Fight or Flight: The Impact of Post-Tenure Evaluations on Researchers' Labor Market Outcomes

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Abstract

This paper examines the labor market effects of Florida's 2022 post-tenure review policy, which weakened tenure protections at public universities. Using a difference-in-differences approach, we compare faculty outcomes in Florida to nearby states. We find the policy increased faculty exits—particularly among high-performing researchers—indicating a brain drain rather than improved selection. Additionally, we detect no productivity gains among incumbents and observe a decline in the research output of new hires. Overall, the findings suggest that reducing tenure protections negatively affects the research capacity and competitiveness of public universities.

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1 Introduction

The tenure system has been an institutional feature of US higher education since the early twentieth century. However, a growing number of states are considering legislation to limit or ban tenure in universities. For example, five states had introduced a total of 13 bills between 2012 and 2022 to ban tenure in their respective jurisdictions (Taylor and Watts, 2024). Although these efforts have largely failed, policy interest in limiting employment protection for professors continue to persist (Nietzel, 2025). Opponents against the tenure system argue that it provides no incentives for effort and leads to low productivity. On the other hand, supporters of the system argue that it protects academic freedom and enables universities to be competitive with jobs in the private sector. Despite the long history of the university tenure system, there is little empirical research testing these competing hypotheses.

This paper studies the labor market impacts of a recent policy that weakened tenure protections for professors. In April 2022, Florida enacted a law requiring post-tenure evaluations every five years for professors at public universities. Faculty who fail to meet performance standards during these reviews can be terminated, effectively transforming tenure into a renewable five-year contract. Leveraging detailed data on faculty employment and publication histories, we implement a difference-in-differences design comparing academic outcomes in Florida to those in nearby states not subject to the policy change. Using this variation, we evaluate whether the policy achieved its intended goal of increasing productivity or if it instead had a negative impact on retaining talent.

We present three sets of results. First, following a panel of researchers over time, we find that the policy increased faculty exits from Florida state universities by about 1 percentage point from a base of 4 percent. The majority of this response is due to professors moving to institutions outside the state. In comparison, a smaller share left academia entirely and there was no change in the number of moves within Florida. Importantly, we find no similar effects among faculty at private universities in Florida, suggesting that the increase in exits is driven by the new policy rather than broader state-level trends. We likewise find no change in the separation rates of non-tenure track faculty who are exempt from the policy.

Second, the increase in departures appears to reflect a brain drain effect rather than improved selection against low-performing faculty. If the policy had achieved its intended goal of punishing unproductive researchers, then we would expect an increase in exits among faculty with low research output. In contrast, separation rates increased the most among scholars with the highest baseline levels of publications and citations in their respective fields. Many of these professors moved before the date of the first post-tenure review, indicating that the moves were voluntary rather than a result of failing their evaluations. Younger

faculty members were particularly responsive, contradicting a view that removing tenure would predominately filter out workers past their prime working age. We also find stronger effects among faculty with white-sounding names, suggesting that the response is unlikely to be driven by ongoing initiatives against diversity, equity, and inclusion.

Third, we find no evidence that the policy improved academic productivity. We show that there was no change in the number of publications, citations, or preprints after the policy was passed. This holds even when we focus on faculty with low baseline publication rates, who might have been most at risk under the new evaluation system. Furthermore, we examine whether the reform influenced the quality of new hires by comparing publication records of cohorts hired before and after the policy change. Contrary to the intent of the policy that less productive applicants will self-select out of the system, we instead find that new hires tend to have fewer recent publications after the policy was enacted. This decline in the quality of new hires is consistent with the theoretical prediction of Carmichael (1988), who argued that tenure helps prevent a downward spiral in hiring standards by ensuring that current faculty are not incentivized to recruit weaker colleagues to protect their own positions.

Our paper contributes to three literatures. First, we contribute to the literature on the role of tenure in academia. From a theoretical perspective, tenure has been viewed as a means of incentivizing effort (MacLeod and Urquiola, 2021), human capital investments (Kahn and Huberman, 1988; Waldman, 1990), and positive selection of new hires (Carmichael, 1988), all of which should increase research output. To our knowledge though, there are no empirical studies that test whether the tenure system actually increases productivity or hiring at universities. Previous papers find that publications and citations fall after individuals receive tenure (Brogaard, Engelberg, and Van Wesep, 2018; Tripodi et al., 2024), but that could reflect both an increase in productivity pre-tenure and a decrease in productivity afterwards.[1] Our paper contributes to this literature by examining a case where tenure is effectively removed, thereby allowing us to capture the aggregate effects of the tenure system.

Second, we add to a broader literature on incentivizing teacher effort.[2] Specifically with respect to employment protections, studies find that teachers' performance increase in response to stricter tenure evaluations and fewer barriers to dismissals (Jacob, 2013; Dinerstein and Opper, 2022; Taylor, 2022; Ng, 2024). On the extensive margin, accountability reforms increase exits among low-rated teachers (Sartain and Steinberg, 2016) and improve the quality

[1]Studies on the effect of tenure on teaching are also inconclusive. While Ehrenberg and Zhang (2005) find that the growth in adjunct professorships has adversely affected graduation rates, Figlio, Schapiro, and Soter (2015) find that students taught by nontenure track professors in their first year tend to do better in subsequent classes.

[2]See Taylor (2023) for a recent review.

of new hires (Kraft et al., 2020). Thus, reducing employment protection appears to increase the productivity and selection of teachers.[3] In contrast, we show that eliminating tenure has no impact on academics' productivity, and instead reduces the ability of universities to attract and retain the most talented researchers.

Third, we contribute to the literature on brain drain. Prior research have studied instances of forced migration such as the immigration of Jewish scientist away from Nazi Germany (Becker et al., 2024), along with its effects on US innovation (Moser, Voena, and Waldinger, 2014) and the productivity of peers who stayed in Germany (Waldinger, 2012). Although in far less extreme circumstances, growing evidence finds that recent U.S. policies have caused researchers from China to pursue academic careers in other countries (Xie et al., 2023; Flynn et al., 2024). We add to this literature by showing that policies penalizing academics are also leading to relocation of researchers across state lines.

The remainder of the paper is organized as follows. Section 2 describes Florida's 2022 policy that introduced post-tenure evaluations. Section 3 describes our data. We report our results in section 4 and conclude in section 5

2 Institutional Context

On April 19, 2022, Florida signed bill SB-7044, authorizing the State University System Board of Governors the ability to require tenured faculty members to undergo a comprehensive post-tenure review every 5 years. Under the bill, these reviews must consider faculty's research, teaching, and service. The governing board announced specific instructions for the post-tenure reviews a year later on March 29, 2023. Importantly, the instructions state that "each faculty member who receives a final performance rating of 'unsatisfactory' shall receive a notice of termination" (Florida Board of Governors, 2023). As a result, tenured faculty in the state university system are only guaranteed 5 years of employment protection.

The first review for 20% of faculty was completed on September 2024. Of the 861 tenured faculty reviewed across 12 universities, 437 exceeded expectations and received $5,000-10,000 one-time bonuses; 350 met expectations; 64 did not meet expectations and would be terminated after a year if their performance did not improve; and 10 were deemed unsatisfactory, resulting in immediate termination (Atterbury, 2024). Thus, the post-tenure reviews were not merely performative, but had real consequences for university faculty.

The expected effect of the post-tenure evaluations is theoretically ambiguous. On one

[3]Outside the education sector, studies of employment protection for the broader labor market similarly find that barriers to firing reduce productivity (Autor, Kerr, and Kugler, 2007; Bjuggren, 2018).

hand, a large literature in personnel economics finds that performance-linked incentives tend to improve worker productivity (see Hoffman and Stanton (2024) for a recent review) and lead to positive sorting (Brown and Andrabi, 2020). This reasoning motivated the intent of the policy. Speaker of the House Chris Sprowls stated that "the option for universities to complete comprehensive post-tenure reviews every five years will inject more accountability and enhance performance" (Executive Office of the Governor, 2022). Some economists have likewise argued that eliminating tenure would increase productivity (Levitt, 2007). Consistent with this view, studies of public school teachers have repeated demonstrated that performance-pay and accountability reforms increase teacher value-added (Taylor, 2023).

