Telework, Childcare, and Labor Supply

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Are Women Leaving the Labor Market in Droves?

Women are leaving the workforce in droves

By Stephanie Ebbert Globe Staff, Updated October 2, 2020, 6:43 p.m. 27

Multiple crises disproportionately affected women's jobs during the pandemic. DGLIMAGE

Four times more women than men dropped out of the workforce in September, a
released Friday, affirming fears that women's careers are collapsing under the pr
educating children through a pandemic.

POLITICO

Ask Congress if your medicine will be at risk in Medicare. PhRMA Learn more

RECOVERY LAB

The pandemic drove women out of the workforce. Will they come back?

Their absence could hurt the broader U.S. economy, so policymakers are weighing ways to help them return to work.

USA TODAY

AFGHANISTAN How US strikes killed ci... CORONAVIRUS NUMBERS Virus numbers by state NOT VACCINATED? Questions + answe

[News] Sports Entertainment Life Money Tech Travel Opinion

NATION

The pandemic is driving moms out of the workforce, COVID-19 child care crisis persists

Hannan Adely NorthJersey.com

Published 11:58 a.m. ET Oct. 22, 2020 | Updated 12:05 p.m. ET Oct. 22, 2020

2020CENSUS.GOV

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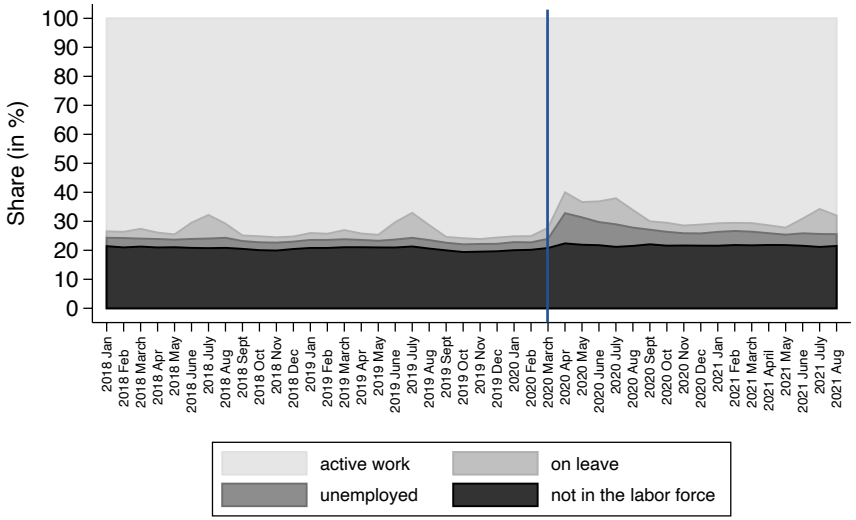
Employment Status of Custodial Mothers

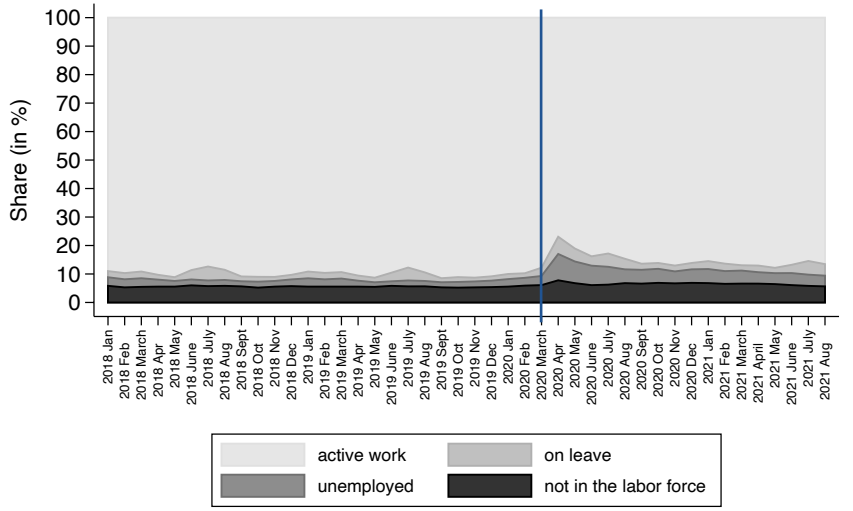
(aged 25 to 54 living with own school–age children)



Graph shows the share of custodial mothers in each category.

