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COMMENT BY

JANE OLMSTEAD-RUMSEY In this paper, Goldin presents a careful and wide-ranging analysis of women's employment experiences during the coronavirus pandemic, assessing and in some cases correcting popular narratives that have developed about the pandemic's effects on women in the labor market. She examines the role that education levels, childcare responsibilities, telecommuting, occupations, and race have played in shaping labor market outcomes during the pandemic. She argues that the decline in the female labor force participation rate during the pandemic was not large relative to the historical average since the late 1980s, when the increase in women's labor force participation began to slow, and that estimates of the decline depend significantly on the reference month chosen. A robust finding is the rise in caregiving time by women during the pandemic.

My discussion concerns three primary issues. The first of these considers the appropriate counterfactual for labor force participation rates absent the pandemic, including a closer examination of the rise in female labor force participation prior to the pandemic. The second relates to the long-run impact of the pandemic on women through changes in the availability of remote work. The third considers policy implications of "she-cessions" compared to "man-cessions."

LABOR FORCE PARTICIPATION RATES Prior to the start of the pandemic, the US economy had been in a long expansionary period. In August 2020 the Federal Reserve announced changes to its long-run monetary policy strategy, explicitly describing its maximum employment mandate as a "broad-based

and inclusive" goal.[1] In a speech accompanying this announcement Chairman Powell (2020) noted that marginalized groups were benefiting more from the booming labor market as time went on. It is impossible to know how long the expansion would have continued absent the pandemic, but it is worth thinking hard about the right counterfactuals for labor force participation rates when considering how large the impact of the pandemic was on different groups of women compared to a world with no pandemic. My first comment is therefore an investigation of the rise in women's labor force participation prior to the pandemic.

The paper shows that the labor force participation rate (LFPR) for women age 25–54 increased rapidly in late 2019. This surge makes the choice of a reference month for measuring declines in female labor force participation during the pandemic important. The paper rightly notes that women's LFPR did not grow significantly in the past three decades.[2] However, since 1988, there have been significant fluctuations between 72.2 percent and 77.3 percent, corresponding with the business cycle, so understanding where women's LFPR was heading before the pandemic is still important.

I note five features of the rise in women's LFPR prior to the pandemic which suggest it would likely have remained high absent the pandemic: First, it was sustained. The largest monthly increase in women's LFPR in 2019 was 0.9 percentage points between July and August, from 75.4 percent to 76.3 percent. Rather than declining thereafter, which would reflect a possible statistical or seasonal anomaly, the rate continued to rise slowly through February 2020 to 76.9 percent. Second, it was part of a recovery in women's LFPR that began in late 2015, so a comparison to earlier years like 2018 makes losses due to the pandemic seem smaller. This is particularly true for subgroups that tend to enter later in the cycle. Third, it was driven by employment, not unemployment, rising—the unemployment rate for women was flat at around 3.5 percent in the later part of 2019 and early 2020.[3] Fourth, it was fairly broad-based among women. Following the subgroup analysis in the paper comparing changes in LFPR for subgroups in the Current Population Survey (CPS) between April 2019 and December

1. "Federal Open Market Committee Announces Approval of Updates to Its Statement on Longer-Run Goals and Monetary Policy Strategy," press release, Board of Governors of the Federal Reserve, https://www.federalreserve.gov/newsevents/pressreleases/monetary20200827a.htm.

2. One explanation for this is the rise in the college wage premium; see Albanesi and Prados (2022). Women's pay and labor force attachment over the life cycle have continued to increase since the 1980s, according to Goldin (2006) and Goldin and Mitchell (2017).