However, there are multiple reasons why post-tenure reviews might have different impacts on university professors compared to public school teachers. First, the tenure evaluation process for academic faculty is potentially already more selective. For example, 64% of STEM faculty (Kaminski and Geisler, 2012) and 69% of economics faculty (Sarsons et al., 2021) receive tenure at the institution where they are initially hired. In comparison, prior to a major reform in 2010, NYC's tenure rate for public school teachers was 97% (Dinerstein and Opper, 2022). If there are decreasing returns to performance evaluations, then the effect of accountability reforms would likely be more positive for public school teachers than university faculty. Second, unlike public schools, whom to hire at colleges is primarily decided by incumbent faculty rather than a principal. Eliminating tenure could have the perverse effect of incentivizing current faculty to hire less qualified individuals so that the incumbents look better in comparison (Carmichael, 1988). Third, it may be more challenging for teachers to move states compared to university faculty due to institutional barriers like occupational licensing requirements.[4]

To identify the effect of the new policy, we compare faculty working at public universities in Florida to other public university faculty also in the South Atlantic Census Division, which includes Georgia, South Carolina, North Carolina, Virginia, West Virginia, Maryland, and Delaware. To our knowledge, only two other major policies targeting public universities was enacted during this time. First, in 2021, Georgia made it easier for college administrations to remove tenured professors. Given that Georgia has required post-tenure reviews since 1996, this new policy was a relatively minor change. Nevertheless, it generated substantial controversy as the new law eliminates a faculty peer-review process and grants more power to the university administration. Second, West Virginia University experienced a massive layoff in 2024 due to large budget deficits. By keeping both Georgia and West Virginia in our control group, our estimates are biased against finding our result of negative retention

[4]According to Evans, Francies, and McDole (50), "thirty-one states require some or all out-of-state teacher candidates to take additional coursework or training prior to entering a classroom".

effects. Moreover, we will show that the policy in Georgia did not appear to have an impact on faculty retention in the state.

3 Data

Motivated by the competing theories of the impact of tenure, our empirical analysis focus on two outcomes: retention and productivity. To measure these outcomes, our analysis takes advantage of two data sources. First, we leverage data collected from curriculum vitaes (CVs) posted on Open Research and Contributor ID (ORCID) to follow researchers' employment statuses over time. Second, we merge on publication records from Dimensions to measure individuals' productivity. Using these datasets, we construct a panel of faculty who started at a public university, and a repeated cross-section of new hires at each school. We explain the construction of our analysis samples in more detail below.

3.1 CV Data: ORCID

ORCID is a free online platform that helps researchers and scholars connect their work with their identities. Users verify their identity with their university email address and then self-report their employment history on the website. They are then provided a unique ID that they can provide to journals upon publication of a new paper. This creates a transparent way to accurately attribute publications to researchers, without any ambiguity that may arise if multiple people have the same names. Users are incentivizes to truthfully report their CV information as many grant institutions like the National Health Institute and National Science Foundation now ask for an ORCID in their funding applications.

Using the ORCID database, we are able to observe the employment history of over 15 million individuals. We query this large dataset to construct two subsamples. First, we create a balanced panel of all researchers affiliated with a university in the South Atlantic Census Division in 2021, the year before the bill mandating post-tenure reviews was passed. We then follow the employment history of these individuals from 2018 to 2024. Second, we create a repeated cross-section of all new hires over the same time period for the same set of universities.

To ensure that we focus on individuals targeted by the post-tenure review, we restrict our samples to workers with "prof" in their job title. We also drop non-tenure track positions that contain the phrase "visiting", "adjunct", "clinical", "emerit", or "temporary". Similarly, we drop teaching positions whose job titles include "teach", "lecturer", "instruct", or "practice". Lastly, we use the job title to make a distinction between assistant, associate, and tenured faculty members.

To explore heterogeneity by demographic characteristics, we use individuals' names to predict their gender and race. First, we infer gender from individuals' first names using the Gender Guesser package in Python. The program classifies names into six categories: mostly female", "female", "male", "mostly male", "androgynous" and "unknown". We define a researcher as female or male using the first four classifications, resulting in a gender for 81% of the sample.[5] Second, we infer individuals' race by linking their last names to the U.S. Census database of commonly occurring surnames and assigning the most likely racial group associated with each name.

3.2 Publication Data: Dimensions

To measure individual's productivity, we merge on publication records from Dimensions, an online repository that collects metadata for the near-universe of academic works. The database contains records for over 140 million peer-reviewed publications and 4.3 million working papers. The dataset includes the ORCID of researchers who make their ORCID name and profile publicly accessible on their online profile. We successfully merge on the publication history for 83% of the observations in our panel and 88% of the repeated cross-section. To maximize statistical power, we keep the full sample whenever we do not need a measure of productivity in our analysis.

There are three advantages to using the Dimensions database to measure research output relative to simply the self-reported records on ORCID. First, Dimensions tracks the number of citations for each publication, allowing us to measure both the quality and quantity of research. Second, Dimensions also scrapes information from preprints like SSRN so that we can measure immediate changes in the research process even before a paper is published. Lastly, Dimensions classifies papers into academic fields, which allows us to explore heterogeneity by disciplines. In particular, we define an author in our panel to be in a STEM field if they had at least 1 STEM paper prior to 2022.

Appendix Table A1 reports descriptive statistics of our panel dataset, averaged over the pre-treatment period from 2018 to 2021. We restrict the sample to only public sector universities, and define the treatment group to be researchers in Florida and the control group to be scholars in other states in the same Census division. In general, academics in Florida have more publications and are more likely in STEM. They are also less likely to be men or white. Although our analysis only requires that the treatment and control group have similar trends prior to the policy change, it is reassuring that the differences in baseline characteristics are fairly small.

[5]In other research where we manually collected the genders of researchers, we found that Gender Guesser correctly identified 94% of the women in the data (Quach and Yu, 2024).

4 Results

4.1 Empirical Strategy

We begin our analysis by studying the impact on incumbent researchers using the panel sample. To identify the effect of introducing post-tenure reviews, we estimate a difference-in-difference regression of the form

$$y_{it} = \sum_{\substack{t=2018 \\ t \neq 2021}}^{2024} \beta_t \cdot Florida_i \times D_t + \alpha_i + \gamma_{t,c(i)} + \epsilon_{it} \tag{1}$$

where y_{it} is an outcome of interest for researcher i in year t, such as a dummy variable for being employed outside the state university system. $Florida_i$ is an indicator that equals one if researcher i is was employed in Florida in 2021. D_t equals one at year t. We control for individual (α_i) and year-characteristic ($\gamma_{t,c(i)}$) fixed effects. To compare people of similar ranking and mobility, our preferred specification allows for the year fixed effects to differ by assistant vs. associate/full professors, and by the year that they were hired at their job. Our reference period is 2021, the year before the post-tenure review policy was first passed in legislation. We cluster standard errors at the individual level.

4.2 Effect on Retention

Figure 1 examines the effect of Florida's post-tenure review policy on faculty retention. Panel A plots the difference-in-difference estimates over time, with the outcome variable being an indicator that equals 1 if the researcher is employed outside their state's public university system. We find that leading up to 2022, separation rates were trending similarly between scholars in Florida and nearby states. However, after Florida weakened employment protections, we observe a gradual increase in separation rates. The rise in separations occurs even before the first round of post-tenure reviews in 2024, suggesting that researchers were moving in anticipation of the new policy.

The increase in separations from the public university system can reflect three types of responses: movement to a private university within the state, migration outside the state, and exits from academia altogether. Panels B to D of Figure 1 decompose the change in separation into each of these components. In Panel B, we find no change in the probability that individuals moves from a public university to a private one within the same state. Instead, Panel C shows that the increase in separations is largely driven by professors moving out-of-state. Panel D finds to a smaller extent that some faculty are also responding by leaving

academia, which we define as an employment gap in individuals' CV on ORCID.[6]

To assess the robustness of our results, Table 1 reports estimates of the effect on separations using a series of alternative controls. Column (1) estimates a standard two-way fixed effects model, controlling for individual and year fixed effects. This baseline specification suggests that separation rates increased by 1 percentage point on a base of 3.9 percent, equivalent to a 26% increase in separations. We find similar results in column (2) where we flexibly allow for differential time-trends between tenured and nontenured faculty. Column (3) shows that the results are also robust to allowing the year fixed effects to differ by individuals' duration at their job in 2021. Since recent hires may be less attached to their employer relative to entrenched incumbents, column (3) controls for differences in baseline worker mobility across states. Lastly, column (4) reports the fully saturated model corresponding to Panel A of Figure 1. In this most conservative specification, separation rates increased by 19% from baseline. Overall, we find that our results are stable across a range of alternative specifications.

