

Modeling the Consumption Response to the CARES Act

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Viewpoints and conclusions stated in this paper are the responsibility of the authors alone and do not necessarily reflect the viewpoints of the Federal Reserve Board or the ECB.

econ-ark.github.io/Pandemic	<i>HTML version of paper</i>
Interactive-Jupyter-Notebook	<i>Allows user to modify some assumptions</i>
github.com/econ-ark/Pandemic	<i>Full codebase; explore all assumptions</i>
LaTeX subdirectory of ↑	<i>PDF version of paper</i>
LaTeX subdirectory of ↑	<i>Presentation slides</i>

The CARES Act directly impacts household balance sheets:

- \$1,200 to every adult (means tested)
- \$600 per week *additional* unemployment benefits, for up to 13 weeks (\$7,800)

Compared to 10 years ago, we now have good models of how household consumption responds

Contribution of paper:

- How is this time different?
- What does a carefully calibrated consumption model say?

What's Old - Baseline Model

Rich stochastic lifecycle model made up of high school dropouts, high school graduates and college graduates, matching:

- Their income profiles (trends and uncertainty)
- Liquid wealth distribution
 - matched using patience heterogeneity

⇒ Annual Marginal Propensity to Consume (MPC) ≈ 0.5

Matches *both* micro and macro phenomena

- ?
- ?

What's New: (1) 'Deep' Unemployment

Want to experiment with different expectations (and realities) about the length of pandemic-related unemployment.

Two types of unemployed:

- 1 'Normal' Unemployed: $2/3$ probability of finding a job each quarter - expected unemployment duration 1.5 quarters
- 2 'Deep' Unemployed: $1/3$ probability of returning to 'normal' unemployed state each quarter - expected unemployment duration 4.5 quarters

What's New: (2) 'Lockdown' Consumption

C during lockdown is restricted:

- Many types of C less desirable, or illegal
- Calibration: 11 percent C reduction (travel, restaurants, etc)
- Captured by reduction in the marginal utility of C

⇒ Households defer some of their spending into the future

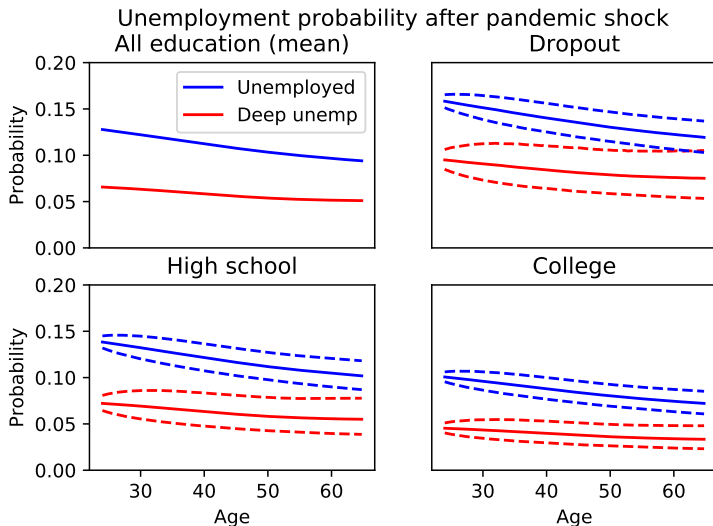
Two scenarios:

- Short-Lived: 'Lockdown' lasts two quarters on average
 - unemployment 15%
 - One-third is 'deep unemployment'
- Long, Deep: The 'lockdown' lasts four quarters on average
 - unemployment 22%
 - Mostly deep unemployment

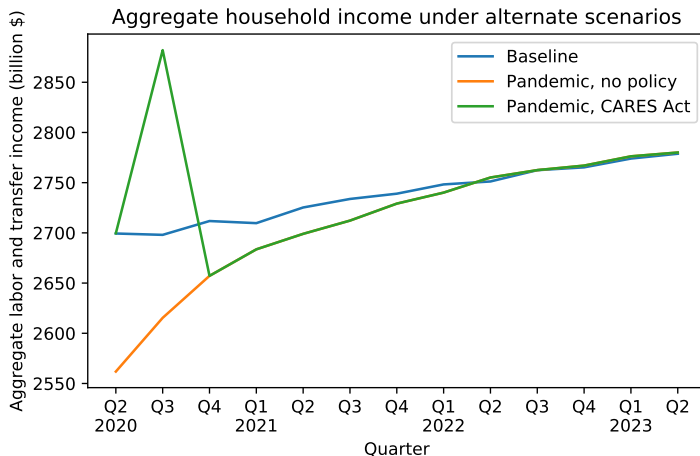
We invite you to make your own assumptions:

