), we replaced our main citation measure with total citations since publication, as well as with average yearly citations excluding self-citations.

[8] Appendix B of the Online Appendix provides details of the process we followed to identify publications' topics.

[9] The literature on gendered topics adopts different approaches to measuring this phenomenon, including an investigation of how gender is distributed within topics (gender segregation of topics) (e.g. Auschra et al., 2022) and an investigation of which topics men and women choose most frequently (e.g. Nielsen and Börjeson, 2019). In our empirical approach, we mainly focus on gender segregation of topics in a similar vein to Auschra et al. (2022), although we also analyse topic specialisations; for example, in Table 4.

[10] It is worth noting that many references are to conference proceedings or unpublished working papers. In addition, some references belong to other non-business disciplines, such as medicine, planning and computer science. As a result, a significant proportion of references could not be identified in terms of their discipline, and we were able to allocate 9,951,970 out of 18,671,435 references to one of the 22 AJG fields, an identification rate of 53.3 %. Details of variable construction can be found in Appendix B of the Online Appendix. Appendix G of the Online Appendix lists all 22 AJG fields.

[11] While we acknowledge the multifaceted nature of interdisciplinarity as captured by various measures proposed in, for example, Rafols et al. (2012), we view *Variety* to be the most suitable proxy for interdisciplinarity in our setting, owing to the nature of our sample and for two further reasons: first, conceptually, it captures the most basic measure of knowledge integration from other fields, namely the engagement with and reference to work published outside one's own field, thereby serving as a necessary condition for producing interdisciplinary work; second, 25 % of the papers in our sample cite work in journals from only one field, which does not allow us to calculate the other, more nuanced measures of interdisciplinarity proposed in Rafols et al. (2012), including *Balance* and *Disparity*, and, therefore, we concede the analysis of other facets of interdisciplinarity to future research.

[12] We defined a paper as qualitative if at least one of the following predefined terms appeared in the abstract or title: *questionnaire, survey, participant, interview, case study, case studies, respondent, response rate, qualitative, focus group, asked, participation, thematic, opinion, semi-structured, primary data.* We acknowledge that our 'key term'-based approach has limitations and classifies papers using survey-based approaches as 'qualitative'. While survey-based approaches can be considered empirical in the sense that they use quantitative techniques to analyse their primary data, they are not considered among the traditional, standard empirical approaches in finance, and would be deemed 'qualitative' to the extent that they deviate from its standard quantitative approaches.

[13] Our measure of qualitative methodologies is likely to under-identify such studies because not all publications disclose their methodological approach in their title and abstract. By contrast, our approach would also classify mixed-methods studies (i.e. those using quantitative *and* qualitative techniques) as qualitative. We have conducted additional robustness tests in which we replace our measure with one that uses an artificial intelligence (AI) large language model (LLM), specifically ChatGPT, to identify a paper's methodological approach based on its title, keywords and abstract. We report the results of this in Tables E.2 and E.4 of the Online Appendix.

200 of Quacquarelli Symonds (QS) 2022 World University Rankings at the time of publication, and 0 otherwise.[14],[15]

Author Affiliation to US Institutions – Prior research has shown that in the fields studied in our paper, the majority of publications in the 'top' journals are produced by US-based authors. The latter are less dominant in lower-ranked journals (Brooks and Schopohl, 2018; see also Kim et al., 2006; Keloharju, 2008). To account for this geographical concentration, we created a dummy variable that takes a value of 1 if a paper has at least one affiliated author located in the United States, and 0 otherwise.[16]

Number of Authors – We controlled for the number of authors on a paper (*NumAuthors*). We expect both the ABS rank of the journal in which a paper is published and the citation counts to be positively related to the number of authors of a paper. Jones (2021) argues that working in teams allows authors to combine perspectives, knowledge, skills and effort, which may improve the quality of work, thereby improving its likelihood of success when it comes to placement in a higher-rated journal. A large set of authors is also likely to increase opportunities for a paper's distribution and exposure, thereby increasing citations to it (Jones, 2009, 2021; Wuchty et al., 2007). Furthermore, if authors are more prone to citing their own work than that of others, having more authors on a publication increases the potential for self-citation.[17]

4. Results

4.1. Summary statistics and univariate analysis

Table 1 presents summary statistics and a correlation matrix for the main variables we employed in our study covering all four fields. Focusing first on the measures of journal ranking and citations, we find that the average rating of the journal in which a paper is published is between 2 and 3 (2.53), with a standard deviation of around 1. On average, each paper in our sample receives 2.39 citations per year, with a standard deviation of 6.08. This is highly skewed, however, owing to a few papers receiving a very high number of citations while other papers

are not cited at all. Turning to the representation of women among a publications' authors, we find that on the average publication, women constitute 26 % of the authorship, although, remarkably, the median publication has no women among its authors.

The table further illustrates that for 35 % of papers, at least one of the authors is affiliated to a university that lies in the Top 200 institutions according to the QS rankings, and for an identical percentage of papers (i.e. 35 %) at least one of the authors was based at a US institution at the time of publication. Qualitative methodologies (*Qual*) were used by 12 % of the papers in the sample, and the average paper cited references from 2.85 different fields of the ABS list (*Variety*). However, a large proportion of the papers had not engaged with research published beyond their own fields, with more than 25 % of the sample citing work from only one field. Finally, the average number of authors per paper in the sample was around two, with a moderate standard deviation of 1.13, suggesting that, while very large co-authorship teams exist in the four fields of interest, the number of authors for most papers was between one and four.

Panel B of Table 1 shows that publishing in higher-rated journals is positively correlated with having at least one US-affiliated author and being at a more prestigious institution (i.e. having a high QS ranking). Our measure of interdisciplinarity, *Variety*, is positively correlated (coefficient: 0.18) with the number of authors, an intuitive outcome given that the more authors a study involves, the greater the likelihood that they will collectively possess subject-matter expertise drawn from more than one discipline. In terms of the relation between the proportion of female authors (*Female (%)*) and our two outcome variables, we find a slight negative link to the AJG ranking of the journal in which an article is published, and a positive but near-zero correlation coefficient for the article's yearly citation count. However, these results do not control for field-specific effects in these relationships or the confounding effects of other variables, which we will explore in further detail below.

We now turn to the question of how female authorship is represented in different fields. Fig. 1 shows the average proportion of female authors for different finance journal ratings and contrasts these with the figures for accounting, economics and management journals. The overall proportion of women authors in finance journals (25 %) is lower than in accounting (32 %) and management (34 %) journals and on a similar level to economics ones (24 %). In addition, female authors in finance (and economics) also appear to be less successful as measured by the proportion of their work published in the highest-rated journals. Focusing first on the most-prized JoD outputs, the average representation of women in these in finance is 18 %, compared with 29 % for accounting and 33 % for management, although economics returns a similar proportion (19 %). These numbers exhibit a larger drop from the overall levels of female representation in the 'top' journals in finance and economics than for accounting and management journals, where the comparative lack of female representation in the three highest journal-rating categories is much less pronounced. The figure illustrates women's reduced presence in the most prestigious journals in finance, a phenomenon not observed in accounting and management, but echoing the finding of Maddi and Gingras (2021) for economics and providing support for hypothesis H1a.

To further understand how female authorship materialises in the different fields, Table 2 presents summary statistics for the percentages of papers by gender composition of the authorship team, according to discipline and to the rating of the journal in which the paper was published. The categories of female authorship representation range from 0 % (none of the authors is female) to 100 % (all the authors are female); intermediate categories represent mixed-gender teams, with higher values representing higher proportions of female authors. The table illustrates that across all four fields, women represent a minority group within authorship (teams), with the vast majority of all publications across all journal quality ratings having less than 34 % women among their authors. This pattern is more pronounced the higher the journal quality rating, as well as in the fields of finance and economics. In

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[14] We note that the QS ranking variable may be considered endogenous because authors that achieve publication in leading journals or obtain large numbers of citations for their work have a higher chance of being hired by highly ranked institutions – that is, the explanatory variable *QSRank* may be influenced by the outcome variables *AbsRank* and *Citations*. In addition, *QSRank* may be influenced by both the outcome and some other predictors, thus representing a collider variable that distorts the true relationships between those predictors and the outcome. By including *QSRank*, we may inadvertently induce a spurious correlation between variables that would otherwise be uncorrelated. However, we argue that given the way our data are organised, we can probably justifiably consider an author's current institutional *QSRank* to be exogenous with respect to publications and citations in that particular year because publication or citation status in year *t* is unlikely to lead an author to change institution in the same year. Furthermore, despite the risk of collider bias, the inclusion of *QSRank* is important because it captures key factors, including resources, networks and reputation, that directly impact journal placement and citation rates. Omitting it could lead to an incomplete understanding of how institutional prestige influences publication outcomes, introducing potential omitted variable bias. Moreover, its inclusion helps us explore the role of academic prestige in shaping success, which is crucial to understanding broader (gendered) patterns in publishing. Hence, while bias is a concern, we aim to mitigate it via careful interpretation of coefficient estimates.

[15] In further tests, we examined whether our findings were robust to a more restrictive definition of 'elite' institutions by focusing on those ranked in the QS Top 20: qualitatively, our results were unchanged.

[16] In robustness tests, reported in Tables E.2 and E.4 of the Online Appendix, we replaced our dummy variable with the percentage of all of the affiliations listed on the publication that were US-based.

[17] We control for self-citation in robustness tests that can be found in Tables E.1 and E.3 of the Online Appendix.

particular, for finance and economics the majority of publications do not have any women among their co-authors because 55 % and 60 %, respectively, of all papers are written exclusively by men. Interestingly, and by way of comparison, accounting, which is also closely related to finance and far more often co-located with it departmentally than economics, exhibits a broader representation of female authorship, both overall and in terms of co-authorship patterns. Another notable observation from Table 2 is that work written exclusively by women, either solo or as a team, is rarer in finance than in any of the other disciplines, representing less than 9 % of all finance papers and <5 % of the 'top' publications. In addition, teams in which women represent more than half of the authors are a rarity, not only in finance but across all four disciplines.

While the foregoing statistics provide an overview of averages over our entire sample period, female representation in academic publishing has increased significantly over the last three decades (e.g. Lundberg and Stearns, 2019; Hengel and Phythian-Adams, 2022; Auschra et al., 2022). Hence, Fig. 2 illustrates the average proportion of female authors per publication by field for each year of our sample period. All four fields show a strong upward trend in female representation between 1997 and 2022, although management and accounting progressed from higher levels (around 27 % and 24 %, respectively) than finance and economics, where women represented only 13 % and 16 % of authors, respectively, in 1997. Since then, finance and economics have not 'caught up' with accounting and management, but instead the four fields have developed roughly in parallel, preserving the original 'gaps' in female authorship throughout the sample period. By 2022, female authorship had reached around 40 % among management and accounting publications, while women constituted an average of around 32 % of finance and economics authors.

In addition to variations over time, differences in research achievements for male and female authorship teams might be driven by variations in the nature of the research they conduct and/or differences in their affiliations. To understand if this is the case, we analysed whether such characteristics could be driving the likelihood of journal placement and citations to the work. Table 3 provides summary statistics for these, broken down by the share of female authors on a paper. To facilitate comparison, in this table we compare papers with minority female authorship (i.e. *Female (%)* < 50) with those in which at least half of the authors are women (i.e. *Female (%)* ≥ 50). In addition to average values of the variables, we also report results of a student's *t*-test of a comparison of means between these two groups. The table illustrates that the largest difference in citations between female- and male-dominated work is in finance, with majority-female publications generating 0.24 fewer citations, on average, than those with a male majority. Hence, Table 3 provides preliminary support for hypothesis H1b. However, given that papers with more authors tend to generate more citations (Jones, 2021), and that higher proportions of female authors in mixed-gender teams seem to be associated with higher numbers of authors per paper (see *NumAuthors*), it is not possible to discern the separate effects of female authorship and number of authors in this univariate comparison. A further issue is the extent to which higher male citation figures arise as a result of their greater tendency to self-cite (Cameron et al., 2016; King et al., 2017; Maliniak et al., 2013), which could be the result of having a larger body of prior studies to draw upon (owing to men's higher lifetime productivity and greater tendency to specialise) and/or their higher confidence in promoting their own work (Thelwall, 2018). Hence, we defer further assessment to our regression analysis, in the next section.

Turning to the other characteristics, we see that women are more likely to be involved in qualitative research whatever their field, although such research is far more common in accounting and management than in economics or finance. In finance, the difference in the use of qualitative research methods between papers authored by a majority of male and female authors is small but statistically significant: 9 % of papers authored by a majority of women are qualitative in nature,

compared to 7 % of those written by a male majority. This difference is even more stark in other fields; in particular, in management where 32 % of papers written by a female majority employ qualitative methods, while only 23 % of work written by a male majority do so.