In Appendix Figure A1, we implement a series of placebo tests to show that the increase in separation rates is driven by the 2022 post-tenure review policy and not other contemporaneous shocks. First, if the rise in separation rates reflects a general economic downturn specific to Florida, then we would expect professors in private universities to also leave their jobs. However, Panel A finds that even when we use within-Florida variation, separation rates increased in public universities relative to private ones.

Second, if the increase in separation rates is due to a different shock specific to the Florida public university system, such as a broad budget cuts, then we would expect to see non-tenure track faculty leaving as well. However, Panel B finds no trend break in the separation rate of non-tenure track faculty in Florida relative to other states following the 2022 policy. This suggests that the rise in separations is not due to a public university wide shock.

Third, we test whether Florida naturally has a higher separation rate whenever we conditional on a panel of incumbents. For example, if working in Florida is an undesirable outcome, then workers may leave quicker due to reversion to the mean, similar to an Ashenfelter dip phenomenon (Ashenfelter, 1978). To test for this effect, we replicate our analysis using 2018 as the reference year where we require all workers to be employed. In this case, we find no rise in separations, indicating that our results are not driven by mean reversion.

[6]By default, ORCID assumes someone is still employed at a school unless manually updated. As a result, employment gaps occur when someone provides an end date for their job without entering a new position. This can occur if someone is unemployed, retired, or moves to industry and chooses not to list the company in their ORCID profile.

Fourth, as discussed in section 2, Georgia also weakened its tenure protections in 2021, albeit not as drastically as Florida. To test whether including Georgia in the sample biases our results, Panel B compares researchers in Georgia to those in the remaining states over time, excluding Florida. Overall, we find no clear evidence of a response to the Georgia policy, suggesting that it did not contaminate our estimates. Together, the placebo checks in Appendix Figure A1 imply that the increase in separation rates was driven by a shock that specifically targeted tenure track faculty in public universities in Florida in the year 2022, which we interpret to represent the impact of the post-tenure review policy.

4.3 Effect on Productivity

It is unclear from the results thus far whether eliminating tenure accomplished its intended policy goal. On one hand, it is costly for employers to fill positions, so a fall in retention is generally a negative outcome. However, the goal of the policy was precisely to terminate the least productive workers, so an increase in separations is to be expected. In this section, we test whether the policy increased productivity by removing unproductive workers, incentivizing more effort, or improving selection of new hires.

Selection in Separations

To begin, Figure 2 explores heterogeneity in separation rates by baseline productivity levels. To measure productivity, we aggregate the total number of peer-reviewed publications and citations that each professor received in the three years between 2018 and 2021. Panels A and B separately estimates the effect on separations for scholars with below and above median citations within their field, respectively. We find that it is the highly cited scholars that are most likely to leave the Florida public university system. Similarly, Panels C and D show that the increase in separations was more pronounced among researchers with above median number of recent publications. Moreover, we find that highly productive workers are leaving even before the first round reviews in 2024, which suggests that these are voluntary moves rather than a result of failing the review. In contrast, we only observe an increase in separations for low productivity professors after the reviews began. Taken together, the estimates indicate that eliminating tenure caused a brain drain effect that exceeded the direct effect of firing unproductive workers, leading to net positive selection in the productivity of leavers.

The brain drain effect is novel given that studies of public school teachers generally find that high-stakes evaluation systems tend to increase voluntary attrition of low-performing teachers (Dee and Wyckoff, 2015; Loeb, Miller, and Wyckoff, 2015; Sartain and Steinberg, 2016; Cullen, Koedel, and Parsons, 2021). From prior studies, it may seem reasonable to

expect that the introduction of post-tenure reviews will similarly cause low-performing professors to leave. However, these reviews introduce two countervailing incentives - they increase the potential punishment for tenured faculty, but they also decrease the potential reward for tenure-track assistant professors. If we assume that the punishment mechanism is only binding for low-productivity tenured professors, and the reward is only binding for high-productivity untenured ones, then the brain drain effect should be driven primarily by younger faculty.[7]

To understand which types of faculty are driving the attrition response, Appendix Figure A2 reports additional heterogeneity analyses by scholars' field of study and demographic characteristics. We highlight five results. First, consistent with the hypothesis that post-tenure evaluations disincentivizes high-productivity early-career researchers, we find that retention falls more significantly for younger faculty, where we infer researchers' age from their first year of employment and separate the sample into those above and below median age in the sample.[8] The results therefore go against the view that eliminating tenure would primarily push out workers past their prime productive years. Second, consistent with the effect being larger for young faculty, we find suggestive evidence that most of the separations is driven by tenure-track assistant professors. To see this more clearly, Appendix Figure A3 disaggregates the estimates into their year-specific effects. The disproportionate response by nontenured professors potentially indicates that early-career researchers are forward-looking, relatively more mobile than tenured faculty, and greatly value a job with tenure prospects.

Third, far more striking than the generational differences in response is that the entire separations effect is driven by researchers in non-STEM related disciplines. One possible explanation for this heterogeneity is that moving costs are larger for lab-based researchers, and academics in STEM may be may concerned about research funding than tenure. Fourth, separations also increased more among white workers than black workers. This suggests that the rise in separations are not driven by other Florida policies targeting diversity, equity, and inclusion in universities.[9] Fifth, we observe no discernible differences in response between men and women. This is somewhat surprising given evidence that in general, couples are more likely to move for the man's career advancement relative the woman's (Jayachandran et al., 2024).

[7]Intuitively, tenured faculty who are very productive do not have the worry about the tenure review. Meanwhile, the new policy would also be irrelevant for unproductive tenure-track faculty who do not expect to receive tenure.

[8]The median researcher started working in 2008.

[9]For example, Florida passed the "Stop Woke Act" in April 2022, prohibiting professors from teaching subjects related to race, gender, and social justice. However, an injunction was placed on the law in November 2022 and then the law permanently nullified in July 2024. As a result, the act was never legally enforced after November 2022.

Productivity of Incumbents

Although highly productive researchers are more likely to leave as a result of the policy, it may nevertheless increase aggregate productivity by incentivizing more effort from stayers. To test for such responses, we estimate our difference-in-difference using the number of publications and number of citations as the outcome variables. Since these are count variables, we compute our estimates using a Poisson regressions to interpret the coefficients in percentage terms while allowing for non-zero values:

$$E[Y_i|X_{it}] = \exp\left[\sum_{\substack{t=2018 \\ t\neq 2021}}^{2024} \beta_t \cdot Florida_i \times D_t + \alpha_i + \gamma_{t,c(i)}\right] \tag{2}$$

Figure 3 reports the effect of the post-tenure reviews on workers' productivity. Panels A shows that, on average, there is no discernible increase in research output or citation counts following the policy's implementation. While the reform did not yield overall improvements in productivity among incumbent faculty, this null result may mask heterogeneity by baseline performance. Since the least productive researchers are at the greatest risk of losing their jobs from the post-tenure reviews, we would expect productivity to increase more for this group.

Panels B and C disaggregate the productivity effects by faculty's baseline productivity, measured by their citation counts in the three years before the enactment of the policy. We find no positive productivity effects even for faculty with below-median citations. Instead, the only indication of an increase in productivity is a temporary uptick in citations among highly cited scholars. This implies that the policy did not improve research productivity, even among faculty members who would have been most incentivized to increase performance under a stricter review regime.

Appendix Table A2 shows the robustness of the null effect on productivity. Across multiple specifications — including models with year fixed effects interacted with tenure status, and job duration — none of the estimated coefficients on the interaction between the Florida indicator and post-policy period are statistically significant. For example, the 95% confidence bounds for our preferred specification in column (4) can rule out increases in the number of publications by more than 3%.

One potential explanation for the muted response in productivity is that three years is insufficient time for increased effort to translate into new publications and citations. To assess whether faculty are increasing the number of early-stage research projects, Appendix Figure A4 explores the effect on unpublished research. We find that the number of preprints

and working papers did not increase post-policy either. These null effects hold across the full sample (Panel A), and among both the low-citation (Panel B) and high-citation (Panel C) subgroups.

