

This Time It's Different: The Role of Women's Employment in the Great Lockdown

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*"I can't remember—do I work at home or
do I live at work?"*

Why Gender?

COVID-19 kills more men than women . . .

. . . but Great Lockdown recession has big economic impact on women.

→ **Matters for welfare.**

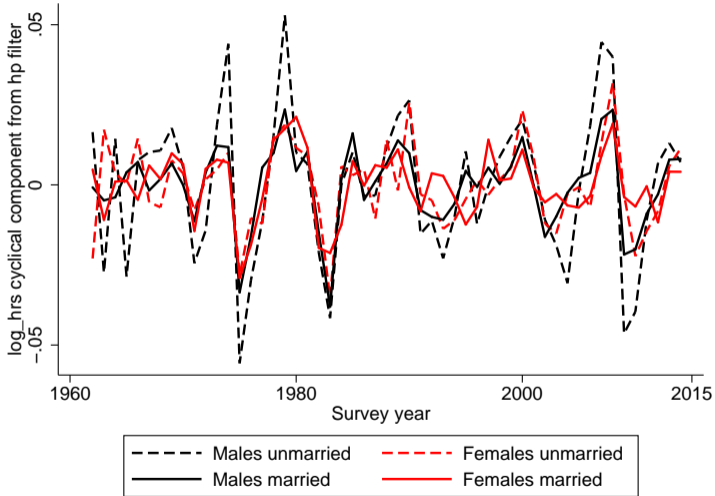
→ **Matters for policy.**

→ **Matters for macroeconomic repercussions.**

An Evolving Project

- ▶ **Step 1:** Paper in *Covid Economics: Vetted and Real-Time Papers*, April 2020:
“The Impact of COVID-19 on Gender Equality”
→ Assess likely impacts and consequences based on pre-crisis data.
- ▶ **Step 2:** Data gathering on actual impacts during the crisis in various countries.
- ▶ **Step 3:** Macro model with rich household heterogeneity:
“This Time It’s Different: The Role of Women’s Employment in the Great Lockdown”
→ Assess macro implications.
→ Assess long-run impacts.
→ Assess policy options.

Regular Recessions are “Mancessions”



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	All			Married		Single	
	Total	Women	Men	Women	Men	Women	Men
	1989–2014						
Total Volatility	1.15	0.87	1.47	0.79	1.16	1.30	2.25
Cyclical Volatility	0.91	0.51	1.23	0.38	0.95	0.70	1.82
Hours Share		42.6	57.4	25.9	39.8	16.8	17.5
Volatility Share		23.7	76.3	10.8	41.5	12.9	34.8

(Doepke and Tertilt 2016)

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This Time It's Different ...

... for two reasons:

- ▶ Usual recessions are concentrated in sectors where many men work, such as construction and manufacturing. **Not so this time.**
- ▶ People's ability to work also affected by increased childcare needs during school and daycare closures. **Affects women more than men.**

Consequences of the Large Impact on Women's Employment

- ▶ **Welfare:** Big impact on single parents and couples with little work flexibility.
- ▶ **Amplification:** Diminished scope for intra-household insurance magnifies transmission of income shocks to consumption.
- ▶ **Gender gap:** Employment losses combined with returns to experience imply widening of the gender gap in the medium term.
- ▶ **Social norms:** Greater work flexibility and shifting social norms in response to men's greater involvement in childcare will benefit working mothers in the long term.

Outline

1. Facts from pre-crisis data.
2. Evidence on actual impact so far.
3. Macro model with heterogeneity in gender, marital status, occupation, and childcare needs.
4. Short-run, medium-run, and long-run implications (preliminary).

Facts from Pre-Crisis Data

Women versus Men in Critical and Telecommutable Occupations

	Critical	Telecommutable
Women	17%	22%
Men	24%	28%

Critical: transportation, health, food production, maintenance and repair, public safety and protective services

Classification of “telecommutable” based on ATUS 2017–2018.

Childcare Needs

More than 15 million single moms!

Living arrangements of US children in 2019:

Total children under 18	73,525	100%
Two parents	51,561	70%
Mother only	15,764	21%
Father only	3,234	4%
Other relatives	2,319	3%
Non-relatives	647	1%

Distribution of Married Couples with Children by Employment Status

		Wives		
		Not Employed	Part-Time	Full-Time
Husbands	Not Employed	4%	1%	5%
	Part-Time	1%	1%	2%
	Full-Time	25%	15%	44%

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Weekly Childcare Hours for Couples who Both Work Full Time

	All	Children ≤ 5
Women	10.3	16.8
Men	7.2	10.6

Impact of Job Flexibility

Today, children and childcare explain much of gender wage gap (Kleven et al. 2019, Gallen 2018).