In addition, field-specific and gender-specific differences exist in the extent to which research papers draw on methods and insights from more than one field, as captured by the *Variety* variable. Economics and finance appear less interdisciplinary than accounting and management because, on average, their work makes reference to publications from fewer fields. This greater insularity and self-focus have been documented in prior research (e.g. Brooks et al., 2019), and if interdisciplinary work is penalised more heavily in these fields, this might be one channel by which to explain the lower publishing success of female academics. The difference in gender-specific interdisciplinary tendencies is notably stronger in finance than in economics: on average, finance papers written by a female majority reference work from 0.27 more fields than those by male-dominated teams, while in economics the difference is only 0.19. However, both management and accounting exhibit even stronger contrasts in gender-specific interdisciplinarity, with work written by a majority of women citing, on average, 0.33–0.34 more fields than that of their male-dominated contemporaries.

Further, Table 3 also illustrates differences in affiliation characteristics across fields and genders. In finance, papers authored by a male majority are considerably more likely to have at least one author affiliated with a US institution (38 %) than papers written mostly by women (30 %), and are also more likely to have an affiliation to a university in the QS Top 200 institutions (37 % vs 30 %). Economics, accounting and management all exhibit less strong gender divides in such affiliations. These field-specific differences in gendered work characteristics and affiliation backgrounds may serve as potential channels by which to explain the lower gender representation of women in higher-ranked journals – an aspect we will explore in detail in the next section.

As a final part of our univariate analysis, we focus on differences in the topics in which women and men specialise. Fig. 3 shows different topics clustered by their degree of gender segregation (*GenderSeg*). It is perhaps surprising that (putting aside mixed-gender teams) men produce more published research than women even on the topics that are primarily associated with the latter, such as the 'human-centred' issues discussed in the literature outlined in Section 2, including Nielsen and Börjeson's (2019) management topic analysis. While there appears to be gender segregation in all research topics for all four fields, the differences are more pronounced for finance and economics. Looking at the kinds of topics in finance and economics that are most dominated by male authors, they tend to be more quantitative and technical, as well as macroeconomic in nature, such as 'Option Pricing' and 'Game Theory', and 'Monetary Policy' and 'Taxation'. We find that women in finance write more commonly than men about 'ownership' and 'executive compensation', while they write less about 'investments'. By contrast, less gender-segregated topics seem to focus more on governance, ethics, and 'people'-oriented issues (e.g. 'Corporate Social Responsibility (CSR) and Ethics', 'Human Capital'). This trend features in accounting too, albeit to a lesser extent, where the more gender-segregated topics are more likely to focus on financial accounting and the less gender-segregated ones resemble those in finance to a degree (e.g. 'CSR', 'Executive Compensation', 'Ethics Education'). Management differs most starkly from the other fields, with 'Information Management' and 'Strategic Management' the most gender-segregated topics, and 'Marketing' and 'Organizational Development' the least so. Nevertheless, even in the management field there is a clear gender divide in topic choices, with topics such as 'Ethics and Governance', 'Operations Management' and 'Corporate Finance' presenting as more male-dominated.

Table 4 further explores the extent to which women and men study different research topics. It presents the top five topics according to the proportions of female authorship. An interesting question is whether mixed-gender teams investigate research topics that resemble those that

Table 3
Summary Statistics by Gender and by Field.

	Finance			Economics			Accounting			Management		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Female (%)	$<50\%$	$\geq 50\%$	_Diff. (2)–(1)_	$<50\%$	$\geq 50\%$	_Diff. (5)–(4)_	$<50\%$	$\geq 50\%$	_Diff. (8)–(7)_	$<50\%$	$\geq 50\%$	_Diff. (11)–(10)_
AbsRank	2.73	2.56	−0.17	2.47	2.37	−0.10	2.87	2.69	−0.18	2.76	2.69	−0.08
t-stats			(20.87)			(25.03)			(12.47)			(6.45)
Citations	2.68	2.44	−0.24	2.03	1.94	−0.09	2.62	2.43	−0.19	4.88	4.89	0.01
t-stats			(4.76)			(3.91)			(3.19)			_0.08_
Qual	0.07	0.09	0.01	0.10	0.13	0.03	0.20	0.23	0.03	0.25	0.32	0.07
t-stats			(6.83)			(26.06)			(6.34)			(14.24)
QSRank	0.37	0.31	−0.06	0.37	0.36	−0.02	0.23	0.22	−0.01	0.27	0.28	0.01
t-stats			(14.89)			(7.69)			(2.69)			(1.09)
locUS	0.38	0.30	−0.08	0.37	0.34	−0.03	0.24	0.21	−0.03	0.36	0.32	−0.03
t-stats			(20.14)			(14.05)			(5.63)			(6.76)
Variety	2.93	3.19	0.27	2.19	2.39	0.19	4.17	4.50	0.33	6.10	6.44	0.34
t-stats			(20.51)			(32.53)			(10.88)			(9.98)
NumAuthor	2.38	2.42	0.03	2.11	2.17	0.06	2.32	2.31	−0.01	2.40	2.40	0.00
t-stats			(3.85)			(13.57)			(0.65)			(0.02)

Notes: The values in the first two columns for each field represent the mean value for each variable for papers with <50 % of female authors ('<50 %') and papers with at least 50 % female authors ('≥ 50 %'), respectively. The final column for each field represents the difference between the column titled '≥ 50 %' and the column titled '<50 %'. The value below represents the corresponding _t_-ratio for a test of equality of means. The variables are defined in Section 3.

either gender explores in their solo or same-gender teams, or whether they investigate altogether different topics.

For finance, it appears that the work produced by mixed-gender teams tends to represent a combination of the topics investigated by female authors (e.g. 'Executive Compensation', 'Ownership' and 'CSR and Ethics'), as well as additional topics that do not feature among the most common topics of male- or female-only authorships (e.g. 'Initial Public Offering (IPO)', 'Volatility Modelling and Forecasting', 'Emerging Markets'). In other words, mixed-gender teams most frequently work on either female-dominated or altogether different topics, rather than those favoured by men-only teams. Furthermore, in mixed-gender teams in which women represent the majority, their topics of focus seem to feature more technical and quantitative studies (e.g. 'Volatility Modelling and Forecasting', 'Actuarial Science'), albeit not the same ones as those most frequently covered by male-only teams. This finding suggests that women mainly investigate different topics when working with other women as compared to working with men, even if the team is majority female.

For economics, Table 4 shows a clear divide between the most frequently investigated topics of male-only teams and those of mixed-gender teams and female-only teams. By contrast, the topic specialisations of mixed-gender teams of varying female representation exhibit considerable overlap, suggesting that once women and men work together, the relative proportion of women among the authors seems to have less impact on topic specialisation. A similar pattern of topic specialisation is also observed for mixed-gender teams in accounting and management. Here, however, the gender divide between the topics investigated by male- and female-only teams is less pronounced than in finance and economics, with overlaps between them when it comes to the topics investigated most frequently.

5. Regression results

5.1. Estimating the female finance penalty

Thus far, the descriptive statistics have highlighted substantive gendered differences in author and paper characteristics as well as research specialisations. We now explore how these factors impact upon research 'performance'. Given our focus on the 'quality' of the publication vehicle and the research impact as performance measures, we examine both the rating of the journal in which a paper is published and a paper's citation measure as our core dependent variables. The former is measured on an ordinal (1–5) scale with a higher value indicating a higher journal rating, while citation counts per year represent a

continuous variable, censored at zero. Our independent variables are the paper and author characteristics presented in the previous section. For specifications that use the journal rating as their dependent variable, we employ an ordered probit model as our primary specification owing to its parsimony and ease of interpretation, but we also report results for generalised ordered probit models, which relax the proportional odds assumption. For specifications with citations per year as the dependent variable, we use Poisson pseudo-maximum likelihood (PPML) regressions, as described by Correia et al. (2020), because citation counts are highly skewed. Considering time-specific effects in gender representation as well as temporal changes in publishing and citation patterns, we employ year fixed effects in all regression specifications. In addition, we cluster standard errors by year to allow for intragroup correlation, that is, correlation in the error terms within observations from the same year.[18] The following equations describe our two regression models. The ordered probit regression equation for the journal ranking is:

$$\text{AbsRank}_i^* = \beta_0 + \beta_1 Female(\%)_i + \beta_2 Female(\%)_i \times FIN_i + \beta_3 FIN_i + \beta_k X_{ki} + YearFE + \varepsilon_i$$

$$(1)$$

where AbsRank_i^* is the unobserved propensity for paper i to be placed in a higher-ranked journal, $Female(\%)_i$ is the share of female authors for paper i, FIN_i is an indicator variable for whether paper i is published in a finance journal, and X_{ki} includes the further explanatory variables (i.e. _Qual_, _Variety_, _QSRank_, _locUS_, _GenderSeg_, _NumAuthors_). The observed _AbsRank_ is an ordinal variable categorised thus:

$$\text{AbsRank}_i \begin{cases} 1 \text{ if AbsRank}_i^* \leq \mu_1 \\ 2 \text{ if } \mu_1 < \text{AbsRank}_i^* \leq \mu_2 \\ 3 \text{ if } \mu_2 < \text{AbsRank}_i^* \leq \mu_3 \\ 4 \text{ if } \mu_3 < \text{AbsRank}_i^* \leq \mu_4 \\ 5 \text{ if } \mu_4 < \text{AbsRank}_i^* \end{cases}$$

where μ_1, μ_2, μ_3 and μ_4 are threshold parameters to be estimated, which determine the cut-off points for the journal rankings.

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[18] Clustering by year adjusts the standard errors to account for the possibility that observations within the same year might share common shocks or unobserved factors that cause their errors to be correlated, leading to more robust standard error estimates.

Finance

Cluster	Label	genderseg	GenderSeg
15	Monetary Policy	56%	1.00
17	Option Pricing	55%	0.97
24	Taxation and Public Finance	54%	0.91
4	Investments	54%	0.90
1	Banking	54%	0.90
21	Real Estate	52%	0.81
16	Mutual & Hedge Funds	52%	0.81
22	Risk Management	51%	0.78
9	Firm Financing	51%	0.77
7	Foreign Exchange	50%	0.75
14	Market Microstructure	48%	0.64
10	Information Disclosure	45%	0.52
11	Interest Rate Modelling	45%	0.51
20	Portfolio Management	45%	0.51
5	Actuarial Science	45%	0.50
2	Credit Risk	43%	0.43
13	M&A	43%	0.42
23	Volatility Modelling and Forecasting	43%	0.42
8	Emerging Markets	42%	0.40
12	IPO	42%	0.38
19	Pensions	41%	0.35
18	Ownership	38%	0.20
3	Executive Compensation	36%	0.12
6	CSR and Ethics	33%	0.00

Economics

Cluster	Label	genderseg	GenderSeg
4	Agency Issues	64%	1.00
29	Utility Theory	62%	0.93
18	Game Theory	62%	0.93
24	Market Frictions	61%	0.91
27	Monetary Policy	60%	0.89
12	Economic Systems/ Political Economy	60%	0.89
6	Business Cycles	59%	0.86
7	Market Structure	58%	0.82
9	Economic Growth	58%	0.81
10	Economic Methods	57%	0.81
5	Behavioral Economics	57%	0.79
22	Macroeconomics	55%	0.74
19	Infrastructure	55%	0.73
2	Experimental Design	53%	0.68
31	Taxation	52%	0.66
15	Exchange Rates	50%	0.59
1	Econometrics	49%	0.57
32	Trade	49%	0.56
26	Martingale Theory	48%	0.53
20	Innovation	48%	0.53
23	Market Efficiency	46%	0.48
16	Financial Crisis	46%	0.47
14	Estimation Methods	46%	0.47
33	Volatility Forecasting	45%	0.47
21	Labour Economics	44%	0.42
30	Sustainability/Climate	42%	0.36
11	Economic Inequality	41%	0.34
13	Economic Issues	40%	0.32
17	Foreign Direct Investment	40%	0.31
25	Markov Chain	39%	0.29
8	Contingent Valuation Method	39%	0.29
3	Human Capital	33%	0.12
28	Health Economics	29%	0.00

Accounting

Cluster	Label	genderseg	GenderSeg
13	Performance Measurement	42%	1.00
12	Investment	41%	0.96
4	Earnings Management	39%	0.87
7	Forensic Accounting	37%	0.77
11	Management Accounting	36%	0.73
14	Public Accounting	34%	0.58
10	Accounting Methods	33%	0.55
9	Information Disclosure	31%	0.45
8	Financial Reporting	30%	0.40
1	Auditing	29%	0.33
5	Ethics Education	27%	0.24
2	Corporate Governance	26%	0.17
6	Executive Compensation	25%	0.15
3	CSR	22%	0.00

Management

Cluster	Label	genderseg	GenderSeg
9	Information Management	48%	1.00
22	Strategic Management	44%	0.88
15	Operations Management	41%	0.79
19	Ethics and Governance	41%	0.78
1	Corporate Finance	39%	0.73
14	Corporate Decision-making	38%	0.71
23	Supply Chain Management	38%	0.71
12	International Business	33%	0.55
6	Ethical Leadership	32%	0.53
10	Innovation	32%	0.52
11	Intellectual Capital	28%	0.39
4	E-Commerce	27%	0.37
16	Organization	26%	0.35
7	Corporate Governance	26%	0.35
3	CSR	24%	0.29
21	SME	23%	0.26
2	Marketing and Consumer Behaviour	22%	0.21
20	Research Methods	21%	0.19
18	Public Relations	19%	0.15
5	Entrepreneurship	17%	0.08
8	Human Resource	16%	0.04
17	Organizational Development	14%	0.01
13	Marketing	14%	0.00

Fig. 3. Gender-segregated Topics by Field. **Notes:** The clusters for topics of journal publications by field are based on a machine-learning technique applied to each article's list of keywords, as described in Section 3 and the Online Appendix. The second column in each panel (*GenderSeg*) reports the percentage of papers produced by male authors minus the percentage produced by female authors. The third column (*GenderSeg*) normalises these percentages to a 0–1 scale where 1 is the most 'male-dominated' topic and 0 is the least.

