BRIDWELL INSTITUTE WORKING PAPER SERIES

SMU Bridwell Institute for Economic Freedom

Coming Apart at the Seams: Exogenous Shocks to the Already Fraying Camp

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Coming Apart at the Seams:
Exogenous Shocks to the Already Fraying Campaign for Gender Equality in the US Workforce

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Bridwell Institute for Economic Freedom
Cox School of Business
Southern Methodist University
October 2023

Acknowledgements:

The Authors thank Michael W. Tolhurst for his advice and bibliometric support during this paper. Further, we thank the participants of the Economic Freedom and Women Project at the Bridwell Institute for Economic Freedom at Cox School of Business at Southern Methodist University for their helpful comments and the Bridwell Institute for its generous support of this research. The authors are fully responsible for any remaining errors.

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While much progress has been made in gender equality in the United States' workforce, many of the policies that bolster this do not address the root issues at play and instead, create a precarious situation where this equality is fraught with uncertainty. Furthermore, this precarious nature is worsened when exogenous shocks occur, causing major setbacks in gender equality. While on paper, it often appears that women can "have it all," this is not how it works in practice.

Whether it is attributed to personal choice or societal pressure, women take on roles in society that conflict with their roles in the workforce (Goldin 2021 p. 152). While policies exist to assist in the hiring, retention, and career success of women in the workplace, these policies often address the short-term effect of these roles without addressing the ultimate conflicts that are hindering progress (see Goldin 2021 p. 155). In some cases, such as parental leave in academia, the policies appear to help but do not actually benefit women and sometimes worsen the gender divide (Antecol, Bedard, and Stearns 2018 pp. 2429-30).

Additionally, in situations where all else is equal, there are still gaps between the genders in the labor market. For example, women who have graduated from MBA programs earn less money than men who have graduated from MBA programs (Goldin 2021 p. 161). This is still true in

cases where the women do not have children and the men do (id.) With these cracks already showing in gender equality, an exogenous shock, such as COVID-19, would expose the weakness of these policies and show how fragile this equality really is. Early research already suggests that government shutdowns during COVID-19 negatively affected the employment and career advancement of women disproportionately (Albanesi and Kim, 2021;).

Research has measured the overall impact of the COVID-19 pandemic on women's careers in different industries; however, not as much work has been done on the structural issues and governmental policies behind this impact (Clapp, 2023). Furthermore, some of the efforts to mitigate this impact ignore the previous literature about the effectiveness of gender equality policies.

Due to traditional gender roles, the unequal burden of caregiving placed on women, and unmeasured emotional labor, the pandemic disproportionately affected women in the workplace (Alon, et al 2020). While in some industries, men's productivity has increased, women's self-reported productivity during covid often dropped along with their job satisfaction levels. Moreover, some government responses affected women more severely than others. For example, the shuttering of schools and lack of childcare options disproportionately impacted women's ability to participate full-time in the workplace. This instability in support services exacerbated job disruption and created regulatory uncertainty by preventing mothers from predicting availability each workday.

We hypothesize that regions/state governments that had a more risk-averse approach to the pandemic resulted in more disruption, re-shuttering schools and childcare during outbreaks. As a result, we expect that working women with children in these more restrictive states will have a decline in employment, pay, and promotions as they return to the workplace. After a review of the literature, efforts to measure the ultimate impact of the pandemic are premature. Not enough time has passed from the start of the pandemic to see the full consequences to careers. As a result, we cannot fully test our hypothesis at this point. However, we can point to short-term factors that signal longer-term disruptions and compare the current policies to historical efforts to predict the likely effects.

Our paper uses academe as an industry case study to compare pandemic policies to identify what factors resulted in greater harm to women's careers. We focus on academia because the industry demonstrates an ideological commitment to women/minority employment compared with many industries. It also tends to be a more flexible career, incorporating significant remote work and work hours. Additionally, it is a profession that has clear milestones by which to measure progress. By identifying problematic factors and policies, we can adjust future policy proposals and address deep structural issues to reduce inequality within industries. We examine current policies and predict whether we could expect broader employment changes post-pandemic, or whether policies still need to be adjusted for women workers to recover. Finally, we offer next steps for this project based on career milestones we will measure in the future.

Demand for women's labor

In evaluating women's employment trends, it is important to consider both the demand and the supply decisions of those involved in the labor market. For any potential worker, the decision to seek paid labor depends on many factors. Similarly, the decision by any employer to hire that worker depends on their valuation of the worker's potential productivity relative to the wage and benefits required to attract that worker. Factors that impact an employer's valuation decision of an employee could include her personal characteristics, education levels, reliability, flexibility, as well as relevant job skills. These valued characteristics will be balanced off against the cost of employing her in terms of wages and benefits.

We might ask whether employers value women employees similarly to their male counterparts. Assuming that a woman can perform the job as well as her male counterpart, the employer would choose to employ her unless the wage/benefits costs are higher. Employers who choose to avoid more talented or productive female employees for non-job-related reasons such as discrimination may well find themselves at a competitive disadvantage to their non-discriminating competitors. The question is, are there real or perceived differences in valuation associated with gender. Some of the possible differences that might raise costs of women employees relative to men include women's greater desire/need for flextime or part-time hours **and** leave for maternity, childcare, or elder care (M. Thomas, 2016; Post, 2015); and **possibly** higher healthcare costs (Bertakis, et. al, 2010).

