

NBER WORKING PAPER SERIES

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EVIDENCE (ON GENDER GAPS) FROM THE ECONOMICS JOB MARKET

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Working Paper 32446
<http://www.nber.org/papers/w32446>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
June 2024

This research was supported in part by an NIA training grant to the Population Studies Center at the University of Michigan (T32AG000221). We thank Yiran Fan and Dave Boudia for their excellent research assistance. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

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Career Expectations and Outcomes: Evidence (on Gender Gaps) from the Economics Job Market

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NBER Working Paper No. 32446

June 2024

JEL No. J16,J44

ABSTRACT

This paper investigates gender gaps in long-term career expectations and outcomes of PhD candidates in economics. For this purpose, we match rich survey data on PhD candidates (from the 2008-2010 job market cohorts) to public data on job histories and publication records through 2022. We document four novel empirical facts: (1) there is a robust gender gap in career expectations, with females about 10 percentage points less likely to ex-ante expect to get tenure or publish regularly; (2) the gender gap in expectations is remarkably similar to the gap observed for academic outcomes; (3) expectations are similarly predictive of outcomes for males and females. In addition, the predictive power of expectations does not differ by the relationship status of the individual; and (4) gender gaps in expectations can explain about 19% and 13% of the ex-post gaps in tenure and publications, respectively.

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1 Introduction

While the gender pay gap in the US has declined substantially since the 1960s, the residual pay gap is remarkably persistent (Blau & Kahn 2017). Gender gaps in high-skilled fields and occupations – where one might have expected convergence over time due to the increased representation of women in higher education – have proven to be surprisingly resilient. Examples include promotion gaps in the legal field (Azmat & Ferrer 2017), wage gaps among business professionals (Bertrand, Goldin & Katz 2010), tenure gaps in academia (Antecol, Bedard & Stearns 2018, Sarsons et al. 2021, Chen, Liu & Kim 2022), and physician specialty choice in medicine (Wasserman 2023). There is also a growing literature that shows that expectations are an important predictor of educational choices and labor market outcomes (Giustinelli 2023), and that these expectations often differ systematically by gender and can explain part of the underlying gender gap (Wiswall & Zafar 2015, Reuben, Wiswall & Zafar 2017, Cortés et al. 2023, Roussille 2024).

In this paper, we investigate gender gaps in expectations and outcomes of Ph.D. recipients in economics and adjacent fields early in their careers. For this purpose, we leverage novel survey data covering three cohorts from 2008 to 2010 (McFall et al. 2015). In these surveys, participants are asked about their career expectations over a number of outcomes, including regarding receiving tenure and regularly publishing. We then link these participants to their eventual outcomes in terms of job history and publication records as of 2022, providing a 12-14 year horizon after receipt of the Ph.D.

We find that there are significant gender differences in career expectations early on. For example, 56% of men think they are “very” or “extremely” likely to receive tenure, versus 45% of women (p-value < 0.01). Likewise, 28% of men versus 16% of women in our sample believe that they will publish regularly in top journals (p-value < 0.01). These gender gaps remarkably mirror those that are observed in ex-post outcomes more than a decade later. For example, 56% of men end up receiving tenure versus 44% of women.

While average expectations and outcomes generally line up by gender, the natural question to ask is whether expectations are predictive of subsequent outcomes at the individual level. Here, we find that both tenure and publishing expectations are indeed related to better outcomes for both men and women (the relationship between publishing expectations and outcomes is, however, statistically and economically weak for women). Given this, and the fact that expectations differ systematically by gender, we find that gender differences in expectations account for about 19% of the gap in tenure achievement and 13% of the gap in publication records.

While our results are broadly consistent with earlier work in other settings that document gender gaps in expectations, and the empirical fact that they can explain part of the gaps in outcomes, it is somewhat surprising (at least to us) that we see similar results in this setting of high-ability high-ambition individuals. Our work is unique in the sense that there is little prior evidence linking expectations to outcomes over horizons beyond a few years. One paper that is closest to ours in methods and results is recent work by Azmat, Cuñat & Henry (2023) who find that aspirations of early-career lawyers differ substantially by gender, and can explain roughly half of the resulting gender promotion gap to partner.

One may expect career expectations and their relation to gender gaps to be intertwined with expectations regarding marriage, fertility, and household labor. Prior literature has shown that individuals make trade-offs between career and family, and that these trade-offs are significantly more costly for women (Goldin & Katz 2008, Goldin 2014, Juhn & McCue 2017, Bursztyn, Fujiwara & Pallais 2017, Fadlon, Lyngse & Nielsen 2024). Additionally, Kuziemko et al. (2018) argue that women - particularly those with a college degree - significantly underestimate the impact of having a child on their labor supply, dubbed the “mommy effect”. To our knowledge, there has not been work that studies how relationship status impacts ex-ante career expectations and their link to ex-post outcomes. Our unique setting and rich data allow us to investigate this directly.

We find that women who are in a committed relationship at the time expectations are

elicited do not have significantly different expectations regarding tenure and publication achievement, relative to their counterparts not in relationships. Interestingly, we also find that there is no significant difference in tenure achievement for women in relationships compared to those who are single at the beginning of their career. We find similar results for men. Importantly, for both men and women, the predictive power of ex-ante expectations on their outcomes does not differ by relationship status. Given the prior literature, this result is somewhat surprising. To give some context, it is worth noting that individuals who are in relationships at the time of the survey seem to be positively selected in terms of baseline observable characteristics.

Finally, the post-market survey also collects information on whether individuals in a relationship accepted the position that was their individually preferred option, or whether they made a different choice as a result of constraints imposed by their relationship. The sample size is small, but we find suggestive evidence that women were more likely to reject their individually preferred choice compared to men (15.4% versus 11.6%; $p\text{-value}=0.305$). Additionally, men who accept their preferred position do not appear to have different expectations or outcomes compared to men who reject their preference due to a relationship, but women who reject their individually-preferred job are 14 percentage points less likely to believe they are likely to get tenure compared to women who did accept their preferred position. These gaps are reflected in outcomes, with men seemingly no less likely to obtain tenure by whether or not they accept their preferred position, while women who reject their individually preferred position are 16 percentage points less likely to obtain tenure compared to their peers who were not constrained by their relationship. This is broadly consistent with findings by Fadlon, Lyngse & Nielsen (2024) who find that initial labor market sorting has long term impacts for high-skilled women only. While our evidence is only suggestive given the small sample sizes, we believe this to be a critical area for future work.

2 Data

The structured nature of the economics job market, the near universal coverage of job market participants given public CVs and websites, and ten to twelve years of occupation and publication history presents a unique opportunity to understand how expectations early in careers relate to long term, ex-post outcomes. In this section, we describe the data sources.

2.1 The Job Seekers' Survey

The Job Seekers' Survey (JSS) was a longitudinal data-collection effort tracking the personal and professional trajectories of recent entrants to the junior PhD job market in Economics, spanning over three consecutive cohorts beginning with 2007-08. The survey was originally designed and administered at the University of Michigan by Brooke Helppie-McFall, Marta-Murray Close, and Bob Willis, and has been utilized in prior work concerning career satisfaction and joint location decisions (McFall et al. 2015, McFall & Murray-Close 2016). The survey was administered to candidates from economics or adjacent PhD programs from the top 130 PhD granting institutions that were participating in the economics job market. In total, 1,843 individuals were surveyed over the three cohorts. We believe that the JSS sample comprises nearly the universe of job candidates who expected to participate in the primary US job market for new economists in 2008, 2009 and 2010.

Each of the three cohorts were surveyed at multiple points across their career. All cohorts received a pre- and post-market survey. The pre-market survey was administered in December of the job market year, by which time some interview invitations had been received but prior to the typical timeline for fly-outs or job offers. The pre-market survey aimed to capture individual characteristics, personal situation, and preferences over potential outcomes. The post-market survey was administered in August of the following year, after the job market had cleared, and participants had recently accepted and potentially started in their new position. The post-market survey collected information on outcomes

and individual situation - including how relationships may have impacted their job search or outcomes.

The first and second cohorts also later received an early-career survey, in which career expectations were elicited. The early-career survey was conducted several years after the job market - three years after for the first cohort and four years after for the second cohort. For the third cohort, the original authors combined the post-market survey and the early-career survey. Thus, individuals in cohort three had their career expectations elicited right after graduation and at the beginning of their work careers, which is clearly preferable. We explore this mismatched timing in our robustness checks and find that it does not significantly alter our main findings.

Response rates average 64% for the pre-market survey, 46% for the post-market survey, and 39% for the early-career survey. The response rates to the survey in which career expectations were elicited is 41%. For clarity, we hereafter refer to the early-career surveys for the first and second cohorts and the post-market survey for the third cohort as the “expectation survey”.

2.2 Outcomes Data

To understand whether career expectations are predictive of ex-post outcomes, we collected over ten years of data on both job and publication history for every participant. Ultimately, we were able to collect outcome data for 97% of those for whom we had information regarding career expectations. We restrict all analysis to the sample with both expectations and outcomes data.