Employment Status of Custodial Fathers

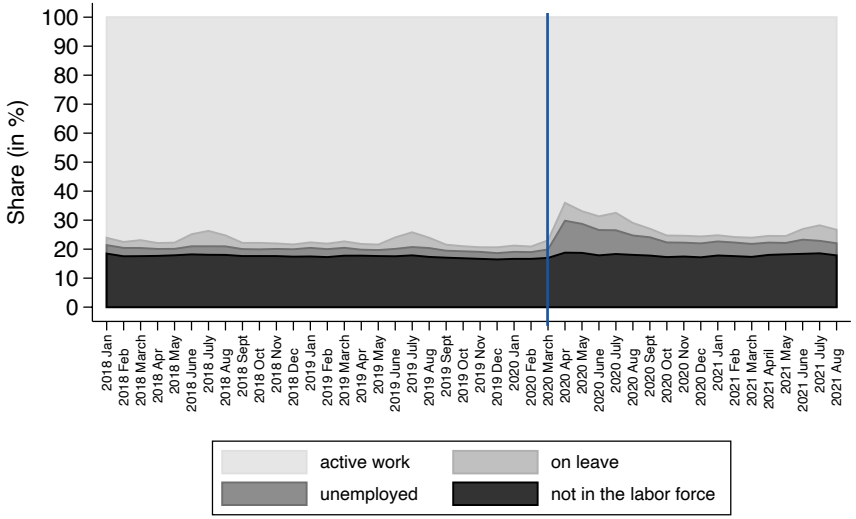
(aged 25 to 54 living with own school–age children)



Graph shows the share of custodial fathers in each category.

Employment Status of Women without Dependent Children

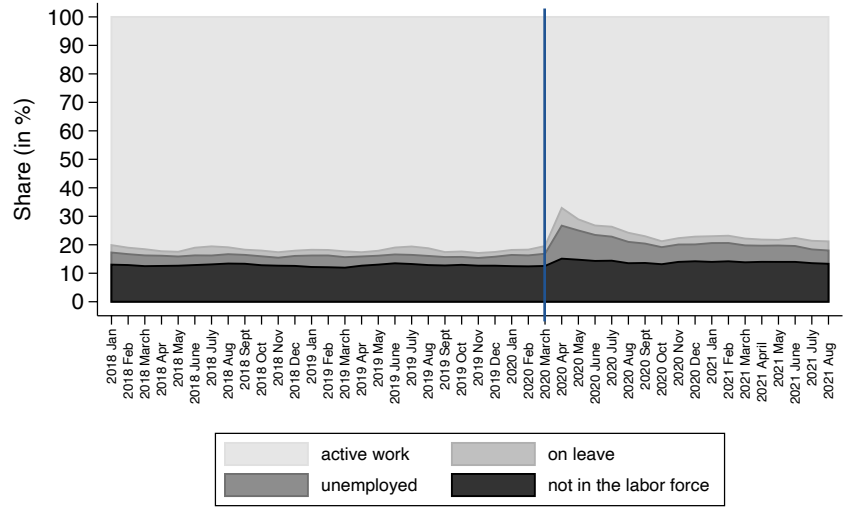
(aged 25 to 54 with children above 18, or no children)



Graph shows the share of women without dependent children in each category.

Employment Status of Men without Dependent Children

(aged 25 to 54 with children above 18, or no children)



Graph shows the share of men without dependent children in each category.