Table 4
Five most popular topic specialisations by gender and field.

Female (%)	=0 %	%	>0 % & ≤ 33 %	%	>33 % & ≤67 %	%	>67 % & < 100 %	%	=100 %	%
Finance	Banking	63 %	M&A	19 %	CSR and Ethics	18 %	Volatility Modelling and Forecasting	10 %	CSR and Ethics	15 %
	Monetary Policy	63 %	IPO	17 %	Ownership	17 %	Executive Compensation	8 %	Executive Compensation	12 %
	Taxation and Public Finance	62 %	Credit	17 %	Volatility Modelling and Forecasting	16 %	Actuarial Science	8 %	Ownership	11 %
	Investments	62 %	Ownership	17 %	Executive Compensation	16 %	IPO	8 %	Pensions	11 %
	Option Pricing	61 %	Emerging	17 %	Actuarial Science	16 %	Emerging Markets	8 %	Information Disclosure	9 %
Economics	Agency Issues	72 %	Contingent Valuation Method	19 %	Health Economics	18 %	Markov Chain	9 %	Human Capital	19 %
	Utility Theory	70 %	Markov Chain	17 %	Estimation Methods	17 %	Health Economics	9 %	Economic Issues	16 %
	Market Frictions	70 %	Sustainability/ Climate	15 %	Markov Chain	17 %	Contingent Valuation Method	8 %	Health Economics	14 %
	Economic Systems/ Political Economy	70 %	Health Economics	15 %	Foreign Direct Investment	17 %	Sustainability/Climate	7 %	Foreign Direct Investment	14 %
	Game Theory	69 %	Volatility Forecasting	15 %	Market Efficiency	17 %	Volatility Forecasting	7 %	Labour Economics	14 %
Accounting	Performance Measurement	55 %	Executive Compensation	21 %	CSR	20 %	Executive Compensation	13 %	Ethics Education	19 %
	Forensic Accounting	52 %	Auditing	19 %	Management Accounting	20 %	Corporate Governance	12 %	Accounting Methods	18 %
	Accounting Methods	51 %	Earnings Management	18 %	Public Accounting	18 %	Auditing	11 %	Public Accounting	17 %
	Public Accounting	50 %	CSR	17 %	Forensic Accounting	17 %	CSR	10 %	CSR	15 %
	Management Accounting	50 %	Investment	17 %	Corporate Governance	17 %	Information Disclosure	10 %	Forensic Accounting	15 %
Management	Information Management	58 %	SME	23 %	Organizational Development	21 %	Marketing	15 %	Ethical Leadership	18 %
	Ethics and Governance	57 %	Public Relations	20 %	Marketing	21 %	Public Relations	14 %	Organization	17 %
	Strategic Management	55 %	Entrepreneurship	20 %	Human Resource	20 %	Human Resource	14 %	Research Methods	17 %
	Operations Management	53 %	Organizational Development	19 %	Marketing and Consumer Behaviour	20 %	Entrepreneurship	12 %	CSR	17 %
	Corporate Finance	52 %	Marketing	19 %	*E*-Commerce	19 %	Organizational Development	12 %	Organizational Development	17 %

Notes: The table shows the most popular topics for each of the four fields separated by the percentage of women in the authorship team. Topics are determined as described in Section 3 and the Online Appendix and the range of topics for each field is shown in Fig. 3.

The Poisson regression equation for the citation-based measure can be stated as:

$$E[\text{Citations}_i|X_i] = exp\big(\beta_0 + \beta_1 \text{Female}(\%)_i + \beta_2 \text{Female}(\%)_i \times FIN_i + \beta_3 FIN_i + \beta_k X_{ki} + YearFE\big) \tag{2}$$

where $E[Citations_i|X_i]$ is the expected average of yearly citations for paper i given the set of explanatory variables, $exp(\ldots)$ is the exponential function, ensuring that the predicted number of citations is always positive, and the remaining variables are defined as above; $\beta_1, \beta_2, \ldots, \beta_k$ measure the partial effect of each explanatory variable on the expected average of yearly citations, with the impact being multiplicative owing to the exponential function.

Table 5 presents the results of the regressions. Our main variable of interest is the coefficient on *Female (%)*, which indicates whether a higher share of female authors on a paper is associated with a higher or lower likelihood of publication in a higher-ranked journal (columns (1)–(4)), or whether it is associated with more or fewer citations (columns (5)–(8)). Further, we are particularly interested in whether any gender-specific effect is different for finance publications, as measured by the interaction term of *Female (%)* and *FIN*. In subsequent specifications, we introduce the additional publication and affiliation characteristics to understand whether they can help to 'explain' the gender-specific publication 'performance' by affecting the size and significance of the estimate on *Female (%)* and its interaction term with *FIN*. In particular, if the inclusion of the additional explanatory variables reduces a potential

negative impact of gender on the *AbsRank* of a publication and/or its yearly citation count, we interpret this as indicative of these characteristics being linked to the potential association between gender and the outcome variables.

Looking at the results for the specifications that contain only the share of female authors (*Female (%)*), that is, columns (1) and (5), we can see that a higher representation of women among a publication's authors is associated with a lower likelihood of it being published in a higher-rated journal, but is also linked with more citations to the work. Specifically, for the specification explaining *AbsRank*, a one-standard-deviation increase in female authorship (i.e. 0.34 or 34 percentage points) is associated with a 0.0374-unit decrease in the journal ranking.[19] For the specification explaining average yearly citations, the coefficient on *Female (%)* suggests that for a one-unit increase in the percentage of female authors, that is, a change from 0 % to 100 % female authors, we expect the number of yearly citations to increase by approximately 6.1 %.[20]

Because we are particularly focused on gender-based differences between finance and its related fields, we turn to the next specifications,

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[19] Owing to the inclusion of year fixed effects (dummies), we are unable to calculate marginal effects for the probit regressions explaining *AbsRank*, and therefore we calculate the economic impacts based on the parameter estimates in the usual fashion for linear regressions.

[20] The effect is calculated as $exp.(0.059) \approx 1.061$.

Table 5

Regression results explaining journal rating and citations.

Panel A: Regression output

Columns	Dep = AbsRank (Ordered Probit Regression)				Dep = Citations (Poisson Regression)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female (%)	−0.110***	−0.081***	−0.062***	−0.068***	0.059***	0.096***	0.044***	0.004
	(9.55)	(6.89)	(7.33)	(6.74)	(7.16)	(11.22)	(4.76)	(0.36)
Female (%)*FIN		−0.146***	−0.112***	−0.095***		−0.199***	−0.032	0.010
		(10.11)	(7.06)	(5.80)		(4.81)	(1.02)	(0.34)
FIN		0.251***	0.229***	0.090***		0.156***	0.037	−0.154***
		(11.45)	(17.18)	(3.85)		(6.87)	(1.26)	(3.03)
GenderSeg				−0.087**				−0.557***
				(−2.54)				(−20.01)
GenderSeg*FIN				0.238***				0.359***
				(6.71)				(8.17)
Qual			−0.187***	−0.192***			0.061**	0.032
			(−18.32)	(−19.85)			(2.42)	(1.38)
QSRank			0.462***	0.462***			0.081***	0.083***
			(20.99)	(21.09)			(4.32)	(4.26)
locUS			0.443***	0.442***			0.044*	0.039*
			(23.49)	(23.71)			(1.92)	(1.71)
Variety			0.029***	0.029***			0.130***	0.123***
			(4.99)	(4.61)			(57.37)	(48.75)
NumAuthor			0.065***	0.064***			0.084***	0.081***
			(5.10)	(4.85)			(9.40)	(8.98)
AbsRank							0.497***	0.496***
							(15.22)	(14.89)
Year dummy	Y	Y	Y	Y	Y	Y	Y	Y
Obs	414,108	414,108	414,108	414,108	414,108	414,108	414,108	414,108
Pseudo R^2	0.003	0.005	0.042	0.042	0.009	0.010	0.175	0.180
Cut1	−1.301***	−1.274***	−0.857***	−0.915***				
	(273.28)	(211.40)	(33.69)	(19.19)				
Cut2	−0.202***	−0.171***	0.297***	0.240***				
	(−45.94)	(−30.54)	(13.64)	(5.58)				
Cut3	0.866***	0.899***	1.440***	1.383***				
	(115.48)	(107.21)	(53.27)	(29.88)				
Cut4	1.395***	1.431***	2.020***	1.963***				
	(198.08)	(193.40)	(85.35)	(46.53)				

Panel B: KHB approach for Table 5 results

Var	Based on Table 5 Results for AbsRank				Based on Table 5 Results for Citations			
	Comparing (2) & (3)		Comparing (2) & (4)		Comparing (6) & (7)		Comparing (6) & (8)	
Female (%)*FIN	Reduced	−0.155***	Reduced	−0.155***	Reduced	−0.154***	Reduced	−0.151***
		(−11.81)		(−11.81)		(−5.46)		(−5.38)
	Full	−0.112***	Full	−0.095***	Full	−0.032	Full	0.010
		(8.52)		(7.19)		(1.13)		(0.36)
	Diff	−0.043**	Diff	−0.060***	Diff	−0.122***	Diff	−0.161***
		(2.28)		(3.18)		(3.72)		(4.80)
Female (%)	Reduced	−0.086***	Reduced	−0.086***	Reduced	0.087***	Reduced	0.086***
		(16.15)		(−16.16)		(6.77)		(6.70)
	Full	−0.062***	Full	−0.068***	Full	0.044***	Full	0.004
		(11.46)		(12.63)		(3.40)		(0.29)
	Diff	−0.025	Diff	−0.018	Diff	0.043	Diff	0.082**
		(1.31)		(0.96)		(1.31)		(2.45)

Notes: The regression specifications for Panel A are described in Section 5. Standard errors are clustered by year. z-statistics are presented in italics below their respective parameter estimates. Panel B presents results of the KHB approach based on the model specifications reported in Panel A. (2), (3) and (4) refer to the model specifications in the columns of Panel A titled (2), (3) and (4), respectively, that use *AbsRank* as dependent variable; (6), (7) and (8) refer to the model specifications in the columns of Panel A titled (6), (7) and (8), respectively, that use *Citations* as dependent variable.

in columns (2) and (6), to compare female academics in finance with their peers in economics, accounting and management. While the positive and significant coefficients on the stand-alone finance dummy indicate that, in general, publications in finance journals are related to a higher journal rating and more citations, finance publications with a higher share of female authors seem to do less well than female-authored work in the other three fields, as indicated by the sizable

and highly significant coefficients on the interaction terms of *Female (%) × FIN*. Specifically, when we look at the combined effect of the *Female (%)* and *Female (%) × FIN* variables for specification (6), which explains citations per year, we see that this is negative, suggesting that as the proportion of female authors on a finance publication increases, the citations to this publication decline, again supporting hypothesis H1b. Specifically, we find that for a one-unit increase in female

authorship in finance papers, that is, moving from 0 % to 100 %, we can expect the number of citations to decrease by approximately 9.8 %.[21] This is in clear contrast to the citation effect of gender in the other three disciplines, which is, on average, positive. Hence, our regression results document a clear female 'finance penalty' with regards to both journal rating and citations, relative to the related fields of economics, accounting and management.

