Measuring the Labor Market at the Onset of the COVID-19 Crisis: Evidence from Traditional and Non-Traditional Data

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Our goals

1. Understand labor market decline at onset of COVID-19 recession
   a. Which sectors?
   b. Timing
   c. Which workers?
   d. Role of firms

Focus on small businesses

2. Provide preliminary evidence on labor market effects of shut-down orders and economic interventions at onset
Finding 1: Pandemic recession differs from recent recessions
1. This time is different

- Job losses in 2 months were 60% larger than the entirety of the Great Recession.
- Industrial composition quite different - Not the usual “mancession.”
- High rates of temporary layoff, recall expectations.
Homebase data

- Scheduling & time-clock service.
- Primary small business clients – restaurants, retail, salons, etc.
- Daily hours worked.
- Follow firms and workers over time.
The collapse was extremely sudden

Total hours by day,
(Jan. 19-Feb. 1 = 1.0)
Finding 2: Firm shut-downs and re-openings have played a large role
Half of Homebase firms have shut for at least a week

- This accounts for about half the lost hours.
- About 60% of the firms that closed have since reopened, averaging $\frac{2}{3}$ of pre-shutdown scale.
- Nearly all hours at reopened firms have been from previous workers (but share is shrinking)
Smaller firms were more likely to exit
distressed firms were more likely to exit, less likely to reopen

Probability of firm exit (marginal effects)

Probability of firm reopening (marginal effects)
Finding 3: More disadvantaged workers more likely to be laid off and less likely to be rehired
Inequitable impacts

Age
❖ Young & old workers more likely to be laid off.

Education
❖ Education gradient in layoff.
❖ Weaker in rehiring.

Race
❖ Black, Asian workers more likely laid off, less likely rehired.

Source: Matched CPS data. Includes state & industry FEs.
Workers’ expectations were predictive of rehiring

- Homebase worker survey
- Focus on those who have stopped work.

- Recall expectations are high:
  - 89% of unemployed job-losers in April were on temporary layoff
  - As many as 90% of new UI claimants in California (Hedin et al., 2020) expect to be recalled.
Finding 4: Shut-down and re-opening orders play minor role in labor market changes
Shut-down and re-opening orders event studies

Event study treatment effects on ln(hours)

Calendar time effects on ln(hours)
Finding 5: States that received more PPP loans and had higher UI replacement rates have had milder declines and faster job recoveries.
Relationship of relief policies with layoff/rehiring

**PPP**
- Divide states by loans/payroll (1st round)
- Q4 = highest disbursement

**UI**
- Divide states by replacement rate
- Q4 = highest RR

Suggestive that loans & UI are protective.

<table>
<thead>
<tr>
<th>PPP volumes</th>
<th>Logit: Stopped work in April</th>
<th>Logit: Rehired in May</th>
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<tbody>
<tr>
<td>Quartile 2</td>
<td>0.016</td>
<td>0.019</td>
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<tr>
<td></td>
<td>(0.006)</td>
<td>(0.011)</td>
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<tr>
<td>Quartile 3</td>
<td>-0.014</td>
<td>-0.048</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.010)</td>
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<tr>
<td>Quartile 4</td>
<td>-0.023</td>
<td>-0.037</td>
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<td></td>
<td>(0.007)</td>
<td>(0.011)</td>
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<table>
<thead>
<tr>
<th>UI replacement rates</th>
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<td>Quartile 2</td>
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<td>Quartile 3</td>
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Division FE

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<th>N</th>
<th>Y</th>
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Conclusions

1. The pandemic recession is different from recent recessions (so far):
   a. Extremely fast onset and partial recovery.
   b. Led by decline in in-person services employment.
   c. Unemployed workers overwhelmingly expect to be recalled.

2. More disadvantaged workers more likely to be laid off and less likely to be rehired (so far).

3. In short run, shut-down and re-opening orders play relatively minor role in driving labor market decline and recovery; customers disappeared.

4. Some indication that PPP loans sheltered the blow; no indication that UI replacement rates have slowed recovery (so far).
Appendix Slides
CPS employment status breakdown

The usual categories missed a lot of the interesting action

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<th>Levels (%)</th>
<th>Changes (percentage points)</th>
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<tbody>
<tr>
<td></td>
<td>February</td>
<td>March</td>
</tr>
<tr>
<td>Employed at work</td>
<td>72.0%</td>
<td>69.8%</td>
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<tr>
<td>Employed but not at work</td>
<td>1.8%</td>
<td>2.9%</td>
</tr>
<tr>
<td>All enumerated reasons</td>
<td>1.6%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Other</td>
<td>0.2%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>2.9%</td>
<td>3.4%</td>
</tr>
<tr>
<td>On layoff</td>
<td>0.5%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Looking</td>
<td>2.4%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Not in the labor force</td>
<td>23.3%</td>
<td>23.9%</td>
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</table>
Hours trends, survey respondents vs. non-respondents
Turnover in Homebase data

Graph showing the share of hours from workers in base period from February to June. The data is differentiated by year: 2018 (red), 2019 (blue), and 2020 (green).
Weekly hours distribution, Homebase workers
Homebase firm attrition

Share of firms with positive hours in or after a given week

Week
- Feb
- Mar
- Apr
- May
- Jun

Year
- 2018
- 2019
- 2020
Homebase hours align closely with UI claims

**Homebase hours (Jan. 19-Feb. 1=1)**

**Initial UI claims**
60% of firms that shut have reopened

❖ At about $\frac{2}{3}$ of pre-shutdown scale.
❖ Overwhelmingly from prior workers at first.
❖ New worker share is growing (but these are high turnover firms).
Hours trends by demographic group, Homebase

**Education**
- Some HS
- Some College
- HS
- BA+

**Race**
- White
- Asian/NH/PI
- Hispanic
- Black
- AI/AN

**Wage**
- $5-$10
- $15-$20
- $10-$15
- $20+
Shelter-in-place orders in effect, by date
Hours by PPP amounts
Steeper decline, slower recovery where UI replacement rates are low

Note: UI replacement rates from Ganong, Noel, and Vavra (2020)
Initiation of PUA (independent contractor) and FPUC ($600) UI payments
Event studies estimates of effects of PUA & FPUC