Job history was collected through both LinkedIn and publicly available CVs. Both sources were queried using APIs that took into consideration only public information - first and last names, PhD granting institution, and occasionally publications at the time of PhD attainment to aid in disambiguation. For both data sources, we often obtained multiple hits per survey participant. We then used programmatically assigned confidence scores to inform

manual verification of the correct result. Publication data was accessed using Scopus, a publication database maintained by Elsevier. A random sample of participant’s publication histories were spot checked against CVs to ensure accuracy.

Our job history data collection yielded information regarding employer, position title, duration, and location. This information was used to define positions as either academic or non-academic, and within academia as non-tenure track, tenure-track, or tenured. Tenured positions were identified by job title, location, and institution. Positions at institutions in the United States were determined to have tenure given titles including “Associate Professor”, “Professor”, “Full Professor”, etc. Positions outside of the United States often have different titles. For instance, the position of “Senior Lecturer” was determined to not hold tenure in the United States, but is a tenured position at Australian universities. Participants at institutions in the United States that utilized different position nomenclatures often included “with tenure” or “without tenure” in their titles.

2.3 Sample Description

Our final analysis sample is restricted to individuals for whom we had information on both career expectations and ex-ante outcomes. These restrictions yield a final sample of 766 participants, 520 male and 246 female. Full details pertaining to data cleaning can be found in Appendix B.

One concern might be that individuals who report expectations data are different from those who take the baseline survey but then do not report expectations data. This comparison is presented in the first two columns of Appendix Table A1. The analysis sample is more likely to be white (73%) and a US citizen or permanent resident (47%) compared to the overall surveyed sample, but is equally likely to be male (68%) and from a top 30 university (57%) - alleviating concerns of selection by gender or perceived ability. Column (3) of the table shows that the sample from whom we have both baseline survey data and expectations data is not very different from the analysis sample (which also includes respondents who

take the expectations survey but not the baseline survey).

Across the different samples, we find that age at expectation survey, percent that accepted an academic position, job type preference, and program rank are strikingly similar, with statistically significant differences that are small in magnitude.¹

Table 1 presents means of key demographic, educational, and professional characteristics for the analysis sample. Whenever possible, we use participant characteristics from the expectation surveys, and leverage past surveys to fill in any missing data (See Appendix B for more information regarding data cleaning). Gender, relationship status, age, citizenship or permanent residency, and race are measured at the time expectations are elicited. Job preferences are elicited prior to the job market in the pre-market survey. The stated fields of the candidates were collected from the CVs of job market candidates at the time of the market. Finally, whether the initial job market placement is academic is asked in the post-market survey, but we complement this field when missing with our own data collection effort. Column 3 presents the average difference of these means by gender. Columns 6 and 9 present differences within gender by relationship status, measured as of the pre-market survey. Our results are robust to alternative measurement timings of relationship status.

Across gender, there are some key differences to note: men are 16 percentage points more likely than women to be white and are 8 percentage points more likely to list academic positions as their most preferred job market outcome. The difference in job preferences is driven by not-single men, as they are 14 percentage points more likely to prefer academia compared to their single counterparts, with single men preferring academia at comparable rates as women. Not-single men are also 16 percentage points more likely to be US citizens compared to their single counterparts and are more likely to have listed their primary field as an applied area. There are no statistically significant differences in any category by

¹The significant difference in relationship status between the Baseline Survey Only sample and the other samples is largely driven by timing. Relationship status is measured in the Expectation Survey for column 1 which came 3-4 years after the job market for many of the individuals. For the Baseline Survey only sample, relationship status is measured at the beginning of the job market. Given that individuals are more likely to be in relationships as they age, this difference is not surprising.

relationship status for women, though sample sizes are smaller.

3 Empirical Results

3.1 Expectations and Outcomes

Career expectations are elicited via a six-point Likert scale, spanning “Extremely Unlikely”, “Very Unlikely”, “Somewhat Unlikely”, “Somewhat Likely”, “Very Likely”, and “Extremely Likely”. While expectations were elicited for several career outcomes, we focus our analysis on tenure achievement and publishing record. All career outcomes are asked in the same survey question, and begin with “How likely do you think it is that, **over the course of your life...**”. For tenure, we take the maximum of participant’s responses to “You will hold a tenured position at a research university?” and “You will hold a tenured position at a four-year college?”. For publishing, participants are asked their expectation to “You will publish regularly in top journals?”. We employ indicators for whether the respondent thinks the outcome is likely, where the indicator is equal to one if the response is either “very” or “extremely” likely.² These kinds of questions suffer from the familiar issue that they may not be interpersonally comparable. For example, two people answering “very likely” may have very different subjective likelihoods in mind (Manski 2004). However, we are constrained to work with the data that we have.

The methodology for determining whether a participant successfully obtained tenure is described above. The expectation question relating to publications was worded in a more ambiguous way, letting the respondent independently determine what is meant by a “top” journal and what “regularly publish” means in terms of frequency. As a result, determining what is a successful career outcome for regularly publishing in top journals is more subjective. Our preferred measure that is used throughout our analysis is whether or not the participants

²Note that these questions are fielded to all respondents, regardless of whether they had a tenure-track/academic job at the time of the survey or not.

published in a top general interest journal at any point after they received their PhD. The journals that are included in this measure are defined in Appendix Table B3.³

Given the richness of our novel dataset, we are able to analyze not only if there are gaps by gender in expectations and outcomes, but also whether there are any significant differences within gender by relationship status. Table 2 presents the means for the career expectation questions (Panel A) and ex-post outcomes (Panel B). We also present differences in these means between men and women, as well as differences by relationship status within gender. We first report the raw differences, and then report the differences including controls for demographics, field, and program quality.⁴

Looking at the first four columns in Panel A, we see there is a (statistically and economically) significant gender gap in expectations. On average, men are 10.8 percentage points more likely to believe they are likely to receive tenure, and 12.0 percentage points more likely to believe they will publish in top journals at baseline. Controlling for differences in baseline characteristics, we see the gaps are largely unchanged: they are 9.1 and 11.4 percentage points, respectively.

Turning to outcomes in Panel B, two things stand out: (1) the outcome levels are quite similar to the expectations (though, this is partly an artefact of how the variables were constructed), and (2) the gender gaps in expectations are closely mirrored in ex-post outcomes, with men 12.3 percentage points more likely to receive tenure and 10.5 percentage points more likely to publish in top journals.

The remaining columns of Table 2 cut the data further by gender and relationship status. Expectations for women do not differ statistically by relationship status. This is in contrast to other settings which document systematic differences in expectations for women by re-

³Our results are robust to alternative measures of both publishing quality and timing; see Appendix Table A2.

⁴The raw differences are obtained from a simple linear regression, where we report the coefficient on the relevant indicator - either if the participant self-identifies as female or if the participant reports being in a relationship in the survey in which expectations were elicited. The differences with controls come from corresponding regressions where we also control for the various characteristics. We account for missing data in characteristics by assigning missing values an arbitrary constant and including an indicator for if the value was missing.

lationship status (Bursztyn, Fujiwara & Pallais 2017). This trend also holds for men, with comparable expectations across relationship status. Turning to outcomes, they generally look more favorable for not-single individuals within gender. However, the differences are not statistically significant. One exception is the likelihood of publishing in top journals for women, where not-single women are about 10 percentage points more likely to end up doing so.

3.2 Do Expectations Predict Outcomes?

While the gender gap in both expectations and outcomes in our sample is interesting on its own, we are interested in whether ex-ante expectations are predictive of ex-post realizations at the individual level. For this purpose, we employ a simple linear probability model regressing the indicator for whether the relevant outcome was achieved onto an indicator that equals one if the participant ex-ante thought the outcome was “very” or “extremely” likely to happen, controlling for the vector of characteristics. Table 3 reports these estimates.

The predictive power in expectations is (economically and statistically) significant and comparable across genders. Men who believe that they are very or extremely likely to receive tenure are 24.2 percentage points more likely to actually receive tenure compared to their counterparts with lower expectations. For women, we find a similar impact: women with higher expectations are in fact 32.3 percentage points more likely to receive tenure. There is statistically no difference between these gaps by gender.

For publishing, expectations remain highly significant predictors for men, leading to a 13.1 percentage point increase in the likelihood of publishing in top journals. For women, the relationship between expectations and outcomes for publishing is weaker (and statistically imprecise).

Looking across the remaining columns of the table, we see that relationship status does not meaningfully affect the predictive power of expectations (within gender).⁵ A priori,

⁵One exception is that the predictive power of expectations for actual tenure is weaker for not-single

given the evidence that women do not fully anticipate the employment effects of motherhood (Kuziemko et al. 2018), and that family-career trade-offs tend to be more binding for women (Fadlon, Lyngse & Nielsen 2024), one may have expected that the relationship between expectations and outcomes for women in relationships would be weaker.

3.3 Do Expectation Differences Explain Gender Gaps in Outcomes?

Given that there are gender gaps in career expectations and that these expectations systematically correlate with outcomes, a natural question to ask is the extent to which gender gaps in career expectations can account for career outcome gaps. To this effect, we estimate the following simple linear regression model:

$$\mathbb{1}[Y_{i,j}] = \beta \mathbb{1}[X_{i,j}] + \eta \mathbb{1}[female_i] + \gamma' \mathbf{Z}_i + \theta_t + \epsilon_i, \quad (1)$$

where $\mathbf{Z}$ is a vector of individual-level controls including expectations. In Table 4, we present η , the coefficient on the indicator for the participant identifying as a female. Across the columns, we include a growing set of controls.

