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GENDER AND WORK

Half Empty and Half Full? Women in Economics and the Rise in Gender-Related Research[†]

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Although women have made great strides in the economics profession since the 1970s, progress toward increasing their representation has recently stalled at multiple levels (Lundberg and Stearns 2019). This includes among doctoral degree holders, where women's share of all PhDs in economics appears to have plateaued at close to one-third since 2005 (Chari 2023). The persistent underrepresentation of women raises the question of what ideas are lost when women are absent. On a broader level, this is closely linked with the larger question of how researcher identity shapes research ideas and innovation.[1] In a related paper (Antman et al. 2024), we find differences in the fields of study by the racial/ethnic background of researchers but limited evidence that doctoral recipients from underrepresented minority groups are more likely to pursue race-related research than non-Hispanic White PhDs. While other research has documented important differences in field of study for men and women with economics PhDs (Fortin, Lemieux, and Rehavi 2021; Lundberg and Stearns 2019), little is known about the specific research topics pursued by women and, thus, how the representation of women might change the scope of research in economics as a whole or the topics that are studied within subfields of economics.

If researcher background meaningfully shapes research pursuits, one might expect women to be more likely to pursue gender-related research topics. On the other hand, women might be less likely to pursue gender-related research topics if they expect greater repercussions from deviating from traditional economics research areas. We use three decades (1991–2021) of the EconLit dissertation database to investigate the link between the gender of economic dissertation authors and economic research topics.[2] These comprehensive data allow us to conclusively link gender and economic research, in part because dissertations are solo authored and arguably represent the broadest possible population of entering economists. As a result, we are able to paint a picture of the profession using a population that is both surely a measure of what topics are salient in society and the discipline at a given time, and also a leading indicator for its future—new doctorates.

Using these data, we find a remarkable rise in gender-related research in economics over time and by subfield. We show that women economists are significantly more likely to pursue gender-related dissertation topics. Moreover, women bring gender-related topics into a wider range of fields within economics, thus expanding the scope of economic research more broadly. The rise in gender-related research in economics dissertations does not appear to be fully driven by the gender mix of dissertators—the share of

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[1] Research on all fields of study, not just economics, suggests a link between diversity of researchers and innovation (Hofstra et al. 2020; Yang et al. 2022) but does not tie specific areas of research to researcher identity.

[2] See https://www.aeaweb.org/econlit/.

dissertations written by women has held constant as research on gender has increased. It appears that men in economics have substantially increased their interest in gender-related topics as well.

I. Data and Methods

Our primary data source is the EconLit dissertation database, which is available through institutional license and includes information on publication year, author, title, keywords, and subject code, as per the *Journal of Economic Literature* (*JEL*). Our sample comprises 31,223 doctoral recipients in economics from 1991 to 2021.[3] We use these data to construct measures of gender-related research. Our primary measure of gender-related research is an indicator variable equal to one if any of the *JEL* codes associated with a dissertation are J16, which includes the "Economics of Gender."[4] To probe robustness, we also define an alternative broader outcome variable—an indicator equal to one if a dissertation's keywords include any of the following terms: women, gender, female, fertility, sex, mother, and maternal—in addition to the *JEL* code J16 to identify research that is gender related.[5] We focus on the gender of recent doctoral recipients, which we impute from their names algorithmically.[6] Note that imputing gender based on names is a commonly used method for overcoming data limitations in the literature on diversity in science (Yang et al. 2022) and economics (Lundberg and Stearns 2019).[7]

[3] The sample used in the regression analysis drops to 24,723 due to missing values in cases where the gender imputation is uncertain.

[4] J16: Economics of Gender; Non-labor Discrimination.

[5] Our definitions of gender-related research include all *JEL* codes or keywords associated with the dissertation, and are not limited to the primary *JEL* research area.

[6] We use the Python packages gender-guesser and ethnicolr to impute gender and race/ethnicity based on author names, in keeping with other work—for example, Hofstra et al. (2020). Our imputed race variables allow us to construct a mutually exclusive and exhaustive set of dummy variables indicating whether the author is non-Hispanic White, non-Hispanic Black, non-Hispanic Asian (who we refer to as "Asian"), or Hispanic, where non-Hispanic Whites are the reference category in regression analyses below.

[7] Ross et al. (2022) validate a similar approach. While gender imputations can have good performance, they are far from perfect, especially for Asian names. Fortunately, our trends echo those from official reports, suggesting that imputation error does not bias our results. A limitation is that our gender measure is both binary (or ternary with an uncertain category) and static, limiting our ability to address nonbinary and fluid gender identities.