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Research Questions

1. What would happen to labor supply if childcare did not exist?

2. Can telework mitigate the effect of a lack of childcare on labor supply? If so, how?

3. Are the effects of no childcare on labor supply immediate, longer-term, or both?

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Data

Current Population Survey (CPS) Monthly Data (ipums.org, U.S. Census Bureau/Bureau of Labor Statistics)

January 2018-September 2021

Prime-age (25 to 54) Adults:

- Living with own school-age (5 to 17) children
- Living without own dependent children

Pooled into Two Groups:

- Before March 2020
- On or after March 2020

Variations in Sample Size:

- 6, 9, 12, 15, and 18 months pre/post
- Main results focus on 9 months out (up to December 2020)

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Difference-in-Difference Framework

$$Y_{icst} = \beta_0 + \beta_1 * \text{Kids}_{icst} + \beta_2 * \text{Post}_{icst} + \beta_3 * \text{Adult}_{icst} + \delta * \text{Kids}_{icst} * \text{Post}_{icst} + \zeta_c + \phi_s + \nu_t + \epsilon_{icst} \quad (1)$$

$$Y_{icst} = \beta_0 + \beta_1 * \text{Kids}_{icst} + \beta_2 * \text{Post}_{icst} + \beta_3 * \text{Adult}_{icst} + \beta_4 * \text{Female}_{icst} + \delta * \text{Kids}_{icst} * \text{Post}_{icst} + \theta * \text{Kids}_{icst} * \text{Post}_{icst} * \text{Female}_{icst} + \zeta_c + \phi_s + \nu_t + \epsilon_{icst} \quad (2)$$

δ , θ = effect of a childcare shock on outcome of interest relative to comparison group

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Outcomes of Interest

1. Labor Force Participation (everyone)
2. Actively Working (conditional on being in the labor force)
3. Unemployed (conditional on being in the labor force)
4. On Leave (conditional on having a job)

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Validation Checks

1. **Pseudo-Pandemic (March 2019)**

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Pseudo-Pandemic

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	-4.175	-.4325	.3655	.07883	8.756**	1.544**	-1.305*	-.2712
	(0.6654)	(0.1368)	(0.1794)	(0.2443)	(0.4466)	(0.1045)	(0.1281)	(0.2531)
Post*Treatment	-.1087	-.468	.1341	.3462	.2334	-.2617	.206	.06391
	(0.1295)	(0.0864)	(0.1903)	(0.2240)	(0.2860)	(0.1522)	(0.1116)	(0.2201)
Post*Treatment*Female					-.3831	-.1941	-.0776	.2769
					(0.3247)	(0.1502)	(0.1041)	(0.0717)
R2	0.018	0.006	0.007	0.003	0.042	0.005	0.006	0.003
Observations	302133	233100	233100	226159	584115	483401	483401	468759