5.2. Exploring the female finance penalty

Next, we aim to 'explain' this female finance penalty by incorporating into the model the publication and affiliation characteristics as explanatory variables. Columns (3) and (7) of Table 5 introduce our set of additional variables to model, respectively, the journal rating and the citations per year. Overall, we find that controlling for the characteristics of the publication and the affiliation of the authors helps to substantially reduce the female finance penalty, as measured by the coefficient size. Specifically, the coefficients on the interaction terms of *Female (%)* × *FIN* reduce in size considerably, especially for the citation specification, where the coefficient value is reduced from −0.199 to −0.032. Furthermore, for the case of citations as the dependent variable, accounting for these characteristics also eliminates the significance of the female finance penalty. These results suggest that part of the 'underperformance' of female finance academics derives from their different affiliation characteristics and the different characteristics of their research, including their tendency to engage in qualitative and interdisciplinary work, which is consistent with hypothesis H3.

Turning to the individual effects of these characteristics, we find a negative coefficient on *Qual* for the specification that explains the journal rating of a publication. This suggests that, on average, qualitative research is published in significantly lower-rated journals. However, qualitative work does not appear to suffer a similar penalty when it comes to citations, because we document a positive coefficient on *Qual* for the specification in column (7), significant at the 5 % level. By contrast, interdisciplinary work (as captured by *Variety*) appears to be associated with both a higher journal rating and more citations to the work, indicating that work referencing a larger number of other fields is more likely to be placed in a higher-ranked journal and cited. However, the effect of interdisciplinarity is much more pronounced on citations than on journal placement (see also the existing evidence in Rafols et al., 2012). In particular, a one-unit increase in *Variety,* that is, the paper engages with work published in one additional subject area, leads to an increase in the expected number of citations of approximately 13.9 %.[22] Overall, these results provide further, partial support for hypothesis H3.

Authors' affiliation characteristics seem to be another important determinant of journal rating and citation numbers. Specifically, having at least one author associated with a US institution, as well as having at least one author in an institution that features among the Top 200 institutions in the QS ranking, significantly increases the likelihood of the work being published in a higher-rated journal as well as the number of citations to the work. These positive links are, to some extent, expected because the quality of the work produced by researchers is likely to correlate with the prestige of the institution in which they are employed. However, these links may also capture other causal mechanisms, such as network effects, given that the majority of conferences and editors of prestigious journals are located in the US and/or at the most prestigious institutions, enabling authors aligned to these networks to more readily disseminate their work to larger audiences. Finally, we find a positive and strongly significant effect for the number of authors on the likelihood of work being placed in a higher-rated journal and the number of

citations that the work garners, likely due to the greater dissemination opportunities afforded by a larger number of people, but also perhaps as a result of the beneficial impact of teamwork on the quality of knowledge production and innovation (Jones, 2021).

In our specification measuring citations, we also control for the rating of the journal in which the work is published. Unsurprisingly, this has a large effect on the number of citations that the work garners, with publications in higher-rated journals receiving considerably higher citation counts. In particular, for a one-unit increase in *AbsRank*, that is, the ranking of the publishing journal increases by one category, a publication can expect to experience an increase of approximately 64.4 % in its average yearly citation count. This effect may be a result of higher quality and a greater likelihood of seminal work being published in higher-rated journals, in turn garnering more citations, but it might also, to some extent, be performative because previous literature has shown that authors cite work from higher-rated journals for strategic reasons (Teplitskiy et al., 2022).

Finally, because our prior analysis has indicated that women work on different topics to men, in columns (4) and (8) we account for the topic specialisations of publications by including the normalised gender-segregation measure (*GenderSeg*) as well as an interaction with the finance indicator (*FIN*). In general, we find that publications on topics that are more male-dominated are less likely to be published in a higher-rated journal and receive fewer citations, but for finance journals the opposite is the case, that is, work on more gender-segregated topics increases the likelihood of publication in a higher-rated journal. In addition, the negative effect of gender-segregated topics on citation counts is considerably reduced for finance publications. Accounting for the topic of the work and, in particular, gender-specific differences in topic specialisation, further reduces the remaining female finance penalty, which is consistent with hypothesis H2. Specifically, when the

Table 6

Generalised probit regression results for journal rating.

	Dep = AbsRank			
	(Generalised Ordered Probit Regressions)			
	AbsRank threshold:			
Columns	1 to 2	2 to 3	3 to 4	4 to 5
Female (%)	−0.007	−0.106***	−0.116***	−0.047*
	(0.58)	(10.32)	(9.62)	(1.91)
Female (%)*FIN	−0.054	−0.069***	−0.121***	−0.278***
	(0.98)	(3.08)	(4.97)	(8.93)
FIN	0.033	0.053	0.103***	0.259***
	(0.70)	(1.23)	(2.75)	(10.71)
GenderSeg	−0.165***	−0.070*	−0.021	−0.106**
	(7.74)	(1.76)	(0.46)	(2.53)
GenderSeg*FIN	0.484***	0.257***	0.062	0.125***
	(7.62)	(4.97)	(1.17)	(3.03)
Qual	−0.203***	−0.144***	−0.277***	−0.246***
	(15.78)	(11.75)	(28.28)	(15.04)
QSRank	0.383***	0.435***	0.547***	0.530***
	(23.31)	(15.95)	(22.66)	(17.82)
locUS	0.271***	0.410***	0.589***	0.666***
	(25.62)	(22.16)	(19.37)	(18.94)
Variety	0.007	0.032***	0.030***	0.069***
	(1.62)	(6.67)	(3.42)	(6.82)
NumAuthor	0.093***	0.061***	0.035**	0.039**
	(10.17)	(4.14)	(2.12)	(1.98)
Const	0.540***	−0.690***	−1.817***	−2.729***
	(13.25)	(10.23)	(21.03)	(26.49)
Year dummy	Y	Y	Y	Y
Obs	414,108	414,108	414,108	414,108

Notes: This table presents results from a generalised ordered probit regression of the model specification reported in column (4) of Table 5 (Panel A). Coefficients are allowed to vary between the thresholds of each AbsRank. Standard errors are clustered by year. *z*-statistics are presented in italics below their respective parameter estimates.

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[21] This effect is calculated by first generating the combined effect for finance papers as 0.096–0.199 = −0.103, and then calculating the effect size by exponentiating the combined coefficients, i.e. exp.(−0.103) − 1 ≈ −0.098.

[22] The effect size is calculated as: exp.(0.130) − 1 = 13.9 %.

comparator set is the combination of the other three fields (accounting, economics and management), we find that after controlling for topic choice and all other characteristics, the proportion of female authors is still significantly and negatively related to the journal's rating, although the size of the effect is smaller. However, when it comes to citation counts, the female finance penalty has now become insignificant. This latter finding suggests that women's different affiliation characteristics and the different characteristics of their research are, indeed, associated with why their work receives fewer citations than that produced by men.

To enable a stronger economic interpretation of the effects of including the additional affiliation and paper characteristics on the impact of female authorship on journal placement and citation counts, we adopted the approach outlined by Karlson, Holm and Breen (Karlson et al., 2012), known as the KHB approach. The results of this approach are shown in Panel B of Table 5. The reduced model represents the specifications in columns (2) and (6) of Panel A for, respectively, *AbsRank* and *Citations*, hence only containing, besides year fixed effects, the variables *Female (%)*, *FIN* and *Female (%) × FIN*. The full model adds the subsequent explanatory variables. Thus, Panel B's table illustrates the extent to which the inclusion of these variables influences and reduces our estimate of the female finance penalty, as reflected by the coefficient on *Female (%) × FIN*.

Starting with the interpretation of the results for *AbsRank* as dependent variable, we find that inclusion of these 'explanatory' variables reduces the size of the female finance penalty by between 27 % (based on the specification in column (3) of Panel A of Table 5) and 39 % (based on the specification in column (4)). Hence, we can conclude that the paper and affiliation characteristics reduce the female finance penalty, but do not fully eliminate it. For the models that explain average yearly citation counts, we find that the additional paper and affiliation characteristics see the female finance penalty diminish, with the coefficient on *Female (%) × FIN* no longer significant. In particular, we find that by including these 'explanatory' variables, the size of the female finance penalty reduces by around 79 %, based on the specification in column (7) of Panel A, and disappears completely when the basis is the specification in column (8).

To analyse the ordinal dependent variable *AbsRank*, we employ an ordered probit model, this being a method used widely in the literature for modelling ordinal outcomes (e.g. Bukstein and Gandelman, 2019); it offers a parsimonious and interpretable framework with which to capture the relationship between independent variables and ordered response categories. A key assumption of this model is the proportionality of odds (or parallel regression), which implies that the relationship between the predictors and the outcome is consistent across different threshold levels of the ordinal outcome. To evaluate whether this assumption held for our data, we conducted a formal test for the proportionality of odds and found that the assumption was violated for some of the variables. Therefore, to ensure that our results hold across different *AbsRank* categories, we also estimated a set of generalised ordered probit models, which relax the proportional odds assumption. Specifically, the generalised ordered probit model allows the relationship between the covariates and the outcome to vary across categories, providing a more flexible approach to estimation.

In Table 6, we report the results of the model specification from column (4) of Table 5 (Panel A), now estimated using a generalised ordered probit model. The coefficients in the different columns report the impact of the independent variables for different *AbsRank* rating thresholds. We can see that the coefficients on *Female (%)*, representing the general female penalty across the fields of economics, accounting and management, are negative across all four rating thresholds, and are strongest when moving from 2 to 3 and from 3 to 4 in relation to *AbsRank*, suggesting that having a higher proportion of female authors on a paper lowers the likelihood of publishing in higher-rated journals. If we look at the coefficients on *Female (%) × FIN*, which indicate the female finance impact, we can see an increasing differential penalty for increases in the proportion of female authors. While the share of female

authors does not exhibit a significant differential effect on the likelihood of moving from 1 to 2 in relation to *AbsRank*, women in finance are more penalised the higher the journal ranking, with the largest penalties observed for moving to the most prestigious journals, the JoD. These findings align with hypothesis H1b: as a field, finance stands out in terms of the gap between the publication success of men and women, especially in relation to the most prestigious journals.

Looking at the impact of topic focus, we find that, for the set of three comparison fields, more male-dominated topics lower publication success in higher-ranked journals, but increase publication success for finance, particularly in terms of the *AbsRank* thresholds between 1 and 2, 2 and 3, and 4 and 5 (JoD). As to the differences in coefficients for the other independent variables, we find that they align with the results presented in Panel A of Table 5, although there are slight variations in the strength of the effects. Interestingly, in the context of journal-rating thresholds, affiliation characteristics seem to be more strongly associated with the likelihood of publishing in higher-rated journals.

We have also undertaken a variety of further tests of robustness, replacing our main variables with alternative specifications, including accounting for self-citations in the citation counts and using alternative definitions of the affiliation characteristics and our indicator of qualitative methodologies. The results of these tests and a detailed description of these measures are included in Appendix E of the Online Appendix.

5.3. Contextualising the female finance penalty

Thus far, our results have shown that work written by women, or that includes women in its authorship, differs from that produced by men and shows characteristics that are associated with lower research achievement in terms of journal placement and impact. In particular, work by women is less likely to involve authors from highly QS-rated institutions and institutions located in the US, and is more likely to be qualitative and interdisciplinary in nature. In addition, women seem to work on different topics to men, which appears disadvantageous, especially in finance. We find that these characteristics can explain the lower rates of citation to female-authored work, and they reduce, but do not fully explain, the lower journal rankings associated with publication.

We next explore the extent to which women do or do not benefit from being associated with publication characteristics and affiliation backgrounds that generally increase journal placement and citation likelihood. In other words, are women advantaged to a lesser or greater extent than men when they and their work have characteristics typically associated with more publication and citation success? To examine this, we divided our sample into subsamples according to field and interacted each of the variables *GenderSeg*, *QSRank*, *locUS*, *Variety* and *Qual* individually with *Female (%)*, the coefficients on these interaction terms measuring the differential impacts of these characteristics for female-authored work. Table 7 presents the results of our tests. In Panel A, for ease of presentation, we report the results from the ordered probit model for *AbsRank* as dependent variable, but we also present results from the generalised ordered probit model in Panel B of Table 7 (Finance) and in Table F.1 of the Online Appendix (other fields), demonstrating that our key results hold even under more flexible assumptions.