There are also several positives associated with women employees that may influence hiring and promotion decisions. These include female employees' higher skills for supporting other employees through mentorship and teamwork, obtaining higher education levels, having strong interpersonal skills, as well as the social and creative benefits of a more diverse workforce (McKinsey & Company and LeanIn.org 2022).

In a completely free market, employers would make decisions based on their evaluations of these costs and benefits, but there are social considerations and regulations that may impact these individual employment decisions. Many labor policies restrict an employer from considering differences based on gender/sex, while other policies seek to reduce other gender costs such as leave and childcare (Klev**e**n, et al, 2020).

Additionally, there may be broader social gains for an employer resulting from increasing gender equity in their workforce. Several companies such as Salesforce, Accenture, IBM, and Intel have launched very visible campaigns to promote gender equity in their workforce including bias training and parental leave. These outward facing efforts to highlight their campaigns suggest an expected social benefit from their gender inclusiveness policies that goes beyond any internal improvements in their workforces. Virtually all of these gender-friendly campaigns were established when the technology sector was booming. Now that employment in this sector is slowing, there is some evidence that maintaining this commitment may be more challenging. Data from the current downsizing in the tech industry suggests women and

minorities are disproportionately vulnerable to layoffs despite years of efforts to recruit these workers (Revello Labs, Inc. 2023). Women faced almost 50% of the layoffs despite being less than 30% of the workforce (Khan, 2022: US Chamber of Commerce, 2022). One possible explanation is the greater proportion of women in part-time roles, particularly voluntary part-time workers. When the pandemic hit, part-time workers were more vulnerable to layoffs than full-time employees (BLS, 2023).

Supply-side Considerations.

In deciding to seek employment in the paid sector, women's decision calculus regarding work may also differ somewhat from their male counterparts. Past employment patterns suggest this is true. Women frequently move in and out of the labor force relative to family events such as childbirth and children in early childhood, summer school breaks, and elder care of parents (Goldin and Mitchell, 2017; Goldin, 2021; BLS, 2022). Likewise, women frequently support work demands of their partners by moving for their spouses' job relocation or seeking part-time work to be available for various family needs. Thus, in considering whether to offer up their labor in the paid market, women may have to consider it relative to a competing value of unpaid work in the family. A 2014 OECD study suggests the value of unpaid work is not an insignificant value worldwide. "According to some studies, if included, unpaid care work would constitute 40% of Swiss GDP and 63% of Indian GDP (OECD, 2014)." Because we do not measure this explicitly, it is harder to evaluate the economic rationality of women's labor decisions relative to men.

For each individual, however, we posit that the decision to work (supply of labor) is a result of her perceived value of work (financial and other benefits) less the costs she incurs in working. These costs include childcare, lost value of parenting time, social/leisure time, commuting time, work expenses, family tradeoffs, etc. Women may value any of these costs and benefits differently than men and thus, make different decisions to enter or stay in the workforce (Goldin, 2021).

Overall labor participation by gender

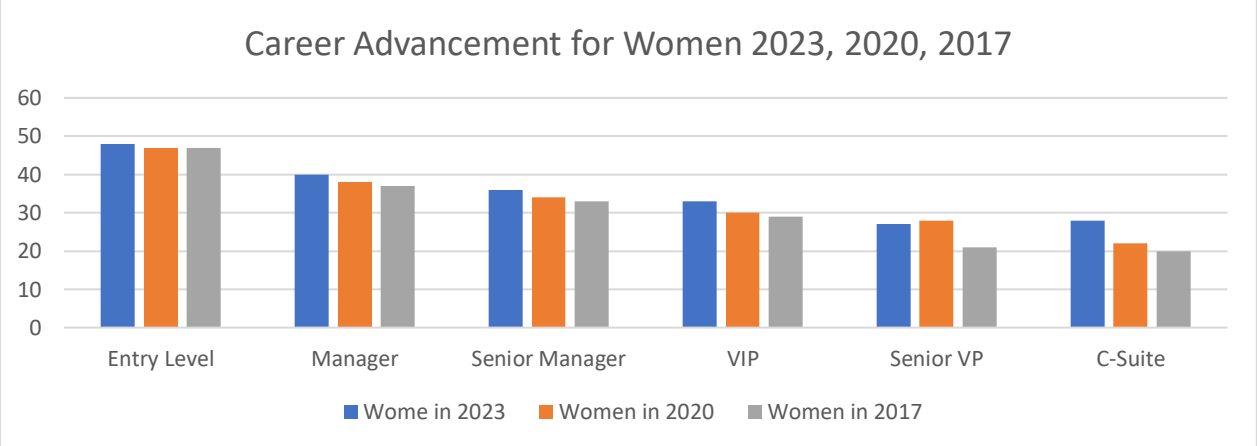
Women participation in the U.S. labor force, as measured by the proportion of all women, has increased over the past seventy years. Recently, however, it has plateaued at a slightly lower rate than its peak at the turn of this century. Since 1950, prime age women's participation grew significantly from 1970 to 1985 and then has maintained consistent levels except during post-recessionary periods and during the COVID shutdowns. Even older cohorts show more moderate but steady growth and may suggest that women are choosing to work for more years than they did earlier in response to better opportunities.

