Effects of the COVID-19 Recession on the US Labor Market: Occupation, Family, and Gender

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Roadmap

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Goals

1. Differences in supply-side employment responses between men and women
2. How occupational differences between men and women influenced employment

Mechanism

Added-worker effect

- When one partner is at risk of earnings loss or employment (such as during a recession or because of a plant closing), the other partner increases their labor supply
- Blundell et al. (2016), Albanesi (2019), Ellieroth (2019)

Great Recession

- During the Great Recession (and previous recessions), the decline in women's employment was sizeably smaller than men's in every group for every family group

Unique factors for COVID-19

- During COVID-19, infection risk was more severe in the service industry, where there is likely an over-representation of women in service jobs
- Increased childcare needs
  - Gender norms
  - Child penalty

Data

Occupational Informational Network (O*NET) survey data (2020)

- Inflexibility score
  - 15 questions designed to determine if workers are performing tasks that can be executed remotely, or if they are bound to work onsite (takes an average of 1-5 ordinal scale)
- Contact intensity measure (also 1-5 ordinal scale)
  1. Beyond 100ft
  2. Private office
  3. Shared office
  4. At arm's length
  5. Near touching

Identification

1. Flexibility
   - Flexible occupations: occupations that allow employees to work remotely (inflexibility score $>$ median)
   - Inflexible occupations: occupations that involve outdoor activities or require on site equipment (inflexibility score $\leq$ median)
2. Contact intensity
   - Depends on workers' physical proximity to customers or coworkers while on the job
   - High-contact: At arm's length or closer

Occupation classification

	Flexible	Inflexible
High-contact	Education, training, and library	Healthcare practitioners and technical healthcare support Food preparation and serving Personal care and service
Low-contact	Management Business Computer and mathematical Architecture and engineering Life, physical, and social sciences Community and social services Legal Arts, design, entertainment, sports, and media Sales and related Office and administrative	Protective service Building and grounds cleaning and maintenance Farming, fishing, and forestry Construction trades, extraction installation, maintenance, and repair production Transportation and material moving

Female share between occupations

Group	% female share
Flexible, high-contact	76
Flexible, low-contact	50
Inflexible, high-contact	73
Inflexible, low-contact	19

- Flexible, low-contact occupation employment recovery was smaller for women
- Inflexible occupations lost more jobs

Regression model

$$Y_{i,t} = \alpha + \sum_{\tau=1}^{2} \beta_\tau \times I(\tau) + \gamma I^i(f) + \delta I^i(m) + \eta I^i(c) + \nu X_t^i + \epsilon_{i,t}$$

- i indexes an individual
- τ is an indicator variable for one of the two phases of the pandemic ($\tau = 1$ for March to May and $\tau = 2$ for June to November)
- $I^i(f)$ is a dummy for gender (1 for female)
- $I^i(m)$ is a dummy for marital status (1 for married)
- $I^i(c)$ is a dummy for children under the age of 12 present (1 for present)
- X_t^i is a set of controls for age, educational attainment, and occupational
- Included is the full set of interactions between phase effects, gender, martial status, and presence of children dummies, and the age, education, and occupational controls

Results

	EU		*UE*	
Change since February 2020	*Phase 1*	*Phase 2*	*Phase 1*	*Phase 2*
Average without occupation controls	2.9	1.2	-0.4	-0.6
Share women	65.1	66.6	57.6	62.1
Average with occupation controls	1.8	1.1	-0.4	-0.4
Share women	66.8	58.5	72.4	86.2

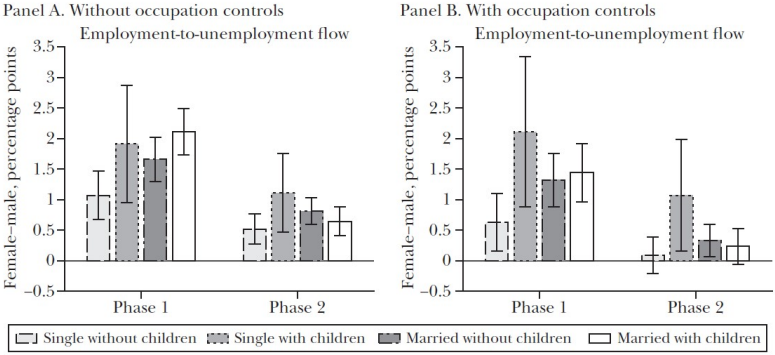
Results (cont'd)

	EN		*UN*	
Change since February 2020	*Phase 1*	*Phase 2*	*Phase 1*	*Phase 2*
Average without occupation controls	0.2	0.1	0.1	0.1
Share women	68.7	68.0	71.0	61.0
Average with occupation controls	0.2	0.1	0.01	0.04
Share women	55.4	85.0	120.2	76.2

Results (cont'd)

Figure 5

Female–Male Difference in Changes in EU Flows since February 2020, Estimated with and without Occupation Controls



Source: Author's calculations from Current Population Survey data, using equation in text.
Notes: See note to Table 4. Error bars denote 90 percent confidence intervals.

Conclusion

- The rise in unemployment and non-participation in the market disproportionately affects women
- Occupational controls reduce the magnitude of the effect of the pandemic
- Even controlling for occupation, there exists a large and significant gender gap among married workers with children in Phase 2

Continuing impacts

Susceptibility to automation by occupation

Routine Task-Intensity (RTI) index; Autor & Dorn (2013)

	Flexible	Inflexible
High-contact	0.2%	34%
Low-contact	49%	22%

Continuing impacts

Atrophy during non-pariticipation (human capital depreciation)

- Employer investments in human capital and career paths to women are affected by expected career interruptions

Effects of remote work

- Lack of flexibility has been seen as a barrier to women's career advancement
- Stigmatization of remote work arrangements may further hinder career advancement opportunities, particularly in highly competitive professional and managerial occupations