Since Florida's policy has no impact on individuals who move out of state, we also explore whether the average productivity of those who remained employed in the Florida public university system increased. Appendix Figure A5 presents results restricted to faculty who stayed from 2021 to 2024. Again, we find no statistically meaningful changes in the number of publications or citations over time, aside from a temporary increase in citations in 2023. Overall, our analysis finds no evidence of systematic improvements in productivity as a result of the post-tenure review system.

Selection in New Hires

An important secondary channel through which post-tenure reviews could influence academic quality is via the hiring pipeline. On the labor supply side, it might improve the quality of applicants if only the most productive researchers are confident in their ability to keep a job in a system without tenure. For example, Kraft et al. (2020) finds that teacher accountability reforms increased the quality of newly hired teachers. However, if the most influential academics value the security of tenure to engage in riskier projects, then post-tenure reviews may lead to lower quality applicants. On the labor demand side, Carmichael (1988) predicts that incumbents would be less willing to hire talented researchers if they worry that the new entrants will replace their jobs.

To study the effect of the policy on the quality of new hires, we turn to our repeated cross-section sample, where each year of the data represents a new cohort of researchers. We measure a new hire's quality by the number of publications and citations they received in the 3 years prior to hiring. To identify the impacts of the policy, we make two adjustments to our difference-in-difference design in equation 2. First, since each individual only appears once in the sample, we no longer control for individual-level fixed effects. Second, it is similarly infeasible to control for year interacted with duration of employment fixed effects since by definition, each person is starting a new job. Instead, our preferred specification will control for state and year-tenured fixed effects.

Figure 4 reports the event study estimates over time. Panel A shows that leading up to 2022, the productivity of incoming cohorts of new hires was trending similarly between Florida and other states. However, after 2022, we observed a marked decrease in the number of prior publications among new hires in Florida. Panel B shows less of a decline in citation counts of new hires, but the estimates are fairly noisy.

Appendix Table A3 summarizes our results and tests their sensitivity to alternative spec-

ifications. Column (1) simply controls for state and year fixed effects, while column (2) allows for differential time trends for tenured and nontenured hires. Columns (3) and (4) repeats the analysis, controlling for university-specific differences. In all cases, we find a significant negative effect on the productivity of new hires ranging from a 13-18% drop in prior publications. Although the estimates for prior citations (Columns 5–8) are also negative, we can not statistically reject a zero effect. On the whole, these results suggest that the pool of new hires in Florida's public universities became less research-productive after the post-tenure review policy was enacted.

5 Conclusion

This paper provides the first empirical evaluation of a major policy reform that weakened tenure protections at public universities by introducing mandatory post-tenure reviews. Leveraging detailed data on faculty employment histories and research output, we find that the policy led to a significant increase in faculty departures from Florida's public universities, primarily driven by highly productive and younger scholars. These exits occurred even before the first review cycle was implemented, indicating anticipatory behavior rather than formal dismissals.

Contrary to the reform's stated goals, we find no evidence that the policy improved academic productivity among incumbent faculty. Measures of publications, citations, and preprints remained flat, including for those most at risk of failing post-tenure evaluations. Moreover, the quality of new hires, as measured by pre-hire research output, declined following the policy's enactment, suggesting a deterioration in the attractiveness of Florida's public universities to top talent.

Taken together, these findings challenge the assumption that weakening tenure improves university performance. Instead, the evidence points to unintended consequences: a loss of top-performing faculty, no gain in research output, and a drop in the caliber of incoming scholars. As other states consider similar reforms, our results underscore the need for caution. Efforts to increase accountability in academia should be carefully designed to preserve institutional competitiveness and long-term research capacity.

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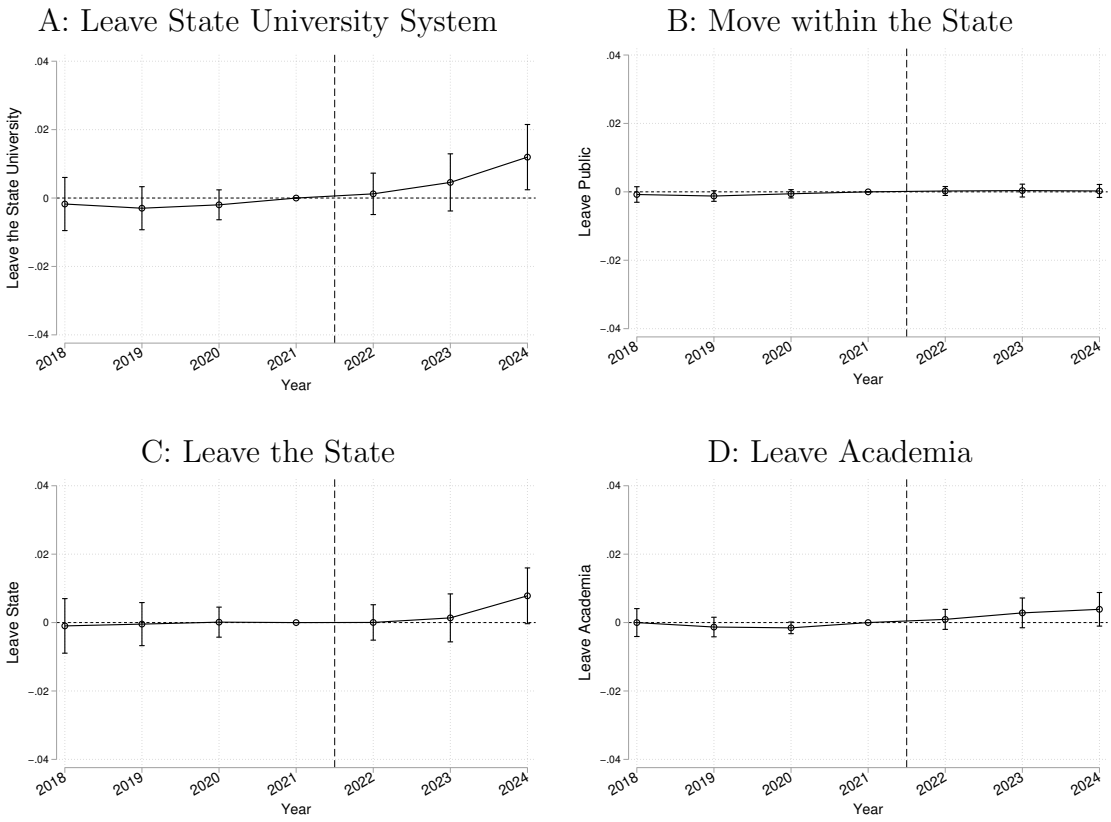
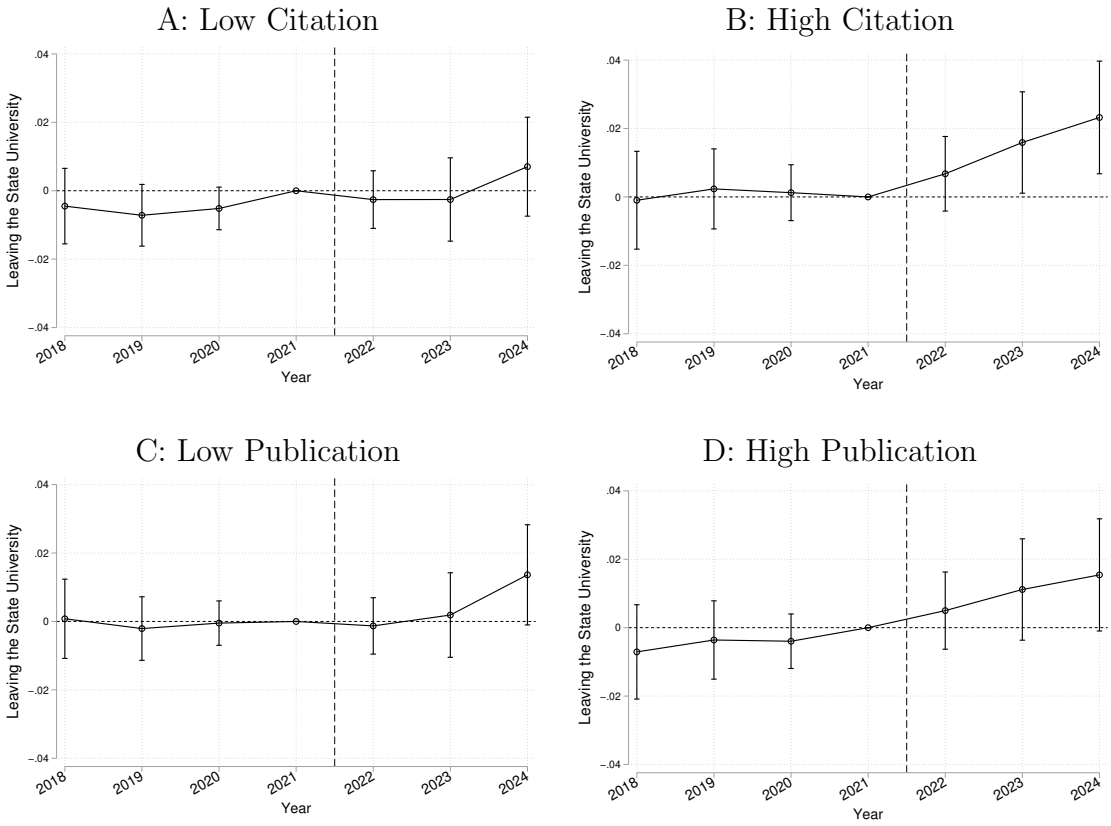
Figures and Tables

