"Temporary Unemployment and Labor Market Dynamics During the COVID-19 Recession"

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Motivation

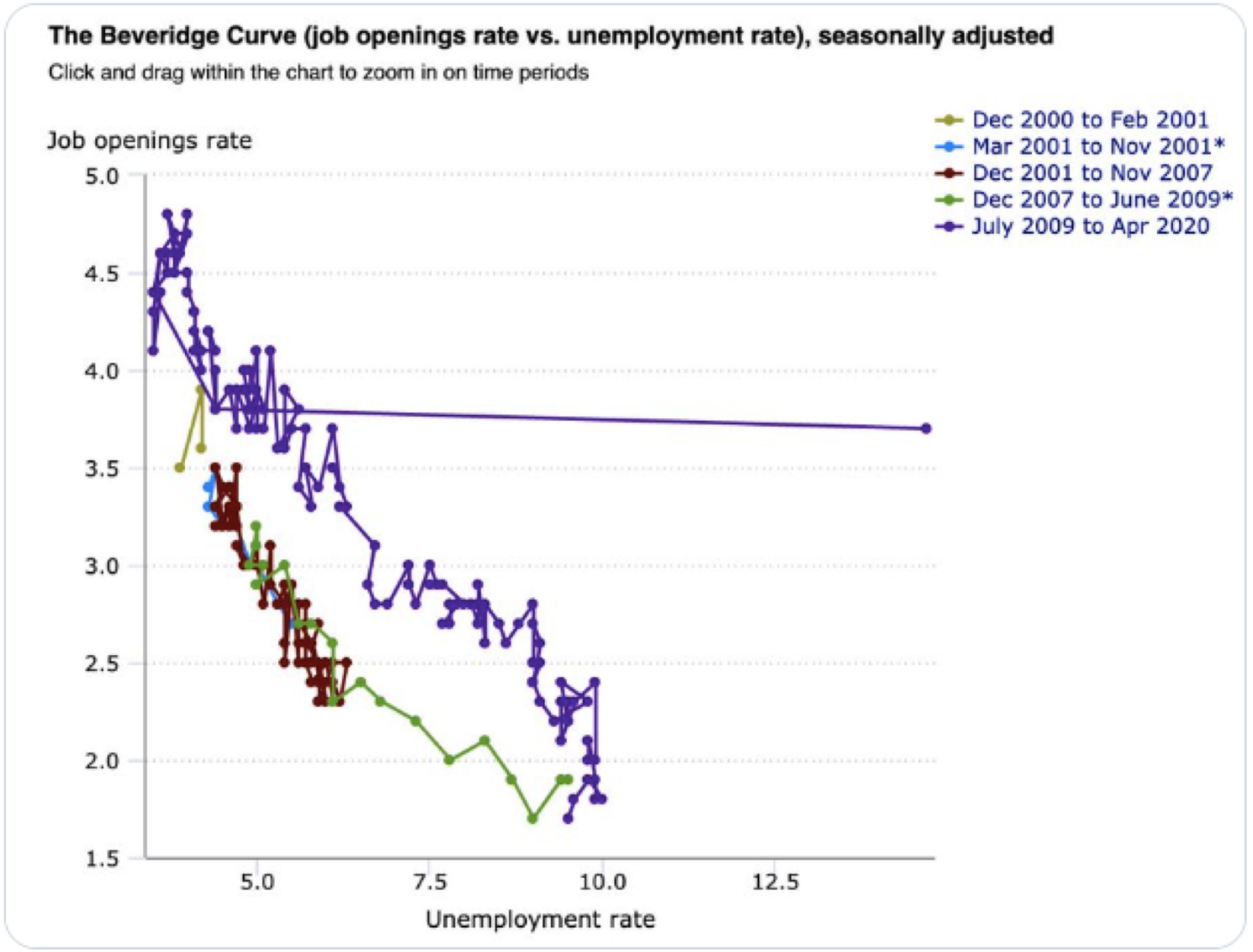
The COVID-19 recession is a **very unusual recession**:

- Record-shattering UI claims, extremely rapid increase in the unemployment rate (***u***)
- Increase in ***u*** much larger than corresponding drop in job vacancies – "breaking" the Beveridge curve
- Typically, recessions begin with large increase in separations followed by low job finding rates, but job finding rates have remained relatively high during the COVID-19 recession