Column 1 presents the raw gender gaps in outcomes observed in our data - 12.3 percentage points and 10.5 percentage points for tenure and publishing, respectively. The inclusion of relationship status or standard controls (columns 2 and 3) have little impact on the gender estimate. The last two columns of the table show that expectations account for a non-trivial portion of the observed gender gaps in both tenure achievement and publication. For tenure, comparing column (5) with column (3), we see that expectations account for 2.3 percentage points, or about 19% of the gender gap. For publishing, expectations account for 1.3 percentage points of the gap, or about 13% of the gender gap.

men (relative to single men), but the difference is not statistically significant at conventional levels.

3.4 Individually Preferred Outcomes

Finally, our data offer insights into whether the participant’s job market outcome was constrained by their relationship. The post-market survey, which was fielded directly after the job market for all cohorts, asked participants the following:

Please think about the set of jobs from which you chose, including all of your formal offers and any offers you are certain you could have received, but did not formally receive. If your [significant other] would have been equally happy with any outcome of your job search, would you have accepted your [accepted position], or would you have accepted a different job?

If a respondent indicates that they would have accepted the same position, we classify them as having accepted their individually preferred (IP) job choice. For the first two cohorts, this question is asked in a different survey than the one in which expectations are elicited, and thus restricts the sample further than the previous analysis (namely to those with data on expectations, outcomes, and whether their accepted position was individually preferred). These restrictions produce a smaller sample size. While these reduced sample sizes are too small to draw convincing inferences, given the novelty of this question, we still describe the responses.

In total, 401 respondents in our analysis sample responded to this question, of whom 29% are female. 51 (12.7%) respondents indicated they rejected their individually preferred (IP) job choice due to their relationship. Of these, 49 took a different job while 2 rejected all jobs. By gender, 33 of 284 (11.6%) of men rejected their IP position and 18 of 117 women (15.4%) rejected their IP position (p-value for the equality of these proportions by gender is 0.326).

It is worth noting that we find no evidence of tenure expectations and outcomes differing across men according to whether or not they accepted their IP outcome. For women, however, we find substantial gaps by IP option choice: women who rejected their IP option are 14

percentage points less likely to believe tenure achievement is likely and 16 percentage points less likely to end up achieving tenure. Neither of these differences are statistically significant, however.

This analysis, while underpowered, suggests that intra-household constraints may seem to be more binding for women, and more consequential for their subsequent long-term professional outcomes.

3.5 Robustness

3.5.1 Timing of Expectation Elicitation

As mentioned in section 2.1, expectations were elicited 3-4 years after the job market (for Cohorts 1 and 2), or immediately following the job market (Cohort 3). What we really need are expectations at the onset of one's career. One concern is that expectations for the first two cohorts may have already evolved over the course of the first few years differentially by gender. As a robustness check, we use only the third cohort, for whom the timing of expectations data elicitation is the closest to the start of the professional career. Appendix Table C1 presents ex-ante expectations and ex-post outcomes, analogous to Table 2, restricting the sample to Cohort 3. While the sample size is necessarily reduced resulting in lower precision, we see that the differences by gender are qualitatively similar. Women's expectations for getting tenure and publishing regularly are, on average, lower by 17.2 and 14.5 percentage points than males' expectations, respectively. Gender gaps in outcomes are smaller in magnitude but economically sizable.

3.5.2 Academic Placement

The expectations and outcomes we analyze are inherently academic in nature. One would expect that somebody that initially places into a private sector position is more likely to have a preference for the private sector, and is unlikely to pursue publication or tenure. This

should not be an issue since expectations are elicited after the initial placement is known, and thus participants should be taking their placement into account. In addition, our analysis includes whether initial placement is in academia as one of the controls.

However, as a robustness check, we re-run the analysis further restricting the sample to those that had an initial placement that was academic.⁶ Appendix Table C2 presents the analogue to Table 2, restricted to this sample which had an initial academic placement. Our sample is necessarily reduced, decreasing precision as not all participants' initial placement could be confidently identified. Qualitatively, the results are unchanged with women 10.3 and 12.9 percentage points less likely to expect to receive tenure and publish regularly, respectively. Women are also 11.1 and 12.9 percentage points less like to receive tenure and publish, respectively, with the differences significant and robust to controls.

3.5.3 Relationship Timing

Throughout the main analysis, we use relationship status as defined at the time expectations were elicited. It is reasonable to expect that individuals internalize their current relationship status at the time of forming their ex-ante career expectations. It is possible, however, that decisions made in the past due to relationship constraints play a more significant role in expectation formation. We investigate this by re-running the entirety of the analysis using an alternate definition of relationship status, measured at the time of the pre-market survey which occurred at the beginning of the job market. The presence of a relationship at this time places potential constraints on location choices, interviews and fly outs, and the eventual accepted position.

Performing this analysis reduces our sample size slightly, from 766 participants to 710 (93%), as we have to impute values for those who did not complete the pre-market survey

⁶The post-market survey explicitly asked about initial placement, but there are participants in the first and second cohort that completed the early-career survey in which expectations are elicited, but did not complete the post-market survey. We complement the original survey data with our own data collection on job history. Participants were coded as having an initial academic placement if they placed into a post-doc or any position within a university - both tenure and non-tenure track.

but did complete the post-market or expectations survey. It is important to note that a majority of those lost in using this alternative definition come from the third cohort. This stems from changes made to how the survey asks participants about prior relationships.

Appendix D includes additional information on how relationship status at the time of job market is defined as well as the associated analysis. The results using this definition, presented in Appendix D, are qualitatively unchanged. Both men and women are more likely to be single at the time of the job market, with 25% of men and 34% of women single at the pre-market survey compared to 21% of men and 27% of women at the time of the expectation survey. Table D2 presents the levels of expectations and outcomes by gender and relationship status. Looking at the specifications for differences with controls, which includes relationship status, women are 10.6 percentage points and 12.3 percentage points less likely to expect to get tenure and to publish regularly, respectively. The gaps persist to outcomes, with women 11.9 percentage points less likely to receive tenure and 10.1 percentage points less likely to publish regularly. Consistent with the main analysis, we also see weak evidence that not-single men and women do better in outcomes compared to their single counterparts, though these differences are not statistically significant. Expectations do not differ across relationship status within gender, with the differences also not being statistically significant.

4 Conclusion

This paper links novel data on early-career expectations from Ph.D. recipients in economics and adjacent fields with professional outcomes more than a decade later. This unique data then allows us to document several novel facts. Not only do we see that early-career expectations differ systematically by gender in this sample of high-ability high-ambition individuals, but that they are also predictive of ex-post outcomes. In addition, we show that expectations can explain about 15% of the gender gap in (tenure and publication) outcomes.

While there is a large literature showing that expectations are predictive of human capital

choices and outcomes, almost all of this literature looks at outcomes over shorter horizons. In addition, there is even less work on gender gaps in expectations and outcomes among individuals with professional degrees beyond a bachelor's. Thus, the descriptive findings in this paper add to our understanding of the determinants of gender gaps among the highly educated.

Our analysis raises new questions. It is not clear why expectations differ by gender. It could be because females anticipate discrimination or that they have internalized other social norms (Altonji & Blank 1999, Wiswall & Zafar 2021), or this could be due to other factors. Understanding the drivers of gender differences in expectations is needed to inform policies aimed at mitigating gender gaps in outcomes. In addition, we have expectations data at only one point in time. How these career expectations evolve over time, and whether they do so differently by gender, is not well understood.

Finally, we present suggestive evidence that females are weakly more likely to reject their individually-preferred (IP) job. While rejecting the IP job does not impact the expectations or outcomes for men, women who reject the IP job have substantially lower expectations and worse outcomes. This suggests that intra-household constraints differentially affect career outcomes for women, even in this sample of professional degree recipients. Further work that digs deeper into this would be informative.

References

- Altonji, Joseph G., and Rebecca M. Blank.** 1999. “Chapter 48 Race and gender in the labor market.” In . Vol. 3 of *Handbook of Labor Economics*, 3143–3259. Elsevier.
- Antecol, Heather, Kelly Bedard, and Jenna Stearns.** 2018. “Equal but inequitable: Who benefits from gender-neutral tenure clock stopping policies?” *American Economic Review*, 108(9): 2420–2441.
- Azmat, Ghazala, and Rosa Ferrer.** 2017. “Gender gaps in performance: Evidence from young lawyers.” *Journal of Political Economy*, 125(5): 1306–1355.
- Azmat, Ghazala, Vicente Cuñat, and Emeric Henry.** 2023. “Gender Promotion Gaps and Career Aspirations.” *Management Science*.
- Bertrand, Marianne, Claudia Goldin, and Lawrence F Katz.** 2010. “Dynamics of the gender gap for young professionals in the financial and corporate sectors.” *American economic journal: applied economics*, 2(3): 228–255.
- Blau, Francine D, and Lawrence M Kahn.** 2017. “The gender wage gap: Extent, trends, and explanations.” *Journal of economic literature*, 55(3): 789–865.
- Bursztyn, Leonardo, Thomas Fujiwara, and Amanda Pallais.** 2017. “‘Acting Wife’: Marriage Market Incentives and Labor Market Investments.” *American Economic Review*, 107(11): 3288–3319.
- Chen, Jihui, Qihong Liu, and Myongjin Kim.** 2022. “Gender gap in tenure and promotion: Evidence from the economics Ph. D. class of 2008.” *Southern Economic Journal*, 88(4): 1277–1312.