Turning first to the results for finance publications (in columns (1) and (2) of Panel A), we find an insignificant coefficient on the interaction term of *Female (%)* and *GenderSeg*, suggesting that while working on male-dominated topics increases the chance of having a paper placed in higher-rated journals, when women work on these male-dominated topics in finance their publications are not differently affected, that is, they neither benefit more nor are they penalised more. However, when their research is more interdisciplinary, women in finance do seem to be penalised more when it comes to placement of their work in higher-rated journals, as captured by the negative coefficient on *Female (%) × Variety*, although this differential impact does not seem to extend to citation

Table 7
Differential effects of publication characteristics and affiliations across fields.

Panel A	Finance		Economics		Accounting		Management	
	AbsRank	Citations	AbsRan	Citations	AbsRank	Citations	AbsRank	Citations
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female (%)	−0.063	0.061	−0.079***	0.062	−0.038	0.022	−0.026	0.058
	(1.30)	(0.64)	(3.24)	(1.42)	(0.64)	(0.27)	(0.31)	(0.45)
Female (%)*GenderSeg	0.038	0.107	−0.028	0.056	0.036	0.147	0.147**	0.136
	(0.64)	(0.92)	(1.01)	(0.96)	(0.54)	(1.12)	(2.34)	(1.01)
Female (%)*QSRank	−0.043	−0.168***	0.015	−0.123***	0.023	−0.037	−0.005	−0.042
	(1.41)	(3.17)	(0.92)	(4.54)	(0.33)	(0.56)	(0.18)	(0.74)
Female (%)*locUS	0.057*	−0.145***	0.059***	−0.074*	−0.077	0.066	0.131***	−0.082*
	(1.67)	(3.39)	(2.96)	(1.88)	(1.07)	(0.89)	(3.65)	(1.67)
Female (%)*Variety	−0.026***	−0.000	−0.014***	−0.004	−0.022**	−0.024**	−0.023***	0.000
	(3.68)	(0.00)	(3.38)	(0.36)	(2.27)	(2.14)	(2.85)	(0.02)
Female (%)*Qual	−0.121*	−0.178**	−0.040***	−0.083**	0.046	0.064	0.185***	−0.090
	(1.93)	(2.17)	(2.95)	(2.00)	(1.34)	(0.77)	(3.61)	(1.45)
GenderSeg	0.086**	−0.213***	0.005	−0.570***	0.100**	−0.739***	−0.388***	−0.596***
	(2.55)	(3.63)	(0.15)	(17.31)	(2.33)	(9.87)	(10.55)	(8.97)
QSRank	0.488***	0.103***	0.463***	0.119***	0.853***	0.154***	0.530***	0.066*
	(23.79)	(3.02)	(22.18)	(6.76)	(9.61)	(3.90)	(11.46)	(1.92)
locUS	0.544***	0.020	0.344***	0.104***	1.430***	−0.057	0.499***	−0.030
	(26.46)	(0.59)	(24.85)	(7.52)	(13.14)	(1.41)	(12.42)	(0.86)
Variety	0.007	0.090***	−0.064***	0.192***	0.037***	0.097***	0.077***	0.084***
	(0.88)	(8.26)	(−14.53)	(26.64)	(4.63)	(15.12)	(8.94)	(13.96)
Qual	−0.419***	0.060	−0.125***	0.106***	−0.102***	−0.078**	−0.426***	−0.023
	(17.15)	(1.14)	(16.96)	(3.39)	(4.45)	(2.13)	(12.50)	(0.78)
NumAuthor	0.033***	0.137***	0.076***	0.079***	−0.012	0.127***	0.055***	0.071***
	(3.08)	(6.74)	(5.90)	(7.73)	(−0.84)	(7.85)	(3.35)	(6.24)
AbsRank		0.515***		0.525***		0.455***		0.491***
		(8.34)		(17.19)		(15.64)		(15.84)
Year dummy	Y	Y	Y	Y	Y	Y	Y	Y
Obs	74,146	74,146	279,524	279,524	24,593	24,593	35,845	35,845
Pseudo R^2	0.059	0.154	0.039	0.148	0.154	0.188	0.070	0.223
Cut1	−1.385***		−0.929***		−1.770***		−1.194***	
	(27.30)		(22.31)		(27.82)		(34.23)	
Cut2	−0.102***		0.233***		−0.355***		−0.266***	
	(3.92)		(5.32)		(7.94)		(4.39)	
Cut3	1.121***		1.350***		0.972***		1.112***	
	(34.27)		(28.24)		(15.92)		(32.63)	
Cut4	1.585***		2.075***		1.412***		1.522***	
	(52.73)		(45.46)		(19.40)		(43.55)	

Panel B: Finance	Dep = AbsRank			
	(Generalised Ordered Probit Regressions)			
	AbsRank threshold:			
	1 to 2	2 to 3	3 to 4	4 to 5
Female (%)	0.101	−0.178***	−0.280***	−0.255***
	(1.06)	(2.74)	(3.53)	(2.70)
Female (%)*GenderSeg	−0.055	0.109*	0.024	−0.031
	(0.53)	(1.77)	(0.33)	(0.35)
Female (%)*QSRank	−0.031	0.031	0.066*	0.056
	(0.66)	(0.92)	(1.69)	(1.15)
Female (%)*locUS	−0.037	0.150***	0.226***	0.275***
	(0.82)	(4.20)	(5.97)	(4.22)
Female (%)*Variety	−0.022**	−0.017**	−0.023*	−0.058***
	(2.15)	(2.08)	(1.84)	(3.61)
Female (%)*Qual	−0.162***	−0.139**	−0.125	0.024
	(2.71)	(1.98)	(1.47)	(0.21)
GenderSeg	0.206***	0.124***	0.015	−0.085**
	(3.05)	(3.34)	(0.34)	(1.99)
QSRank	0.347***	0.429***	0.529***	0.689***
	(10.43)	(15.33)	(16.44)	(14.66)
locUS	0.156***	0.451***	0.765***	0.849***
	(5.08)	(21.90)	(23.75)	(16.25)
Variety	−0.051***	0.036***	0.028***	−0.009
	(6.90)	(2.90)	(2.98)	(0.62)
Qual	−0.516***	−0.388***	−0.248***	−0.244***
	(15.05)	(11.51)	(8.26)	(5.62)
NumAuthor	0.100***	0.028	−0.033**	−0.017
	(14.01)	(1.48)	(2.28)	(1.22)
Const	1.012***	−0.551***	−1.622***	−2.173***
	(24.72)	(15.43)	(25.44)	(26.91)

Table 7 (*continued*)

Panel B: Finance	Dep = AbsRank			
	(Generalised Ordered Probit Regressions)			
	AbsRank threshold:			
	1 to 2	2 to 3	3 to 4	4 to 5
Year dummy	Y	Y	Y	Y
Obs	74,146	74,146	74,146	74,146

Notes: Panel A reports subsample regression results for each field estimated using ordered probit models. *z*-statistics are presented in italics below their respective parameter estimates. Panel B presents results from a generalised ordered probit regression of the model specification reported in Table 7 column (1) for Finance. Coefficients are allowed to vary between the thresholds of each *AbsRank*. Results for generalised ordered probit models for the other fields can be found in Table F.1 of Appendix F of the Online Appendix. Standard errors are clustered by year for all specifications.

performance. Women also seem to be more disadvantaged than men for using qualitative methodologies, although the effect is statistically stronger for citation counts than for journal rankings. Furthermore, publications written by female finance academics seem to profit less in relation to citation counts from association with at least one author from a US-based institution or from an institution rated highly by QS, as indicated respectively by the negative coefficients on the interactions of *Female (%)* with *locUS* and *QSRank*. Hence, female-authored work that involves US-based authors and scholars from prestigious institutions is less likely to be cited than similar male-authored work.[23] Finally, looking at the stand-alone term of *Female (%)* in the finance-focused regression specifications, we find that it is now insignificant, suggesting that when we account for the differential impact of the publication and affiliation characteristics on journal placement and citations, there is no remaining female finance penalty in relation to the lower likelihood of female-authored work being published in highly rated journals or having fewer citations. Appendix C in the Online Appendix provides interaction plots that illustrate the differential effects of these characteristics according to the proportion of female authors.

While our primary focus is exploration and estimation of the female finance penalty, for comparison and completeness we also examined gender-specific effects on journal placement and citation counts in the three related fields, also presented in Panel A of Table 7. Doing so contextualises our findings, with the results confirming the 'female penalty' in relation to journal placement that is particularly strong for finance but partially reduced by the inclusion of publication and affiliation characteristics. An exception to this pattern is in economics, where the 'female penalty' for journal rankings remains statistically significant even after the inclusion of all of our explanatory variables and interaction terms.[24] Other than this, we confirm the effect of the 'female penalty' in relation to citations and show that by capturing the characteristics of the research and affiliation details, the effect and significance of female authorship on citations is reduced considerably and no longer statistically significant. Nevertheless, comparison of the interaction terms between *Female (%)* and other variables reveals significant variation in the differential impact of these characteristics for female authors across fields. For instance, in economics as in finance, women fail to benefit in the way that men do from affiliation to a US or prestigious institution in terms of citations, although the magnitude of this effect is weaker than in finance. By contrast, differential impacts on citations are barely visible in accounting, with the exception of interdisciplinarity, or in management, where only affiliation to a US institution has a marginally significant and differential impact for women. In

finance, women suffer a greater penalty for engaging in interdisciplinary or qualitative research than in the other fields, with larger coefficients evident. Indeed, in the field of management, women's qualitative research is, on average, published in higher-rated journals than men's.[25]

Our findings demonstrate that, even between cognate fields, marked differences exist in how the nature of the research conducted influences rankings and citations, with significantly differing coefficients and, in some cases, even opposite signs. For example, interdisciplinary research, which is more common in accounting and management, positively impacts on the journal ranking of the work published in these fields, yet there is no statistically significant impact in finance and a negative impact in economics.[26] These results reveal that, even in proximate fields, different norms exist in how the characteristics of the research conducted influence research performance measures.

To further illustrate the differential impact of specific characteristics on research outcomes for male- and female-authored papers across our four cognate fields, we conducted an Oaxaca decomposition of the regression models represented in Table 6; detailed results can be found in the Online Appendix (Appendix D).

We also estimated generalised ordered probit models for the specifications with *AbsRank* as dependent variable, allowing the relationship between the covariates and the outcome to vary across *AbsRank* categories. We report the results for the finance subsample in Panel B of Table 7. To preserve space, the results for the other three fields – economics, accounting and management – are reported in Table F.1 of the Online Appendix. For the finance subsample, we find that while *Female (%)* does not seem to significantly affect the likelihood of publishing in lower-ranked journals, it still has a significant and negative effect for the higher journal rating categories, suggesting that work by female authors still faces a disadvantage that is not fully encapsulated by the affiliation characteristics and the characteristics of the work. Furthermore, Panel B shows that the differential impact of interdisciplinary work for women holds across all *AbsRank* categories, while the differential impacts of qualitative research and affiliation to US institutions vary slightly across *AbsRank* categories. In addition, when looking at the stand-alone impact of characteristics, we find that affiliation characteristics positively affect higher journal ratings across all categories and gain significance for higher values of *AbsRank*, while qualitative research is consistently and negatively associated with publication success in higher-rated journals.

We have also undertaken a variety of further robustness tests of the results presented in Table 6 in which we employed alternative definitions of several of the main variables. For brevity, we report the results of these tests in Appendix E of the Online Appendix.

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[23] In robustness tests in which we replaced the 2022 QS ranking with an earlier QS ranking (i.e. 2004 and 2015), the differential effect of the affiliation characteristic on citation outcomes lost some or all of its significance. Hence, we are cautious in putting too much emphasis on this finding.

[24] In generalised ordered probit results, presented in Table F.1 of the Online Appendix, we show that this is driven by moving from *AbsRank* categories 2 to 3 and 3 to 4, while for the highest-ranked journals, i.e. moving from categories 4 to 5, *Female (%)* is insignificant.

[25] This effect persists across all *AbsRank* categories, as shown in Table F.1 of the Online Appendix.
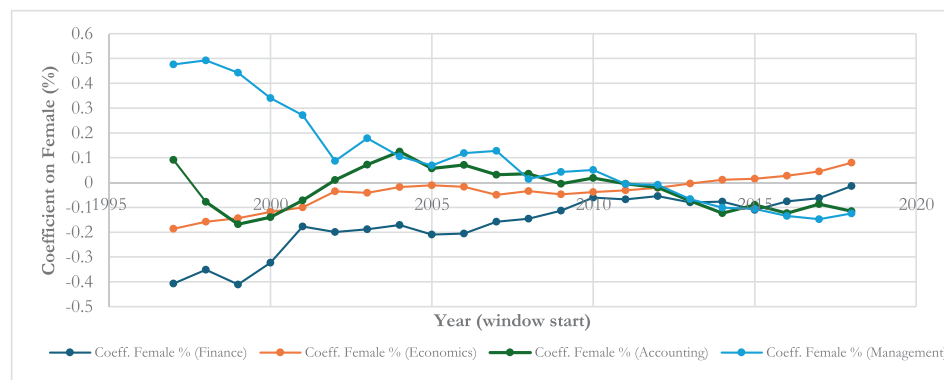
[26] These effects persist across all *AbsRank* categories, as shown in Table F.1 of the Online Appendix.