3. See FRED, "Unemployment Rate—Women," https://fred.stlouisfed.org/series/LNS14000002.

Table 1. Reduced Form Estimates for Labor Force Exit, March to the following April

	Labor force exit
College or more	0.029***
	[0.004]
Age 30–39	0.030***
	[0.005]
Age 40–49	0.038***
	[0.005]
Age 50–54	0.034***
	[0.006]
Non-white	0.023***
	[0.004]
Children, under age 5	0.024***
	[0.005]
Children, age 5–14	0.002
	[0.004]
Married	0.010**
	[0.004]
Group 1	0.076***
	[0.012]
Pandemic	0.027***
	[0.003]
Group 1 × pandemic	–0.024
	[0.018]
Constant	0.162***
	[0.034]
Industry × Occupation Fixed Effects	Yes
Number of observations	48,432
R^2	0.223

Source: Current Population Survey.

Note: Population is women age 25–54 only. Sample includes group 1 (new entrants in 2019), group 2 (continuously employed workers in 2019), and placebo group 1 and placebo group 2 for placebo pandemic in 2018 (see note 21 in the paper). Weighted using "wtfinl" from the CPS micro data. Robust standard errors in brackets.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

2019 by age, education, and presence of children under age 5, I find that all subgroups except three saw increases in LFPR of at least 0.9 percentage points.[4] Fifth, as of January 2022, women's LFPR had recovered to 76 percent, a higher level than any month between February 2009 and July 2019, suggesting that trend LFPR was high.

Turning to micro data, I follow the creation of group 1 and group 2 in the pandemic and placebo periods using CPS data as in the paper. As the paper points out (table 1), these groups differ substantially on observables.

4. The three groups without large increases were noncollege-educated women in their twenties without children under age 5 (increase of 0.3 percentage points), college-educated women in their forties without children under age 5 (decrease of 0.7 percentage points), and noncollege-educated women in their fifties without children under age 5 (decrease of 0.1 percentage points).

Women who entered the labor force just prior to the pandemic (group 1) are younger, more likely to have children, and less likely to have a college degree. These were precisely the groups at greatest risk of leaving their jobs during the pandemic because of lack of remote work opportunities and because of childcare needs. I therefore run a regression to control for demographic differences between the two groups:

$$y_i = \alpha + \beta X_i + \delta 1^i \text{ (group 1, group 1 placebo)} + \gamma 1^i \text{ (pandemic groups)} + \rho 1^i \text{ (group 1)} + \epsilon_i,$$

where y_i is an indicator for whether woman i left the labor force any time between March and the following April, X_i is a vector of demographic characteristics including age, race, presence of children, marital status, and occupation by industry dummies, and 1^i is an indicator for woman i's membership in a given group.

As shown in table 1, controlling for demographics and job types shrinks the difference in the propensity to leave the workforce between group 1 (new entrants in 2017 and 2019) and group 2 (continuously employed workers in 2017 and 2019), measured by δ, to 7.6 percentage points, still a large number reflecting the weaker attachment of new entrants to the labor force. Both group 1 and group 2 were more likely to leave the workforce during the pandemic than their counterparts in the placebo groups were to leave the workforce in March 2018–April 2019 (the estimated value of γ is 2.7 percentage points), but the interaction between being in group 1 and the pandemic is not significant, suggesting that women who entered the workforce just before the pandemic were not more likely to leave the workforce during the pandemic than similar women were to leave the workforce in March 2018–April 2019 after accounting for the effects of the pandemic itself.

Taken together, this analysis suggests that using the February 2020 women's LFPR as a reference month for measuring pandemic-related declines, as many papers have done, is not unreasonable.[5] Policymakers have recently devoted increased attention to the behavior of the LFPRs of marginalized groups over the business cycle. More work should be done to understand the long-run drivers of both male and female LFPRs to develop estimates of these trends going forward.

5. When looking at CPS subgroups, however, participation rates still need to be seasonally adjusted. This is not an issue for the headline series that is seasonally adjusted by the Bureau of Labor Statistics.

CHANGES IN WORK FLEXIBILITY The paper provides an insightful discussion of the potential benefits and risks for women of greater work flexibility after the pandemic. In Alon and others (2020b) we use a model of household labor supply featuring heterogeneity by gender, marital status, age of children, occupation (telecommuting or not), and human capital to understand how a permanently higher share of telecommuting jobs in the United States would have an impact on female labor force participation and the gender wage gap in the long run.