In ATUS-CPS data, having a telecommutable job is highly predictive of involvement in childcare.

When married to women who cannot telecommute, men who can telecommute provide 50 percent more childcare compared to men who cannot.

Potential for Changing Social Norms

Even small changes in childcare distribution can have long-run impact (e.g., paternity leave; Farré and González 2019).

Other evidence for importance of social norms and beliefs: Fernández, Fogli, and Olivetti (2004), Fernández (2013), Fogli and Veldkamp (2011), Olivetti, Patacchini, and Zenou (2018).

We estimate that in **9–12 percent** of married couples with children the father will be the primary childcare provider during the crisis.

The Great Lockdown is a huge change in childcare!

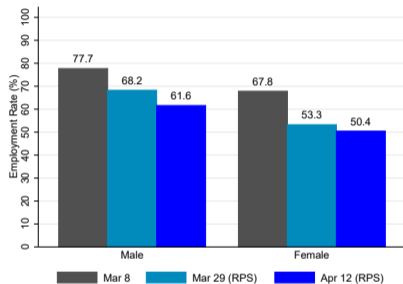
Potential for Changing Social Norms

"I just wanted to say I was excited to see your paper. My husband is a dentist who was never much involved with the kids or domestic activities, and has transformed to a stay-at-home dad for the past 5 weeks while I continue to work from home as a government contractor. The effect on our family has been profound and life changing, and it would NEVER have happened without a global pandemic."

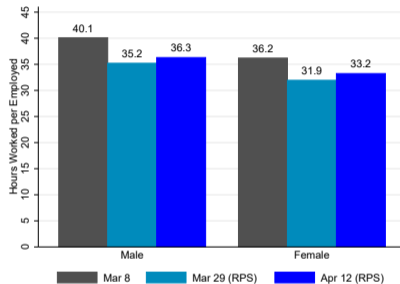
The Actual Impact So Far

Employment Impact in the United States, Women versus Men

(a) Employment Rate



(b) Hours Worked per Employed



Notes: Data from March 8 are derived from CPS surveys. More recent data are derived from responses to our online RPS survey.

Alexander Bick and Adam Blandin “Real Time Labor Market Estimates During the 2020 Coronavirus Outbreak”

State-Level Unemployment by Gender

Fuller Project for International Reporting:

- ▶ Women filed majority of unemployment claims in week after school and workplace closures.
- ▶ Women's share ranges from 53 percent in Wyoming to 67 percent in Alabama.

International Evidence

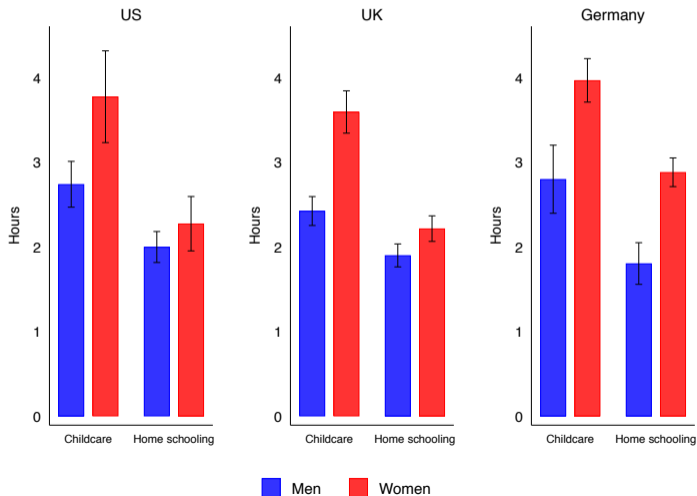
Adams-Prassl, Boneva, Golin, and Rauh: “Inequality in the Impact of the Coronavirus Shock: Evidence from Real Time Surveys”

Real-time survey evidence for UK, US, and Germany.

- ▶ Women more likely to lose employment in US and UK, but not in Germany.
- ▶ Employment losses much smaller in Germany.
- ▶ Labor market institutions matter!

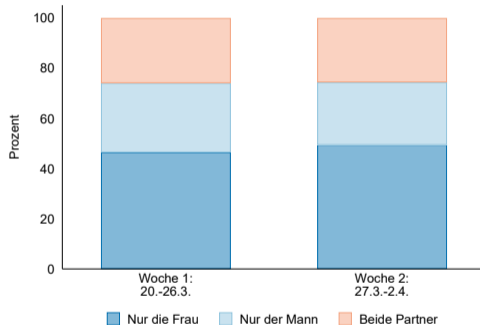
Daily Childcare Responsibilities During the Crisis

