

Moving in Academia: Who Moves and What Happens After?

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A large and growing literature on gender gaps has examined the determinants of labor market outcomes among economists in academia. Differences arise early within a scholar's career in the likelihood and timing of promotion (Ginther & Kahn 2004; Ginther & Kahn 2021; Sarsons 2017) as well as in salary (Hilmer & Hilmer 2010; Binder et al. 2010; Carlin et al. 2013; Li & Koedel 2017; Chen & Crown 2019; Bedard et al. 2021). Evidence points to various mechanisms including availability of role models (Hale & Regev 2014; Carrell et al. 2010; Blau et al. 2010), implicit biases (Milkman et al. 2015; Moss-Racusin et al. 2012; Hengel 2017; Sarsons 2017; Sarsons et al. 2021), negative productivity shocks due to family responsibilities (Mason & Goulden 2002), institutional factors such as gender-neutral tenure clock stopping policies (Antecol et al. 2018), gender quotas (Deschamps 2018), and gender composition on evaluation committees (Bagues et al. 2017).

Recent literature has found social networks to be very important in Economics (Combes et

al. 2008; Brogaard et al. 2014; Colussi 2018). Studies underscore the impact of peer quality on work outcomes, influencing behaviors, facilitating knowledge dissemination, and fostering collaborations (Agrawal 2017; Jackson & Bruegmann 2009; Akcigit et al. 2018; Zacchia 2018; Tartari et al. 2014). Additionally, the concentration of highly productive scholars in a university generates positive spillovers on scientific production (Azoulay et al. 2010; Borjas & Doran 2012; Waldinger 2012; Oettl 2012). We know less about gendered aspects of networks and its contribution to gaps in outcomes, there is some suggestion that networks are especially important for women (Kleemans & Thornton 2021; Wesselbaum 2023). Several previous papers have examined labor mobility among economists, with Hilmer & Hilmer (2010) finding large gender differences in moving out of top-30 ranked institutions, but most papers on mobility focus on changes in salary (Hilmer & Hilmer 2010; Barbezat & Hughes 2001; Ehrenberg et al. 1991) or have focused on attrition out of academia altogether (Brown & Woodbury 1995; Ginther & Kahn 2004).

In this paper, we further the literature on gender differences among academic

economists by first describing labor market mobility across faculty rank. We use a longitudinal panel of faculty employment of economists at 131 R1 institutions to examine changes in jobs that are lateral, with promotion, or a demotion. We describe how movement across institutions varies overall, and by institution, rank, and gender.

We then turn to studying what happens after a faculty member moves to a new institution to their former and new colleagues' publications. We show event study plots of productivity before and after the loss or gain of a colleague, separately by gender.

I. Data

We use data from CVs of tenured and tenure-track economists holding a Ph.D. in Economics, or economics-related field (e.g. Public Policy, Finance, or Business) in 131 doctoral universities classified as R1 universities. Using these data, we construct an individual-year panel of employment histories with year of Ph.D., university affiliation and its department ranking within Economics¹, job title, and gender.² We match individuals to data from RePEc to obtain their annual number of publications. Our data are conditional on being

employed in academia and do not allow us to study movements outside of academia (Ginther & Kahn 2004), moving outside of the U.S., or to non-doctoral programs (Bratsberg et al. 2010; Ault et al. 1979).

TABLE 1—SUMMARY STATISTICS BY GENDER

	(1) Female	(2) Male	<i>p</i> -value difference
Ph.D. graduation year	2006 (11.06)	2000 (13.65)	0.00
Rank Ph.D. university	193.33 (70.9)	195.96 (69.48)	0.22
Rank university of first job	166.55 (73)	171.06 (72.75)	0.04
Assistant professors (%)	39.70 (48.95)	27.06 (44.43)	0.00
Associate professors (%)	27.11 (44.47)	22.41 (41.70)	0.00
Full professors (%)	33.19 (47.11)	50.53 (50.00)	0.00
Number of moves	0.48 (0.76)	0.65 (0.89)	0.00
Annual probability of moving	0.04 (0.18)	0.04 (0.19)	0.75
Years to first move	7.08 (5.23)	7.57 (5.75)	0.08
Time to associate professor	7.03 (2.65)	6.24 (2.37)	0.00
Time to full professor	13.35 (5.732)	11.87 (4.87)	0.00
Number of publications	0.77 (0.66)	1.10 (0.93)	0.00
Number of Top 5 publications	0.08 (0.15)	0.14 (0.23)	0.00
Number of citations	9.02 (14.75)	16.42 (30.83)	0.00
Observations	1402	4708	

Notes: Columns 1 and 2 present means with standard deviations in parentheses for female and male economists and Column 3 shows the *p*-value of a *t*-test comparing means. Observations for number of publications, Top 5, and citations for women and men are 715 and 2,863. Years to first move is conditional on moving and includes 498 women and 2087 are men.