Panel A: Specifications with AbsRank as dependent variable
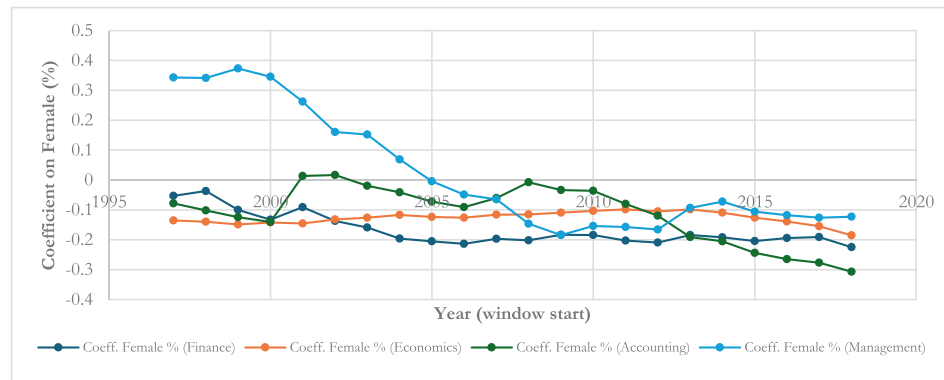
Panel B: Specifications with Citations as dependent variable

Fig. 4. Rolling Regression Coefficients of the Female Penalty. Panel A: Specifications with AbsRank as dependent variable. Panel B: Specifications with Citations as dependent variable. **Notes:** Coefficients on *Female (%)* based on five-year rolling regressions of specifications in Table 6, without control variables, but with year dummies.

5.4. Temporal changes in the 'female penalty'

As a final dimension of our analysis, we explore temporal changes in the 'female penalty' across the four fields to investigate whether the impact of gender on our outcome variables has changed over time, as more women have entered academic disciplines (e.g. Ceci et al., 2014; Lundberg and Stearns, 2019; Hengel and Phythian-Adams, 2022; Auschra et al., 2022). To analyse the evolving role of gender in determining *AbsRank* and *Citations*, we ran rolling regressions using a five-year window, based on the regression framework used in Table 6. In these regressions, we included only the share of female authors on a paper (*Female (%)*) and year fixed effects. Fig. 4 displays the estimated coefficients for *Female (%)* in relation to *AbsRank* (Panel A) and *Citations* (Panel B), revealing interesting time trends in the impact of gender.

Starting with Panel A, we see that the effect of gender on journal placement has shifted markedly over time in the field of management. Early in the sample period, a higher proportion of female authors was positively associated with a higher *AbsRank* value. However, this effect has declined steadily, becoming negative – albeit close to zero – by the end of the sample period. In contrast, the influence of gender on journal placement in finance and economics has remained consistently negative throughout, with finance exhibiting the most significant 'female penalty' for most of the sample period when compared to the other fields. Turning to Panel B, which illustrates the temporal effects of the 'female penalty' on citations, there has been a notable dwindling of this penalty across all fields over time, although the precise trajectory differs by discipline. In management, a higher proportion of female authors was associated with significantly more citations until the early 2000s, after which this positive effect declined sharply. Meanwhile, in finance, what started as a large female penalty in relation to citations has decreased

considerably, and had almost disappeared by 2010, suggesting that gender has become a less significant factor in determining citation outcomes over time, and may now be insignificant. These findings, focused on four business areas, contrast with those in Thelwall (2020), who found little tendency for gender differences in citation rates to vary systematically over time among 27 fields spanning sciences, arts and social sciences.

In light of the analysis of these temporal changes, some 'male legacies' appear to persist. While the influence of gender on citation patterns seems to be diminishing over time, the negative 'female penalty' in journal placements, especially in finance and economics, remains more persistent, even in recent years. A detailed analysis of how the evolving gender composition of different fields influences publication and citation outcomes is beyond the scope of this study, as globally representative, granular data on field-specific gender composition over the entire sample period is, to the best of our knowledge, not readily available. However, we now provide some contextualisation of our results by examining trends among recent entrants into academia. This data is particularly informative as PhD graduates form the pipeline for junior faculty and, eventually, senior academic positions, and therefore might be suggestive of future trends regarding publication authorship. To this end, we have gathered data on the proportion of female doctoral recipients at US universities from 2010 to 2023, disaggregated by our four fields of interest: finance, economics, accounting, and management.[27]

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[27] Granular data by field level, covering all four fields of interest in our study, is only available from 2010 onwards. The data is derived from the National Centre for Science and Engineering Statistics (NCSES) and be retrieved via: https://www.nsf.gov/statistics/doctorates/.

The full figure illustrating these trends is presented in Appendix H, Fig. H.1, of the Online Appendix, but we summarise the main insights here. Overall, despite some annual variations, the proportion of female doctoral recipients in each field has remained relatively stable over the past decade, particularly in finance and economics, suggesting that at least on the basis of US doctoral graduates a strong upward trend in female authorship in these fields is not to be expected.[28] Notably, finance has consistently exhibited the lowest female representation among the four disciplines, with women comprising only around 27 % of PhD graduates. These trends suggest that improvements in gender representation within finance are likely to remain slow-moving. As a result, the 'female finance penalty' may continue to persist, particularly in journal placement. However, we leave a more detailed examination of these long-term dynamics for future research.

6. Discussion, conclusions and implications

6.1. Summary of main findings

We studied the publications of male and female finance academics and compared them with those in three other cognate fields: accounting, economics and management. Our results show that finance and economics exhibit similar patterns of female representation and research achievement when the latter is measured with reference to the rating of the journal in which a paper is published or the rate at which it garners citations. The overlaps between finance and economics are perhaps unsurprising given their epistemological similarities and narrowness, although finance is the more extreme case.

Not only does female authorship in finance comprise just 25 % of the total, but we also observe a considerable drop-off in the proportion of female authors in higher-rated journals. In addition, female authors in finance seem to 'underachieve' when their performance is measured by the rating of the journal in which their work is published and the rate at which their publication garners citations. We term this the 'female finance penalty'. We find that the work produced by female authors in finance – and to a lesser extent in economics, accounting and management – demonstrates markedly different dimensions to that of male authors, which include being more qualitative and interdisciplinary in nature. Female authors also show a lower likelihood of affiliation to more prestigious institutions and those located in the US, and they focus on different research topics to their male colleagues.

6.2. Theorisation and suggestions for future research

What can we learn from these findings regarding the underlying causes and drivers of gender disparities in publication outcomes? The existing literature suggests a variety of reasons for why women achieve different outcomes in publishing – and in academia more generally – that span: (1) differences in human and social capital, including women's different preferences; (2) institutional and structural barriers that impede women's career progress; (3) outright bias and discrimination against women – for example, in the peer review process.[29] In terms of the combined evidence from our study, the results are less suggestive of an outright bias or discrimination against women (although there is some suggestive evidence of differential impacts of specific characteristics on women in comparison to men), rather our findings suggest a more complex explanation in which women are more

likely to pursue different types of research (i.e. more use of qualitative and interdisciplinary methodologies and different topic specialisations) and have different affiliation characteristics (i.e. their publications are less likely to involve US-affiliated authors from prestigious institutions), which appear to be strongly associated with weaker research outcomes. In particular, the cumulative impact of these characteristics seems to work against women in relation to the journal in which their work is placed and the rate at which their work garners citations.

Hence, our findings align with the cumulative advantage/disadvantage (CAD) theory first proposed by Price (1965) and Merton (1968, 1988), which emphasises how initial advantages or disadvantages can accumulate over time, leading to increasing inequalities. In the academic context, men may experience cumulative advantages in publishing and career progression owing to better access to prestigious networks, mentorship and institutional resources, while women face cumulative disadvantages that hinder their academic visibility and success. The 'female finance penalty' could, therefore, be viewed as a cumulative disadvantage, whereby women, particularly in finance, start with fewer opportunities and face increasingly difficult hurdles as their careers progress, including an undervaluation of the types of research they are more likely to pursue, in terms of topic specialisation and methodological approach, thus compounding the gap between male and female scholars. The CAD theory aligns particularly well with our findings in relation to gender disparities in journal rankings. Because access to prestigious journals is largely shaped by (disproportionately male) gatekeepers such as editors and peer reviewers, and is often biased against interdisciplinary, qualitative or specific research topics, women in academia may face structural disadvantages that prevent them from accessing high-ranking journals. This is particularly evident in finance, where epistemological narrowness and privileging of specific methods align more closely with male-dominated preferences. Recent work by Bedowska-Sojka et al. (2024) finds that women account for only 20 % of editorial positions in finance journals, with editorial power being concentrated in the US and UK. Moreover, male editors outnumber female editors at every level, including those serving on multiple boards, suggesting that gatekeeping structures remain male-dominated. However, Bedowska-Sojka et al. (2024) do not investigate whether gender representation on editorial boards varies by journal quality, leaving open an important area for future research. If higher-ranked journals have even lower female representation on their editorial boards, this could further explain why women in finance face greater challenges in publishing in top-tier outlets. Understanding the relationship between journal prestige, gender representation in editorial leadership, and network effects in finance academia could provide deeper insights into the structural barriers limiting women's academic progression.

The CAD theory also speaks to our finding of gendered citation disparities, with women's work being less cited not just because it appears in lower-ranked journals, but also because its research topics and methods are undervalued within the broader scholarly community, and women might not have access to the same network benefits that more prestigious and US affiliations can offer.

While one might conclude from our findings that (part of) the 'female penalty' is self-inflicted as a result of the 'choices' that women make regarding topics and methods that are associated with lower publication ratings and citation counts, such a perspective discounts the notion that gender itself may be a structural variable rather than merely an individual-level characteristic. In other words, some topics or methodological approaches might be less well-published or cited *because* they are female-dominated. In addition, it is important to note that a researcher's selections of both their field of study and the topics within it are not necessarily free choices made at a particular decision time, but are probably constrained as a result of complex interactions resulting from socialisation, cultural influences and previous educational experiences and choices. Such influences may well – consciously or subconsciously – steer researchers in a particular direction that is associated with their gender (see, for example, Ridgeway, 2011). For instance,

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[28] These figures do not account for PhD graduates and entrants from other parts of the world, which might not share the same trends. However, we were unable to obtain granular field-specific data on doctoral recipients outside of the US.

[29] See Adams and Lowry (2022a, 2022b) and Lynn et al. (2019) for overviews of the existing research on the drivers of differential career outcomes among men and women in academia.

owing to differing socialisation or social reinforcement, women may be less likely to target 'top' journals as a result of concerns about higher risks associated with rejection (Etzkowitz et al., 2000; Basson et al., 2023), and/or may place less emphasis on the prestige associated with such publications (Sonnert and Holton, 1995). Hence, a promising avenue for future research is a closer examination of the drivers behind these differences in research 'choices' and expressed preferences on the part of female academics, and whether they stem from different inherent preferences and other gender differences in human and social capital, or whether they are the result of structural and institutional features present in academia.[30] In particular, it cannot be assumed that the same gender differences that might drive different choices and outcomes in the general population are present among academics that enter a specific discipline. For instance, Adams and co-authors demonstrated in a variety of different surveys that both men and women entering finance academia and the financial industry differ significantly from the general population in their values (Adams et al., 2016; Adams and Lowry, 2022a, 2022b). Hence, we encourage further research that specifically aims to disentangle the impact of inherent preferences from those of structural and institutional barriers.

Our comparative approach to investigating the research outcomes for women within related but distinct disciplines also sheds new light on the importance of the institutional features of a field in shaping different results for them, even when operating within the common context of business and management schools. One particularly intriguing finding is that while working on male-dominated topics tends to be associated with lower-ranked journals and fewer citations across disciplines, in finance, the opposite is the case. This may reflect the extent to which finance research is shaped by established norms regarding 'mainstream' topics, where male-dominated subjects are perceived as more aligned with the discipline's intellectual core. Alternatively, finance-specific citation networks may favour research that aligns with these dominant themes.