Figure 1: Effect of Post-Tenure Review Policy on Retention



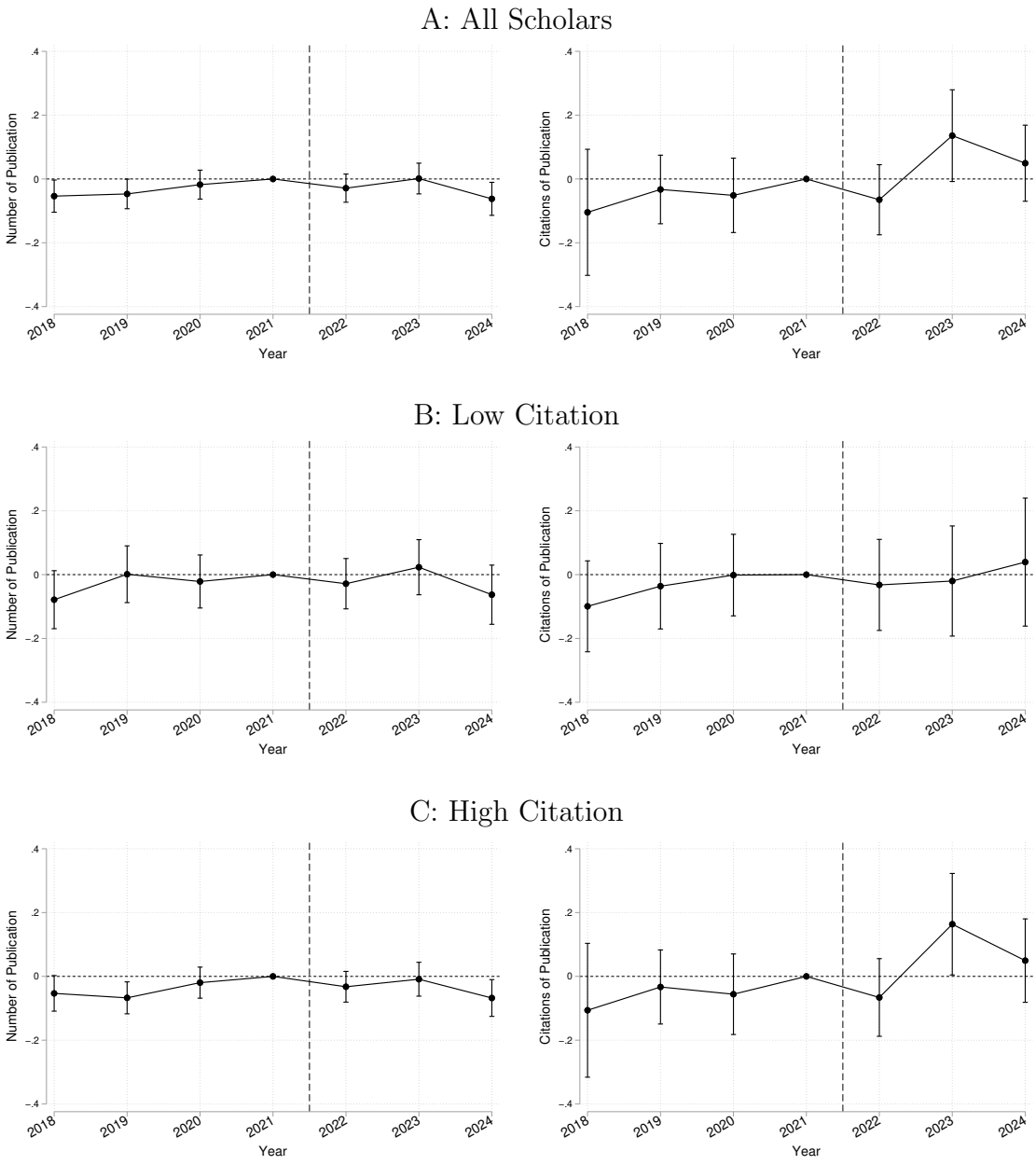
Note: These figures plot the effects of Florida's post-tenure review policy on the retention of tenured and tenure-track faculty at Florida state universities. Panel A shows the effect on leaving the state university system in which the faculty were employed in 2021. Panel B reports the effect on moving to other in-state academic institutions. Panel C shows the effect on relocating to out-of-state academic institutions. Panel B presents the effect on exiting academia. All estimates include 95% confidence intervals based on standard errors clustered at the individual faculty level.

Figure 2: Heterogeneous Effects on Retention by Baseline Research Productivity



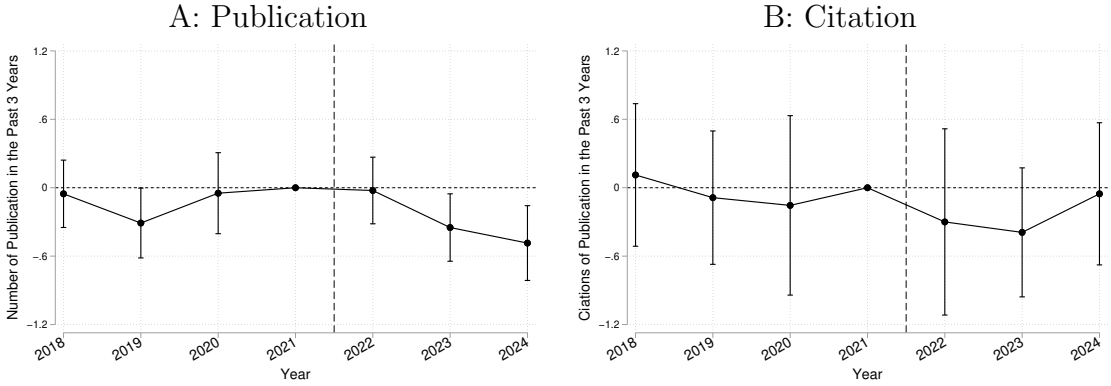
Note: These figures plot the heterogeneous effects of Florida's post-tenure review policy on the retention of tenured and tenure-track faculty at Florida state universities. Panels A and B show the effect for faculty with below-median and above-median citation counts during 2018–2021, respectively. Panels C and D report the effects for faculty with below-median and above-median publication counts during 2018–2021, respectively. All estimates include 95% confidence intervals based on standard errors clustered at the individual faculty level.

Figure 3: Effect of Post-Tenure Review Policy on Research Productivity



Note: These figures plot the effects of Florida's post-tenure review policy on the research productivity of tenured and tenure-track faculty at Florida state universities. Panel A shows the effect on the number and citation of publications for all faculty members. Panels B and C show the effects separately for faculty with below and above median citation counts, respectively. Estimates are computed using Poisson regressions. All estimates include 95% confidence intervals based on standard errors clustered at the individual faculty level.

Figure 4: Effect of Post-Tenure Review Policy on the Quality of New Hires



Note: These figures plot the effects of Florida's post-tenure review policy on the quality of incoming tenured and tenure-track faculty at Florida state universities. Panel A shows the effect on quality measured by the number of publications in the year of hire and the two preceding years. Panel B shows the effect on quality measured by citations to those publications. Estimates are computed using Poisson regressions. All estimates include 95% confidence intervals based on standard errors clustered at the individual faculty level.