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Validation Checks

1. **Pseudo-Pandemic (March 2019)**

2. **Parallel Trends Assumption**

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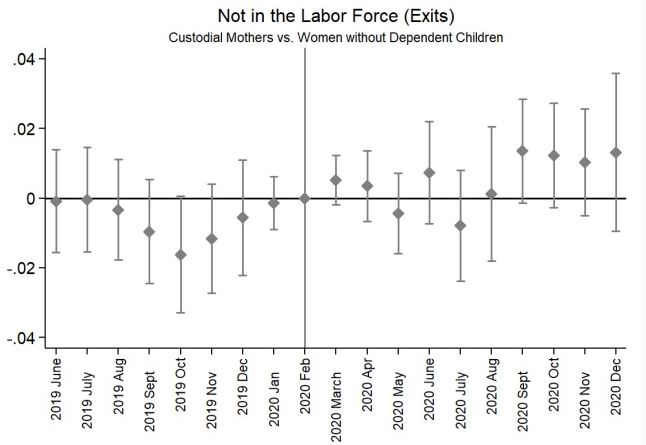
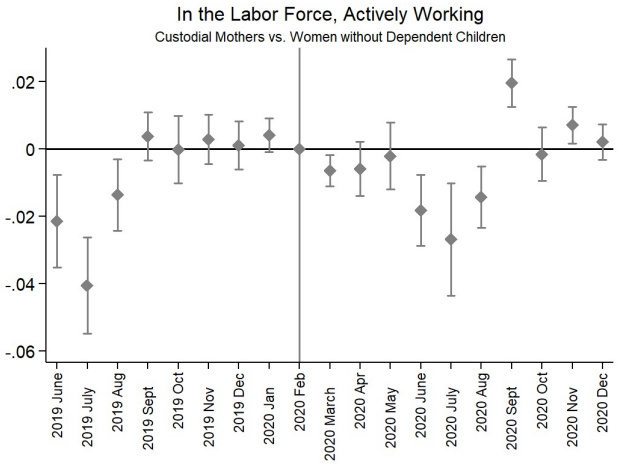
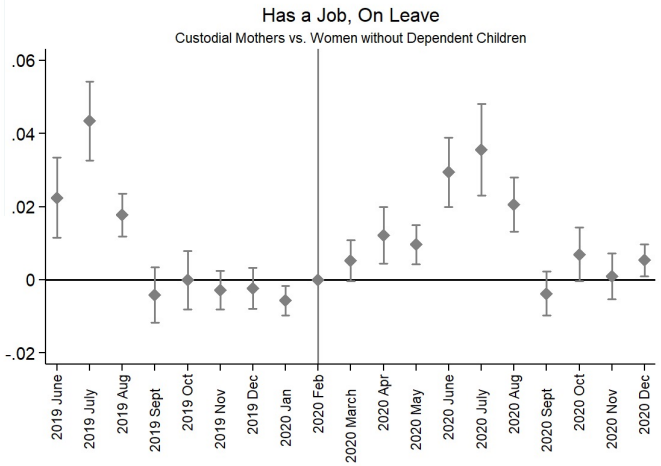
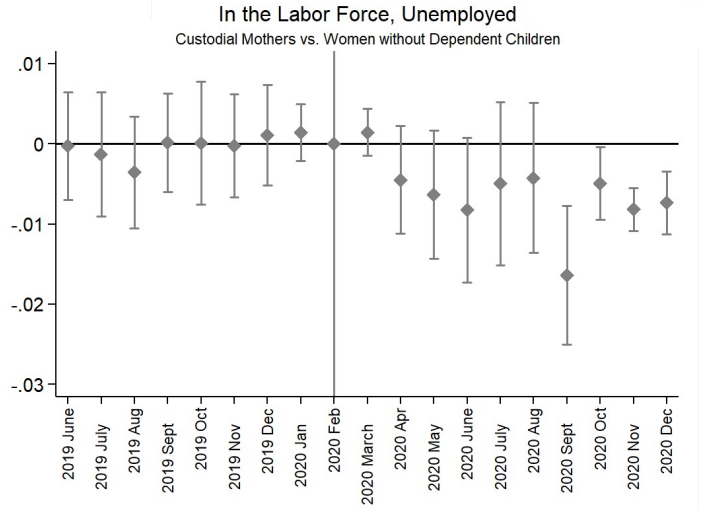
Parallel Pre-Trends…









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Results: Labor Force Participation Outcomes (9 months; full sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	-4.297	-.8332	.6307*	.2299	8.943**	1.389	-1.042	-.3723
	(0.8870)	(0.1859)	(0.0980)	(0.0603)	(0.4569)	(0.2341)	(0.1867)	(0.0882)
Post*Treatment	-1.511*	.05166	-.7323*	.7263*	.2274	.9846	-1.149	.09167
	(0.1587)	(0.1571)	(0.0923)	(0.0638)	(0.4407)	(0.2206)	(0.2108)	(0.1535)
Post*Treatment*Female					-1.735**	-.9291	.4192	.6273
					(0.0873)	(0.2355)	(0.2461)	(0.1589)
R2	0.020	0.021	0.019	0.008	0.041	0.019	0.017	0.007
Observations	257120	197890	197890	188083	498860	410855	410855	390410

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Research Questions

1. What would happen to labor supply if childcare did not exist?

Mothers would disproportionately exit; disproportionately take leave from work.

Nine months out:
Mother's LFP decreased by **1.7ppt** relative to custodial fathers.
Mother's LFP decreased by **1.5ppt** relative to female counterparts without children.
Mother's who stay in the labor force would compensate for the extra childcare burden by taking leave from work (**0.73ppt** increase).