Despite a general trend of more women working outside the home, there is wide variety of women's labor force participation across the United States according to data from the Women's Bureau at the Dept of Labor. Rates differ by age cohort, location, family structure, and education-levels (BLS 2023). Clearly, within the broad gender policies of the US there are

significant economic, demographic, and cultural/preference differences that impact women's employment decisions. Policies that assume a one-size fits all approach are unlikely to be successful across the full spectrum of occupations and life-circumstances which women face. This challenges any simple policy intended to assist women in reaching economic parity.

In addition to overall employment participation rates, we might also examine how patterns of career advancement for women have changed over the years to consider how COVID shutdowns may impact their future promotions and representation in leadership positions. In an ongoing study by the organization, Leanin.org and McKinsey and Company consultants, a differential in women's promotion up through the ranks of corporate management relative to men continues despite recent gains (Women at Work, 2023**)**. While women represent nearly equal proportion in entry level positions (48%), their ranks shrink as they move through the corporate structure to minority status in highest leadership roles (See Figure 1). Women now fill 28% C-suite positions and while the representation in the top ranks has increased quickly over the last decade, the data indicates a troubling gender gap at the first ranks of advancement. As fewer women move on to the next rungs of the promotion ladder, the prospects for continued gains declines. Women who faced multiple pressures of home, family, and employment during the pandemic sought flexibility over promotion. As a result, they may have missed critical opportunities to move onto those first steps of the advancement ladder (Women at Work 2023). This comes at a time when women are expressing increased career ambition, particularly under conditions of greater flexibility in employment. It is feared that any gender difference in remote work or extended gaps in employment brought about during COVID might undo the gains that have been made over the last decade, especially if entry level women are not moving up into middle ranks at as fast a pace as before. Similar differentials exist across most industries, including academe, where the early career move to tenured associate can impact an entire career trajectory.

Figure 1



Data from Women at Work, 2023, LeanIn.org

Even before COVID, women faced challenges in gaining equity in promotion opportunities. As suggested, women are more inclined than men to trade-off success at work for additional time with family or to play a supportive role for an advancing partner, especially when there is an asymmetry in their earning level (Goldin and Katz, 2017; Klepner, et al, 2020). The question we examine here is to what extent this pattern changed in response to COVID-19 policies and what effect these changes may have on broader goals of women's employment going forward. In the next section, we turn to this question to evaluate how government and employers' COVID responses changed women's calculus regarding paid employment and career advancement.

Gender differences during COVID job loss:

Women faced disproportionate job losses during the pandemic compared with men and their recovery back into the workforce has been slower (Clapp, 2023; BLS, 2023). There are several reasons for this. Women dominate several sectors that faced immediate layoffs at lockdown and some of the greatest losses over the course of the pandemic—travel industry, restaurant work, and retail all suffered large layoffs and closures in initial state actions. These occupations could not go remote easily and, as a result, the layoffs included virtually entire sectors impacting women disproportionately. In other sectors of the economy such as service and clerical positions, women fared better as they were initially able to work remotely. But, of course, remote work came with its own set of problems disproportionately felt by women. Compared to only 14 percent of men, 44 percent of women reported being the only one in the household providing childcare and educational assistance at a time when schools and childcare centers were closed. This was especially true for mothers of young children as Febrizio, Gomes, and Tavares, 2021, demonstrate. They coin the term She-cession to suggest the disproportional impact on women, especially mothers, associated with the COVID-19 recession. As they explain using the U.S. monthly Current Population Survey data:

> Less educated women with young children were the most adversely affected during the first nine months of the crisis. The loss of employment of women with young children due to the burden of additional childcare is estimated to account for 45 % of the increase in the employment gender gap, and to reduce total output by 0.36% between April and November 2020 (Fabrizio, et al, 2021)

They found the impacts of Covid disruptions were greatest for lower income women and minorities in industries facing lockdowns. Of course, there also were positive incentives in government policies for these women to stay home. Economic policies such as those that provided bonus unemployment payments operated as a greater positive incentive for lower income workers than their higher income counterparts and perhaps encouraged female workers, especially mothers, to opt for staying home.

The long lockdowns and school closures had a cumulative effect on the gender employment gap even beyond the early groups job losses. Over time, the challenge of online schooling impacted more highly educated and professional mothers who might have been able to work remotely but chose to cut back as they became aware that their children were not making

adequate progress with unsupervised online learning (Gallup, 2022). As a result, even without layoffs, mothers opted for less paid employment during the COVID-19 pandemic. We argue that the COVID gender gap is a result of both these broader gender employment trends and the disproportional gender effects associated with enhanced unemployment and restrictions such as school closures which states employed.

According to analysis by Gallup and The Bureau of Labor Statistics, this COVID-19 pandemic gender gap, while moderate early on, grew as the pandemic continued. Because of the timing of the initial COVID 19 shutdowns, women, especially those with children, were already moving into summer routines of reduced employment and fewer hours. Thus, the initial impact of job loss and reduced hours were somewhat hidden. Certainly, the large number of women involved in K-12 education who return home during the summer months to care for their own families meant that any disproportionate effect in women's employment would not be immediately seen in the aggregate employment levels. However, as the shutdowns wore on, particularly with school and childcare closures, the gap between men and women's employment grew larger and the pace of recovery for women continued to lag during 2021 (Clapp (2023; BLS 2022). With unpredictable school closures the need for flexibility meant parents made employment choices that seemed to exacerbate the gender participation gap beyond its normal pattern. The question remains how much this disruption will carry over into longer trends.