Recent work has speculated that 'field-specific culture' is a higher barrier to women's advancement in finance than in other areas (Adams and Xu, 2022), and our findings corroborate this notion. Leslie et al. (2015) highlight that women's representation varies by discipline depending on the extent to which a field values innate brilliance over acquired skills. In fields where success is believed to require exceptional, inherent talent, women tend to be underrepresented due to pervasive gender stereotypes that associate brilliance more strongly with men. Adams and Xu (2022) apply this framework to finance, showing that ability beliefs help explain why finance remains one of the least gender-diverse fields. Their findings align with broader evidence that finance has one of the least inclusive cultures in academia, reinforcing gatekeeping mechanisms that disadvantage women. Further, Adams and Xu (2025) show that women's representation is higher in fields with more inclusive cultures, suggesting that finance's exclusionary norms could be a key driver of the gender penalty we observe. In finance, where technical, male-dominated subjects seem the most prized, research that deviates from this paradigm – such as work in qualitative or interdisciplinary areas – is undervalued. Such dynamics reflect a field-specific culture, in which women's research is disproportionately marginalised. While our primary investigation has concerned the impact of these potential structural barriers and field-specific culture on women's research outcomes, our findings raise further questions in relation to the implications for knowledge generation and innovation, both specifically

within the fields examined in our study and more broadly across academia. Discriminating against topics that do not align to male preferences or that make greater use of insights from other fields (Leahey et al., 2017; Okamura, 2019) undermines the diversity of ideas and knowledge production. A lack of willingness to develop and publish work that lies outside established field boundaries is understandable when individual incentives for career progression are driven by publication 'quality'. However, incentivising such behaviour is not well aligned to a public policy preference for scholars to draw upon insights from a variety of fields to further knowledge and tackle 'grand challenges' (Leahey et al., 2017; Okamura, 2019).

6.3. Limitations

Our findings have limitations, which may also suggest avenues for future research. Our research design is underpinned by the implicit assumption that the topics women in finance chose to examine and the methods they use contribute to their lower publication and citation success. However, an alternative explanation that cannot be discounted is that the chain of causality is different, and that particular topics or methods are less evident in 'top' journals and/or are cited less frequently because they are disproportionately covered by women. While we have distilled gender into a seemingly exogenous individual-level characteristic in our analysis, in reality it is a multi-dimensional construct that can affect publication and citations through many different channels within a gendered university research environment in which power dynamics may serve to devalue work in areas where women are dominant.

In addition, while we can isolate the impact that numerous specific author attributes (e.g. prestige and location of their affiliation(s)) and research characteristics (e.g. the subject matter or methodology utilised) will have, on average, on the probability that women are able to publish in highly rated journals, we cannot observe the factors that led to those affiliations and selections. Hence, despite our study representing an important step in understanding field-specific differences in female academics' research patterns and achievements, the results also raise new questions as to what might be driving these differences and the broader implications of our findings. For instance, it remains an open question as to whether gendered topic specialisations are the result of inherently different preferences between male and female researchers, or whether institutional structures and a 'hostile environment' discourage women from specialising in certain areas and/or incentivise them to work on other research questions and choose different methodologies.

Finally, while we have attempted to capture a variety of different characteristics of the published research as well as of the authors themselves, data limitations do not allow us to capture all the factors that might play a role in shaping research outcomes. In addition, some of our measures need to be considered as 'noisy' proxies of the actual underlying factors. For instance, one of the main determinants of journal placement and citation rate involves the 'quality' and originality of the research itself, as well as the 'ability' and skills of the researchers concerned. We also lack information on researchers' educational backgrounds, which might help to further elucidate drivers of different outcomes, research characteristics and affiliations. For instance, do female researchers have different levels of achievement in high-school mathematics than men, or be more or less likely to have advanced qualifications in quantitative subjects? Nonetheless, we believe that our study makes an important contribution in its efforts to link a large variety of factors to different research outcomes. By drawing attention to the field-specific nature of gender penalties and illustrating the value of examining complex relationships between the gendered choice of research topics and the methods used in exploring them, we hope to inform wider debates about how these factors shape the development of intra- and inter-field academic knowledge, and their impact upon researchers.

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[30] We acknowledge that the notion of differences in inherent preferences across gender is contested. While economist Larry Summers suggested that intrinsic differences between men and women regarding their preferences and capabilities might explain the relative underrepresentation of women in STEM fields in particular (see Dillon, 2005), others contest this idea and suggest that these preferences are shaped by cultural norms (e.g. Eagly and Wood, 1999; Schwartz and Rubel-Lifschitz, 2009; Guiso et al., 2008).

6.4. Implications and recommendations

Our study has important implications for both individual researchers and the academic community more generally. Our findings provide insights into the effects of utilising quantitative measures of academic impact. We found substantive gendered differences between fields in how different topics and research methods align to ubiquitous ranking and citation measures. This suggests a pressing need to ensure that appointment, progression and promotion criteria take into account the ways that field-specific research and publishing norms differentially affect women, rather than operating simply at business school or social science faculty levels. In this regard, the situation in finance is unique; despite its apparent paradigmatic diversity, its more technical and core subjects are the ones most prized by 'top' (US) journals and disproportionately inhabited by men. The current reliance on quantitative measures such as journal rankings and citation counts may disadvantage women, who are more likely to pursue interdisciplinary or qualitative research, which may in turn affect their career success (Corsi et al., 2019). Institutions should therefore consider adjusting evaluation criteria to account for the field-specific publishing norms that affect women disproportionately. For example, research assessments could account for gendered differences in research topics and methodologies; field-specific evaluation criteria could also be developed to reflect the diversity of research approaches across disciplines, ensuring that women's contributions in finance and other fields are properly valued.

It is tempting to argue that one response might be to move away from such 'objective' measures entirely and instead rely on peer review, which has formed the basis of national evaluation exercises such as the Research Excellence Framework in the UK. However, ignoring quantitative input altogether would depart from the Leiden Manifesto's first principle that 'quantitative evaluation should support qualitative, expert assessment' (Hicks et al., 2015, p. 430). The salience of that work with respect to gender bias is reflected in research that compared peer review and bibliometric evaluation and found the latter to be more favourable to women owing to major concerns about bias, transparency and efficiency in the use of peer review that have yet to be resolved (Lee et al., 2013; Jappelli et al., 2017). In fact, the findings of this paper strongly suggest that different measures of 'quality' all have the potential to be gendered in one way or another. An alternative response might be for policymakers and research leaders to account for gender-based journal and citation effects in research evaluation, or when applying equity, diversity and inclusion (EDI) policies (Graddy-Reed and Lanahan, 2023), while recent work by Zhou et al. (2024, p. 16) has provided some practical suggestions as to how to facilitate gender-neutral interactions that may minimise gender homophily in professional networks; for instance, by careful planning of conference seating arrangements to better integrate the scientific community.

CRediT authorship contribution statement

Chris Brooks: Writing – review & editing, Writing – original draft, Conceptualization, Funding acquisition. **Lisa Schopohl:** Writing – review & editing, Writing – original draft, Methodology, Funding acquisition, Formal analysis, Conceptualization, Software, Visualisation, Project administration. **Ran Tao:** Software, Formal analysis, Data curation, Methodology, Validation, Writing - original draft. **James Walker:** Writing – review & editing, Writing – original draft, Conceptualisation, Funding acquisition. **Millie Zhu:** Data curation.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: James Walker reports a relationship with Chartered Association of Business Schools that includes: board membership. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.respol.2025.105207.

Data availability

The data that has been used is confidential.

References

Adams, R., Lowry, M., 2022a. What's good for women is good for science: evidence from the American finance association. Rev. Corp. Financ. Stud. 11 (3), 554–604.

Adams, R., Lowry, M. (2022b). The culture of the finance profession: evidence from the 2020/2021 American finance association survey. *ECGI working paper Series in finance,* working paper N° 845/2022.

Adams, R., Xu, J., 2022. The Inequality of Finance, working paper. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3998218.

Adams, R., Xu, J., 2025. Sex, Science, and Society, *working paper.* Available at: https://ssrn.com/abstract=5105526.

Adams, R., Barber, B., Odean, T., 2016. Family, Values, and Women in Finance, *working paper.* Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2827952.

Agarwal, R., Hoetker, G., 2007. A Faustian bargain? The growth of management and its relationship with related disciplines. Acad. Manag. J. 50 (6), 1304–1322.

Aksnes, D.W., Rorstad, K., Piro, F., Sivertsen, G., 2011. Are female researchers less cited? A large-scale study of Norwegian scientists. J. Am. Soc. Inf. Sci. Technol. 62 (4), 628–636.

Alexander Jr., J.C., Mabry, R.H., 1994. Relative significance of journals, authors, and articles cited in financial research. J. Financ. 49 (2), 697–712.

Alvesson, M., Sandberg, J., 2013. Has management studies lost its way? Ideas for more imaginative and innovative research. J. Manage. 50 (1), 128–152.

Andrew, J., Cooper, C., Gendron, Y., 2020. Critical perspectives on accounting and journal rankings: engaging in counter discourses and practices. Crit. Perspect. Account. 71, 102169.

Auriol, E., Friebel, G., Weinberger, A., Wilhelm, S., 2022. Underrepresentation of women in the economics profession more pronounced in the United States compared to heterogeneous Europe. Proc. Natl. Acad. Sci. 119 (16), 1–11.

Auschra, C., Bartosch, J., Lohmeyer, N., 2022. Differences in female representation in leading management and organization journals: establishing a benchmark. Res. Policy 51 (3), 104410.

Basson, I., Ni, C., Badia, G., Tufenkji, N., Sugimoto, C. R., Larivière, V. (2023). Gender differences in submission behavior exacerbate publication disparities in elite journals. *bioRxiv,* 2023-08.

Baum, J.A., 2012. The skewed few does "skew" signal quality among journals, articles, and academics? J. Manag. Inq. 21, 349–354.

Beattie, V., Goodacre, A., 2012. Publication records of accounting and finance faculty promoted to professor: evidence from the UK. Account. Bus. Res. 42 (2), 197–231.

Beaudry, C., Larivière, V., 2016. Which gender gap? Factors affecting researchers' scientific impact in science and medicine. Res. Policy 45 (9), 1790–1817.

Bedowska-Sojka, B., Tarantola, C., Mare, C., Paccagnini, A., Öztürkkal, B., Pisoni, G., Shala, A., Perri, R., Skaftadotti, H.K., 2024. Editorial boards of finance journals: the gender gap and social networks. J. Bus. Ethics, forthcoming.

Bernardi, R.A., Melton, M.R., Roberts, S.D., Bean, D.F., 2008. Fostering ethics research: an analysis of the accounting, finance and marketing disciplines. J. Bus. Ethics 82, 157–170.

Bird, K.S., 2011. Do women publish fewer journal articles than men? Sex differences in publication productivity in the social sciences. Br. J. Sociol. Educ. 32 (6), 921–937.

Brooks, C., Schopohl, L., 2018. Topics and trends in finance research: what is published, who publishes it and what gets cited? Br. Account. Rev. 50, 615–637.

Brooks, C., Fenton, E.M., Walker, J.T., 2014. Gender and research evaluation. Res. Policy 43, 990–1001.

Brooks, C., Fenton, E., Schopohl, L., Walker, J.T., 2019. Why does research in finance have so little impact? Crit. Perspect. Account. 58, 24–52.

Brooks, C., Schopohl, L., Walker, J.T., 2023. Comparing perceptions of the impact of journal rankings between fields. Crit. Perspect. Account. 90, 102381.

Bukstein, D., Gandelman, N., 2019. Glass ceilings in research: evidence from a national program in Uruguay. Res. Policy 48, 1550–1563.

Cameron, E.Z., White, A.M., Gray, M.E., 2016. Solving the productivity and impact puzzle: do men outperform women, or are metrics biased? BioScience 66 (3), 245–252.

Card, D., DellaVigna, S., Funk, P., Iriberri, N., 2020. Are referees and editors in economics gender neutral? Q. J. Econ. 135 (1), 269–327.

Castonguay, S., 2024. Gender differences in rewards for academic performance: the case of north American environmental sociology. Environ. Sociol. 10 (1), 30–41.

Ceci, S.J., Stephen, J., Ginther, D.K., Kahn, S., Williams, W.M., 2014. Women in academic science: a changing landscape. Psychol. Sci. Public Interest 15 (3), 75–141.

Ceci, S.J., Kahn, S., Williams, W.M., 2023. Exploring gender Bias in six Key domains of academic science: an adversarial collaboration. Psychol. Sci. Public Interest 24 (1), 15–73.

Chari, A, Goldsmith-Pinkham, P., 2017. Gender representation in economics across topics and time: evidence from the NBER Summer Institute. Working paper available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3066692.

Closa, C., Moury, C., Novakova, Z., Qvortrup, M., Ribeiro, B., 2020. Mind the (submission) gap: EPSR gender data and female authors publishing perceptions. Eur. Polit. Sci. 19 (3), 428–442.