This paper focuses on one specific way the COVID-19 recession stands out: the **sharp increase in temporary unemployment**

Catherine Rampell
@crampell

Beveridge Curve is drunk



9:04 AM · Jun 9, 2020 · Twitter Web App

This paper

- Develops search-and-matching model that distinguishes between temporary (*T*) and permanent (*P*) unemployment
  - Key idea: If workers believe unemployment is temporary, they impose less "congestion" on search-and-matching process – they will be "waiting", rather than "searching"
- Calibrates model using 2001-2019 Current Population Survey (CPS) data
- Adjusts the Beveridge curve based on the composition of the unemployed using our calibrated model
- Use model to project ***u*** over next 18 months under different scenarios -- evolutions of job vacancies, job separations, and the recall rate of the temporary unemployed "waiting" to be recalled

Outline

- Related literature
- Data
- Motivating figures
- Search-and-matching model
- Calibration results
- Conclusion

Related literature

- BPEA papers on dynamics of recessions: **Elsby et al. (2010)** and Elsby et al. (2011)
- Search-and-matching model: **Kroft et al. (2016)**, Krueger et al. (2014 BPEA), Kroft et al. (2019)
- Temporary unemployment: Katz (1986), Katz and Meyer (1990), Fujita and Moscarini (2017), Nekoei and Weber (2015), **Forsythe et al. (2020a,b)**, Hall and Kudlyak (2020)
- COVID-19 labor market dynamics papers: Chodorow-Reich and Coglianese (2020), Gregory, Menzio, Wiczer (2020), Bick and Blandin (2020)
- Additional COVID-19 papers: Bartik et al. (2020a,b), Goolsbee and Syverson (2020), Barrero et al. (2020)

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Data

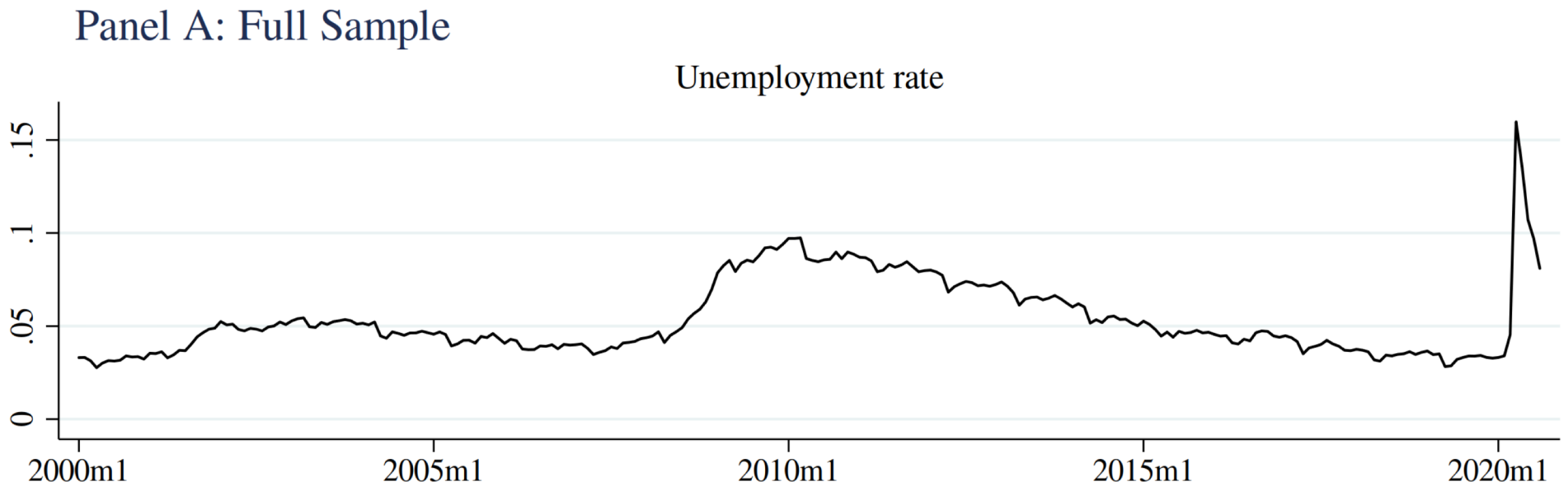
- Monthly **CPS** data between January 2001 - August 2020, using both cross-sectional and matched panel
  - Labor market states: employed (E), temporary unemployment (T), permanent unemployed (P), and non-participation (N)
  - Temporary unemployed classified as either “waiting” (T^W) or ”actively searching” (T^A)
  - Measure “stocks” each month as well as month-to-month transition rates each month
  - Measure stocks of unemployed by duration d, $P(d)$ and $T(d)$