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Telework

Use telework classifications of occupations as defined by Dingel and Neiman (2020)

Don't know who teleworked; only if job is telework-compatible

Pros/Cons:

- **Allows us to include individuals who left the labor market over the past 12 months**
- **May not capture with precision the effect of actually teleworking**

	Worked Remotely for Pay Due to COVID-19	
	No	Yes
Onsite Occupation	**65.4%**	21.5%
Telework-Compatible Occupation	34.6%	**78.5%**
Total	100%	100%

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Results: LFP Outcomes by Telework & Educ Attainment (9 months)

Onsite Occupations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	-.121	-1.082	1.101	.009594	.05491	-.6263	-.0652	.7098
	(0.1277)	(0.1775)	(0.2528)	(0.0661)	(0.1753)	(0.2499)	(0.4397)	(0.1791)
Post*Treatment	-.06806	.7161	-1.458	.8014**	-.1368	2.54	-2.557	-.08806
	(0.1218)	(0.2908)	(0.4361)	(0.0540)	(0.1814)	(0.5645)	(0.7749)	(0.2458)
R2	0.009	0.041	0.037	0.019	0.014	0.038	0.044	0.021
Observations	65488	64648	64648	59888	32166	31950	31950	30740

Telework-Compatible Occupations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	-.1198	-1.46	.5784	.9415	-.03429	.2458	-.09817	-.1602
	(0.2837)	(0.5410)	(0.5378)	(0.1893)	(0.0433)	(0.2534)	(0.2041)	(0.1724)
Post*Treatment	-.2565	.3125	-.4514	.201	-.1656**	-.9673	.1783	.8295*
	(0.3165)	(0.2038)	(0.4425)	(0.0848)	(0.0108)	(0.1773)	(0.1732)	(0.0835)
R2	0.014	0.040	0.036	0.023	0.009	0.019	0.019	0.012
Observations	40066	39712	39712	37720	61678	61372	61372	59727

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Research Questions

1. What would happen to labor supply if childcare did not exist?

2. Can telework mitigate the effect of a lack of childcare on labor supply? If so, how?

Yes and no.

Yes: if you are cash strapped and need to provide financially for your family but likely not easy; mental health concerns.

No: telework without childcare is stressful; roles are blurred; exhausting and not likely to be manageable long-term without childcare supports.

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3. Are the effects of no childcare on labor supply immediate, longer-term, or both?

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Labor Force Participation

	(1) 6mo	(2) 9mo	(3) 12mo	(4) 15mo	(5) 18mo	(6) 6mo	(7) 9mo	(8) 12mo	(9) 15mo	(10) 18mo
Treatment	-.08399	-.09938*	-.09084*	-.08634	-.06431	.1636*	.1512*	.1556***	.1592***	.1757***
	(0.0144)	(0.0148)	(0.0257)	(0.0397)	(0.0309)	(0.0242)	(0.0124)	(0.0153)	(0.0159)	(0.0244)
Post*Treatment	-.1336*	-.1448*	-.1208*	-.1135***	-.1257***	.1797	.1449	.1619**	.1595***	.1403**
	(0.0130)	(0.0222)	(0.0311)	(0.0147)	(0.0094)	(0.0480)	(0.0286)	(0.0299)	(0.0258)	(0.0303)
Post*Treatment*Female						-.3141	-.294**	-.2812**	-.2731***	-.2658***
						(0.0580)	(0.0215)	(0.0314)	(0.0424)	(0.0257)
R2	0.961	0.959	0.960	0.961	0.962	0.956	0.954	0.956	0.957	0.958
Observations	198536	257120	378447	482110	567336	384695	498860	734664	935510	1100391