Table 1: Effect of Post-Tenure Review Policy on Retention

	Probability of Leaving the State Universtity			
	(1)	(2)	(3)	(4)
Florida × Post	0.0099**	0.0094**	0.0082*	0.0076*
	(0.0047)	(0.0047)	(0.0043)	(0.0043)
Baseline Mean	0.0392	0.0392	0.0392	0.0392
Individual FE	Yes	Yes	Yes	Yes
Year FE	Yes	No	No	No
Year × Tenured FE	No	Yes	No	Yes
Year × Duration FE	No	No	Yes	Yes
Number of Obs	89173	89173	89138	89138

Note: This table reports difference-in-differences estimates of the effect of Florida's post-tenure review policy on the probability that incumbents leave the state university system in which the they were employed in 2021. The treatment group consists of tenured or tenure-track faculty at Florida state universities, and the control group includes their counterparts at other South Atlantic state universities. Column (1) includes individual and year fixed effects. Column (2) adds controls for year interacted with tenure status. Column (3) controls for the duration of the position held in 2021. Column (4) includes both the year × tenured and year × duration controls. Robust standard errors are clustered at the faculty level. Statistical significance: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

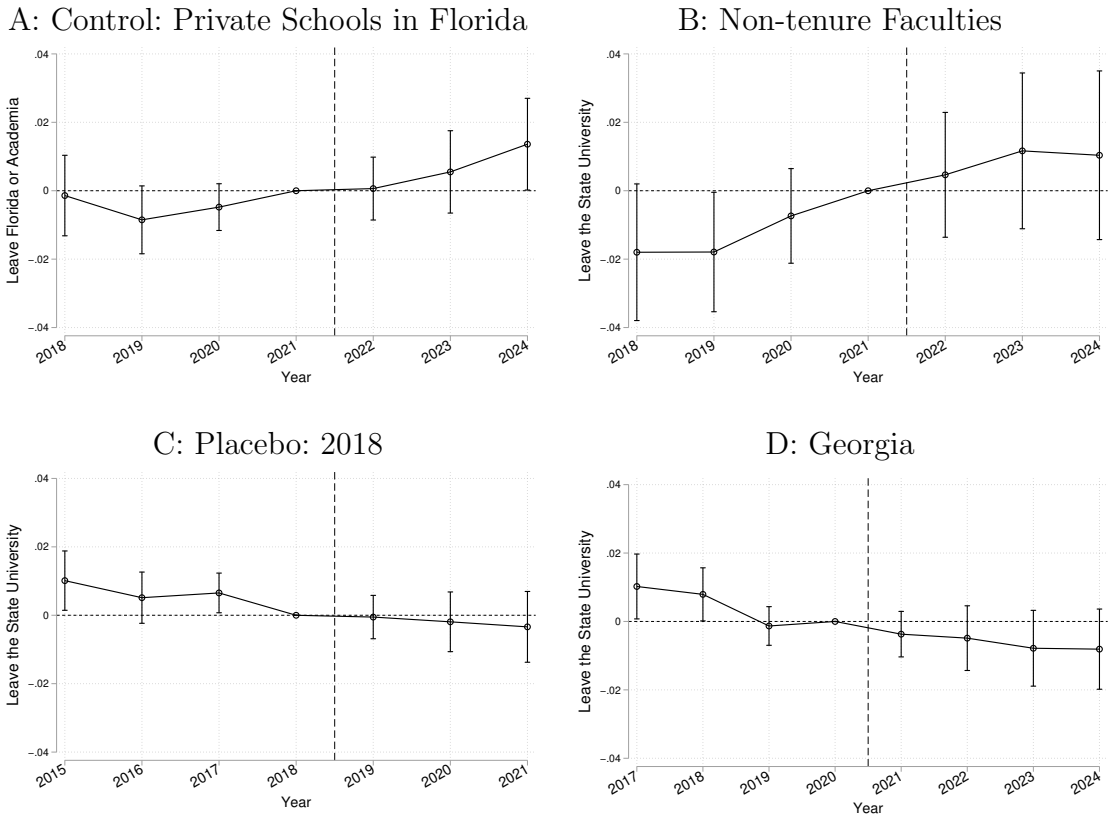
Appendix A Additional Figures and Tables

Table A1: Descriptive Statistics

	Treatment		Control		T − C
Baseline (2018-2021)	Mean	St. Dev.	Mean	St. Dev.	Difference
Not at State University	0.0392	0.1410	0.0433	0.1488	−0.0041
Number of Pub	14.9870	19.1300	12.5548	16.8695	2.4322***
Number of Cite	399.2801	969.0978	397.6514	1396.1654	1.6287
White	0.5513	0.4975	0.5901	0.4918	−0.0389***
Men	0.5085	0.5000	0.5064	0.5000	0.0021
Women	0.2892	0.4535	0.3125	0.4635	−0.0233**
STEM	0.8612	0.3458	0.8416	0.3651	0.0196**
First Year	2005.4779	10.5292	2005.7420	10.3578	−0.2641
Assistant Professor	0.2829	0.4505	0.2953	0.4562	−0.0123
Number of obs	2877		9862		

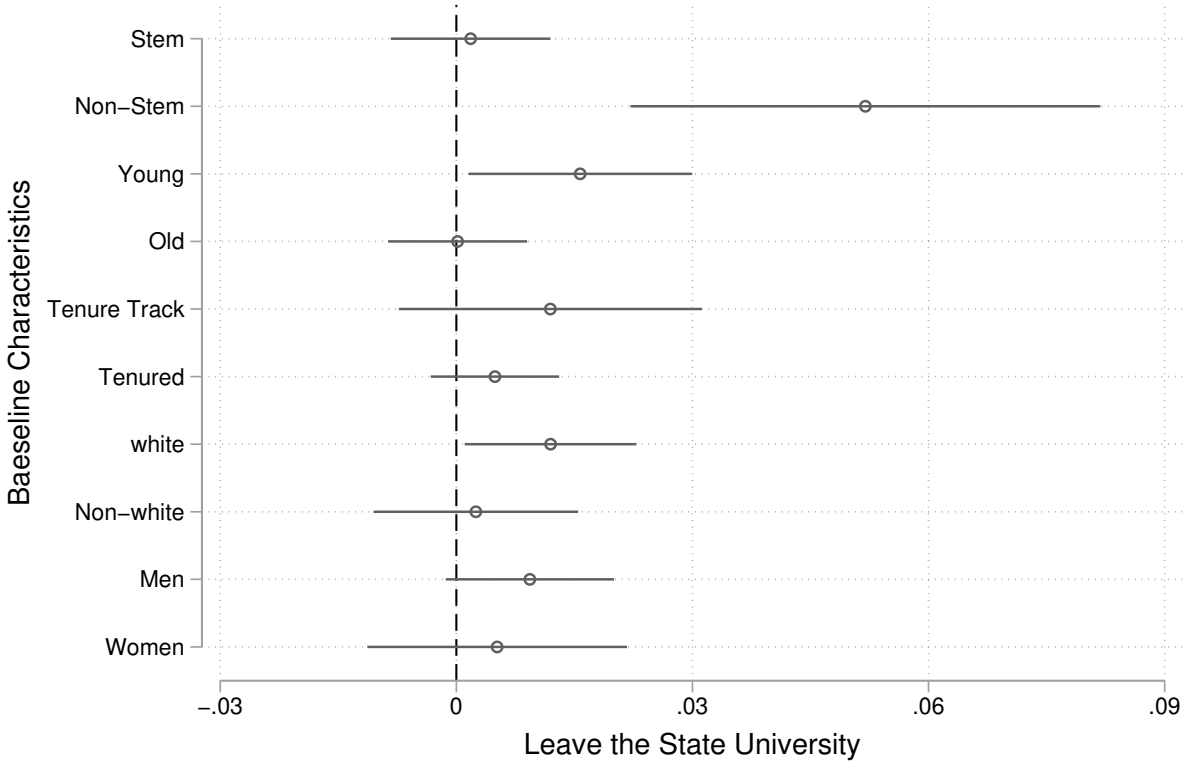
Note: This table summarizes baseline characteristics for tenured and tenure-track faculty during the pre-treatment period (2018–2021). The treatment group contains researchers employed at a Florida state university in 2021, and the control group comprises of researchers at public universities in the South Atlantic Region, excluding Florida. Row (1) reports the share of faculty not working at the state university system in which the faculty were employed in 2021. Rows (2) and (3) show the number of publications and citations, respectively. Rows (4)–(7) present the percentage of faculty who are white, men, women, and STEM majors. Row (8) shows the average year in which individuals began their first job. Row (9) reports the percentage of assistant professors. Column (5) shows the difference between the treatment and control groups. Statistical significance: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Figure A1: Effect of Post-Tenure Review on Retention, Placebo Checks