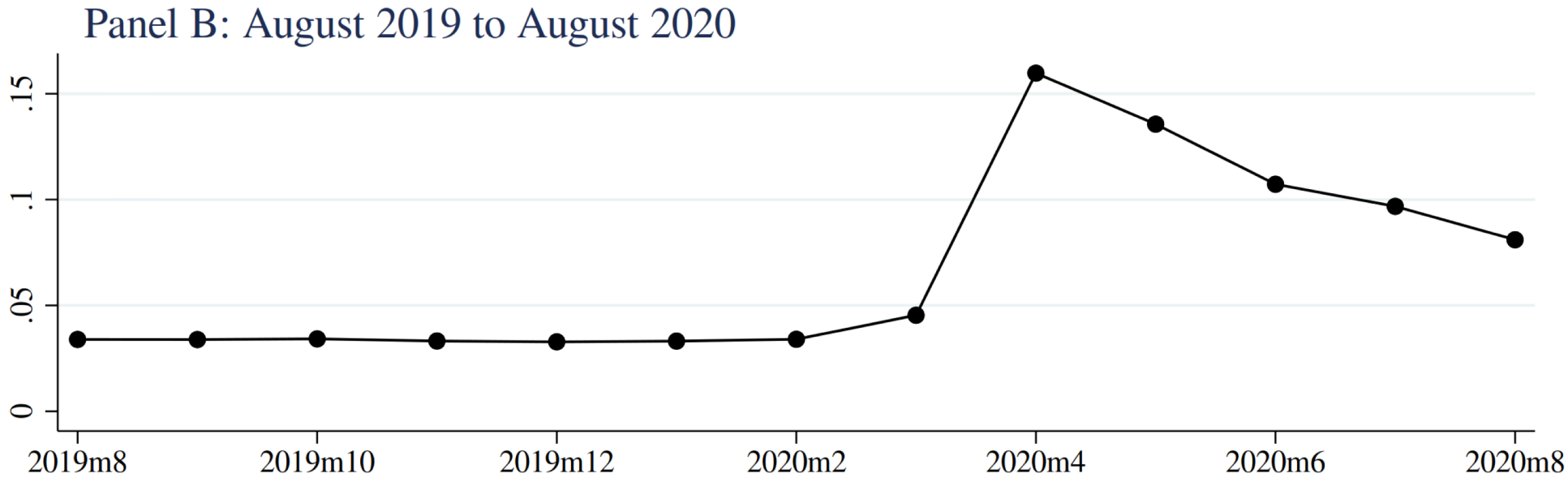
- Job vacancies measured using **JOLTS**

Measurement

- Drawing on Forsythe et al. (2020a,b), our own analysis, and BLS guidance, we include employed workers who are "absent for other reasons" and unpaid in the stock of T^W
- We divide T into T^W and T^A based on question about whether they are "actively searching" for a new job
- We address "rotation group bias" by estimating transition rates in a way that imposes consistency with measured stocks each month, following Kroft et al. (2016)

