

Other Things Being Unequal: The Gender Gap in Academic Publishing

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Abstract

This paper explores the gender distribution of authors that publish in Indian economics journals. We do that in two ways- first, we examine student-run, undergraduate economics journals of Indian colleges and second, we examine leading Indian economics journals as research usually starts at the undergraduate level and continues in the professional sphere. We use Python libraries to scrape data from the journals' websites and assign genders based on author names. The results show that while men and women have an almost equal representation at the undergraduate level, representation drastically falls at the professional level. Possible reasons as to why this occurs are discussed. We also analyse trends in collaborations between authors.

Keywords: Women; Research; Gender Inequality; Academia

JEL Classification: I230, I240, J710

Background

Women are underrepresented in academia through a variety of ways. Research has found that women in academia are less likely to be published, are cited less often, receive less credit for papers co-authored with men, are more likely to be underestimated by their male peers, are underrepresented in editorial boards of journals, receive lesser money and prestige after winning prizes for their research, and are paid lesser than men even after accounting for age and research performance. A recent study found that the Covid-19 pandemic might also be causing women to publish less research and start fewer new projects since they have to take on more care responsibilities than men.

In the field of economics in particular, female authors were subjected to higher levels of evaluation and had their work rated lower, subjected to higher standards during peer review, and were less likely to achieve and take longer to achieve tenure track positions. A survey by the Chicago Booth Review with 9,000 respondents, who were a part of the American Economic Association, indicated 'a climate of discrimination' against women in economics.

In our study, we analyse the proportion of women and men in economic research papers published in top economics journals both at the undergraduate level and at a professional level.

Methodology

The study was conducted at two levels-

- I. Undergraduate Level
- II. Professional level

Undergraduate Level

NIRF, popular websites', and magazine rankings were parsed to collect a list of colleges that offer undergraduate courses in economics. Very few colleges were found to have journals dedicated to economics that are run by undergraduate students and publish undergraduate research, articles, and academic writing. Though some college journals did not publish research papers, their contents were considered to represent an interest in and aspirations of academic writing and so the gender-wise participation in them can be considered to represent the space different genders receive in undergraduate research. Only co-educational colleges were considered in the study as it was felt that in-house submissions in girls colleges would end up outweighing submissions from outside the college in the journal since the entire editorial team would be composed of women. Contributors to each journal were counted. Each contributor was given equal weightage regardless of whether they were co-authors or authored the paper alone. In case of the same author contributing twice in two different papers, they were counted as two different contributors of their gender. The period of study was from the academic sessions 2014-15 to 2019-20.

Professional Level

At the professional level, 10 Indian economics journals were chosen. These were ranked as the top 10 journals by Tilak Mukhopadhyay and Subrata Sarkar in their paper titled Rankings of Economics Journals and Departments in India. Editions from each journal from the year 2016 to the year 2020 were considered. Contributors were counted year-wise as well as journal-wise to find the gender distributions. The gender distributions of single-authored papers and their numbers as compared to papers written in collaboration were also determined.

We ran html scraping code over all the webpages to access paper titles and author names. We used BeautifulSoup, which is a Python library, for pulling the relevant data and lxml API for parsing. We used the journals that were published on Springer, Sage Journals, Jstor and the websites of the journals themselves.

Limitations

The biggest limitation in both parts of study is that of misgendering. Only two genders were taken into account, and the authors were fit into either Male or Female depending on their names (if mentions of their genders/pronouns were not found on the internet). This method misgenders both those who do not identify as a part of the gender binary and those whose gender does not align with the gender their name is usually associated with.