Losses broken down by parental status reflect a longer-standing pattern of asymmetric responsibilities for mothers which was well-documented prior to COVID (Goldin, 2021). However, these differences were made worse by the sudden loss of services such as childcare which were intended to facilitate greater employment opportunities for women. Specifically, government-provided schools and childcare services were closed right when women needed them most. And these services were kept closed longest in those states whose past policy agendas had advocated most for greater equality for women in the labor force. The consequence of these policy changes was a dramatic increase in self-reported persistent burnout by women, reaching a level of 42% for women in 2021, up from 32% in 2020 (McKinsey and LeanIn.Org, 2022).

Interestingly, as we entered year two of the pandemic, the worry regarding childcare and education overtook the economic arguments that impacted decisions to leave work early on. Perhaps it was the performance issues of children which concerned mothers charged with a higher role in their children's development. In reaction, families sought alternatives such as cooperative pods, private schools, and tutors to limit the educational loss (Meckler 2023; Horn 2021). Each of these options required greater time or monetary commitments from parents simply to maintain existing achievement levels. As noted, this fear was greatest for more educated women whose educational goals for their children were threatened by extended periods of sub-optimal schooling. Pew found the gender gap in work hours reduction is the largest among college-educated parents of young children (28 percentage point difference between highly educated mothers and fathers). Women chose to work less to prevent the loss and their partners often picked up hours to compensate for these family financial losses.

Table 1: Main reasons for not working by Gender 2020 and 2021

Reason for not being in labor force	Women (25-55) with children	Men (25-55) with children	All Women	All Men
April 23-May 5 2020				
Economic Reason	47	62	37	44
Care for Children	23	11	8	2
Personal Health Reason	7	8	7	6
Concern for getting COVID	-	-	-	-
Care for elderly person	1	2	2	1
Retired	1	1	31	32
Other	16	13	12	10
January 6-18 2021				
Economic Reason	23	36	16	22
Care for Children	28	12	8	3
Personal Health Reason	14	20	10	11
Concern for getting COVID	5	6	4	7
Care for elderly person	3	3	3	2
Retired	1	2	37	36
Other	22	19	17	15

Source: U.S. Census Bureau Household Pulse Survey

For women who stayed in the workforce, the challenge of more family responsibilities, the requirements of adapting to remote work, and a disproportionate (compared with men) fear of COVID-19 resulted in even greater levels of burn out during 2022 (Gallup/BLS 2022 and Women at work, 2023). One of the results is a slower transition back into the workforce and a desire to spend more hours in remote work even now as children are back in school and childcare (Gallup/BLS 2022). This adds to the already significantly higher levels of part-time work by women compared with men. Over twice as many women work parttime positions (US Chamber of Commerce Employment Study, 2023). Since these parttime positions are often more vulnerable to changes in the economy, again this marks an additional challenge in equality in pay and advancement.

During the crisis, still working women were indeed more likely to press for reduced hours and/or seek part-time employment to compensate for the additional responsibilities with school, childcare, and housework duties during lockdown (You Gov, 2022). But, these personal pressures, while significant, may not be the only factor explaining those who left the workplace during COVID 19. As states implemented restrictive stay at home orders, the federal

government stepped in with increased unemployment benefits. These enhanced payments meant that the lowest income workers faced an economic bonus for staying home. Since women are often the second income in households with partners and children, the decision to leave work for increased home/family duties was economically rational for families on all sides. These payments meant that the full cost of reduced employment during COVID lockdowns were reduced, allowing more women to make this choice.

However, what is rational in the moment may not be so in terms of longer employment success. These extended absences from the paid workplace help explain the slower return to work by women during 2022. These perceived differences may exacerbate an employer's estimate of costs associated with female employees and result in slower advancement for women going forward. Employers during the last year have been willing to accommodate many of these demands for flexibility (by both men and women) to fill empty slots, but it is unclear whether this will continue as the economy slows and layoffs hit certain industries, including higher education and technology. One fear is that as industries slow, the perceived value of women employees, especially those who have cut back on time in the office, make women more vulnerable at a time when they are climbing back from the pandemic.

Because of the complexity of these changed employment patterns, we turn to a specific industry, Academe, to understand some of these value and cost tradeoffs. We choose Academe as our case study because we think that the ideological commitment to greater opportunities for women is higher in the academy than it may be in other sectors. If that is the case, then we can presume that policies will be directed in ways that minimize negative impacts on women compared with men whenever possible. If we see differences in outcomes here, we consider this evidence that the impacts are not a function of underlying gender discrimination, but instead are an effect of real differences in the way women and men interact in the employment arena.

Academia: representative sector or special case?

Demand Impacts in the Academy

Academe is a milestone-based career, so breaks in work can have disproportionate consequences for someone's career long-term. While the pandemic, of course, happened to everyone, where someone was in their career trajectory matters for the scope of its impact. Professors' jobs do not take place in a "vacuum". Instead, the work professors do in a specific role affects their achievements in other areas and in future roles. Any academic's overall productivity is measured absolutely, but it is also measured relative to the productivity of similarly placed colleagues and disciplinary standards. If women faced disproportionate impacts during Covid years, then we might expect it to exacerbate the already difficult advancement challenges they face, especially for women early on in their careers.