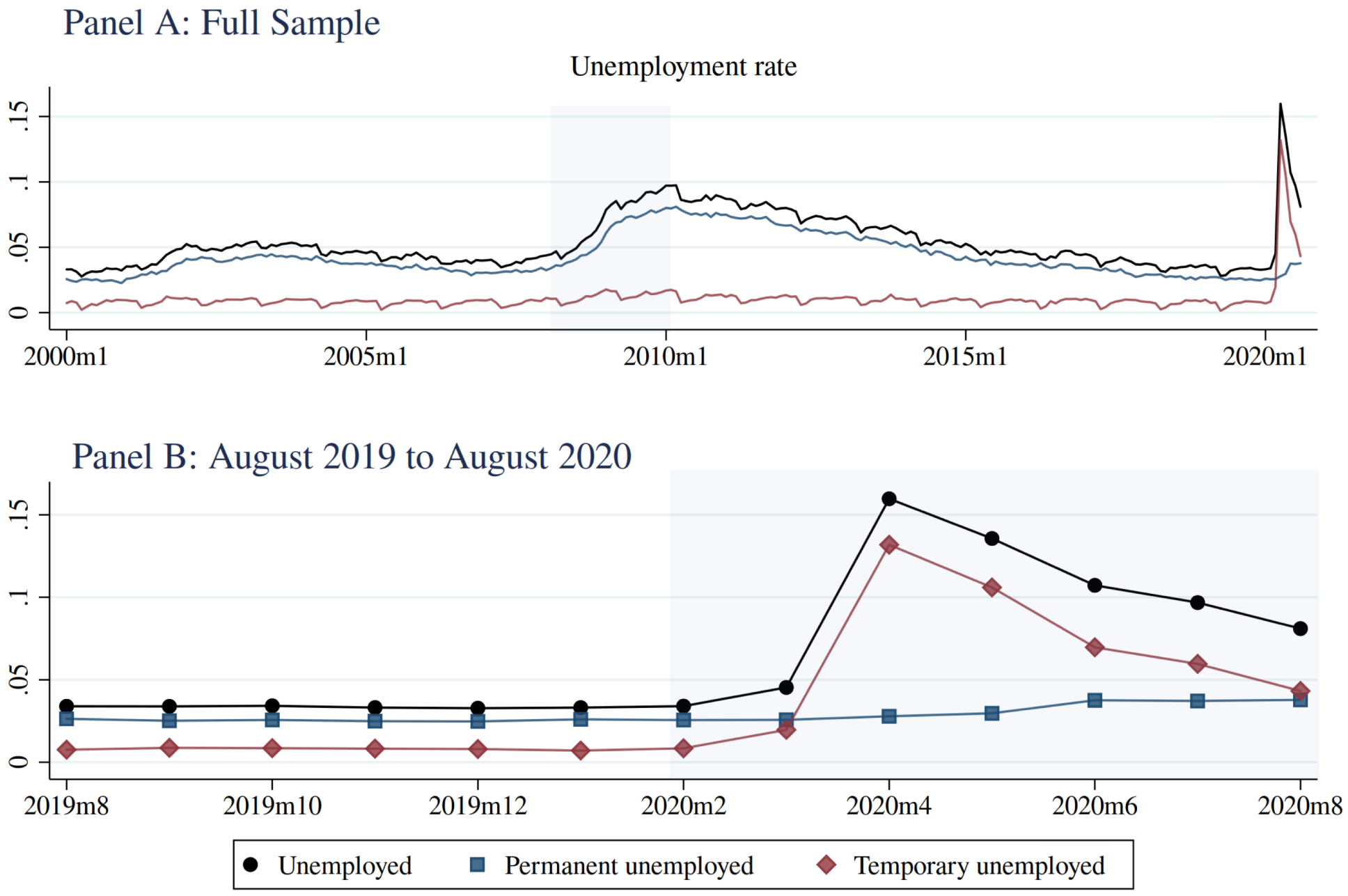
[Motivating figures] unemployment rate (u)