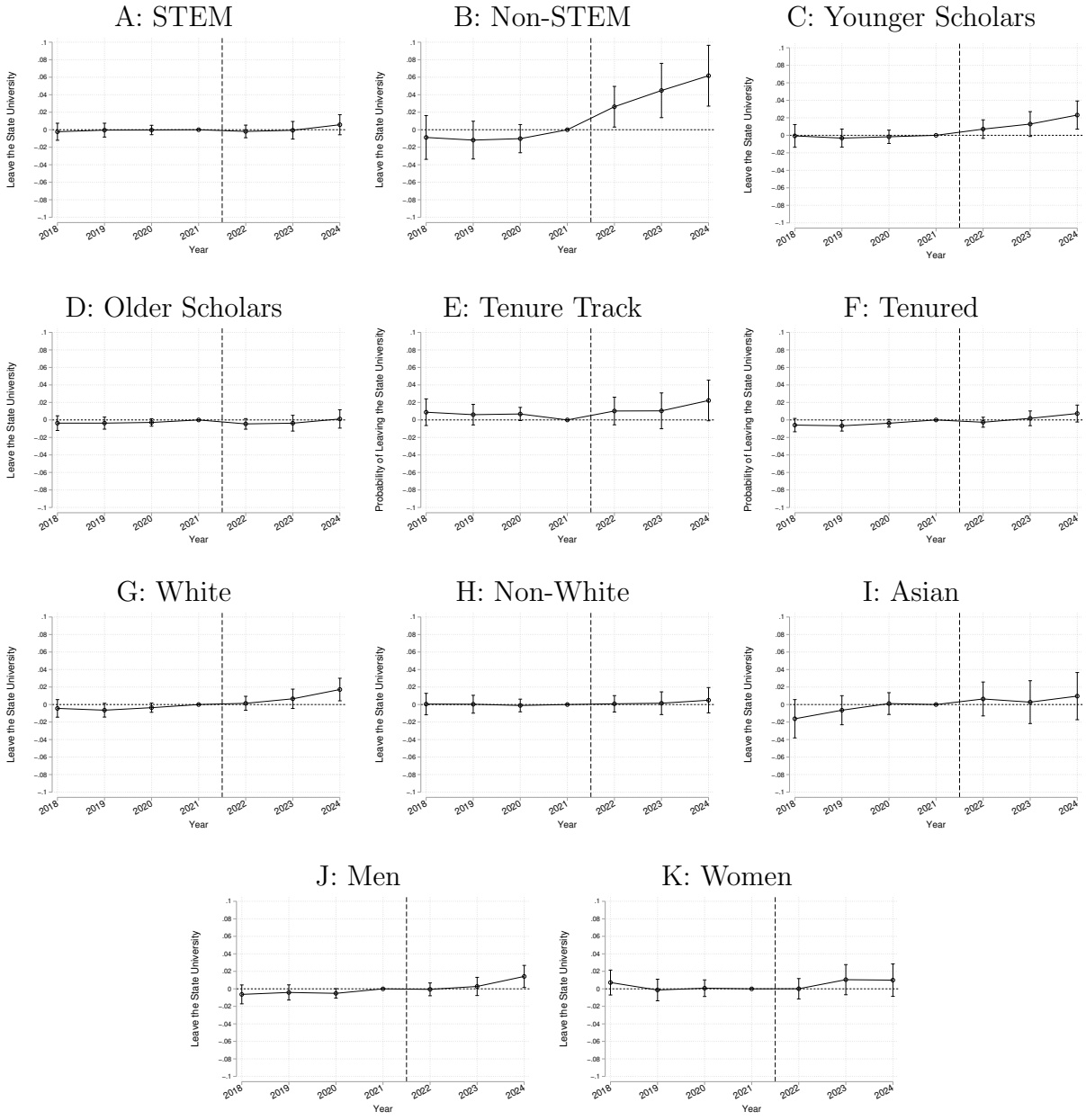
Note: These figures present robustness and placebo checks for the estimated effects of Florida's post-tenure review policy on the retention of tenured and tenure-track faculty at Florida state universities. In Panel A, the treatment group includes tenured and tenure-track faculty at Florida state universities, while the control group consists of the counterparts at private universities in Florida. Panel B reports effects for non-tenure-track faculty. Panel C repeats the analysis of Figure 1 using 2018 as a placebo treatment year. Panel D compares faculty in Georgia state universities to those in other South Atlantic universities, excluding Florida. All estimates include 95% confidence intervals based on standard errors clustered at the individual faculty level.

Figure A2: Heterogeneous Effects on Retention by Baseline Characteristics



Note: This figure plots the heterogeneous effects of Florida's post-tenure review policy by baseline characteristics: STEM vs. non-STEM majors, above-median vs. below-median career starting year (i.e. younger vs. older), white vs. non-white, and men vs. women. All estimates include 95% confidence intervals based on standard errors clustered at the individual faculty level.

Figure A3: Heterogeneous Effects on Retention by Fields and Demographics



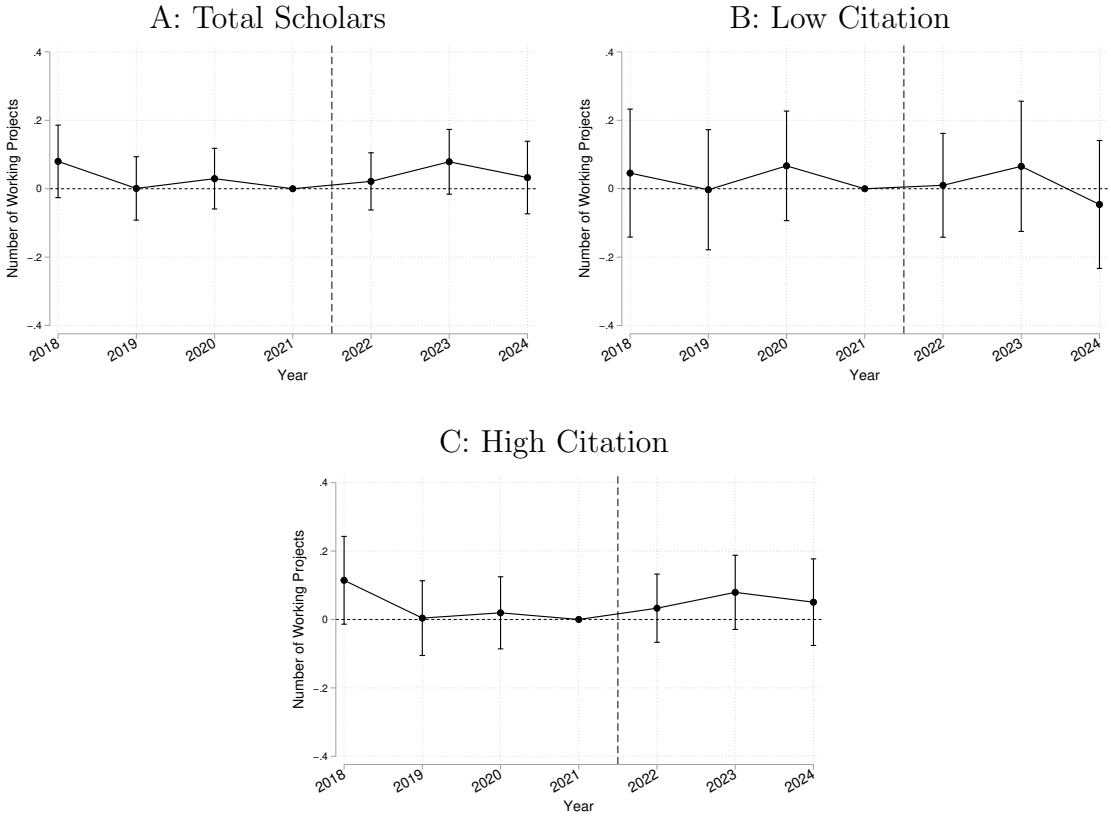
Note: These figures plot the heterogeneous effects of Florida's post-tenure review policy on the retention of tenured and tenure-track faculty at Florida state universities. Panels A–I present estimates separately for faculty in STEM and non-STEM fields; those with below- and above-median career starting years (younger vs. older); White and non-White faculty; Asian faculty; and by gender (men vs. women). All estimates include 95% confidence intervals based on standard errors clustered at the individual faculty level.