- Cortés, Patricia, Jessica Pan, Laura Pilossoph, Ernesto Reuben, and Basit Zafar.** 2023. “Gender Differences in Job Search and the Earnings Gap: Evidence from the Field and Lab*.” *The Quarterly Journal of Economics*, 138(4): 2069–2126.
- Fadlon, Itzik, Frederik Plesner Lyngse, and Torben Heien Nielsen.** 2024. “Early Career Setbacks and Women’s Career-Family Trade-Off.” National Bureau of Economic Research.
- Giustinelli, Pamela.** 2023. “Chapter 7 - Expectations in education.” In *Handbook of Economic Expectations*, ed. Rüdiger Bachmann, Giorgio Topa and Wilbert van der Klaauw, 193–224. Academic Press.
- Goldin, Claudia.** 2014. “A grand gender convergence: Its last chapter.” *American economic review*, 104(4): 1091–1119.
- Goldin, Claudia, and Lawrence F Katz.** 2008. “Transitions: Career and family life cycles of the educational elite.” *American Economic Review*, 98(2): 363–369.
- Heckman, James J, and Sidharth Moktan.** 2020. “Publishing and promotion in economics: The tyranny of the top five.” *Journal of Economic Literature*, 58(2): 419–470.
- Juhn, Chinhui, and Kristin McCue.** 2017. “Specialization then and now: Marriage, children, and the gender earnings gap across cohorts.” *Journal of Economic Perspectives*, 31(1): 183–204.
- Kuziemko, Ilyana, Jessica Pan, Jenny Shen, and Ebonya Washington.** 2018. “The mommy effect: Do women anticipate the employment effects of motherhood?” National Bureau of Economic Research.
- Manski, Charles F.** 2004. “Measuring Expectations.” *Econometrica*, 72(5): 1329–1376.
- McFall, Brooke Helppie, and Marta Murray-Close.** 2016. “Moving out to move up: dual-career migration and work–family tradeoffs.” *Economic Inquiry*, 54(1): 44–62.

- McFall, Brooke Helppie, Marta Murray-Close, Robert J Willis, and Uniko Chen.** 2015. “Is it all worth it? The experiences of new PhDs on the job market, 2007–10.” *The Journal of economic education*, 46(1): 83–104.
- Reuben, Ernesto, Matthew Wiswall, and Basit Zafar.** 2017. “Preferences and Biases in Educational Choices and Labour Market Expectations: Shrinking the Black Box of Gender.” *The Economic Journal*, 127(604): 2153–2186.
- Roussille, Nina.** 2024. “The Role of the Ask Gap in Gender Pay Inequality*†.” *The Quarterly Journal of Economics*, qjae004.
- Sarsons, Heather, Klarita Gërxhani, Ernesto Reuben, and Arthur Schram.** 2021. “Gender differences in recognition for group work.” *Journal of Political economy*, 129(1): 101–147.
- Wasserman, Melanie.** 2023. “Hours constraints, occupational choice, and gender: Evidence from medical residents.” *The Review of Economic Studies*, 90(3): 1535–1568.
- Wiswall, Matthew, and Basit Zafar.** 2015. “Determinants of college major choice: Identification using an information experiment.” *The Review of Economic Studies*, 82(2): 791–824.
- Wiswall, Matthew, and Basit Zafar.** 2021. “Human Capital Investments and Expectations about Career and Family.” *Journal of Political Economy*, 129(5): 1361–1424.

Figures and Tables

Table 1: Descriptive Statistics

	Pooled			Men			Women		
	(1) Men	(2) Women	(3) Difference	(4) Single	(5) Not Single	(6) Difference	(7) Single	(8) Not Single	(9) Difference
Observations	520	246	.	108	412	.	67	179	.
Age at Expectation Survey	32.74	32.55	0.189	32.21	32.88	-0.663*	32.31	32.64	-0.324
Accepted Academic Job	0.74	0.72	0.020	0.75	0.73	0.014	0.78	0.69	0.089
Holds US Citizenship	0.49	0.43	0.054	0.36	0.52	-0.164***	0.37	0.46	-0.094
Race: White	0.78	0.61	0.161***	0.72	0.79	-0.067	0.57	0.63	-0.064
Job Preference: Academia	0.86	0.78	0.080**	0.75	0.89	-0.141***	0.75	0.79	-0.044
PhD from Top Program	0.56	0.59	-0.022	0.52	0.58	-0.057	0.55	0.60	-0.046
Field of Study									
Applied	0.79	0.88	-0.085***	0.66	0.83	-0.167***	0.86	0.88	-0.025
Macro/Trade/Finance	0.45	0.34	0.113***	0.49	0.44	0.055	0.36	0.33	0.030
Econometrics	0.34	0.37	-0.029	0.32	0.34	-0.025	0.34	0.38	-0.034
Theory	0.19	0.11	0.081***	0.20	0.18	0.012	0.06	0.12	-0.059
Survey Cohort									
Cohort 1	0.35	0.37	-0.016	0.38	0.35	0.033	0.30	0.40	-0.098
Cohort 2	0.26	0.27	-0.007	0.14	0.29	-0.155***	0.27	0.27	0.001
Cohort 3	0.38	0.36	0.023	0.48	0.36	0.122**	0.43	0.34	0.098

¹ Sample is restricted to participants with expectation and outcome data for both tenure achievement and publishing.

² Job preferences and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, relationship status, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Single includes "Single" and "Dating". Not Single includes "In a Committed Relationship", "In a Marriage-Like Relationship", and "Married".

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 2: Expectations and Outcomes by Relationship Status

	Pooled				Men				Women			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Men	Women	Difference	Difference With Controls	Single	Not Single	Raw Difference	Difference With Controls	Single	Not Single	Raw Difference	Difference With Controls
Panel A: Expectations												
Tenure	0.56	0.45	-0.108*** (0.039)	-0.091*** (0.034)	0.55	0.56	0.017 (0.054)	-0.023 (0.046)	0.46	0.45	-0.016 (0.072)	0.036 (0.066)
Publish in Top Journals	0.28	0.16	-0.120*** (0.031)	-0.114*** (0.031)	0.30	0.28	-0.017 (0.049)	-0.050 (0.050)	0.18	0.16	-0.023 (0.054)	-0.010 (0.058)
Panel B: Outcomes												
Tenure	0.56	0.44	-0.123*** (0.038)	-0.121*** (0.036)	0.49	0.58	0.089* (0.054)	0.071 (0.053)	0.43	0.44	0.009 (0.071)	0.040 (0.071)
Publish in Top Journals	0.33	0.22	-0.105*** (0.033)	-0.105*** (0.033)	0.29	0.33	0.048 (0.049)	0.011 (0.048)	0.15	0.25	0.097* (0.054)	0.098* (0.055)
Observations	520	246	766	766	108	412	520	520	67	179	246	246

¹ Sample is restricted to participants with expectation and outcome data for both tenure achievement and publishing.

² Controls for difference specifications in columns 4, 8, and 12 include age, citizenship, race, fixed effects for cohort, if their most preferred outcome is academia, if their accepted job was in academia, PhD rank, and field of study. Job preferences and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, relationship status, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Top journals are defined as any of the following: The American Economic Review, Econometrica, Journal of Political Economy, Quarterly Journal of Economics, Review of Economic Studies, American Economic Journal: Applied Economics, American Economic Journal: Economic Policy, American Economic Journal: Microeconomics, Review of Economics and Statistics, Economic Journal, and Journal of the European Economic Association.

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Relationship Between Expectations and Outcomes

	Pooled			Men			Women		
	(1)	(2)	(3)	(4)	(5) Not Single	(6)	(7)	(8) Not Single	(9)
	Men	Women	Difference	Single		Difference	Single		Difference
Receive Tenure	0.242*** (0.050)	0.326*** (0.075)	0.083 (0.089)	0.313** (0.126)	0.237*** (0.055)	-0.076 (0.132)	0.328** (0.152)	0.311*** (0.090)	-0.016 (0.169)
Publish in Top Journals	0.131*** (0.046)	0.064 (0.069)	-0.066 (0.082)	0.125 (0.105)	0.133** (0.052)	0.007 (0.112)	0.012 (0.116)	0.070 (0.087)	0.058 (0.140)
Observations	520	246	766	108	412	520	67	179	246

¹ Sample is restricted to participants with expectation and outcome data for both tenure achievement and publishing.

² All specifications include controls for age, citizenship, race, fixed effects for cohort, if their most preferred outcome is academia, if their accepted job was in academia, PhD rank, and field of study. Job preferences and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, relationship status, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Standard errors in parentheses.