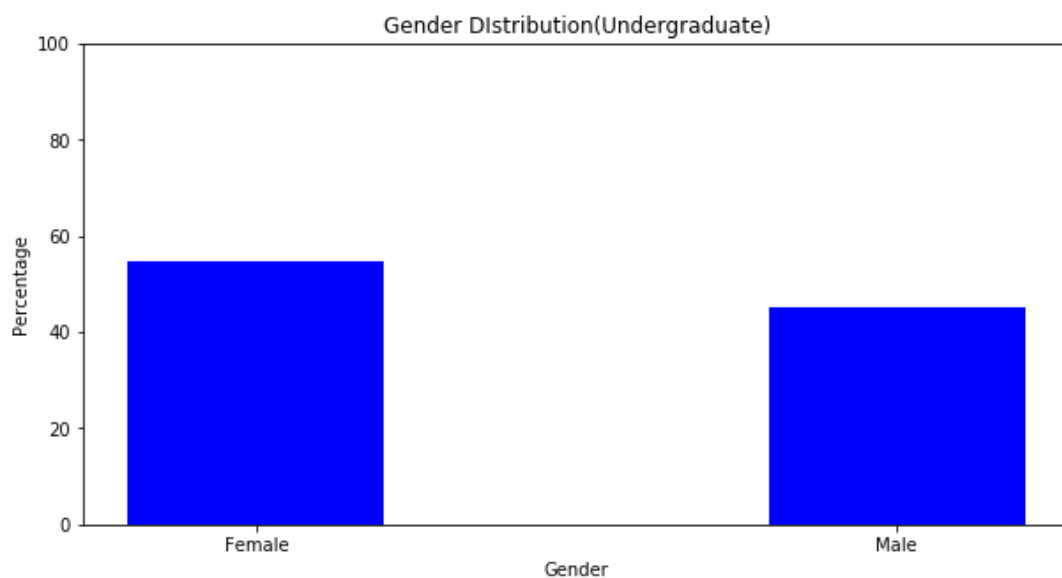
Undergraduate journals

For the undergraduate study, the total number of editions analysed was 22, the total number of papers was 319, and total number of authors was 411. This is quite a small number and a case could be made that these cannot be taken as representative of research spaces in economics at the undergraduate level across the country.

Since only issues available online were considered, the colleges are concentrated in metro cities and again cannot be representative of the entire country.

Findings

At the undergraduate level, the 319 papers studied showed that 225 or almost 55% of the contributors were women.

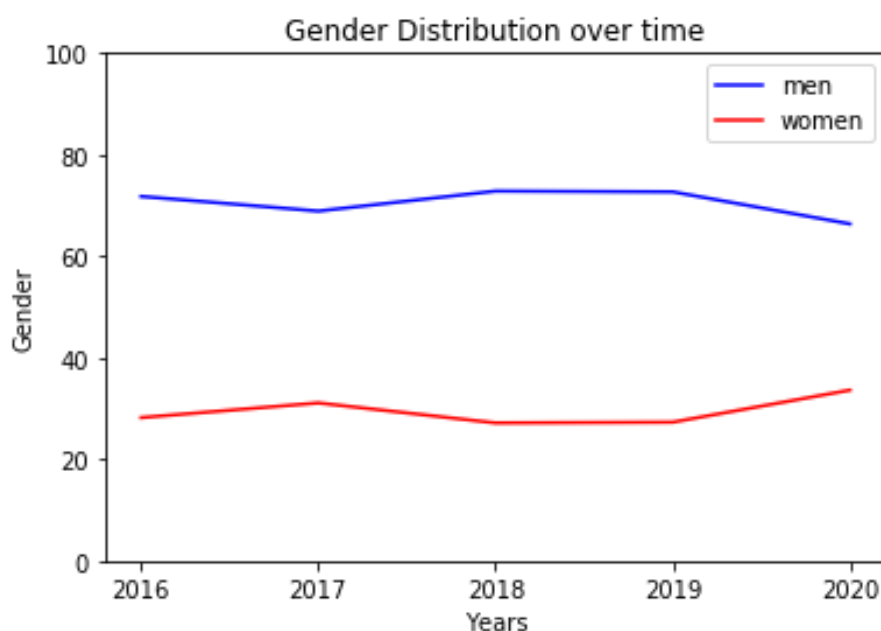


	Women	Men	Total
Distribution	225	186	411
%	54.7%	45.3%	100%

This represents an almost equal distribution with a slight tilt towards women. Although more women enroll in undergraduate courses according to the All India Survey of Higher Education (AISHE) reports of the past few years, the sample set of journals consists of mostly colleges under the University of Delhi, which have had a gender ratio skewed towards men for years. For instance, the student body of Kirori Mal College, one of the colleges whose journals was studied, comprises of only 30% women.

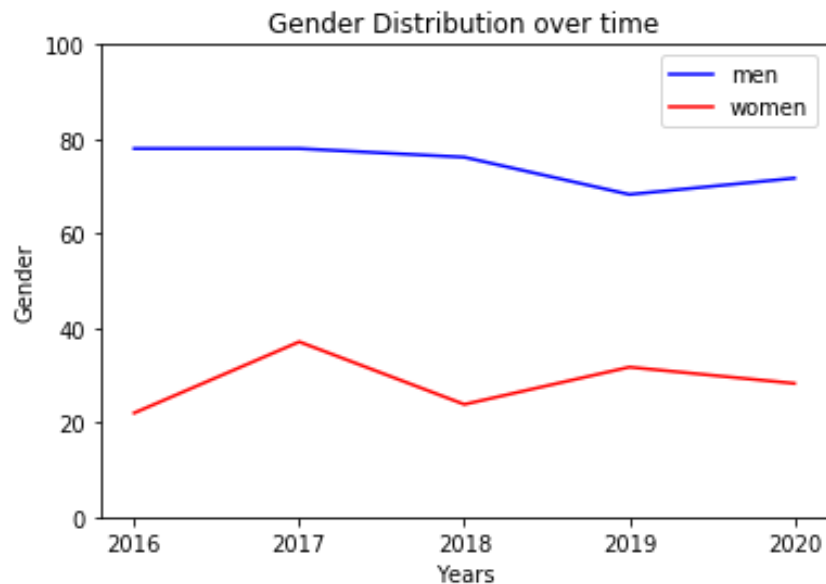
At the professional level, however, the rate of women was found to be much lower. Across the 50 issues of the 12 journals, more than 1,300 papers and more than 2,300 authors were covered. It was found that women contribute less than 30% as a whole.