Table A2: Effect of Post-Tenure Review Policy on Research Productivity

	Number of Publication				Citations of Publication			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Florida × Post	0.0118	0.0090	−0.0004	0.0002	0.0783	0.0747	0.0650	0.0644
	(0.0176)	(0.0172)	(0.0163)	(0.0162)	(0.0485)	(0.0477)	(0.0458)	(0.0452)
Individual FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	No	No	Yes	No	No	No
Year × Tenured FE	No	Yes	No	Yes	No	Yes	No	Yes
Year × Duration FE	No	No	Yes	Yes	No	No	Yes	Yes
Number of Obs	72072	72072	72041	72041	69601	69601	69577	69577

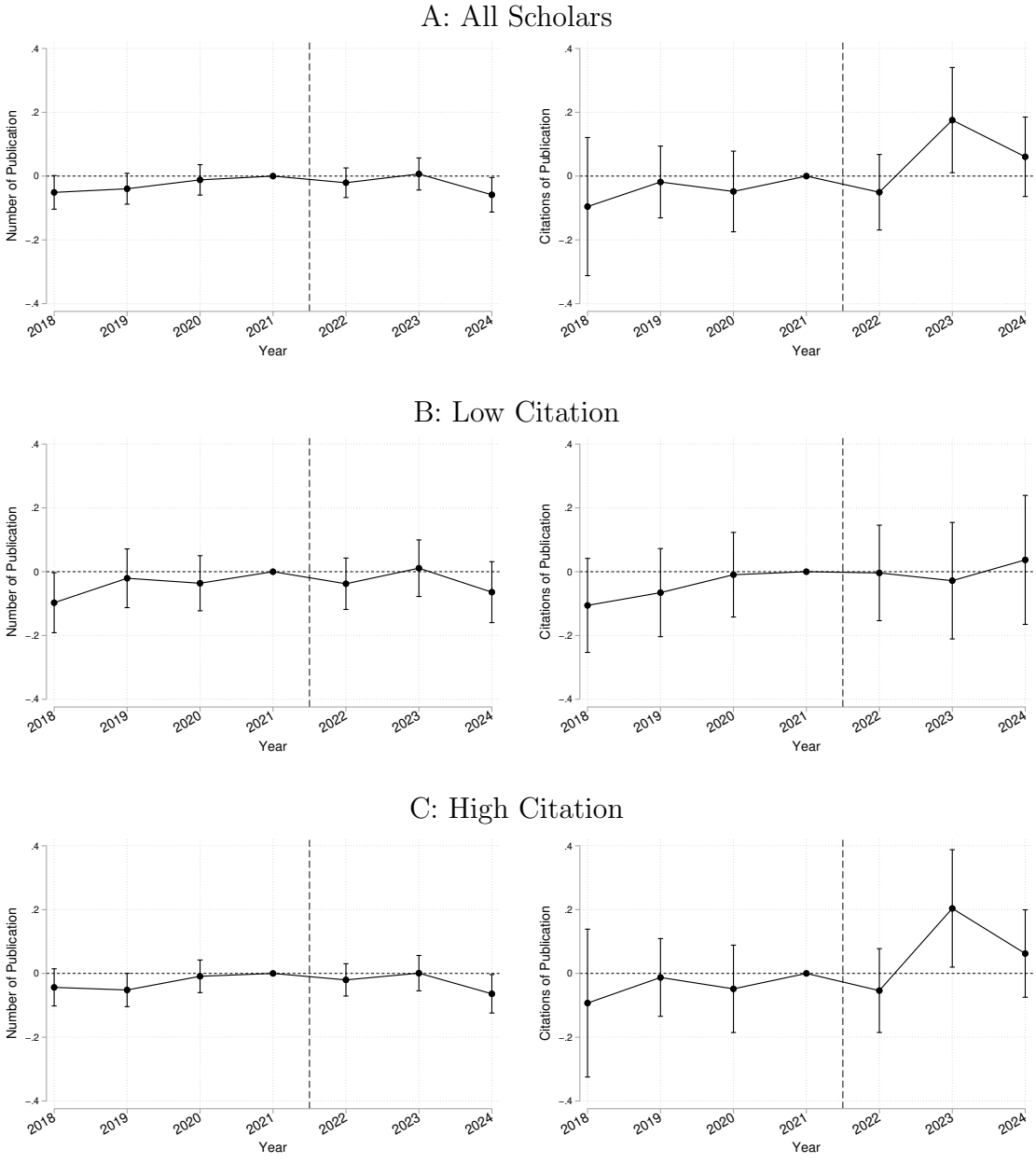
Note: This table reports difference-in-differences estimates of the effect of Florida's post-tenure review policy on research productivity. The treatment group consists of tenured or tenure-track faculty at Florida state universities, and the control group includes their counterparts at other South Atlantic state universities. Columns (1) to (4) report the estimates on the number of publication and columns (5) to (8) reports the results on the citations to those publications. Columns (1) and (5) includes individual and year fixed effects. Columns (2) and (6) adds controls for year interacted with tenure status. Columns (3) and (7) controls for the duration of the position held in 2021. Columns (4) and (8) includes both the year × tenured and year × duration controls. All estimates are computed using Poisson regressions. Robust standard errors are clustered at the faculty level. Statistical significance: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Figure A4: Effect of Post-Tenure Review Policy on Productivity (Unpublished Works Only)



Note: These figures plot the effects of Florida's post-tenure review policy on the research productivity of tenured and tenure-track faculty at Florida state universities. Panel A shows the effect on the number of unpublished research (i.e. preprints and proceedings) for all faculty. Panels B and C show the effect on the number of unpublished research for faculties with below-median and above-median citation counts during 2018–2021, respectively. Estimates are computed using Poisson regression. All estimates include 95% confidence intervals based on standard errors clustered at the individual faculty level.

Figure A5: Effect on Research Productivity of Stayers



Note: These figures plot the effects of Florida's post-tenure review policy on the research productivity of tenured and tenure-track faculty, who remained employed at Florida state universities from 2021 onward. Panel A shows the effect on the number and citation of published research for all faculty. Panels B and C shows the effect on faculty with below-median and above-median citation counts during 2018–2021, respectively. All estimates are computed using Poisson regressions. All estimates include 95% confidence intervals based on standard errors clustered at the individual faculty level.

Table A3: Effect of Post-Tenure Review Policy on the Quality of New Hires

	Number of Publication in Recent 3 Years				Citations of Publication in Recent 3 Years			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Florida × Post	−0.1817**	−0.1370*	−0.1638**	−0.1326*	−0.3586	−0.3072	−0.3822	−0.3432
	(0.0739)	(0.0716)	(0.0716)	(0.0695)	(0.2514)	(0.2460)	(0.2702)	(0.2601)
State FE	Yes	Yes	No	No	Yes	Yes	No	No
University FE	No	No	Yes	Yes	No	No	Yes	Yes
Year FE	Yes	No	Yes	No	Yes	No	Yes	No
Year × Tenured FE	No	Yes	No	Yes	No	Yes	No	Yes
Number of Obs	6427	6427	6425	6425	6427	6427	6425	6425

Note: This table reports difference-in-differences estimates of the effect of Florida's post-tenure review policy on the quality of incoming faculty. The treatment group consists of newly hired tenured or tenure-track faculty at Florida state universities in each year, and the control group includes their counterparts at other South Atlantic state universities. Columns (1)–(4) show effects on research quality measured by the number of publications in the year of hire and the two preceding years. Columns (5)–(8) report effects based on the number of citations to those publications. Columns (1) and (5) include state and year fixed effects. Columns (2) and (6) include state fixed effects and year interacted with tenure status fixed effects. Columns (3) and (7) control for university and year fixed effects. Columns (4) and (8) include university fixed effects and year interacted with tenure status. All estimates are computed using Poisson models. Robust standard errors are clustered at the faculty level. Statistical significance: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.