In 2023, more women are placing and advancing in academia, but the numbers remain stubbornly low, particularly when we consider the number of women currently awarded PhD's. We suggest that this is due to tensions between the career model and life outside of the academy. The majority of adjunct positions belong to women ("Adjunct Faculty Member Demographics and Statistics" 2021) while the majority of tenured positions belong to men (AAUP 2022 p. 17). This still holds when looking at the genders individually. The majority of women employed in higher education hold untenured position titles, whereas the majority of men employed in higher education hold tenured position titles (AAUP 2022 p. 18). This continues to hold despite women earning the majority of graduate degrees since the early 2000s (AAUP 2022 p. 17).

Women in families disproportionately deal with certain life events such as pregnancy and tasks such as child rearing, domestic labor, and other familial obligations that negatively affect their progress towards tenure and career advancement (see Evans and Grant 2008; Ghodsee and Connelly 2014; Ward and Wolf-Wendal 2012). Moreover, in dual-academic heterosexual couples, the woman is more likely to be the "trailing spouse" in job search and selection, that is, the spouse who puts her academic career behind the other's (Schiebinger, Henderson, and Gilmartin 2008 pp. 20; 70). In past decades, measures were put in place to assist women in achieving their milestones in a manner that works with multiple breaks from the academy, but these measures have not been sufficient at mitigating the damage to their careers. In some cases, the measures have increased the disparity between men and women in higher education (Antecol, Bedard and Stearns, 2018).

Maternity leave often comes with a slow-down of the tenure clock, allowing the mother more time to achieve tenure requirements. This is no guarantee given the discretion allowed in the tenure process, and women need to be careful to still seem serious about academia (Ghodsee and Connelly 2014 p. 39). The tenure committee does not always know the reason for tenure clock slow-down, just that the professor opted to temporarily stop the tenure clock (Antecol, Bedard, and Stearns 2018 p. 2423). Additionally, as more time passes in between publications, a committee may see some of a professor's research as outdated (Evans and Grant 2008 p. 247). These measures also did not help the "soft" experiences that bolster academic careers, such as conference attendance, networking, and visibility on campus.

Paternity leave and similar measures were also often available to men. In some cases, men opt not to take paternity leave–an option that is not as realistic for women (Evans and Grant 2008 p. 208). Evidence also suggests that men are more productive than women during parental leave due to taking on less of the childcare and not having the same childbearing costs (Antecol, Bedard, and Stearns 2018 p. 2425).

In a study of gender-neutral parental leave policies at economics programs, "men whose first job was at a top-50 university with a gender-neutral tenure clock stopping policy in place for more than three years have a 17.6 percentage point tenure rate advantage over men at the same university prior to the implementation of any policy," whereas the "gender gap in tenure attainment at the typical policy university increased by 37 percentage points after

implementation of the policy" making women less likely to get tenure than in schools without paternity leave (Antecol, Bedard, and Stearns 2018 pp. 2429-30).

Professional success differentials between men and women are not all due to domestic choices and expectations. There are additional "soft" factors that have given men an advantage in careers in academe. This career path benefits men-with-wives, or in other words, married men who can use their non-working wives for unpaid labor to benefit their own careers (Evans and Grant 2008 p. 247). An analysis of the Nobel Prize Winners revealed many thanking their wives for typing and editing their papers (Deyo 2020). It is extremely valuable to have an often-well-educated support system to facilitate a productive career. Other "soft" experiences that bolster academic careers, such as conference attendance, networking, and visibility on campus, may be more difficult for women during maternity leave and while raising small children.

So, going into the pandemic disruption, women in academe faced many frustrating challenges. But the pandemic raised even greater concern as the nature of women's academic positions changed rather dramatically with the transition to online courses and campuses closed for extended periods of time. These changes are likely to continue to impact industry practices going forward. Often women perform best in teaching settings with greater interpersonal and cooperative techniques (Ceci and Williams, 2011; Arrona-Palacios, et al. 2020). The shift to online and Zoom formats may minimize a key effectiveness advantage women have had in the academy. "Teaching effectiveness impacts faculty status and promotion and is often assessed via documented student outcomes in combination with peer reviews, administrative observations, and in-depth personal reflection" (Bender et al., 2021 pp.47-8).

A body of literature from 2020 looks at the effects of the pandemic on women's publishing. While they show a decrease in publication outputs and submissions, they do not take a longer-view of the pandemic (Jemielniak et al., 2022). Studies from 2020 would have captured submissions for publication and do not capture the effects of the pandemic on completing and submitting projects. Similarly, while a newer article on this subject, (Jemielniak et al. (2022), measures publications and first-authorships in Springer Journals, the measurement stops at January 2021. This would not necessarily represent work on new research projects, and the authors recognize the possibility that some submissions could be resubmits and/or already written papers (ibid). The authors found that for some disciplines, but not all, female authorship dropped (ibid).

The effect of the pandemic on women's publishing cannot be fully measured yet, but survey and interview data show female academics during the pandemic had a larger reduction in research hours and had a greater increase in their non-research workload (Shalaby 2021 pp. 662-3). Additionally, women took on a larger burden of the childcare than men (ibid). While other factors impacted women with a smaller gap to men, women were still impacted more on all factors measured (ibid).