The data include 6,110 individuals, of which 84% are men. Table 1 presents the descriptive statistics of the sample by gender. Women in the sample are younger, having acquired their Ph.D. around 2006, compared to men around 2000, but received their degree from similarly ranked schools. Women begin their academic

¹ We rank the university of PhD completion and first-known faculty position according to McPherson (2012).

² We obtain the gender of economists from a first-name matching database (Tang et al. 2011), and photos during CV collection if a match did not occur.

career, on average, in a slightly lower-ranked university than men. Because women on average have more recently received their Ph.D., female faculty are more likely to be at the rank of Assistant and Associate, while men are more likely to be at Full. Female assistant professors required seven years to reach Associate and thirteen years to reach Full, from the time of their Ph.D., compared to six and twelve years among men. Men score higher on measures of productivity in terms of average annual publications, annual publications in Top 5 journals, and annual number of citations.

II. Who Moves and Where to?

A. Likelihood of Relocation by Gender

Even though on average, women in the data have experienced fewer moves than men, this is likely driven by the fact that women are at earlier stages in their careers. Figure 1 shows the probability of ever having moved institution by year of receiving their Ph.D., separately for men and women. Note that there are no women in our data who received a Ph.D. prior to 1967.

Among those who received their Ph.D. in the 1980's or 1990's, approximately 60% have ever moved institutions. This rate declines with year of Ph.D. Notably, the pattern for ever having moved is very similar for men and

women. The pattern across gender is similar for total number of moves (not shown).

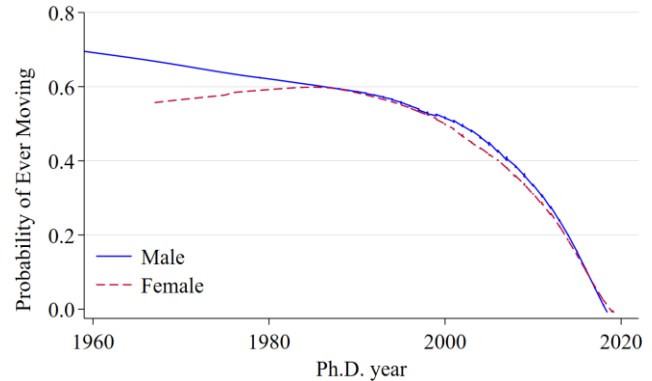


FIGURE 1. PROBABILITY OF EVER HAVING MOVED BY YEAR OF PH.D.

Note: Authors' calculations.

B. Relocation by Faculty Rank and Gender

Table 2 shows the types of moves by faculty rank among those who have ever moved, separately by gender.

TABLE 2. FACULTY RELOCATION BY FACULTY RANK & GENDER

Previous Position		Percent Moving to New Position		
		Assistant	Associate	Full
Assistant	Men	62.8	29.5	7.8
	Women	70.5	22.8	6.8
Associate	Men	4.4	56.5	39.2
	Women	6.4	62.4	31.2
Full	Men	0.8	2.2	97.0
	Women	0.0	6.2	93.8

Notes: Sample includes 2087 men and 498 women who ever moved institutions.

Source: Authors' calculations.

The majority of relocations are to positions with the same faculty rank, with some stark differences across gender. Among those moving from Assistant, 29.5% of men move to an Associate position and 7.8% move to Full contrasted with only 22.5% of women who move to Associate and 6.8% to Full. Among those moving from Associate, the story is similar with 39.2% of men moving with

promotion to Full and only 31.2% of women moving with promotion. This pattern is in line with Ginther & Kahn (2021) and Kleemans & Thornton (2023) showing that women are less likely to receive promotions than men overall in Economics.