Interactive-Jupyter-Notebook *Allows user to modify some assumptions*
github.com/econ-ark/Pandemic *Full codebase*

Unemployment skews young, unskilled and low income

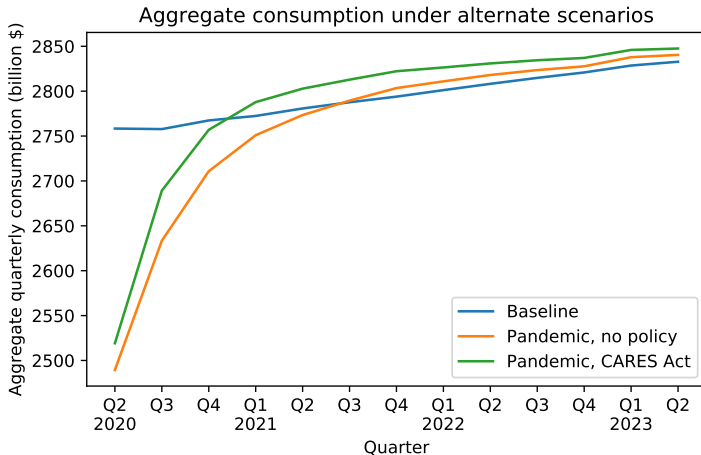


Aggregate Labor and Transfer Income

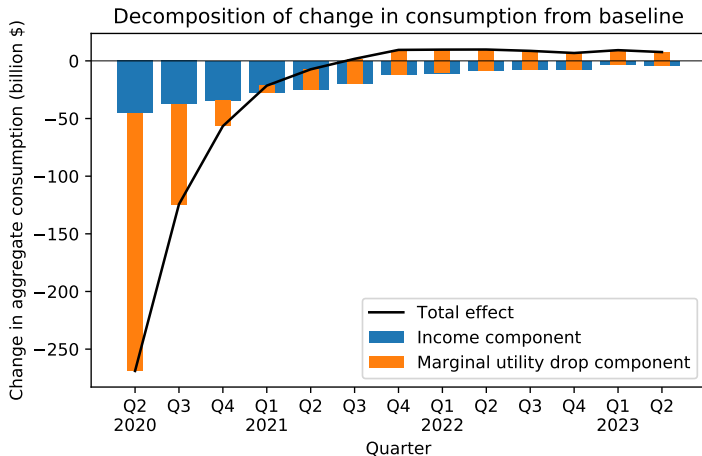


Assumes: Stimulus check delayed one qtr; 25 percent spend before check

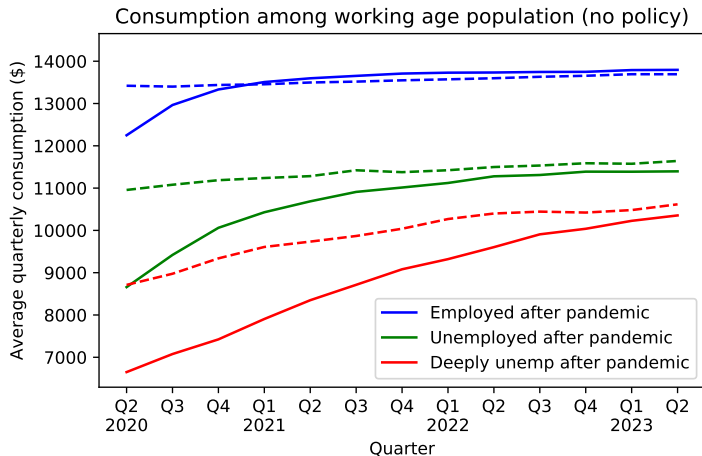
Aggregate Consumption Response



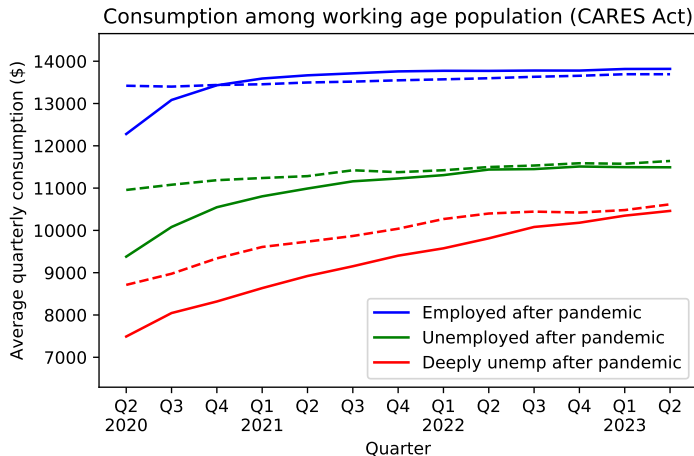
Consumption Response Decomposition



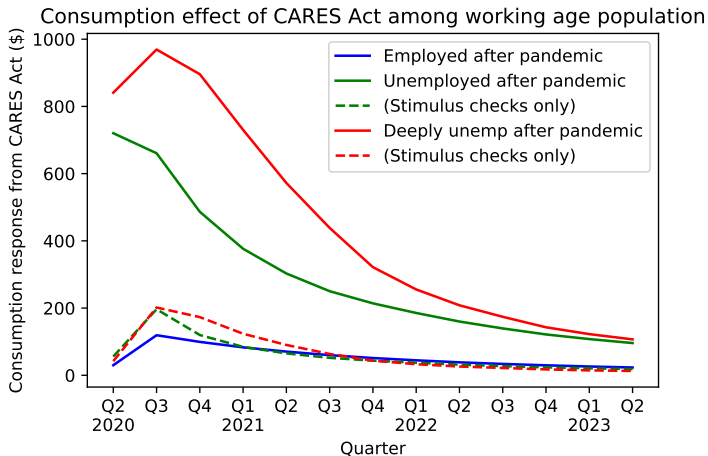
Consumption Response By Employment Type