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: Gender Gaps in Outcomes

	(1) Baseline	(2) With Relationship Status	(3) With Controls	(4) With Expectations	(5) Controls + Expectations
Panel A: Receive Tenure					
Female	-0.123*** (0.038)	-0.119*** (0.039)	-0.118*** (0.036)	-0.075** (0.035)	-0.095*** (0.036)
In a Committed Relationship		0.060 (0.043)	0.055 (0.042)	0.058 (0.040)	0.055 (0.040)
Expectation				0.401*** (0.033)	0.261*** (0.041)
Panel B: Publish in Top Journals					
Female	-0.105*** (0.033)	-0.101*** (0.034)	-0.102*** (0.033)	-0.081** (0.034)	-0.089*** (0.033)
In a Committed Relationship		0.066* (0.037)	0.052 (0.036)	0.069* (0.037)	0.056 (0.035)
Expectation				0.163*** (0.040)	0.118*** (0.038)
Observations	766	766	766	766	766

¹ Sample is restricted to participants with expectation and outcome data for both tenure achievement and publishing.

² Job preferences and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, relationship status, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Standard errors in parentheses.

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

A Supplementary Tables

Table A1: Descriptive Statistics by Survey Completion

	(1) Analysis Sample	(2) Baseline Survey Only	(3) Both Baseline and Expectation Surveys	(4) Difference (2) vs (1)	(5) Difference (3) vs (1)
Observations	766	599	578	.	.
Female	0.32	0.34	0.32	0.021	0.002
In a Committed Relationship	0.77	0.64	0.78	-0.127***	0.007
Age at Expectation Survey	32.68	32.79	32.61	0.114	-0.066
Accepted Academic Job	0.73	0.67	0.72	-0.064**	-0.008
Holds US Citizenship	0.47	0.34	0.51	-0.129***	0.041
Race: White	0.72	0.59	0.74	-0.138***	0.021
Job Preference: Academia	0.84	0.83	0.84	-0.010	-0.000
PhD from Top Program	0.57	0.56	0.57	-0.006	-0.005
Field of Study					
Applied	0.82	0.75	0.82	-0.065***	0.003
Macro/Trade/Finance	0.41	0.50	0.40	0.083***	-0.016
Econometrics	0.35	0.38	0.38	0.035	0.029
Theory	0.16	0.14	0.15	-0.020	-0.013
Survey Cohort					
Cohort 1	0.36	0.25	0.32	-0.107***	-0.041
Cohort 2	0.26	0.45	0.28	0.189***	0.011
Cohort 3	0.38	0.30	0.41	-0.082***	0.029

¹ Our final analysis samples is comprised of respondents for which we have both career expectations and career outcomes data for tenure and publishing. The Baseline Survey Only sample contains respondents that fully completed the pre-market survey but did not complete the expectation survey, and thus has no overlap with our final analysis sample. The Both Baseline and Expectation Surveys sample is comprised of respondents that completed both the pre-market survey and expectation survey, and overlaps significantly with our final analysis sample.

² Relationship status is measured in the pre-market survey for the Baseline Only sample (Column 2) and in the expectation survey for all other samples presented (Columns 1 and 3).

³ Job preferences and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, relationship status, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

⁵ Single includes "Single" and "Dating". Not Single includes "In a Committed Relationship", "In a Marriage-Like Relationship", and "Married".

⁶ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A2: Expectations and Outcomes, Comparing Publishing Indicators

	Pooled				Men				Women			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Men	Women	Difference	Difference With Controls	Single	Not Single	Raw Difference	Difference With Controls	Single	Not Single	Raw Difference	Difference With Controls
Panel A: Expectations												
Publish Top Journals	0.28	0.16	-0.120*** (0.031)	-0.114*** (0.031)	0.30	0.28	-0.017 (0.049)	-0.050 (0.050)	0.18	0.16	-0.023 (0.054)	-0.010 (0.058)
Panel B: Top General and Field Journals												
At Any Point Post Graduation	0.54	0.43	-0.111*** (0.038)	-0.106*** (0.037)	0.47	0.56	0.088 (0.054)	0.061 (0.051)	0.31	0.47	0.161** (0.068)	0.185*** (0.067)
Consistently for Nine Years	0.39	0.25	-0.138*** (0.035)	-0.138*** (0.034)	0.34	0.40	0.060 (0.052)	0.034 (0.049)	0.19	0.27	0.080 (0.059)	0.087 (0.059)
Panel C: Top Journals												
At Any Point Post Graduation	0.33	0.22	-0.105*** (0.033)	-0.105*** (0.033)	0.29	0.33	0.048 (0.049)	0.011 (0.048)	0.15	0.25	0.097* (0.054)	0.098* (0.055)
Consistently for Nine Years	0.22	0.12	-0.093*** (0.028)	-0.093*** (0.027)	0.19	0.22	0.038 (0.043)	-0.000 (0.043)	0.12	0.12	0.004 (0.047)	0.000 (0.047)
Observations	520	246	766	766	108	412	520	520	67	179	246	246

¹ Sample is restricted to participants with expectation and outcome data for both tenure achievement and publishing.

² Controls for difference specifications in columns 4, 8, and 12 include age, citizenship, race, fixed effects for cohort, if their most preferred outcome is academia, if their accepted job was in academia, PhD rank, and field of study. Job preferences and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, relationship status, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Top journals are defined as any of the following: The American Economic Review, Econometrica, Journal of Political Economy, Quarterly Journal of Economics, Review of Economic Studies, American Economic Journal: Applied Economics, American Economic Journal: Economic Policy, American Economic Journal: Microeconomics, Review of Economics and Statistics, Economic Journal, and Journal of the European Economic Association.

⁴ Publishing consistently is defined as having at least one publication that meets the selection criteria for each non-overlapping, consecutive three year period following the job market.

⁵ Standard errors in parentheses.

⁶ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A3: Expectations and Outcomes by IP Choice

	Men			Women		
	Accepted IP	Rejected IP	Difference With Controls	Accepted IP	Rejected IP	Difference With Controls
Panel A: Expectations						
Tenure	0.59	0.55	0.073 (0.111)	0.47	0.33	-0.038 (0.197)
Publish in Top Journals	0.31	0.24	-0.086 (0.115)	0.18	0.11	-0.085 (0.169)
Panel B: Outcomes						
Tenure	0.59	0.58	0.042 (0.082)	0.45	0.28	-0.096 (0.140)
Publish in Top Journals	0.39	0.33	-0.028 (0.080)	0.27	0.28	-0.090 (0.138)
Observations	251	33	284	99	18	117

¹ Sample restricted to participants in relationships at the time of the job market that responded to questions asking if their accepted position was their individually preferred (IP) choice, or if their accepted position was not their IP choice due to relationship constraints.

² Job preferences and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, relationship status, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Single includes "Single" and "Dating". Not Single includes "In a Committed Relationship", "In a Marriage-Like Relationship", and "Married".

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

B Data Cleaning and Definitions

B.1 Job Seekers Survey

B.1.1 About the Survey

The Job Seekers Survey was administered to four consecutive cohorts spanning from 2007-2008 to 2010-2011. All cohorts received the pre-market survey which elicited information about demographics, personal circumstances, and preferences regarding potential placements. Cohorts 1 and 2 received both a post-market survey which asked questions regarding personal circumstance and information regarding their job placement, and an early career survey which elicited career expectations. The third cohort did not receive an early career survey, and instead had the questions asked to prior cohorts in the post-market and early career surveys combined into their post-market survey. Cohort 3 thus had expectations elicited in their post-market survey. Cohort four received only the Pre-Market survey, and was dropped from all analysis. For clarity, we refer to the early career survey for Cohorts 1 and 2 and the post-market survey for Cohort 3 collectively as the “expectation survey”.

For the first two cohorts, 2007-08 and 2008-09, the survey was sent to all job market candidates in graduate departments in the United States and Canada that were listed on the Job Candidates website of the National Bureau of Economic Research (NBER), and listed their contact information either through their personal website or via their graduate institution. While the majority of these participants are in economics graduate programs, the sample also includes other departments such as business schools, agricultural economics departments, public policy, and other closely related fields whose PhD recipients frequently participate in the job market for economists. For the third cohort, 2009-10, the sample was expanded to include top graduate departments in Europe, as well as some departments in the United States and Canada whose departments were not listed on the website of the NBER. The total number of institutions included in the survey is 105 for the first and second cohort and 134 for the third cohort. In total, 2756 job market candidates were surveyed, 880 in the first cohort, 892 in the second, and 984 in the third. We believe that the JSS sample comprises nearly the universe of job candidates who expected to participate in the primary job market for new economists in 2008, 2009 and 2010.

B.1.2 Data Cleaning

Our analysis utilizes the cleaned Job Seekers Survey data produced by prior work, McFall et al. (2015) and McFall & Murray-Close (2016). Some additional cleaning was needed to

employ the data for our research design.

B.1.3 Control Variables

Whenever possible, we use characteristics from the expectation survey for our controls. The timing of the controls and their definition are as follows.