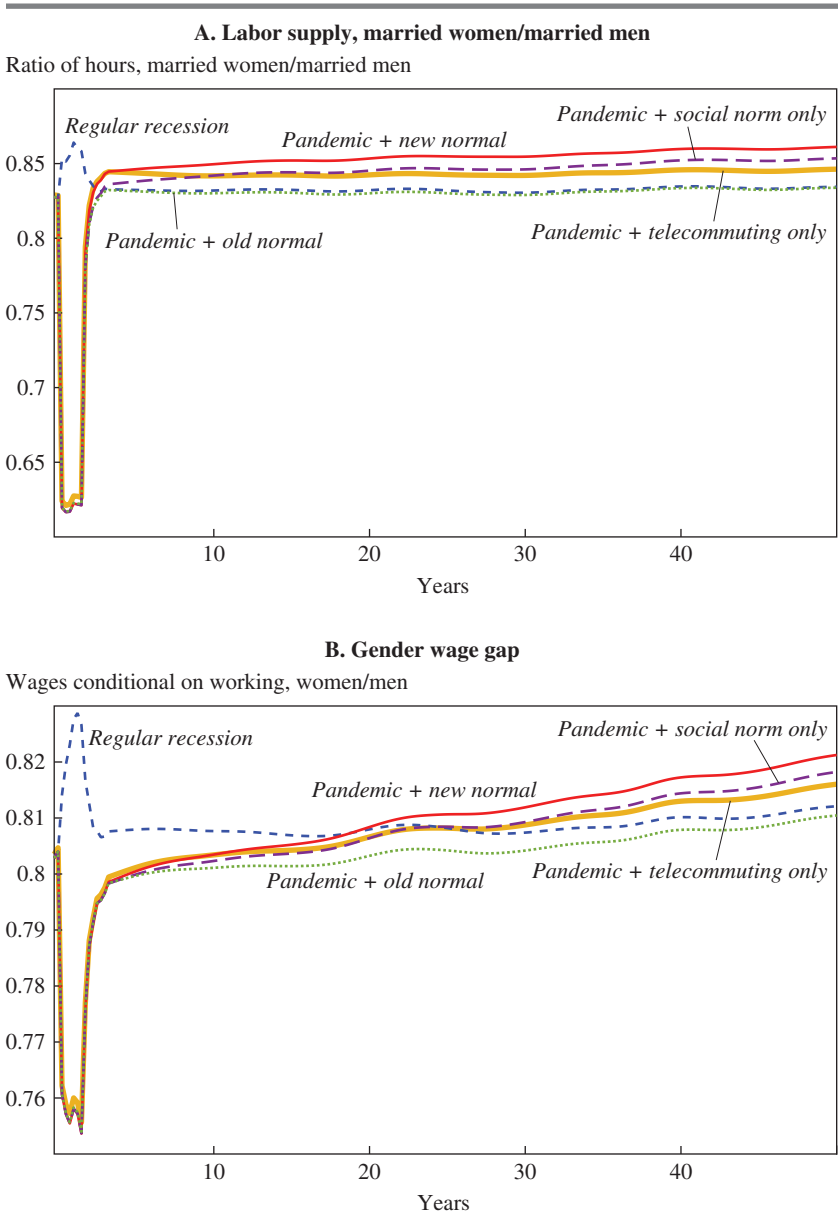
Crucially, we assume there are no productivity losses or gains associated with telecommuting compared to non-telecommuting jobs, only that telecommuting allows workers to combine a fraction of childcare time with work.[6] This fraction is calibrated to match the fact that fathers who could telecommute did 50 percent more childcare than fathers who could not, based on our estimates from precrisis time use data (Alon and others 2020a). Individuals who are not working risk human capital depreciation whereas those who are working full time accumulate human capital. We study a permanent rise in the fraction of the workforce in telecommuting occupations from 13 percent prepandemic to 30 percent in the so-called new normal after the pandemic ends.