Women are also more likely to move to lower ranked departments. Figure 2 plots the density of the difference in ranking between the new and old department, separately by gender. Women are 6.6 percentage points (s.e.=0.021) more likely move to a new department ranked more than 25 rankings lower than their original department and are 4.7 percentage points (s.e.=0.018) less likely to be within a band of -25 to +25 difference in ranking (not shown).

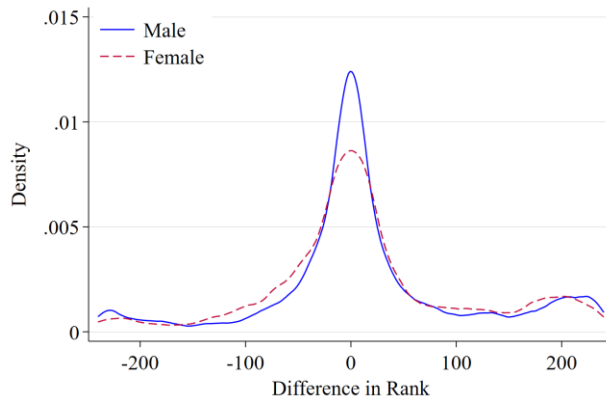


FIGURE 2. DIFFERENCE IN DEPARTMENT RANK OF NEW AND OLD FACULTY POSITION AFTER A MOVE

Note: Authors' calculations.

III. What Happens After a Move?

We use an event study design to understand what happens to colleagues of a faculty member before and after a move to a new institution. Our event study window goes from

five years before until five years after each move. For each move observed in the data, we define an ‘origin network’ as all tenured and tenure track faculty who worked at the same origin institution as the mover for at least one year during the five years before the move. We define a ‘destination network’ as all tenured and tenure track faculty at their destination institution who worked with the mover for at least one year during the five years after the move. We structure the data such that the network does not change over time, so we follow the same colleagues at origin and destination institutions across the event study window. On average origin and destination networks consist of 12 members and we observe 1554 moves in our data, 16% by women.

To estimate the event study, we collapse the number of publications of network members at the move-year level. For each move, we construct the average outcome of colleagues at origin and destination each year of the event study window and estimate the following:

$$Y_{nt} = \sum_{k=-5}^5 \beta_k R_{nt}^k + \lambda_t + \delta_m + \varepsilon_{nt}$$

Y_{nt} indicates our main measure of productivity – the average number of publications among network members n in year t . R_{nt}^k are lag and lead indicator variables for the 5 years before and after each move. We include time and

mover m fixed effects, λ_t and δ_m , and cluster our standard errors at event level. We estimate this regression separately for the origin and destination network and present the coefficients β_k graphically.

Figure 3 shows our main event study results comparing publications by colleagues before or after experiencing a colleague moving away or into a department. In the five years leading up to a move, the number of publications in origins and destinations follow similar increasing trends over time (top panel). Indeed, the difference between destinations and origins, shown in the bottom panel, is close to zero prior to the move. After the move, a clear difference emerges: colleagues in destination departments continue on an increasing path, while publications of origin network members become flat, and ultimately decrease. These trends combined result in an increasing difference in publications favoring destinations. Five years after the move, on average, destination colleagues have 0.23 more publications than colleagues at the origin institution.

Additional event study analyses using other productivity measures reveal that results are similar for Top 5 publications and new working papers. If we restrict the sample to moves by full professors only, we find larger but less precise results. After all, moves by full

professors are less frequent but may be particularly important for their colleagues. Finally, when studying trends in tenure rates at origin and destination departments, we find suggestive evidence that tenure rates increase at destination departments after receiving a new faculty member, becoming statistically significant five years after the move.