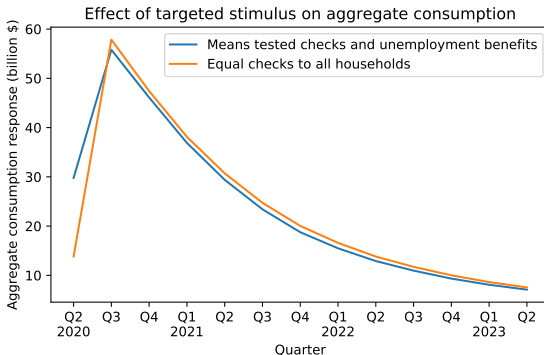
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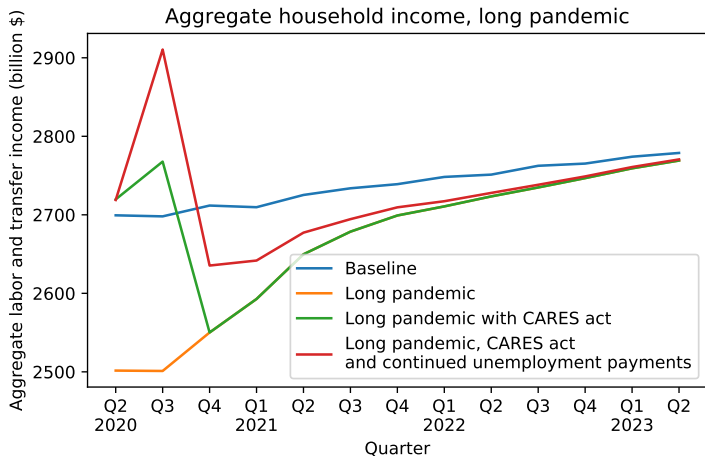


Is Targeting Useful In The Aggregate?

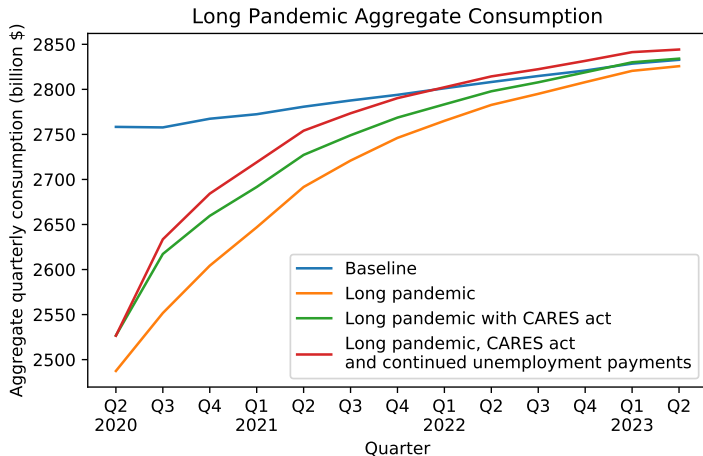


- Deep unemployed have lower MPCs
- UE benefits are generous - average MPC lower than marginal

Deep, Long Pandemic: Income



Deep, Long Pandemic: Consumption



Short-lived lockdown: CARES Act sufficient for swift C recovery

Long, deep lockdown: Further action to prevent big C drop

Check out the dashboard:

<https://econ-ark.org/pandemicdashboard>