Figure 1, panel A, shows the model prediction for the evolution of relative hours for married women compared to married men as a result of this change ("Pandemic + telecommuting only"), suggesting that married women's relative hours could rise by about 2 percent in the long run if work flexibility persists. This also reduces the gender wage gap significantly in the long run by increasing women's labor force attachment and accumulated human capital (figure 1, panel B). "Pandemic + old normal" shows the counterfactual where telecommuting reverts to about 13 percent of jobs and shows that this would significantly slow the recovery of the gender wage gap to prepandemic levels.

The latest data from Barrero, Bloom, and Davis (2021) show that men and women who can work from home are currently working the same number of days per week at home. The difference between desired work from home days per week for men and women is small, with women hoping for 2.37 and men for 2.18, but men report higher work from home days allowed by their employer (1.42 versus 1.24 for women). In an analysis of

6. The evidence on this is mixed. As discussed in the paper, female academics have been less productive during the pandemic. Women also report more interruptions while working from home (Andrew and others 2021). But workers overall self-report higher productivity while working from home (Barrero, Bloom, and Davis 2021).

Figure 1. Married Women's Relative Hours and the Gender Wage Gap Conditional on Working



Source: Alon and others (2020b); reproduced with permission.

Note: "Pandemic + telecommuting only" shows effects of a pandemic recession (equal job loss risk for men and women and a large increase in childcare time) with a permanent increase in the fraction of telecommuting jobs to 30 percent. "Pandemic + old normal" shows the case where the fraction reverts to 13 percent after the pandemic.

prepandemic time use data we found that while married men were more likely than married women to be able to telecommute (45 percent versus 42 percent), married men telecommuted 25 percent less than married women (thirty days per year for married men versus forty-one days per year for married women; Alon and others 2020a). It remains to be seen whether the pandemic has changed norms around this behavior. If not, the risks to women's face time and promotions remain.

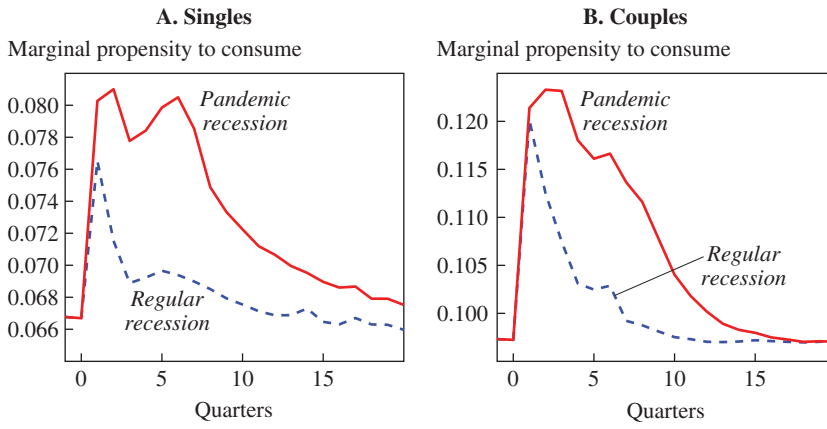
The media headlines at the time of writing regarding women's employment during the pandemic relate to the "Great Resignation." In many cases these stories suggest that the recent rise in quitting is due to workers, especially women, seeking greater employment flexibility. Data on quitting and job-to-job transitions by gender for 2021 are not yet available, nor will it be clear from these data how many workers quit in pursuit of jobs with greater flexibility, but research and surveys on this issue will measure another important dimension of women's labor market experiences during the pandemic related to reallocation to more flexible jobs.

POLICY IMPLICATIONS The 2020 recession due to COVID-19 reversed a pattern from the last five recessions in terms of the gender composition of job losses (Alon and others 2020b), creating distinct policy considerations for she-cessions versus man-cessions. First, she-cessions likely feature a greater translation of employment losses to consumption because of a decrease in intrafamily insurance.[7] In typical recessions, which have been man-cessions, married women can increase their labor supply if their husband loses his job. Because female-dominated occupations were most affected by the 2020 recession, and because of childcare needs, this option was less available than in previous recessions, and most men were already working full time and could not further increase hours in response to their wife's job loss. However, because of the fiscal response to the pandemic, many households that experienced drops in labor income also experienced offsetting increases in government transfers from unemployment insurance and stimulus checks, making measurement of this issue in the data difficult.