Regulatory uncertainty made it difficult for women to predict their workdays, conference attendance, and other in-person obligations that help them promote their research, foster networking relationships, and earn positive teaching scores.

Personal Impacts exacerbate professional challenges:

With women taking on the disproportionate care of the family, many female academics had to take on new roles during the shutdown while men may have had more free time to write. These women faced "intersections of identity and negative emotions with three themes organized within the first category including (a) conflicting roles, (b) altered childcare demands, and (c) relational changes" (Bender et al., 2021 p. 54). They also felt the pre-existing tension between their career and their homelife get stronger and felt a large responsibility for the mental and physical well-being of their children during the pandemic (p. 55).

Women in academia reported a higher degree of unpredictability in trying to balance the uncertainty around school and childcare closings with changing situations at their own universities (p. 56). Additionally, women reported having to manage increased conflicts in their relationships due to a lack of spousal and external support (ibid). Given academic pursuits often follow the jobs available geographically, academics are less likely than women in other fields to be around large support systems of families.

Female academics reported feeling anxiety and guilt when choosing work over childcare, compounding other negative emotions resulting from the pandemic (pp. 58-9). They also expressed that the requirements of academia seemed unreasonable during the pandemic and that their productivity suffered (pp. 59-60).

Mitigation

To mitigate the effects of the pandemics, universities and associations instituted a variety of policies to counteract the negative impact of COVID-19 related disruptions. These policies included pushing back the tenure clock, remote teaching arrangements, and flexible hybrid conferences. While these policies do allow a more flexible work environment, they may do more harm in the long run for academic careers. For example, flexible classrooms result in less connection with students, a metric which women have excelled on in the past (Bachen, 1999; Feldman, 1992). Consequently, their relative performance evaluations as teachers could suffer.

The application in this paper focuses on the policies that stop the tenure clock. These policies, while well-intentioned, may continue to repeat the errors of the past. As seen with parental leave, slowing the tenure clock may lead women to be behind men in career milestones (see Antecol, Bedard, and Stearns 2018).

We pulled the COVID-19-related tenure clock policies for the 49 universities used in the Antecol, Bedard, and Stearns study about the impact of parental leave polices on tenure outcomes for 49 of the top 50-economics programs in the United States (Antecol, Bedard, and

Stearns 2018). We aim to use this study as a benchmark for the eventual tenure outcomes that happen in those departments post-pandemic.

We were able to confirm the official tenure clock policies for 45 out of the 49 universities used in the study[1]. The policies fell into two categories, opt-out and opt-in. In opt-out policies, every professor was granted an extended tenure clock, but individual professors could request to opt-out of the extension. In opt-in policies, professors were required to request the tenure clock extension for COVID-19 related disruptions and would receive the extension upon request, rather than go through the usual tenure clock stoppage process.

An example of an opt-out policy is drawn from Michigan State University ("Tenure Clock Extension Frequently Asked Questions Related to COVID-19 Extensions" 2022):

> *Who is eligible for the COVID-19 automatic extension of the reappointment and tenure review timeline?*
>
> - *Any probationary faculty member who: a) was in the tenure system at MSU as of Spring 2020 scheduled for a reappointment or tenure review, or b) has an employment start date in the tenure system through August 15, 2023. The automatic extension is applied to your record by Human Resources.*

An example of an opt-in policy, from the University of Maryland, College Park ("COVID-19 Pandemic Tenure Delay" 2020):

> *How Should the Request for Tenure Delay due to COVID-19 be made?*
>
> - *Eligible faculty will need to apply for a COVID-19-related tenure delay. They should discuss their intent to apply for a tenure delay with their unit head (Chair/Director/Dean) as soon as possible and before submitting the tenure delay request.*
> - *Faculty who wish to apply should go to https://faculty.umd.edu/delay to begin the process and select "COVID-19 Pandemic" as the reason for the tenure delay request.*
> - *Faculty should provide a brief justification of the pandemic-related disruption to research, teaching, and/or service activity.*
> - *The request will be routed to the Chair/Director (if applicable), the Dean, and the Provost for approval, but assuming the faculty member is eligible, approval will be automatic and without penalty or prejudice.*
> - *Once approved, the faculty member, Chair/Director (if applicable), and Dean will receive notification of the approval and the new mandatory tenure/promotion decision date.*

We found that 25 of the universities adopted an opt-out policy for their COVID-19-related tenure clock stoppage, whereas 20 of the universities adopted an opt-in policy. The COVID-19-related disruptions impacted women's research productivity more than men's (Shalaby 2021 p. 663). Since the opt-out policies apply to everyone—not just those disrupted—we expect the

[1] We expect, by the time of the final datasets, to have confirmed all 49 policies.

tenure results to be similar to those seen in the Antecol, Bedard, and Stearns paper, where the policies caused further disparity for female academics in the departments to the extent that women faced greater challenges from COVID disruptions. Conversely, we expect to see less disparity in tenure outcomes in the opt-in situations, where academics can request a tenure clock stoppage if they have experienced disruptions from the pandemic but do not receive it automatically.

Since female academics were found to have taken on more of the childcare during the pandemic, we compared these policies to the school closure rate in each state (Shalaby 2021 p. 663). We used the school closure data from "A Final Report Card on the States' Response to COVID-19," which ranked school closures by state, based on the percentage of time K-12 students spent in the classroom during the 2020-21 academic year.