	2016	2017	2018	2019	2020	Total
Men	341	319	362	338	302	1662
%	71.8%	68.9%	72.8%	72.7%	66.4%	70.6%
Women	134	144	135	127	153	693
%	28.2%	31.1%	27.2%	27.3%	33.6%	29.4%

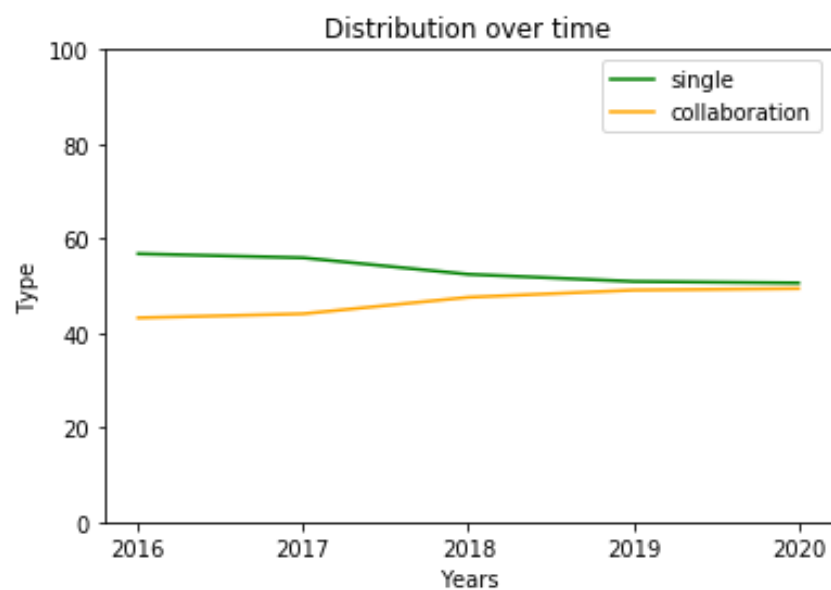


The proportion of women did not show a clear rising or falling trend in the five year period studied but remained between 27-33%.

In addition to total gender distribution, the gender distribution of papers written by individual authors as opposed to multiple authors was analysed. Here the proportion of women fell by another percentage point, to 28.5%. Again, no clear trend emerged over 2016-2020.



It was also found that 53.4% of the papers were written individually while the rest were written in collaboration. Over the course of five years, the number of papers written in collaboration rose slightly while sole-authored papers fell in number leading to both converging towards the middle.



Why Are Fewer Women Publishing At The Professional Level?

A lower rate of publishing cannot be considered a sign of outright discrimination (though that could be a significant reason) as many factors could explain the gap. However, women might be making choices that lead to less publishing due to underlying discriminatory reasons. To get the bigger picture we look at academic enrollment and employment in India in general.

Academic enrollment

According to the 2018-19 AISHE report, the enrollment rate of women is slightly higher than that of men in undergraduate programmes while the opposite is true for M.Phil, Post graduate and PhD programmes. In humanities the ratio of men is higher than women except M.Phil., Post Graduate, and Certificate programmes. At the undergraduate level, the enrollment of women and men stands at 51% and 49% respectively. In particular, BA arts and MA arts both show a rising proportion of women outweighing men.