Correia, S., Guimarães, P., Zylkin, T., 2020. Fast Poisson estimation with high-dimensional fixed effects. Stata J. 20 (1), 95–115.

Corsi, M., D'Ippoliti, C., Zacchia, G., G., 2019. Diversity of backgrounds and ideas: the case of research evaluation in economics. Res. Policy 48 (9), 103820.

Davenport, E., Snyder, H., 1995. Who cites women? Whom do women cite? An exploration of gender and scholarly citation in sociology. J. Doc. 51 (4), 404–410.

Davies, B., 2022. Gender sorting among economists: evidence from the NBER. Econ. Lett. 217, 110640.

Djupe, P.A., Smith, A.E., Sokhey, A.E., 2019. Explaining gender in the journals: how submission practices affect publication patterns in political science. PS: Polit. Sci. Polit. 52 (1), 71–77.

Dolado, J.J., Felgueroso, F., Almunia, M., 2012. Are men and women-economists evenly distributed across research fields? Some new empirical evidence. SERIEs 3, 367–393.

Ductor, L., Goyal, S., Prummer, A., 2023. Gender and collaboration. Rev. Econ. Stat. 105 (6), 1366–1378.

Eagly, A.H., Wood, W., 1999. The origins of sex differences in human behavior: evolved dispositions versus social roles. Am. Psychol. 54, 408–423.

Etzkowitz, H., Kemelgor, C., Uzzi, B., 2000. Athena Unbound: The Advancement of Women in Science and Technology. Cambridge University Press, Cambridge.

Fini, R., Jourdan, J., Perkmann, M., Toschi, L., 2022. A new take on the categorical imperative: gatekeeping, boundary maintenance, and evaluation penalties in science. Organ. Sci. 34 (3), 1090–1110.

Gago, S., Macias, M., 2014. A possible explanation of the gender gap among accounting academics: evidence from the choice of research field. Account. Finance 54, 1183–1206.

Gendron, Y., Smith-Lacroix, J.H., 2015. The global financial crisis: essay on the possibility of substantive change in the discipline of finance. Crit. Perspect. Account. 30, 83–101.

Ghiasi, G., Larivière, V., Sugimoto, C.R., 2015. On the compliance of women engineers with a gendered scientific system. PLoS One 10 (12), e0145931.

Graddy-Reed, A., Lanahan, L., 2023. Prioritsing diversity? The allocation of US federal R&D funding. Sci. Public Policy 50, 104–119.

Grant, L., Ward, K.B., Rong, X.L., 1987. Is there an association between gender and methods in sociological research? Am. Sociol. Rev. 856–862.

Guiso, L., Monte, F., Sapienza, P., Zingales, L., 2008. Culture, gender, and math. Sci 320, 1164–1165.

Heckman, J.J., Moktan, S., 2020. Publishing and promotion in economics: the tyranny of the top five. J. Econ. Lit. 58 (2), 419–470.

Helmreich, R.L., Spence, J.T., Beane, W.E., Lucker, G.W., Matthews, K.A., 1980. Making it in academic psychology: demographic and personality correlates of attainment. J. Pers. Soc. Psychol. 39 (5), 896–908.

Hengel, E., 2022. Publishing while female: are women held to higher standards? Evidence from peer review. *Econ.* J. 132 (648), 2951–2991.

Hengel, E., Moon, E., 2022. Gender and equality at top economics journals. Working paper available at: https://ideas.repec.org/p/liv/livedp/202001.html.

Hengel, E., Phythian-Adams, S.L., 2022. A historical portrait of female economists' coauthorship networks. Hist. Polit. Econ. 54 (S1), 17–41.

Hicks, D., Wouters, P., Waltman, L., et al., 2015. Bibliometrics: the Leiden manifesto for research metrics. Nature 520, 429–431.

Humphrey, C., Gendron, Y., 2015. What is going on? The sustainability of accounting academia. Crit. Perspect. Account. 26, 47–66.

Jappelli, T., Nappi, C.A., Torrini, R., 2017. Gender effects in research evaluation. Res. Policy 46 (5), 911–924.

Joanis, S.T., Patil, V.H., 2022. First-author gender differentials in business journal publishing: top journals versus the rest. Scientometrics 127 (2), 733–761.

Jones, B.F., 2009. The burden of knowledge and the "death of the renaissance man": is innovation getting harder? Rev. Econ. Stud. 76, 283–317.

Jones, B.F., 2021. The rise of research teams: benefits and costs in economics. J. Econ. Perspect. 35 (2), 191–216.

Judge, T.A., Cable, D.M., Colbert, A.E., Rynes, S.L., 2007. What causes a management article to be cited: article, author or journal? Acad. Manag. J. 50 (3), 491–506.

Karlson, K.B., Holm, A., Breen, R., 2012. Comparing regression coefficients between same-sample nested models using logit and probit: a new method. Sociol. Methodol. 42 (1), 286–313.

Keloharju, M., 2008. What's new in finance? Eur. Financ. Manage. 14 (3), 564–608.

Key, E.M., Sumner, J.L., 2019. You research like a girl: gendered research agendas and their implications. PS: Polit. Sci. Polit. 52 (4), 663–668.

Keys, P.Y., Owens, W.L., Turner, P.A., 2009. A gender analysis of productivity and quality in finance research. J. Financ. Educ. 35, 66–79.

Kim, E.H., Morse, A., Zingales, L., 2006. What has mattered to economists since 1970. J. Econ. Perspect. 20 (4), 189–202.

King, M.M., Bergstrom, C.T., Correll, S.J., Jacquet, J., West, J. D. (2017). Men set their own cites high: gender and self-citation across fields and over time. Socius, 3, 2378023117738903.

Leahey, E., 2006. Gender differences in productivity: research specialization as a missing link. Gend. Soc. 20 (6), 754–780.

Leahey, E., Beckman, C.M., Stanko, T.L., 2017. Prominent but less productive: the impact of interdisciplinarity on scientists' research. Adm. Sci. Q. 62 (1), 105–139.

Lee, C.J., Sugimoto, C.R., Zhang, G., Cronin, B., 2013. Bias in peer review. J. Assoc. Inf. Sci. Technol. 64, 2–17.

Leslie, S.-J., Cimpian, A., Meyer, M., Freeland, E., 2015. Expectations of brilliance underlie gender distributions across academic disciplines. Sci 347 (6219), 262–265.

Lundberg, S., Stearns, J., 2019. Women in economics: stalled progress. J. Econ. Perspect. 33 (1), 3–22.

Lynn, F.B., Noonan, M.C., Sauder, M., Andersson, M.A., 2019. A rare case of gender parity in academia. Soc. Forces 98 (2), 518–547.

Maddi, A., Gingras, Y., 2021. Gender diversity in research teams and citation impact in economics and management. J. Econ. Surv. 35 (5), 1381–1404.

Maliniak, D., Powers, R., Walter, B.F., 2013. The gender citation gap in international relations. Int. Organ. 67 (4), 889–922.

Merton, R.K., 1968. The Mathew effect in science. Sci. 159, 56–63.

Merton, R.K., 1988. The Matthew effect in science, II: cumulative advantage and the symbolism of intellectual property. Isis 79, 606–623.

Mingers, J., Willmott, H., 2013. Taylorizing business school research: on the 'one best way', performative effects of journal ranking lists. Hum. Relat. 66, 1051–1073.

Nielsen, M.W., 2017. Gender and citation impact in management research. J. Informetr. 11 (4), 1213–1228.

Nielsen, M.W., Börjeson, L., 2019. Gender diversity in the management field: does it matter for research outcomes? Res. Policy 48 (7), 1617–1632.

Okamura, K., 2019. Interdisciplinarity revisited: evidence for research impact and dynamism. Palgrave Commun. 5, 141.

Penas, C.S., Willett, P., 2006. Gender differences in publication and citation counts in librarianship an information science research. J. Inf. Sci. 32 (5), 480–485.

Pezzoni, M., Sterzi, V., Lissoni, F., 2012. Career progress in centralized academic systems: social capital and institutions in France and Italy. Res. Policy 41, 704–719.

Picard, C.F., Durocher, S., Gendron, Y., 2019. Desingularization and dequalification: a foray into tanking production and utilization processes. Eur. Account. Rev. 28 (4), 737–765.

Price, D.J., 1965. Networks of scientific papers. Sci. 149, 510–515.

Rafols, I., Leydesdorff, I., O'Hare, A., Nightingale, P., Stirling, A., 2012. How journal rankings can suppress interdisciplinary research: a comparison between innovation studies and Business & Management. Res. Policy 41 (7), 1262–1282.

Reuben, E., Sapienza, P., Zingales, L., 2014. How stereotypes impair women's careers in science. Proc. Natl. Acad. Sci. 111 (12), 4403–4408.

Ridgeway, C.L., 2011. Framed by Gender: How Gender Inequality Persists in the Modern World. Oxford University Press, New York.

Ross, M.B., Glennon, B.M., Murciano-Goroff, R., Berkes, E.G., Weinberg, B.A., Lane, J.I., 2022. Women are credited less in science than men. Nature 608 (7921), 135–145.

Rossiter, M.W., 1993. The Matthew Matilda effect in science. Soc. Stud. Sci. 23 (2), 325–341.

Sarsons, H., Gërxhani, K., Reuben, E., Schram, A., 2021. Gender differences in recognition for group work. J. Polit. Econ. 129 (1), 101–147.

Schwartz, S.H., Rubel-Lifschitz, T., 2009. Cross-national variation in the size of sex differences in values: effects of gender equality. J. Pers. Soc. Psychol. 97, 171–185.

Seglen, P.O., 1992. The skewness of science. J. Am. Soc. Inf. Sci. 43, 628–638.

Sherman, M.G., Tookes, H.E., 2022. Female representation in the academic finance profession. J. Financ. 77 (1), 317–365.

Sierminska, E., Oaxaca, R.L., 2021. Gender Differences in Economics PhD Field Specializations with Correlated Choices. IZA Institute of Labor Economics Discussion Paper Series, IZA DP No, p. 14778.

Sonnert, G., Holton, G.J., 1995. Who Succeeds in Science? Rutgers University Press, New Brunswick, New Jersey, The Gender Dimension.

Starbuck, W.H., 2005. How much better are the most-prestigious journals? The statistics of academic publication. Organ. Sci. 16 (2), 180–200.

Teplitskiy, M., Duede, E., Menietti, M., Lakhani, K.R., 2022. How status of research papers affects the way they are read and cited. Res. Policy 51 (4), 104484.

Thelwall, M., 2018. Do females create higher impact research? Scopus citations and Mendeley readers for articles from five countries. J. Inf. Secur. 12 (4), 1031–1041.

Thelwall, M., 2020. Gender differences in citation impact for 27 fields and six English-speaking countries 1996–2014. Quant. Sci. Stud. 1 (2), 599–617.

Tourish, D., 2011. Leading questions: journal rankings, academic freedom and performativity: what is, or should be, the future of leadership? Leadership 7 (3), 367–381.

Tower, G., Plummer, J., Ridgewell, B., 2007. A multidisciplinary study of gender-based research productivity in the world's best journals. J. Divers. Manage. 2 (4), 23–32.

van der Linden, N., Roberge, G., Malkov, D., 2024. Gender equality in Research & Innovation – 2024 review. Elsevier Data Repository V2. https://doi.org/10.17632/bb5jb7t2zv.2.

van Rijnsoever, F.J., Hessels, L.K., 2011. Factors associated with disciplinary and interdisciplinary research collaboration. Res. Policy 40, 463–472.

Walker, J.T., Fenton, E., Salter, A., Salandra, R., 2019a. What influences business academics' use of the association of business schools (ABS) list? Evidence from a survey of UK academics. Br. J. Manage. 30 (3), 730–747.

Walker, J.T., Salter, A., Fontinha, R., Salandra, R., 2019b. The impact of journal re-grading on perception of ranking systems: exploring the case of the academic journal guide and business and management scholars in the UK. Res. Eval. 28 (3), 218–231.

Ward, K.B., Gast, J., Grant, L., 1992. Visibility and dissemination of women's and men's sociological scholarship. Soc. Probl. 39 (3), 291–298.

West, J.D., Jacquet, J., King, M.M., Correll, S.J., Bergstrom, C.T., 2013. The role of gender in scholarly authorship. PLoS One 8 (7), e66212.

Willmott, H., 2011. Journal list fetishism and the perversion of scholarship: reactivity and the ABS list. Organ 18, 429–442.

Wuchty, S., Jones, B.F., Uzzi, B., 2007. The increasing dominance of teams in production of knowledge. Sci 316, 1036–1039.

Zhou, S., Chai, S., Freeman, R.B., 2024. Gender homophily: in-group citation preferences and the gender disadvantage. Res. Policy 53 (1), 104895.