We found that in states where K-12 schools were open less than 50% of the time, 60.9% of schools (14) had opt-out policies, and 39.1% of schools (9) had opt-in policies. We expect that the universities that are located in states where the schools were open less than 50% of the time and have opt-out policies will experience the most gender disparity in terms of tenure.

In states where K-12 schools were open more than 50% of the time, 50% of schools (11) had opt-out policies, and 50% of schools (11) had opt-in policies. We expect that the universities in states where the schools were open more than 50% of the time and have opt-in policies will experience the least gender disparity in terms of tenure.

We will track the tenure outcomes of these universities in the future to test whether they match up with this prediction. We also measure the short-term progress of professors in those departments by examining their publication records. Given historical outcomes of tenure clock policies, however, we are confident that these policies will only increase disparity and not benefit gender equality.

Rather than applying superficial ineffective policies, higher education should look at the demographic breakdown of tenured and untenured faculty. They should determine the root causes of the disparity in higher education and determine how higher education should approach the reality of gender employment differences if they truly want diversity of the sexes. They should work on building solutions around the usual burdens women face rather than creating exceptions that move women outside of the norms of the academic role.

Dataset Methodology

To measure the long-term effects of Covid-19, state policies, and mitigation efforts on career success in academia, we build a dataset that examines the careers of junior faculty at 49 of the top 50 economics programs spanning the pandemic years. We chose the same schools as the Antecol, Bedard, and Stearns paper so we could make direct comparisons with their analysis of gender and tenure outcomes. This dataset includes junior faculty who have held a position for at least one year between 2015-2024; however, we may expand the dataset in either direction depending on trends we begin to spot.

The dataset only includes traditional tenure-track positions within academia to make the career milestone comparisons meaningful. We are using the university department website along with the course catalogs of the universities to determine active professors.

For the initial findings in this paper, we only looked at current professors as of the Fall 2023 semester for each school year. We assembled a dataset of 608 assistant and associate professors at 49 of the top 50 schools. It is too early to determine how tenure and career advancement were impacted by COVID 19. The intention of the findings in this paper is to create a general snapshot of academia right now, but we cannot suggest any long-term impact of the policies of interest based on the short timeframe currently available.

To pull this snapshot, we matched up professors with their researcher ID on Dimensions.ai and pulled their publication and citation history. We relied on the professors' CV to match them to their IDs. In some cases, we blended dupe IDs together, and in other cases, we relied on the CVs and Semantic Scholar when the data was missing from Dimensions. There may be other data discrepancies, but nothing indicates it would affect one group more than another.

The Dimensions data includes non-journal publications such as cited SSRN pre-prints. We chose to include these because our snapshot is intended to suggest whether each professor is headed towards success, so we would rather over include than under include. For the purposes of the final data set, we will be looking at their career success overall and include a complete picture of all publications, including rankings and impact. This inclusion may make differences between productive and unproductive scholars starker but should not change the appearance of productivity overall.

We also included PhD graduation years, the year each professor joined this university, and a best guess at gender using CVs, faculty websites, other forms of self-identification, and common usages of names. We used the graduation years to distinguish associate professors who may not have progressed in their careers overtime from associate professors who achieved their titles more recently.

We grouped professors based on the tracked state and university policy, as well as by PhD graduation year and title. We looked at current productivity by gender as well. In the future version of this dataset, we will compare these policies with faculty career moves, publication history, and other metrics of success that emerge. We hope to report on the level of impact the pandemic had on careers, the impact of state and university policies, and whether gender played a role in the level of impact.

In the future, we will build other potentially impactful policies into our dataset, including other university pandemic policies.

Initial Findings

As noted, it is much too soon to measure the overall impact of the pandemic on a milestone career. The data below is meant to be illustrative of the current state of these top 50 departments and possible trends that may emerge coming out of the pandemic. When broken down by PhD year and gender, some samples are much too small to draw overall conclusions from and the inclusion of SSRN pre-prints may make gaps between productive and unproductive scholars look even bigger. However, when the different groups are compared to each other, the results suggest a potential emerging trend.

When looking at the entire pool of assistant professors, the male professors are trending slightly higher than female professors in number of publications. Of course, at this stage we do not know the impact of these publications and how that might mitigate the gap in numbers.

Table 2: Gender Breakdown of Publication for Assistant Professors

Cohort	Number	Average Pubs
All Assistant Professors	351	8.11
All Male Assistant Professors	235	9.02
All Female Assistant Professors	116	6.26

When broken down into whether their states had K-12 schools open more than 50% of the time or less than 50% of the time (one measure of the severity of state lockdowns), no major differences emerged.

Table 3: Gender Breakdown of Faculty Publication by K-12 schools open or closed.

Cohort	Number	Average Pubs
Assistant Professors Schools Open >50%	175	7.59
Male Assistant Professors Schools Open >50%	116	8.75
Female Assistant Professor Schools Open >50%	59	5.31

Cohort	Number	Average Pubs
Assistant Professors Schools Open <50%	176	8.63
Male Assistant Professors Schools Open <50%	119	9.29
Female Assistant Professors Schools Open <50%	57	7.25

When the entire list of assistant and associate professors was broken down by graduation year, we did not see any significant differences or anything that suggested a trend in one direction or the other. This suggests we should look more into the burden of childcare when schools were

closed for most of the time, but also compare it with the regulatory uncertainty of schools being open the majority of time but suddenly closing at points.