At time of pre-market survey:

- **Job Preference:** Respondents were asked to rank their job preferences at the beginning of the job market over “research university”, “four-year college”, “postdoctoral fellowship”, “non-academic, research”, and “non-academic, non-research”. Respondents were considered to have a preference for academia if they ranked any of “research university”, “four-year college”, or “postdoctoral fellowship” as their top preference.
- **Field of Study:** The original authors of the JSS survey conducted additional data collection efforts in which all the CVs of all JSS participants were collected at the time of the job market. In this study, we only leverage the respondents field(s) as indicated on their CV. We then aggregated the 28 possible selections into four broad groups: applied economics, Macroeconomics, Econometrics, and Economic Theory. This categorization is detailed below, in Table B1.

At time of post-market survey:

- **Accepted Academic Job:** This variable is constructed from two sources. First, participants are asked about their initial placement in the post-market survey (which is also the expectation survey for Cohort 3). Not all respondents in our analysis sample from Cohorts 1 and 2 completed the post-market survey, however. For these missing individuals, we supplemented their initial placement information with our own data collection effort when we had reliable job history. We use the survey data where it exists, but also use their post-market survey responses to validate our data collection. Academic positions are determined to include post-docs at any institution, tenure track positions at academic institutions, and non-tenure track positions at an academic institution. For example, this includes both assistant professor and US lecturer positions. There are individuals, however, where we can make a career tenure determination for but cannot reliably identify career progression. For example, if we found a faculty web page indicating a participant had tenure, but were unable to locate a CV or LinkedIn, we could confidently determine tenure but not initial placement.

At time of expectation survey:

- **Gender:** We use self reported gender (or imputed value, discussed below) at the time of expectation survey.
- **Age:** We use the self reported age (or imputed value, discussed below) at the time of expectation survey.
- **Relationship Status:** Respondents are asked about their relationship status in each survey wave, including whether their current relationship is the same as the relationship they reported in the earlier survey (if they had completed one). There are also questions in the post-market and early career surveys regarding their relationship at the time of the job market, allowing us to also measure relationship status at the time of the pre-market survey for our analysis sample. These results are shown in Appendix D. Throughout the main analysis, we measure relationship status at time career expectations are elicited.

Respondents were able to indicate if they defined their relationship as “legally married”, “in a marriage-like relationship, but not legally married”, “a committed relationship”, “dating relationship”, or “not in a relationship”. The indicator used throughout our analysis classifies “not single” as a response of “legally married”, “in a marriage-like relationship, but not legally married”, or “a committed relationship”. We consider respondents to be single if they report their relationship as a “dating relationship”, or “not in a relationship”.

- **US Citizenship:** We responses to the survey question which asks if the participant is a US citizen or permanent resident. For Cohorts 1 and 2, there is no distinction in their response between citizen and permanent resident, whereas for Cohort 3 these are broken out. For consistency, our indicator is for both US citizenship and permanent residency throughout the analysis.
 - **Race:** We employ an indicator for if the participant reports their race as white, and includes both those who do and do not identify their ethnicity as Hispanic or Latino.
- Other

1. When possible, we imputed observations for participants. Some characteristics were considered immutable between surveys, such as race, self-reported gender, and U.S. citizenship status. Age was also roughly imputed by taking the date at which the participant answered expectation questions, and by roughly determining how old that participant would have been in December of their job market year.

2. If the characteristic could not be imputed, such as for preferences over job market outcomes and field of study at the time of job market, or if the characteristic is missing from all surveys, we assign a missing indicator.

Other controls:

Department Ranking: We employ a coarse measure to capture the quality of PhD program, based largely off of the 2023 US News and World Report rankings for “Best Economics Schools”. The use of such rankings is common (Antecol, Bedard & Stearns 2018, Heckman & Moktan 2020), but not without issue in our setting. A common issue faced with such rankings is that US News only compares universities within the same field or department, whereas the JSS surveyed both students in economics and economics-adjacent fields. To address this, we assign the economics department ranking in the US News rankings to be the same across departments within the university. For instance, the University of California, Berkeley is considered a “top economics department” in our definition, and we apply this to Haas School of Business as well as their agricultural and resource economics program.

A second concern is that US News does not compare domestic and foreign economics departments - the closest global ranking published by US News is “Top Global Universities for Economics and Business”, which places heavy weight on business schools, punishing those without a business department, such as Princeton University. To address this, we made the determination to include six international universities in our definition, all of which can be found below in Table B2.

Finally, there are concerns regarding the validity of using US News and World Report rankings at all, and which year we should use. We believe this is not a concern given that we are utilizing a coarse indicator for top program. Indeed, using prior years rankings did not yield significantly different results. We have chosen the 2023 rankings for simplicity.

Ultimately, our indicator for “Top PhD Program” includes any student that graduated with a PhD from any of the following. A full list is provided in Table B2.

1. An economics department ranked in the top 30 programs by the 2023 US News and World Report Rankings
2. An economics-adjacent department, such as business or public policy, at a university with a top 30 economics department, as ranked by the 2023 US News and World Report Rankings
3. An economics or economics-adjacent department from:
 - London School of Economics

- Oxford University
- University College London
- Warwick University
- Monash University
- Bocconi University

B.1.4 Missing Controls

For demographics, there are circumstances under which we may be missing responses for participants, even if they completed the expectation survey. A small number of respondents simply did not provide a response for a demographic question, and were not required to in order to proceed with the survey.

A more significant concern is with Cohort 3. The original studies were concerned with experience and choices made at the time of job market. The first two cohorts were asked to provide responses to demographic questions in each survey. Cohort 3, however, was only prompted by the survey software, Illume, to ask the demographic battery in the post-market (also the expectation) survey if the software had no record of a the respondent providing pre-market demographics. Ultimately, we have 289 observations for Cohort 3 participants, 200 (69%) men and 89 (31%) women. Of this, 243 (84%) also completed a pre-market survey and were not prompted to complete demographics information for the post-market survey. Of these 243, 172 (71%) are men and 71 (29%) women.

To mitigate any potential impact of missing data, we supplement all demographics data using prior survey responses. For example, if we are missing race for a participant in the early career survey, we look to see if we have a value for post-market. If so, we use that value. If not, we check the pre-market survey and use that value. For race, this is straight forward assuming accurate reporting. We expect that US citizenship and permanent residence status will be weakly increasing over time, leading to imputation under representing the status in later surveys. The largest source of missing information, however, comes from the Cohort 3 concern, in which case we are using citizenship/permanent residency status from only 7 - 8 months earlier. We do not expect this to be a major concern.

Imputing age at the time of expectation survey is slightly more difficult, as we do not have information on birth date for any missing observations. Thus, we cannot say with certainty whether someone who took the pre-market survey in December at age 30 and the post-market survey the following year in August is 30 or 31 at the time of post-market survey. We instead take the number of days passed since between the completion date of the expectation survey and the completion date of the previous survey from which we are

imputing from. When then divide the number of days by 365, rounding to get the most likely age, and add it to the age listed on the previous survey.

After imputation, there are observations for which we are still missing characteristics. In the analysis, we account for these observations through the following procedure. For each field, we assign missing values an arbitrary number (e.g. 100), and create a new variable that is an indicator equal to one if the field is missing data.

Below are the number of missing observations after imputation for each characteristic.

1. Job Preference: 193 (130 men, 63 women)
2. Field of Study: 61 (43 men, 18 women)
3. Accepted Academic Job: 32 (19 men, 13 women)
4. Gender: 0
5. Age: 7 (4 men, 3 women)
6. Relationship Status: 0
7. US Citizenship: 35 (22 men, 13 women)
8. Race: 0
9. PhD from Top Program: 0

B.1.5 Multiple Job Market Participants

There are 22 instances in our analysis sample where a respondent participated in more than one job market between 2007 - 2009, and responds to the JSS survey in multiple years. We address this by taking the earliest cohort the respondent participates in in which they provide career expectations data. The survey automatically sent the expectation survey to all emails in their sample, meaning there are cases where people provide career expectations several times. We want to observe career expectations as early in the career as possible, leading to our choice of earliest cohort with expectation data.

B.2 Data Collection

Data for job history and publication history was collected both programatically and by hand. In both instances, we utilized only publicly available information in our search. This information included first name, last name, PhD granting institution, field of study, and - in more

difficult to identify instances - publication titles at the time of candidacy. This information was utilized in prior work with the Job Seekers Survey, and all personally identifiable information was kept separate from the survey information, only linkable through a separate, securely stored crosswalk file in accordance with our IRB approval.

In total, we had information on career expectations for 791 participants from the 1,843 respondents who were surveyed. We were not able to confidently find job history data or publication history for 25 participants, predominantly due to these individuals placing into non-research occupations outside of the US, bringing our final analysis sample to 766.

Publication history information was accessed through Scopus, an abstract and citation database maintained by Elsevier. Through their API, we were able to utilize first name, last name, and PhD granting institution. We were able to confidently identify 658 participants out of the 766 in our analysis sample. The remaining 108 were largely due to name changes or due to no publication history. For the former group, we manually searched for their publication history through Scopus or Google Scholar. The latter group was identified via their job history data. To confidently claim participants had no publications, we were able to identify that they had been employed since graduation in non-research based occupations; had no attributable Scopus, Google Scholar, or public CV; and that their job CV at the time of the job market contained no published work. Thus, we were able to assign publication histories, or lack thereof, to all 108 participants.