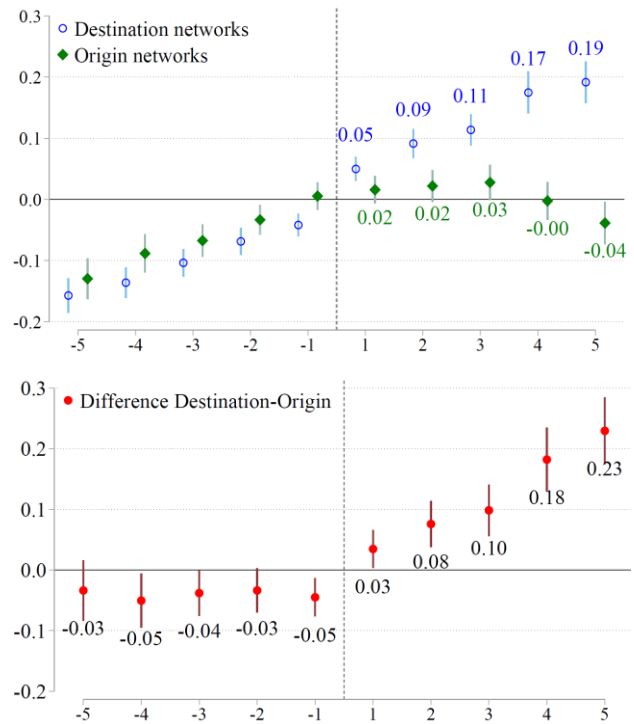


FIGURE 3. ANNUAL NUMBER OF PUBLICATIONS PER NETWORK MEMBER IN ORIGIN AND DESTINATION

Note: Authors' calculations.

There are (at least) two potential explanations for our results in this sub-section. First, selection – departments that attract new faculty are likely to be different than those that lose those faculty. In addition, faculty that do not move in origin networks may have lower productivity trajectories than faculty in destination departments. Second, network

effects – differences in productivity across colleagues in origin vs. destination departments may be affected by the move. While we do not attempt to disentangle mechanisms behind the results, we can gain additional insights by comparing the differences in publications before and after a loss/gain of a colleague, by gender of the origin and destination network members.

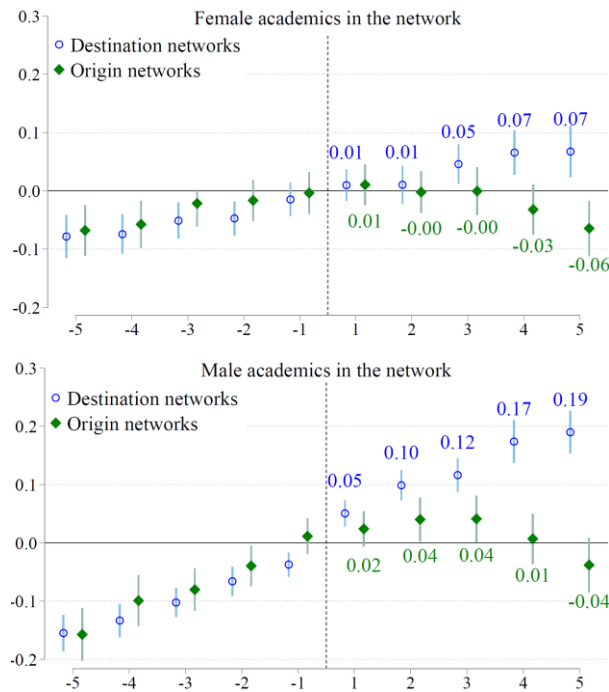


FIGURE 4. NUMBER OF ANNUAL PUBLICATIONS PER NETWORK MEMBER IN ORIGIN AND DESTINATION INSTITUTIONS, SEPARATELY BY GENDER OF THE NETWORK MEMBERS.

Note: Authors' calculations.

Figure 4 shows trends in publications during the event study window among female and male colleagues in the top and bottom panel, respectively. In both panels, publications among origin and destination networks follow similar trends prior to the move, although the increasing trend is steeper for male colleagues

than for female colleagues. After the move, publications for origin networks level off and eventually decrease for both genders. At the destination, however, the number of publications steadily increase for men while the increase for women is more modest. Five years after the move, the number of publications for men at destination has increased by 0.19 while for women it has increased by less than half, 0.07 publications.

IV. Conclusion

This paper provides evidence on gender differences in moves across institutions. Using CV data from R1 university Economists, we measure moves across institutions. We are the first, to our knowledge, to document that that women are significantly less likely to move for promotion: Assistant and Associate women are 8 percentage points less likely to move with promotion than men. Women are also more likely to move to lower ranked institutions. Further, in event study analyses, we find that men who work in departments that received a new faculty member see their publication output increase more than twice as much as women at these departments.

Our results provide evidence of important gender differences in the labor market of academic economists. The fact that it takes longer to get promoted to Associate and Full

(Ginther & Kahn 2021; Kleemans & Thornton 2023) may contribute to moving to lower ranked department, or, if women have lower quality or quantity publications, they may move due to low perceived tenure or promotion probability that further results in moving without promotion.

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