When broken down by university tenure clock policies, differences between gender become clearer. In universities where they implemented an opt-in policy—that is, professors must request to have their tenure clock paused for a year—the male and female professors averaged more closely together in terms of publications, with women slightly but not significantly ahead.

Table 4:
Gender Breakdown of Publication Rates for Depts Based on Opt-In/Opt-Out Policies

Cohort	Number	Average Pubs
All Opt In	125	7.08
Male Assistant Professors Opt In	79	6.85
Female Assistant Professors Opt In	46	7.48

Cohort	Number	Average Pubs
All Opt Out	218	8.75
Male Assistant Professors Opt Out	150	10.27
Female Assistant Professors Opt Out	68	5.4

In universities where they implemented an opt-out policy—that is, the policy applies by default and professors must request to not have their tenure clock paused for a year—the male and female professors diverged from each other much more severely, with men producing almost twice as many publications as women on average.

When broken down by PhD Graduation year cohort, the difference was especially severe for the 2018 group. The 2016-2019 PhD classes are in the chart below for comparison.

Table 5

Cohort	Number	Average Pubs
Opt out Female 2016	8	13.5
Opt out Male 2016	27	17.63
Opt out Female 2017	10	7.8
Opt out Male 2017	18	12.5
Opt out Female 2018	10	4.6
Opt out Male 2018	18	14.5
Opt out Female 2019	12	3.15
Opt out Male 2019	16	7.56

The cohort analysis suggests that the covid-19 pandemic policies may have impacted female professors who graduated their PhD programs a few years before the pandemic started the most. Given the challenges associated with transitioning to a new department and developing new courses, the disruption may have come at a time that was especially problematic for women in this cohort. If this trend continues, we may see the career trajectory of that cohort and possibly others significantly impacted.

Overall this brief data outline suggests that these tenure clock-stopping policies may have the same impact that parental leave had in the Antecol, Bedard, and Stearns study. We will continue monitoring this to see if this trend continues and to measure what long-term impact these polices may have on the careers of men and women in academe. This snapshot, along with the Antecol, Bedard, and Stearns paper, suggest that careful consideration should go into future mitigation efforts to ensure the efforts do not make the problem worse instead of better. Instead of rushing into simple policies, time should be taken to identify and address the root of the problem causing this trend in publication differences between women and men.

Other concerns for women in Academia

While publication is a critical part of career advancement in academe, it is not the only factor that matters. Teaching, service, and building a reputation in the profession and within the university are all critical parts of the tenure and promotion process. Unfortunately, the policies directed around COVID 19 damaged these areas as well.

"Teaching effectiveness impacts faculty status and promotion and is often assessed via documented student outcomes in combination with peer reviews, administrative observations, and in-depth personal reflection" (Bender et al., 2021 pp.47-8). If women continue to teach disproportionately in online and/or asynchronous formats, there are concerns that this could negatively impact the tenure prospects for them further (Ayllón, Sara, 2022).

Additionally, close networked connections are important for advancing in role and for finding new roles quickly if a female faculty member is laid off. Changes to reduce in-person conference attendance and other conference strategies in response to COVID-19 make the establishment of these networks less possible for those faculty who went through COVID in pre-tenure rank.

The recent layoffs occurring in the tech industry may come in higher education as well, as institutions address declining enrollments and budgetary pressures. These pressures put the untenured group of academics at greatest risk. Since women represent both the majority of untenured positions and positions in non-tenure eligible ranks layoffs mean that some of the hard-earned gains for women in the Academy will likely be reversed at many schools if enrollment pressures result in overall faculty reductions.

While extending the tenure clock could help with the longer-term goal of seeing more women hit essential career milestones, the shorter-term consequence is vulnerability to expected layoffs and possibly losing one's career altogether as it is very difficult to come back from a termination.

We don't know exactly the extent or how future layoffs could play out in academia, but, we do know that certain factors are most important when making layoff decisions in higher education– trustees, parents, evaluations (high classroom rankings), and tenured status. These items will likely work against women as they predominantly represent untenured faculty and may be the only option for cutbacks in many Universities.

Concluding Thoughts

Gains made slowly in gender equality can be eroded quickly when policies and circumstances change. COVID 19 and the resulting policy responses that locked down society and institutions of higher education have changed the employment and promotion market with potentially greater impact on women. In this paper we outline how higher education institutions are addressing these issues and suggest a number of critical measures for future analysis. We will continue to track the COVID class and the short-term effects on women in the academy to consider how this cohort fares as they progress through the milestones of their academic careers. We intend to show that the measures taken to decrease disparity may actually increase it, and that industries need to determine how they should approach the reality of gender employment differences if they truly want employment equity of the sexes.

The challenges outlined in this paper leave us with several questions for future research with implications for gender and employment beyond COVID:

> Can hard won gender gains be maintained or at least losses be limited during times of crisis? Which policies proved most effective in limiting losses during COVID 19?
>
> What are the changed gender employment patterns emerging from COVID 19? Are any of these changes preference-driven or are they a result of the policies adopted during the pandemic?
>
> Most of the suggested responses for addressing the disruptions women faced during COVID are increased government assistance such as additional childcare services and leave policies or special considerations, such as stopping the tenure clock, granted to all. Are such policies the answer?

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