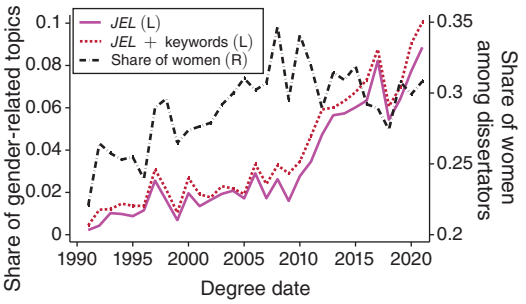

FIGURE 1. SHARE OF GENDER-RELATED TOPICS AND WOMEN DISSERTATORS OVER TIME

Note: This figure plots the yearly share of dissertations with gender-related topics (left axis) and the share of women among dissertators (right axis).

II. Results

A. *Trends*

We begin our analysis by examining trends in research on gender-related topics and the share of women entering the economics profession. As shown in Figure 1, the share of economics dissertations related to gender increased for both measures from roughly 2 percent between 2000 and 2009 to 9 percent by 2021. By contrast, the figure shows that the share of women among economics dissertators held relatively steady over this period, which is consistent with the relative stagnation of women's representation observed elsewhere (Lundberg and Stearns 2019; Chari 2023). Thus, there is a striking divergence between trends in the share of women entering the profession and the share of research on gender-related topics among new PhD economists.

Figure 2 shows that women are, perhaps unsurprisingly, considerably more likely to write dissertations on gender-related topics. At the same time, research on gender flatlined between the late 1990s and 2010 among women and increased only very gradually among men. It then increased substantially for both women and men after 2010. Thus, the recent increase in

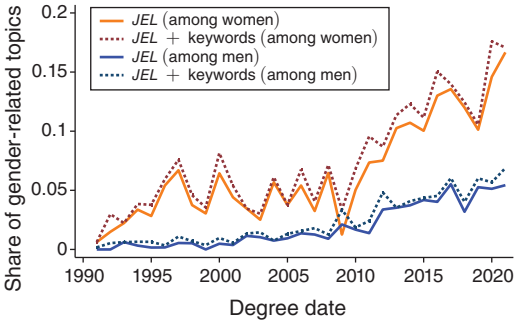

FIGURE 2. SHARE OF GENDER-RELATED TOPICS AMONG WOMEN AND MEN

Note: This figure shows the yearly share of dissertations with gender-related topics among women and men.

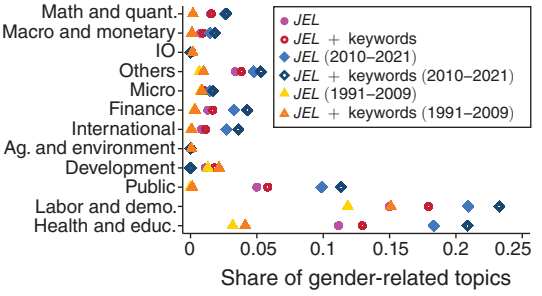

FIGURE 3. SHARE OF DISSERTATIONS ON GENDER-RELATED TOPICS, BY FIELD

Note: This figure shows the share of dissertations related to gender within each field and in two periods: 1991–2009 and 2010–2021.

research on gender occurred because men and women were both increasingly likely to focus on gender in their dissertations. Indeed, because there are more than twice as many men as women writing dissertations in economics, the increase in dissertations on gender among men was an important driver of the overall increase.

B. *Field Differences*

Of course, gender-related dissertations are not evenly distributed across fields of research. Rather, as shown in Figure 3, they are concentrated in applied micro fields, with gender-related dissertations accounting for roughly 15 percent of dissertations in labor/demography and 11 percent in health/education. By contrast, far less than 5 percent of dissertations are on gender in most other fields. These differences are, no doubt, at least partially due to variation in the salience of gender as a topic in some fields versus others (e.g., health economics versus monetary economics). However, these relationships do not appear to be entirely fixed over time. Furthermore, Figure 3 shows that the share of gender-related dissertations increased in the applied micro fields of public, labor/demography, and health/education by 10–15 percentage points (pp) from 1991–2009 to 2010–2021, while most of the other fields increased from near 0 to a few percentage points.