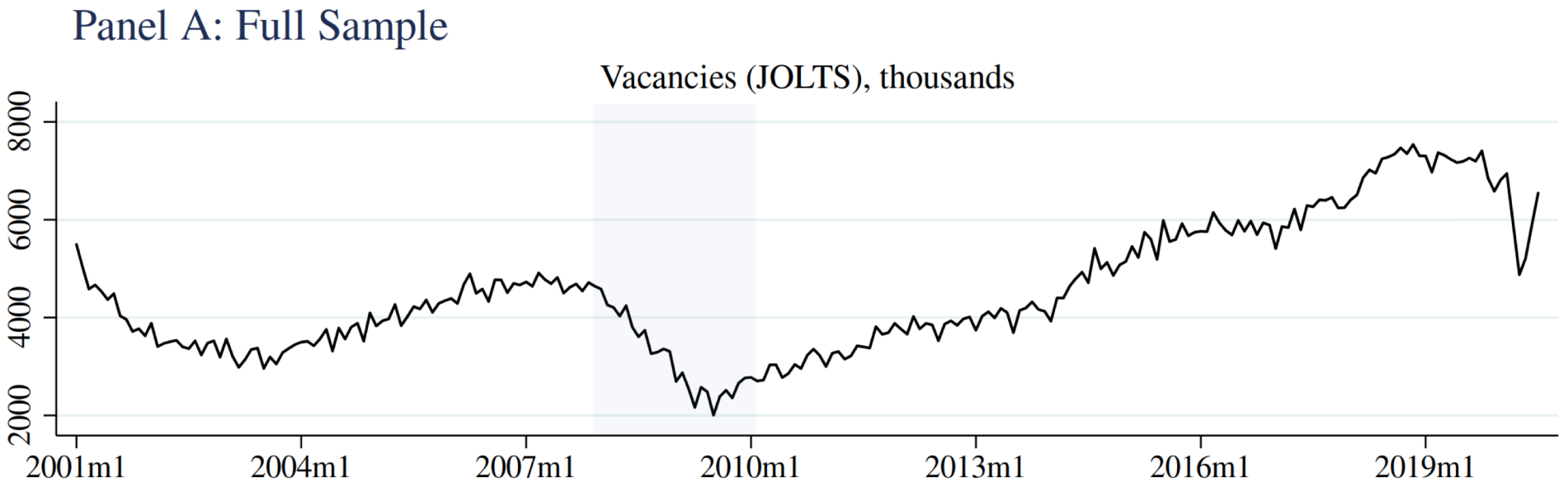
Seasonally adjusted

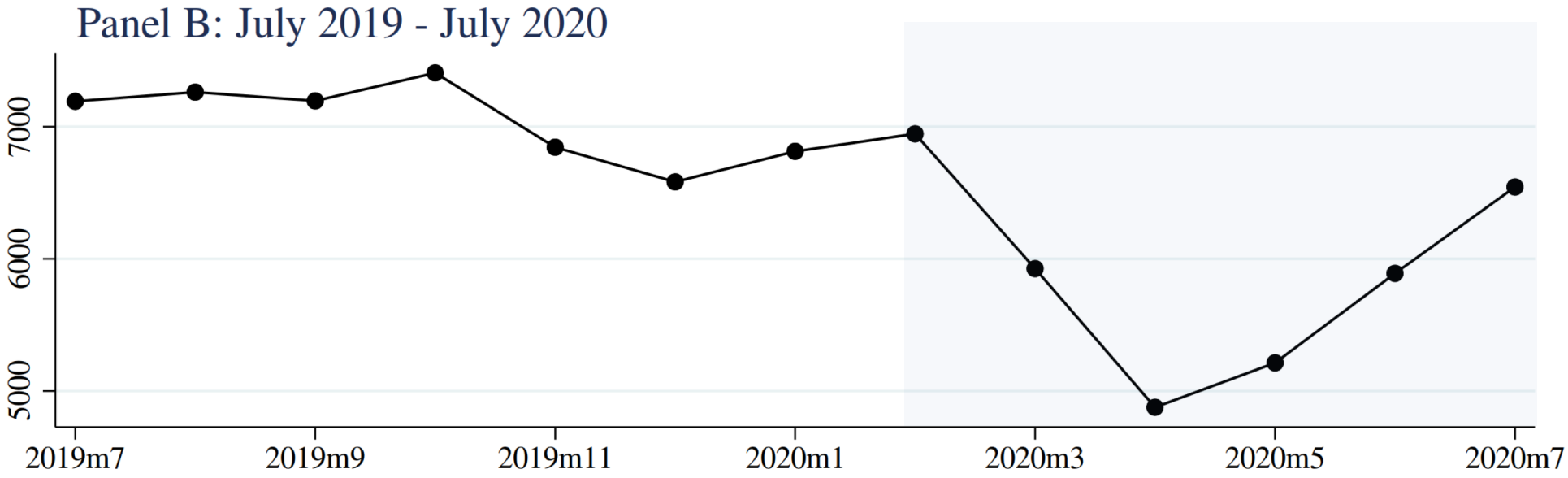
[Motivating figures] unemployment rate (u)