Among parents who now work from home



Many Men Now Take Primary Responsibility

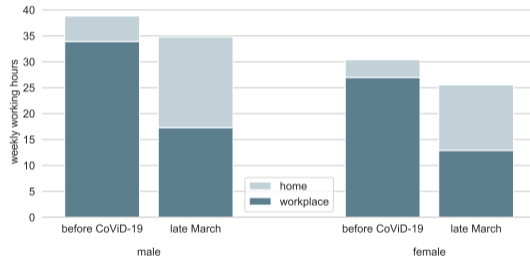
Mannheimer Coronastudie:



US: 12 percentage point March-April increase in millennial moms reporting they share childcare equally with their partner

Evidence from Dutch LISS Data

Gaudecker, Holler, Janys, Siflinger, and Zimpelmann: “The early impact of the CoViD-19 Pandemic on Gender Inequality”



Women's hours drop by 17 percent, men's by 10 percent.

Men: Children predict home office during crisis, but not before.

Women: Children always predict home office.

Evidence from Dutch LISS Data



Lower gender gap in care conditional on essential occupation.

In 30 percent of couples where only mother is in critical occupation father is now sole childcare provider.

Family Macro Model

(Some) Literature We Build On

- ▶ **Role of female labor supply in business cycles:** Albanesi (2020), Albanesi and Sahin (2018), Bardoczy (2020), Fukui, Nakamura, and Steinsson (2019), Doepke and Tertilt (2016), Mankart and Oikonomou (2016, 2017).
- ▶ **Family risk sharing:** Blundell, Pistaferri, and Saporta-Eksten (2016), Ellieroth (2019), Guler, Guvenen, and Violante (2012), Ortigueira and Sassi (2013), Wu and Krueger (2018).
- ▶ **The Great Lockdown Recession:** Gregory, Menzio, and Wiczer (2020), ...

Overview of Ingredients

- ▶ Women and men, singles and couples, childcare needs.
- ▶ Labor supply on the extensive margin, part-time work possible.
- ▶ Occupations differ by telecommutability.
- ▶ Job destruction shocks and unemployment.
- ▶ Endogenous accumulation of experience.
- ▶ Division of labor partly shaped by social norm.

No infection model!

Great Lockdown: shock to **labor market** and **childcare needs**.

Setting

Continuum of three types of households: single women, single men, couples.

State variables:

- ▶ Assets a .
- ▶ Human capital h .
- ▶ Kids $k \in \{0, s, b\}$ (no kids, small kid, big kid).
- ▶ Employment $e \in \{E, U\}$ (employed, unemployed).
- ▶ Occupation $o \in \{TC, NT\}$ (can telecommute, cannot telecommute).
- ▶ Social norm $m \in \{0, 1\}$ (modern, traditional).

Evolution of State Variables

Household type and occupation are permanent types.

Children arrive and leave according to probabilities $\pi^g(k'|k)$ for singles and $\Pi(k'|k)$ for couples.

Employment opportunities arise and vanish according to probabilities $\pi^g(e'|e, k)$ for singles and $\Pi^g(e'|e, k)$. Offers can be rejected.

Human capital accumulates and depreciates stochastically as a function of labor supply.

Transition probabilities for social norm depend on fractions of couples with husband as equal or main primary childcare provider.

The Decision Problem for Unemployed Singles

$$v_U^g(a, h, k) = \max_{a', c, l, t} \{u^g(c, l) + \beta E [w_e^g(a', h', k', o')]\}$$

subject to:

$$c + a' = z + (1 + r)a,$$

$$t = \gamma(k),$$

$$l + t = T.$$

Childcare needs: $\gamma(s) > \gamma(b) > \gamma(0) = 0$.

The Decision Problem for Employed Singles

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$$l + n + \max\{t - \phi(k) n l(o = TC), 0\} = T.$$

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Decision Problem for Singles at Start of Period

Job offer:

$$w_E^g(a, h, k, o) = \max \{ v_E^g(a, h, k, o), v_U^g(a, h, k) \}.$$

No job offer:

$$w_U^g(a, h, k) = v_U^g(a, h, k).$$

Decision Problem for Dual-Earner Couples

$$V_{EE}(a, h^f, h^m, k, o^f, o^m, m) = \max \left\{ \lambda u^f(c^f, l^f) + (1 - \lambda) u^m(c^m, l^m) \right. \\ \left. - m\psi(t^m - t^f) + \beta E \left[W_{(e^f)', (e^m)', (a)', (h^f)', (h^m)', k, (o^f)', (o^m)', m} \right] \right\}$$

subject to:

$$c^f + c^m + a' = w^f h^f n^f + w^m h^m n^m + (1 + r)a,$$

$$t^f + t^m = \gamma(k),$$

$$l^f + n^f + \max\{t^f - \phi(k) n^f I(o^f = TC), 0\} = T,$$

$$l^m + n^m + \max\{t^m - \phi(k) n^m I(o^m = TC), 0\} = T.$$

Couples' Problem at Start of Period

Both have job offer:

$$W_{EE}(a, h^f, h^m, k, o^f, o^m, m) = \max \left\{ V_{EE}(a, h^f, h^m, k, o^f, o^m, m), \right. \\ \left. V_{EU}(a, h^f, h^m, k, o^f, m), V_{UE}(a, h^f, h^m, k, o^m, m), V_{UU}(a, h^f, h^m, k, m) \right\}.$$

... and so on.