Job history information was obtained via both LinkedIn and publicly available CVs or personal websites. Both sources of information were identified via ScraperAPI, a service to mass query Google. This was done to locate LinkedIn profiles, Google Scholar Profiles, and personal websites. We then programatically assigned confidence scores that the match was accurate, depending on the number of search criteria items that were correctly matched to our publicly available information on the participants. For example, a high score for manual review was assigned to those that correctly matched first name, PhD granting institution, and graduation year, as these participants were often found to have changed their last name after marriage. We manually verified that all matches were correct. In instances where no match was correct, we manually searched for one of these three sources of information.

For LinkedIn, we utilized ProxyCurl, a service to scrape LinkedIn profiles for job history, education history, location history, and publications. Information from CVs and personal websites were manually entered and quality checked. This resulted in comprehensive job history information for 663 participants out of 766 in our final analysis sample. The remaining 103 participants did not have publicly available comprehensive job history data, but had information available that allowed for confident assignment of whether the individual ever received tenure. Examples include university professors with titles with full professorship,

but do not have a personal website or CV publicly available.

B.3 Outcome Definitions

B.3.1 Publishing

The question to elicit publication expectations provided two sources of potential ambiguity.

How likely do you think it is, that, **over the course of your life** you will regularly publish in top journals?

Participants may interpret differently what it means to publish regularly, as well as what qualifies as a top journal. To ensure that this ambiguity is not driving results, we reran the analysis using different definitions of top journals as well as different qualifiers for duration. For top journals, we produced two variations - one for top general interest journals only, and another for either top general interest journals **or** top field journals. The journals included in both of these definitions are listed in Table B3. For duration, we looked at a simple definition of publishing at any point after graduation as well as an alternate definition which required at least one top publication in each three year period after graduation. We found that though there are level differences, the findings do not qualitatively change, leading us to choose the simple measure of having published in a top general interest journal at any point after graduation.

B.3.2 Tenure

Tenure determination was made by title, location, and institution. While titles varied substantially, there are largely standardized conventions. For example, “Assistant Professor” was assigned as tenure-track but not tenured, whereas “Associate Professor” or “Professor” was determined as tenured. Titles such as “Senior Lecturer” were determined as neither tenure-track nor tenured for US institutions whereas they were determined as tenured in countries such as the United Kingdom and Australia. Some institutions in the US do not strictly follow these conventions. In many instances, participants at these institutions deliberately indicated tenure status, such as “Associate Professor (without tenure)”. Additionally, there is substantial variation on these conventions that required manual review and assignment.

Table B1: Economic Field Indicator Definitions

Category	Field
Applied Economics	Applied Microeconomics
	Behavioral Economics
	Developmental Economics
	Economic History
	Economics of Education
	Environmental Economics
	Experimental Economics
	Health Economics
	Industrial Organization
	Labor Economics
	Law and Economics
	Microeconomics
	Political Economy
	Public Economics
	Urban Economics
Macroeconomics	Financial Economics
	International Economics
	International Finance
	International Macroeconomics
	International Trade
	Macroeconomics
	Monetary Economics
Econometrics	Applied Econometrics
	Computational Economics
	Econometrics
Economic Theory	Economic Theory
	Game Theory
	Microeconomic Theory

Table B2: Universities Included in Top University Indicator

Location	University
United States	Harvard University
	Massachusetts Institute of Technology
	Stanford University
	Princeton University
	University of California–Berkeley
	University of Chicago
	Yale University
	Northwestern University
	Columbia University
	University of Pennsylvania
	New York University
	University of California–Los Angeles
	University of Michigan–Ann Arbor
	California Institute of Technology
	Cornell University
	University of California–San Diego
	University of Wisconsin–Madison
	Duke University
	University of Minnesota–Twin Cities
	Brown University
	Carnegie Mellon University
	Boston University
	Johns Hopkins University
	University of Maryland–College Park
	University of Texas–Austin
	University of California–Davis
	Boston College
	Pennsylvania State University–University Park
	University of Rochester
	University of North Carolina–Chapel Hill
	University of Virginia
	Vanderbilt University
	Washington University in St. Louis
International	London School of Economics
	Oxford University
	University College London
	Warwick University
	Monash University
	Bocconi University

Table B3: Journals Included in Publishing Indicator

Indicator	Category	Journal
Top General Interest	Top Five	American Economic Review
		Econometrica
		Journal of Political Economy
		Quarterly Journal of Economics
		Review of Economic Studies
	American Economic Journal	Applied Economics
		Economic Policy
		Microeconomics
	Other	Review of Economics and Statistics
		Economic Journal
		Journal of the European Economic Association
Top Field	Labor	Journal of Labor Economics
		Journal of Human Resources
	Industrial Organization	RAND Journal of Economics
		Journal of Economic Behavior and Organization
	Public Finance	Journal of Public Economics
	Finance	Journal of Financial Economics
		Journal of Finance
	Theory	Journal of Economic Theory
		Games and Economic Behavior
	Econometrics	Journal of Econometrics
	Review	Journal of Economic Perspectives
	Development	Journal of Development Economics
	International	Journal of International Economics
	Monetary	Journal of Monetary Economics
	Health	Journal of Health Economics
	Urban	Journal of Urban Economics
	Education	Economics of Education Review
	Environmental	Energy Economics

C Subsample Analysis

Table C1: Expectations and Outcomes by Relationship Status - Cohort 3 Only

	Pooled				Men				Women			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Men	Women	Difference	Difference With Controls	Single	Not Single	Raw Difference	Difference With Controls	Single	Not Single	Raw Difference	Difference With Controls
Panel A: Expectations												
Tenure	0.56	0.39	-0.172*** (0.063)	-0.156*** (0.058)	0.52	0.58	0.062 (0.081)	-0.054 (0.071)	0.45	0.37	-0.082 (0.113)	0.009 (0.101)
Publish in Top Journals	0.28	0.13	-0.145*** (0.048)	-0.141*** (0.049)	0.23	0.30	0.067 (0.070)	-0.018 (0.073)	0.14	0.13	-0.005 (0.079)	0.009 (0.088)
Panel B: Outcomes												
Tenure	0.50	0.42	-0.084 (0.063)	-0.070 (0.063)	0.44	0.52	0.078 (0.081)	0.020 (0.082)	0.48	0.38	-0.099 (0.113)	-0.064 (0.117)
Publish in Top Journals	0.31	0.26	-0.052 (0.057)	-0.057 (0.056)	0.19	0.35	0.159** (0.068)	0.086 (0.071)	0.14	0.32	0.179** (0.089)	0.160 (0.105)
Observations	200	89	289	289	52	148	200	200	29	60	89	89

¹ Sample is restricted to participants in the third cohort with expectation and outcome data for both tenure achievement and publishing.

² Controls for difference specifications in columns 4, 8, and 12 include age, citizenship, race, fixed effects for cohort, if their most preferred outcome is academia, if their accepted job was in academia, PhD rank, and field of study. Job preferences and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, relationship status, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Top journals are defined as any of the following: The American Economic Review, Econometrica, Journal of Political Economy, Quarterly Journal of Economics, Review of Economic Studies, American Economic Journal: Applied Economics, American Economic Journal: Economic Policy, American Economic Journal: Microeconomics, Review of Economics and Statistics, Economic Journal, and Journal of the European Economic Association.

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C2: Expectations and Outcomes by Relationship Status - Subsample with Initial Placement in Academia

	Pooled				Men				Women			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Men	Women	Difference	Difference With Controls	Single	Not Single	Raw Difference	Difference With Controls	Single	Not Single	Raw Difference	Difference With Controls
Panel A: Expectations												
Tenure	0.71	0.60	-0.103** (0.045)	-0.094** (0.044)	0.71	0.71	-0.009 (0.058)	-0.029 (0.058)	0.56	0.62	0.064 (0.084)	0.056 (0.083)
Publish Top Journals	0.31	0.19	-0.129*** (0.039)	-0.119*** (0.039)	0.31	0.32	0.003 (0.060)	-0.019 (0.060)	0.18	0.19	0.008 (0.066)	0.010 (0.073)
Panel B: Outcomes												
Tenure	0.69	0.57	-0.111** (0.045)	-0.107** (0.046)	0.58	0.71	0.128** (0.062)	0.105 (0.065)	0.52	0.60	0.078 (0.084)	0.069 (0.091)
Publish Top Journals	0.39	0.26	-0.129*** (0.043)	-0.127*** (0.041)	0.38	0.40	0.021 (0.062)	-0.001 (0.063)	0.18	0.30	0.119* (0.069)	0.088 (0.073)
Observations	369	167	536	536	77	292	369	369	50	117	167	167

¹ Sample is restricted to participants with expectation and outcome data for both tenure achievement and publishing and to those with an initial placement in a tenure track, post-doctorate, or non-tenure track teaching position in an academic institution.