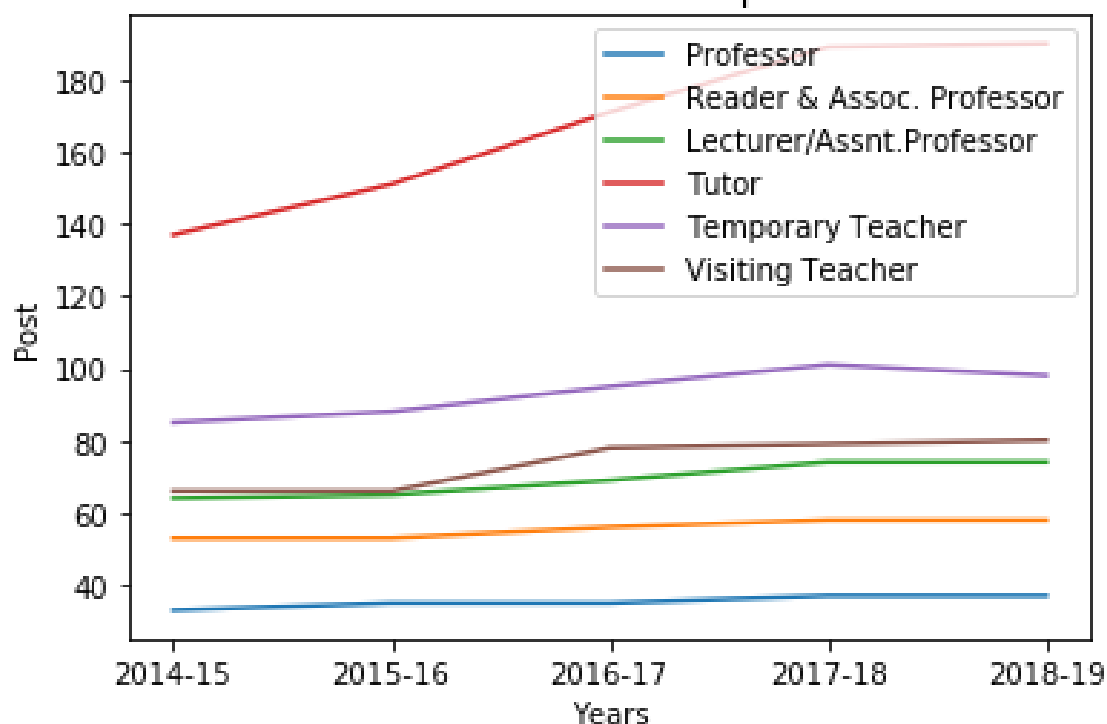
Females per 100 Male Students in Regular Mode of Education					
Programme	2014-15	2015-16	2016-17	2017-18	2018-19
B.A.- Bachelor of Arts	118	118	121	124	126
MA. - Master of Arts	154	165	169	173	180

Higher enrollment could be the reason for women's share in the journal contributions at the undergraduate level to be slightly higher than that of men.

Academic Employment

Although enrollment is higher among women at the M.Phil and postgraduate level, gender wise employment data from the same report shows that fewer women are appointed as professors than men. In fact, the number of women falls more and more as we go along the academic ladder.

Post-wise Number of Female Teacher per 100 Male Teachers



The number of male teachers has consistently been higher than the number of female teachers in all posts except that of a Tutor. What's interesting to observe here is that while females occupying different types of posts have risen over the years, the rise is substantially more for Tutor and Temporary Teachers than for more "coveted" or "important" posts like Professor or Associate Professor, where there's virtually no improvement. This could be because these posts employ more people than "coveted" posts or it could be a sign that women are resigned to positions of lesser prestige in academia.

Some contend that this occurs due to women making career choices that are easier to handle while also managing households. However, if this were true, more women should be present in academic positions over other jobs popular among degree-holders which involve more erratic schedules and sometimes more travelling etc. It also implies that women tend to refuse promotions for the sake of the household at the cost of a higher professional status and more money.

A possible reason for fewer promotions is that of women performing a disproportionate amount of care work and tasks that do not improve their promotability. One study of a research-intensive university faculty found that mothers of young children spend less time on research compared to men even though they spent the same amount of time for their jobs in total. Another study found that women were more likely to be asked to volunteer for and accept to volunteer for tasks that everyone prefers someone else to complete. Thus, it can be said that women tend to act as caregivers of the academic family.

Thus lower representation in journals could be a symptom of lower participation of women in research and academia in general. Studies have shown that women tend to underestimate their abilities and performance which in turn affects their choices and careers. This has been dubbed the confidence gap. At the same time, another study found that faculties were much more responsive to white males compared to other categories of students at the application stage. Women's lower rates of participation seem to occur both due to discrimination and their own perceptions that can be thought of as internalized sexism.

Conclusion

The presence of a significant gender gap in economics research is undeniable, as it is in many other fields and countries. Many theories have been proposed to understand this underrepresentation. It is likely that all the theorized causes work together and result in the lower participation of women in research whether it's- women avoiding careers that require long working hours due to the burden of care work; women performing tasks with low promotability; stereotypes about women's intellect leading to a 'confidence gap' between women and men which discourages their participation; or structural factors that discriminate against women. Thus, self-perception and discrimination (whether outright or unconscious) are both ends that need to be worked on to create a more equitable space for women in academia.

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