The salience of gender-related topics in each field is closely linked with the share of women dissertators in each field. As shown in Figure 4,

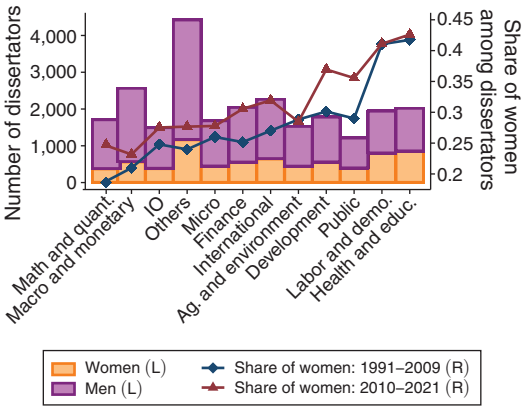

FIGURE 4. NUMBER OF MEN AND WOMEN AND SHARE OF WOMEN AMONG DISSENTATORS, BY FIELD

Note: This figure shows the number of women and men (left axis) and the share of women among dissertators (right axis) within each field and in two periods: 1991–2009 and 2010–2021.

women make up over 40 percent of dissertators in labor/demography and health/education but between 20 and 25 percent in both math/quantitative and macro/monetary, respectively. Moreover, the share of dissertators in each field who are women has been remarkably stable over time. The main exceptions are development and public, where the share of women is over 35 percent in the 2010–2021 period—almost 10 pp higher than in the 1991–2009 period. The relative stability of the gender mix of fields,

Table 1—Author Demographics and Research on Gender

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Gender-related research: JEL (sample mean: 0.034)						
Female	0.046	0.036	0.046	0.036	0.046	0.036
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Asian	−0.003	0.003				
	(0.003)	(0.003)				
Hispanic	0.000	0.004				
	(0.003)	(0.003)				
Non-Hispanic Black	−0.001	0.001				
	(0.006)	(0.006)				
Black/Hispanic			0.001	0.003	0.001	0.004
			(0.003)	(0.003)	(0.003)	(0.003)
Female Black/Hispanic					−0.002	−0.004
					(0.009)	(0.009)
Primary field FE		Yes		Yes		Yes
R^2	0.051	0.096	0.051	0.096	0.051	0.096
Panel B. Gender-related research: JEL + keywords (sample mean: 0.040)						
Female	0.051	0.039	0.051	0.039	0.052	0.040
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)
Asian	−0.003	0.004				
	(0.003)	(0.003)				
Hispanic	−0.002	0.002				
	(0.004)	(0.004)				
Non-Hispanic Black	−0.000	0.002				
	(0.007)	(0.007)				
Black/Hispanic			−0.001	0.001	0.000	0.003
			(0.003)	(0.003)	(0.003)	(0.003)
Female Black/Hispanic					−0.004	−0.007
					(0.009)	(0.009)
Primary field FE		Yes		Yes		Yes
R^2	0.053	0.107	0.053	0.107	0.053	0.107

Notes: Size is 24,723 in all regressions. PhD cohort/year and institution fixed effects are controlled. Standard errors are clustered at the institution-cohort level.

however, is consistent with the constancy of the gender share of dissertators as a whole and contrasts with the share of research that is related to gender, which increased quite substantially in the latter period.

It is also noteworthy that the variation across fields in the share of dissertators who are women is small compared to the differences across fields in the share of dissertations on gender topics. The fact that the share of research on gender varies so much more across fields than the gender mix of researchers suggests that the cross-field differences in research are not driven by mechanical differences in the gender composition of fields alone. Rather, the share of women and men conducting research on gender varies across fields. We hypothesize that the rise in gender-related research in economics reflects an overall increase more than a rise in the representation of women in any particular field. For instance, it is possible that a higher share of women may generate a spillover effect on the research topics among women and men in the field, and that this spillover effect may have accelerated over time.