² Controls for difference specifications in columns 4, 8, and 12 include age, citizenship, race, fixed effects for cohort, if their most preferred outcome is academia, if their accepted job was in academia, PhD rank, and field of study. Job preferences and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, relationship status, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Top journals are defined as any of the following: The American Economic Review, Econometrica, Journal of Political Economy, Quarterly Journal of Economics, Review of Economic Studies, American Economic Journal: Applied Economics, American Economic Journal: Economic Policy, American Economic Journal: Microeconomics, Review of Economics and Statistics, Economic Journal, and Journal of the European Economic Association.

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

D Analysis with relationship status measured at time of job market

This appendix presents the same analyses presented in the main text, but measures relationship status in the at the time of the job market. There is the possibility relationship status at the time of the job market plays a more significant role in expectation formation than relationship status after the job has been accepted.

Our analysis sample does not require participants to have completed the pre-market survey. Of the 766 respondents in our analysis sample, we have self-reported relationship status from the pre-market survey for 600, roughly 78%. We supplement these data with responses from later surveys asking them about their relationship status at the time of the job market. Cohorts 1 and 2 are asked the question in the early career survey: “Which of the following best described your relationship status in January 2008 (2009) — that is, in January of the 2007-08 (2008-09) job-market season?”. Cohort 3 was not asked this question in the post-market survey. If they had completed the pre-market survey, their response regarding relationship status was piped in to dictate logic. The process to determine relationship status at the time of the job market for Cohort 3 is as follows:

1. If the respondent completed the pre-market survey **AND** they indicated they were still in that relationship.
 - (a) We use their pre-market survey response
2. If the respondent did not complete the pre-market survey **OR** the respondent completed the pre-market survey and indicated they were single **OR** the respondent reported that they are no longer in the same pre-market relationship
 - (a) We use the expectation survey response if the reported relationship began on or prior to January 1, 2010 (the job market year)
 - (b) If the relationship reported in the expectation survey began after January 1, 2010, the pre-market relationship status is left blank. This includes the following two groups
 - i. Cohort 3 respondents that did not complete the pre-market survey and indicate their relationship in the expectation survey as single.
 - ii. Cohort 3 respondents that completed the pre-market survey and indicated they were in a relationship, indicate that they are no longer in the pre-market

relationship, and indicate they are in a new relationship that began after January 1, 2010.

Ultimately, using the pre-market survey responses and the retrospective questions from the expectation surveys, we are able to determine the job market relationship status of 710 respondents out of the 766 in the analysis sample. Of the 56 missing, 40 are men and 16 are women.

Table D1: Descriptive Statistics

	Pooled			Men			Women		
	(1) Men	(2) Women	(3) Difference	(4) Single	(5) Not Single	(6) Difference	(7) Single	(8) Not Single	(9) Difference
Observations	480	230	.	119	361	.	78	152	.
Age at Expectation Survey	32.62	32.59	0.037	32.38	32.70	-0.326	32.45	32.65	-0.198
Accepted Academic Job	0.73	0.71	0.021	0.73	0.73	-0.004	0.72	0.71	0.006
Holds US Citizenship	0.49	0.44	0.045	0.34	0.54	-0.193***	0.38	0.48	-0.101
Race: White	0.78	0.61	0.168***	0.73	0.80	-0.067	0.54	0.65	-0.113*
Job Preference: Academia	0.86	0.78	0.080**	0.81	0.88	-0.065	0.73	0.81	-0.085
PhD from Top Program	0.56	0.59	-0.033	0.59	0.55	0.040	0.60	0.59	0.017
Field of Study									
Applied	0.80	0.88	-0.084***	0.70	0.83	-0.122***	0.89	0.87	0.020
Macro/Trade/Finance	0.44	0.33	0.113***	0.44	0.45	-0.011	0.27	0.36	-0.091
Econometrics	0.35	0.37	-0.024	0.39	0.33	0.055	0.38	0.37	0.010
Theory	0.18	0.11	0.070**	0.20	0.17	0.035	0.04	0.14	-0.101**
Survey Cohort									
Cohort 1	0.38	0.40	-0.021	0.44	0.35	0.082	0.41	0.39	0.022
Cohort 2	0.23	0.24	-0.016	0.19	0.24	-0.045	0.29	0.22	0.078
Cohort 3	0.40	0.36	0.037	0.37	0.41	-0.037	0.29	0.39	-0.100

¹ Sample is restricted to participants with expectation and outcome data for both tenure achievement and publishing and to those that indicated their relationship status in the pre-market survey.

² Relationship status, job preferences, and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Single includes "Single" and "Dating". Not Single includes "In a Committed Relationship", "In a Marriage-Like Relationship", and "Married".

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table D2: Expectations and Outcomes by Relationship Status

	Pooled				Men				Women			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Men	Women	Difference	Difference With Controls	Single	Not Single	Raw Difference	Difference With Controls	Single	Not Single	Raw Difference	Difference With Controls
Panel A: Expectations												
Tenure	0.56	0.43	-0.128*** (0.040)	-0.106*** (0.036)	0.54	0.57	0.033 (0.053)	0.016 (0.046)	0.42	0.44	0.018 (0.069)	0.046 (0.062)
Publish in Top Journals	0.29	0.16	-0.127*** (0.032)	-0.123*** (0.032)	0.29	0.29	-0.009 (0.048)	-0.007 (0.048)	0.15	0.16	0.011 (0.051)	0.038 (0.056)
Panel B: Outcomes												
Tenure	0.56	0.43	-0.128*** (0.040)	-0.119*** (0.038)	0.54	0.57	0.027 (0.053)	0.048 (0.051)	0.41	0.44	0.031 (0.069)	0.050 (0.067)
Publish in Top Journals	0.32	0.22	-0.099*** (0.035)	-0.101*** (0.034)	0.28	0.34	0.058 (0.048)	0.076* (0.045)	0.18	0.24	0.064 (0.056)	0.053 (0.056)
Observations	480	230	710	710	119	361	480	480	78	152	230	230

¹ Sample is restricted to participants with expectation and outcome data for both tenure achievement and publishing and to those that indicated their relationship status in the pre-market survey.

² Controls for difference specifications in columns 4, 8, and 12 include age, citizenship, race, fixed effects for cohort, if their most preferred outcome is academia, if their accepted job was in academia, PhD rank, and field of study. Relationship status, job preferences, and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Top journals are defined as any of the following: The American Economic Review, Econometrica, Journal of Political Economy, Quarterly Journal of Economics, Review of Economic Studies, American Economic Journal: Applied Economics, American Economic Journal: Economic Policy, American Economic Journal: Microeconomics, Review of Economics and Statistics, Economic Journal, and Journal of the European Economic Association.

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table D3: Relationship Between Expectations and Outcomes

	Pooled			Men			Women		
	(1) Men	(2) Women	(3) Difference	(4) Single	(5) Not Single	(6) Difference	(7) Single	(8) Not Single	(9) Difference
Receive Tenure	0.242*** (0.052)	0.309*** (0.077)	0.067 (0.093)	0.308*** (0.114)	0.222*** (0.059)	-0.086 (0.126)	0.343** (0.129)	0.322*** (0.090)	-0.021 (0.154)
Publish in Top Journals	0.121** (0.047)	0.036 (0.070)	-0.085 (0.084)	0.173* (0.100)	0.108** (0.054)	-0.065 (0.111)	0.029 (0.110)	0.077 (0.094)	0.048 (0.142)
Observations	480	230	710	119	361	480	78	152	230

¹ Sample is restricted to participants with expectation and outcome data for both tenure achievement and publishing and to those that indicated their relationship status in the pre-market survey.

² All specifications include controls for age, citizenship, race, fixed effects for cohort, if their most preferred outcome is academia, if their accepted job was in academia, PhD rank, and field of study. Relationship status, job preferences, and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Standard errors in parentheses.

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table D4: Gender Gaps in Outcomes

	(1) Baseline	(2) With Relationship Status	(3) With Controls	(4) With Expectations	(5) Controls + Expectations
Panel A: Receive Tenure					
Female	-0.128*** (0.040)	-0.125*** (0.040)	-0.116*** (0.038)	-0.076** (0.037)	-0.089** (0.037)
In a Committed Relationship, Wave 1		0.028 (0.042)	0.043 (0.040)	0.018 (0.039)	0.038 (0.038)
Expectation				0.396*** (0.035)	0.259*** (0.043)
Panel B: Publish in Top Journals					
Female	-0.099*** (0.035)	-0.094*** (0.035)	-0.096*** (0.034)	-0.074** (0.035)	-0.083** (0.034)
In a Committed Relationship, Wave 1		0.060 (0.037)	0.070** (0.034)	0.060* (0.036)	0.070** (0.034)
Expectation				0.151*** (0.042)	0.108*** (0.039)
Observations	710	710	710	710	710

¹ Sample is restricted to participants with expectation and outcome data for both tenure achievement and publishing and to those that indicated their relationship status in the pre-market survey.

² Relationship status, job preferences, and field of study are measured in the pre-market survey. Accepted position is measured in the post-market survey (which is the expectation survey for the third Cohort) and supplemented by our own data collection when missing. Age, citizenship, and race are measured at the time of the expectation survey. The indicator for PhD from a top program is comprised of 39 U.S. and international programs, detailed in Appendix B.

³ Standard errors in parentheses.

⁴ * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.