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Active Work

	(1) 6mo	(2) 9mo	(3) 12mo	(4) 15mo	(5) 18mo	(6) 6mo	(7) 9mo	(8) 12mo	(9) 15mo	(10) 18mo
Treatment	-.7527	-.8134	-.9256**	-.8232***	-.7501***	.8154	.7741	.7296*	.7988**	.8645**
	(0.1933)	(0.2073)	(0.1446)	(0.0800)	(0.1144)	(0.2487)	(0.2308)	(0.2155)	(0.1706)	(0.1594)
Post*Treatment	-.0483	.04348	-.08448	-.1143	-.2083	1.279	1.037	1.077***	1.039***	.9099***
	(0.2048)	(0.1586)	(0.2008)	(0.1747)	(0.1923)	(0.3903)	(0.2472)	(0.1028)	(0.0967)	(0.1422)
Post*Treatment*Female						-1.348	-1.014	-1.181**	-1.17***	-1.128***
						(0.4420)	(0.2932)	(0.1746)	(0.1466)	(0.1624)
R2	0.063	0.054	0.050	0.047	0.045	0.059	0.051	0.047	0.045	0.043
Observations	153203	197890	290490	369815	435330	317606	410855	604188	769292	905246

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Unemployment

	(1) 6mo	(2) 9mo	(3) 12mo	(4) 15mo	(5) 18mo	(6) 6mo	(7) 9mo	(8) 12mo	(9) 15mo	(10) 18mo
Treatment	.9285	.9677	.9521**	.8173**	.8535**	-.524	-.4873	-.5518	-.6861**	-.691**
	(0.3238)	(0.3053)	(0.1905)	(0.1811)	(0.1676)	(0.1514)	(0.1437)	(0.2202)	(0.1865)	(0.1847)
Post*Treatment	-1.674	-1.551	-1.057	-.8456	-.7559	-1.539	-1.181	-1.104***	-1.03***	-.9343***
	(0.4143)	(0.4049)	(0.6532)	(0.5634)	(0.5910)	(0.3062)	(0.2003)	(0.0944)	(0.1125)	(0.1216)
Post*Treatment*Female						.8611	.4939	.6108*	.6606**	.5812**
						(0.3716)	(0.2560)	(0.1927)	(0.1423)	(0.1454)
R2	0.061	0.051	0.045	0.041	0.037	0.060	0.054	0.053	0.051	0.051
Observations	74886	96603	141807	180814	213449	317606	410855	604188	769292	905246

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Leave from Paid Work

	(1) 6mo	(2) 9mo	(3) 12mo	(4) 15mo	(5) 18mo	(6) 6mo	(7) 9mo	(8) 12mo	(9) 15mo	(10) 18mo
Treatment	.2027	.2216	.3445**	.3669***	.2757	-.2878	-.2828	-.1739	-.1148	-.1792
	(0.0632)	(0.0808)	(0.0694)	(0.0423)	(0.1261)	(0.1425)	(0.1197)	(0.1227)	(0.0943)	(0.1382)
Post*Treatment	.7889*	.7034*	.6378***	.5314**	.6027**	.1369	.0554	-.0544	-.08073	-.04081
	(0.0868)	(0.0633)	(0.0562)	(0.1316)	(0.1694)	(0.2035)	(0.1688)	(0.1471)	(0.0659)	(0.0979)
Post*Treatment*Female						.6696	.646	.6957**	.6184***	.6498***
						(0.1443)	(0.1848)	(0.1532)	(0.0729)	(0.1020)
R2	0.019	0.014	0.011	0.009	0.008	0.015	0.011	0.009	0.008	0.007
Observations	145787	188083	276980	353338	416746	302322	390410	575564	734009	865669

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3. **Are the effects of no childcare on labor supply immediate, longer-term, or both?**

   Both.
   Regarding the pandemic, the immediate effect had more of a gender equal response when everything came crashing down on everyone.
   As the pandemic lingered, dads have gone back to work while moms have been left to disproportionately care for children in a way that decreases their ability to engage at work.

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Rethinking Women's Labor Supply Post-Pandemic

Today's households rely on more than one income for survival

Women have higher levels of education than ever before

Women identify with careers and work more than ever before

Younger women expect to have both careers *AND* families

Women are burnt out today precisely BECAUSE they did not exit the labor market in droves but STILL provided disproportional care effort within their home

Because of these facts, affordable and accessible childcare for all is ESSENTIAL to eliminate gender disparities at work AND at home

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