Evolution of Human Capital and Social Norm

Human capital h is on a skill ladder H , probability of moving up and down depends on labor supply, gender, and kids.

→ **Returns to experience, skill loss when not employed**

Transition probabilities for social norm taken as given by couple, depend on aggregate fraction of couples where man is primary childcare provider.

→ **Social externalities**

Calibration

Choose initial parameters to match:

- ▶ Labor market flows by marital status, gender, and kids.
- ▶ Distribution of couples among combinations of full-time work, part-time work, no work.
- ▶ Estimates of returns to experience and skill loss in unemployment.
- ▶ Impact of occupation type on time allocation.

The Great Lockdown in the Model:
Short-, Medium-, and Long-Run Effects

(in progress)

Recessions in the Model

Regular recession:

1. Large change in men's job destruction and job finding rates.
2. Smaller change in women's job destruction and job finding rates.

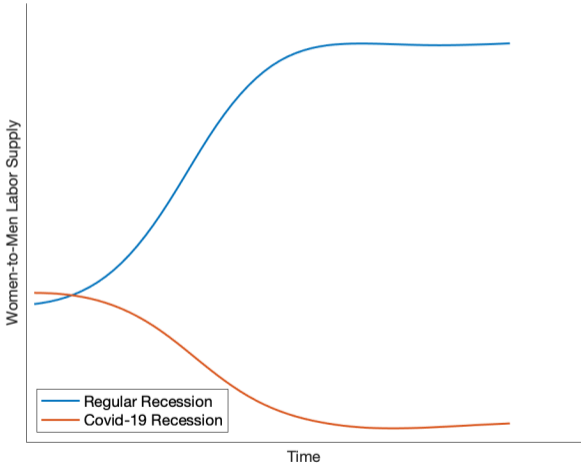
Great Lockdown recession:

1. Large change in men's job destruction and job finding rates.
2. Equally large change in women's job destruction and job finding rates.
3. Rise in childcare needs.
4. Shift in telecommuting ability and social norms.

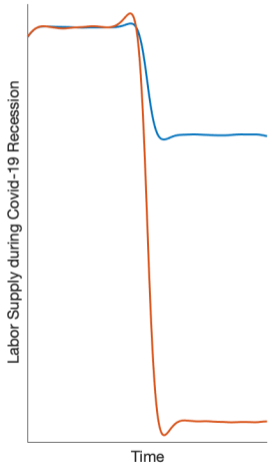
Quantitative Questions to be Answered Using the Model

1. **Welfare:** Measure impact on different groups of households.
2. **Amplification:** Quantify higher MPC due to loss of intra-household insurance.
3. **Policy:** Effect of measures (e.g. earlier school openings) to mitigate the crisis.
4. **Gender gap:** Quantify impact on gender gap through employment losses combined with returns to experience.
5. **Division of labor:** Quantify potential long-run impact on intra-household division of labor due to more telecommuting and shifting social norms.

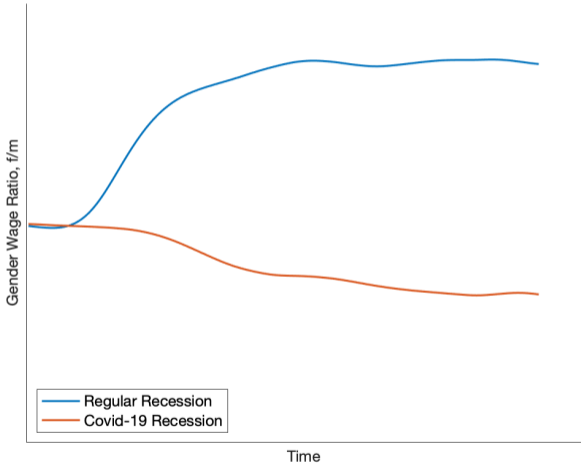
Women's vs. Men's Labor Supply, Great Lockdown vs. Regular Recession



Labor Supply of Singles with and without Children



Gender Wage Gap, Great Lockdown vs. Regular Recession



Summary

Economically, impact on women and childcare needs is biggest distinction between Great Lockdown and regular recession.

- **Matters for short-run policy response.**
- **Matters for medium-run economic impact.**
- **Matters for long-run changes to social norms and gender equality.**