C. *Individual-Level Analysis*

To further explore these questions, Table 1 reports results from a linear regression of whether a dissertation is on a gender-related topic on a gender indicator, other demographic

Table 2—Author Demographics and Research on Gender, by Field Level Share of Women

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Gender-related research: JEL (share of women < 26.4 percent)						
Female	0.025	0.025	0.025	0.025	0.025	0.025
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Primary field FE		Yes		Yes		Yes
R^2	0.047	0.051	0.046	0.051	0.046	0.051
Panel B. Gender-related research: JEL + keywords (share of women < 26.4 percent)						
Female	0.027	0.026	0.027	0.026	0.027	0.027
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Primary field FE		Yes		Yes		Yes
R^2	0.051	0.056	0.051	0.056	0.051	0.056
Panel C. Gender-related research: JEL (share of women ≥ 26.4 percent)						
Female	0.055	0.045	0.055	0.045	0.056	0.046
	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)	(0.005)
Primary field FE		Yes		Yes		Yes
R^2	0.075	0.119	0.075	0.119	0.075	0.119
Panel D. Gender-related research: JEL + keywords (share of women ≥ 26.4 percent)						
Female	0.061	0.049	0.061	0.049	0.063	0.051
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Primary field FE		Yes		Yes		Yes
R^2	0.077	0.128	0.077	0.128	0.077	0.128

Notes: Sample mean of the share of women dissertators across fields is 26.4 percent. Fields with higher shares of women dissertators are ($N = 12{,}825$) financial economics, international economics, agricultural and environmental economics, development, public economics, labor and demographic economics, and health, education, and welfare. Fields with lower shares of women dissertators are ($N = 11{,}895$) mathematical and quantitative methods, macroeconomics and monetary economics, industrial organization, microeconomics, and all the others. PhD cohort/year and institution fixed effects are controlled. Standard errors are clustered at the institution-cohort level.

characteristics, and PhD institution and graduation year fixed effects. Column 1 shows that women are 4.6 pp more likely than men to do gender-related research using our narrow definition of gender-related research or 5.1 pp using the broader definition (panel B, column 1). This is a sizable difference given the average share of gender-related dissertations in the sample (about 3.4 percent). Moreover, column 1 shows no differences across racial or ethnic groups.

Column 2 adds primary field fixed effects to our institution and PhD cohort fixed effects. There are, as we have seen, large differences in the fields in which women and men conduct research, and these account for roughly a quarter of the gender differences in the probability of doing gender-related research. Still, women are about 3.6 pp more likely to write a dissertation on a gender-related topic relative to men, even after controlling for primary research field.

Columns 3 and 4 report estimates that combine Black and Hispanic authors as one group and include Asians with non-Hispanic Whites as the omitted group. Columns 5 and 6 allow for interactions between gender and our indicator for Black or Hispanic. Neither specification indicates that the relationship between gender and doing gender-related research varies with race and ethnicity. Columns 1 through 6 in panel B repeat these specifications for the broader definition of gender-related research. This definition generates somewhat larger estimates for the difference between men and women conducting gender-related research (coefficients ranging from 3.9 pp to 5.1 pp), but overall the results are very similar to those using the *JEL*-only based definition.

Finally, Table 2 suggests that women bring gender-related research into a wide range of fields within economics. Specifically, it shows that women's greater likelihood of focusing on gender-related research holds in fields with high and low shares of women, even after controlling for field fixed effects.

III. Conclusion

We see recent trends in gender-related research and the gender composition of new economics PhDs as both promising and discouraging. Given the relative importance of economists as policy advisors and the continued salience of gender in determining economic outcomes in society, the fact that the share of dissertations that are gender-related has doubled to nearly 10 percent by the end of our sample period is promising. On the other hand, the fact that women's share of PhDs in economics appears to have plateaued at one-third of all economics doctoral degrees is discouraging since it suggests significant barriers remain to achieving equitable representation of women in the profession.

Our analysis further shows that women economists have contributed significantly to expanding the scope of research in the economics profession in a multitude of ways. Women are not only significantly more likely to pursue gender-related dissertation topics; they also bring gender-related topics into a wider range of fields within economics. At the same time, our descriptive evidence suggests that men in economics have substantially increased their interest in gender-related topics. While this may be due to an increased societal focus on gender, another possible explanation, which we leave for future research, is that women's presence in the economics profession has had spillover effects through PhD advisors and cohorts that have developed over time.

We also note that our study is not without limitations, the most obvious of which are the limits to imputing the gender and racial background of dissertation authors. Another limitation is that we are not able to distinguish between international and domestic graduate students, as country of origin is likely to be an important explanatory variable determining research focus. While gender imputations can perform well (Ross et al. 2022) and our descriptive trends are relatively consistent with official reports (Chari 2023), self-reported demographic data on researchers could substantially improve our analysis. Future data collection efforts should aim to combine self-reported demographic and socioeconomic background information with research output for the broad population of researchers to better understand the link between demographic diversity and knowledge creation.

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