Using our model (Alon and others 2020b), we find that households' marginal propensities to consume (MPCs) are particularly high in pandemic recessions compared to regular recessions because the family insurance channel is diminished (figure 2). All else equal, elevated MPCs imply greater efficacy of fiscal stimulus. The paper points out that differences in job loss rates between education levels are even starker than gender gaps,

7. Bardóczy (2022) finds that this family insurance channel reduces the volatility of aggregate consumption in the United States by 33.5 percent.

Figure 2. Average Marginal Propensities to Consume



Source: Alon and others (2020b); reproduced with permission.
Note: The average fraction of an unexpected transfer that a household would consume instead of save.

and similar considerations apply when thinking about recessions that disproportionately affect people with less education, who typically have less savings to insure themselves against negative income shocks. Thus, amplification may be larger in these sorts of recessions as well, and the effects of fiscal policy greater.

A second policy consideration is "scarring" of workers who lost their jobs during the recession in terms of future employment and earnings. Lifetime earnings losses from job displacement are especially large for people who lose their jobs during recessions (Davis and von Wachter 2011). Furthermore, Alon and others (2022) note that at the micro level women's labor supply is more elastic than men's, so women who have dropped out due to the pandemic will also likely take longer to reenter the workforce or never return, making the recovery of employment even slower than it has been after previous recessions. Of course, the recovery of women's LFPR noted earlier looks strong compared to 2019, but it may be well below the prepandemic trend. In other countries, like Germany and the United Kingdom, employment relationships between workers and firms were preserved to a greater extent than in the United States because of short-time work policies (Alon and others 2022), which is one possible way to mitigate scarring in future recessions.

Finally, it's worth noting that comparing a man-cession and a she-cession with equal numbers of job losses for men in the man-cession and women in

the she-cession, we would expect the man-cession to feature a larger drop in aggregate labor income because men are paid more and work more hours on average than women. How exactly this translates into the decline in total output depends on the distribution of household MPCs, and the employment recovery from a she-cession will likely be slower. These considerations matter not just for pandemic recessions, which may also affect caregiving responsibilities, but for any recession where job losses are greater for women than for men, such as a recession concentrated in women-dominated service industries.

CONCLUSION The paper comprehensively characterizes the labor market experiences of women during the COVID-19 crisis. A central message is that despite fears that we would see a mass exodus of women from the workforce, most women remained in their jobs despite increased caregiving responsibilities for many. Education levels and race were important factors in determining which women left the workforce. Exactly how large the job losses and hours reductions were for women depends on the precrisis reference month chosen. I provide some reasons to believe the high LFPR of women prior to the pandemic would have been sustained if the crisis had not occurred, meaning that job losses were indeed substantial. Regardless of the exact percentage decline, the pandemic recession was distinct from previous recessions in terms of its larger effects on women than on men. This has implications for macroeconomic stabilization policies and the speed of the employment recovery back to trend. Models can help us forecast the long-run effects of employers continuing to allow employees to work from home, but these estimates depend on take-up of this flexibility by gender and on productivity and promotions at home versus in the office.

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GENERAL DISCUSSION Robert Hall noted that the people who accounted for the huge reduction of work in April 2020 did not all lose their jobs. He pointed out that the snap back from the pandemic recession was vastly faster than any other recession because workers were recalled to existing jobs. He explained that until it dissipated around early fall 2021, all other dynamics were dominated by the temporary layoffs. He stated that focusing on participation is appropriate because it includes unemployment, so even when people temporarily lost their jobs they were counted as part of the labor force.

Betsey Stevenson noted that people may have made accommodations and reduced work that does not show up as employment in the data. This is related to Claudia Goldin's points about childcare and to what Stevenson has seen in her own survey work, as well, that workers may be turning down