Seasonally adjusted

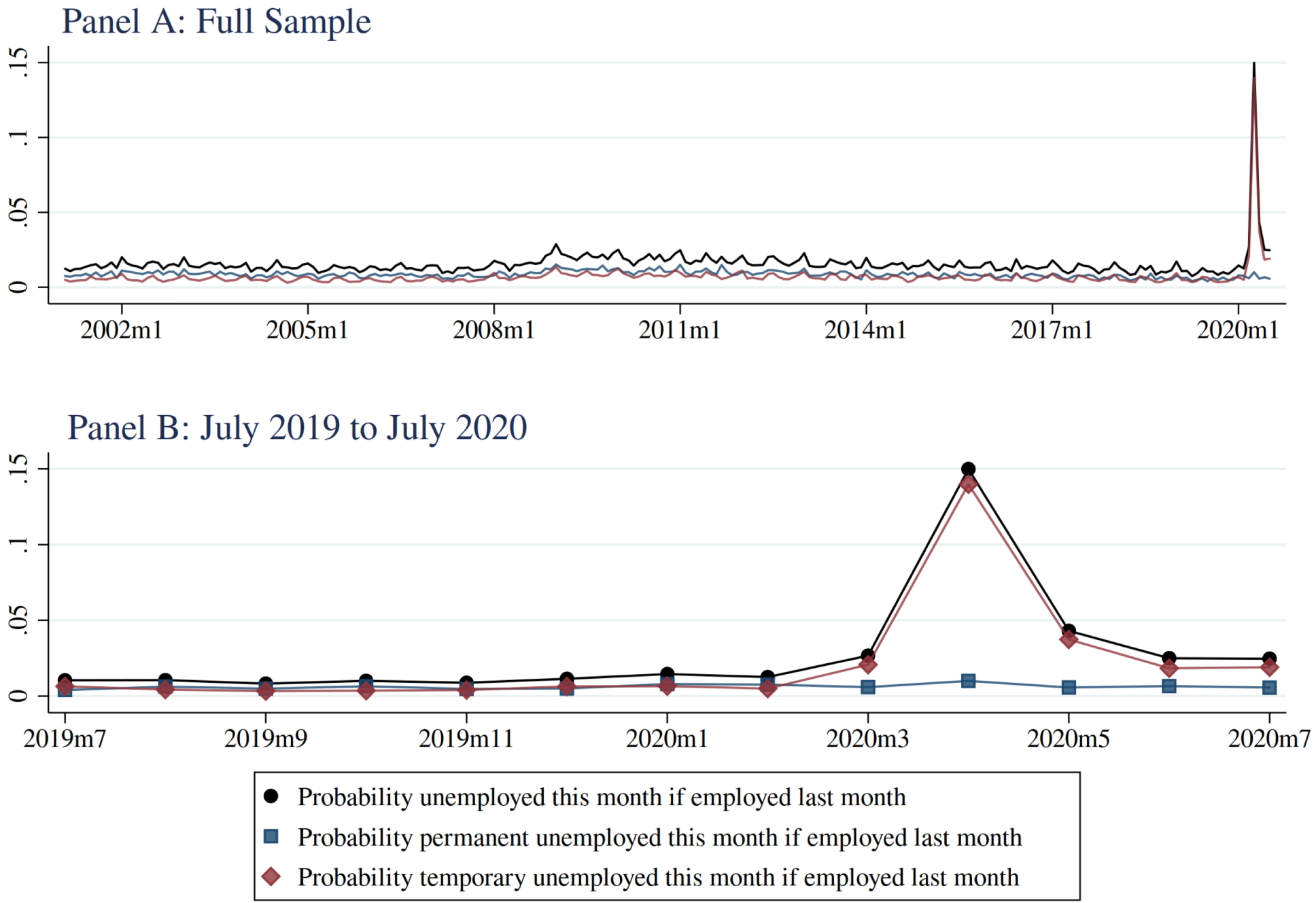
Job vacancies (V)



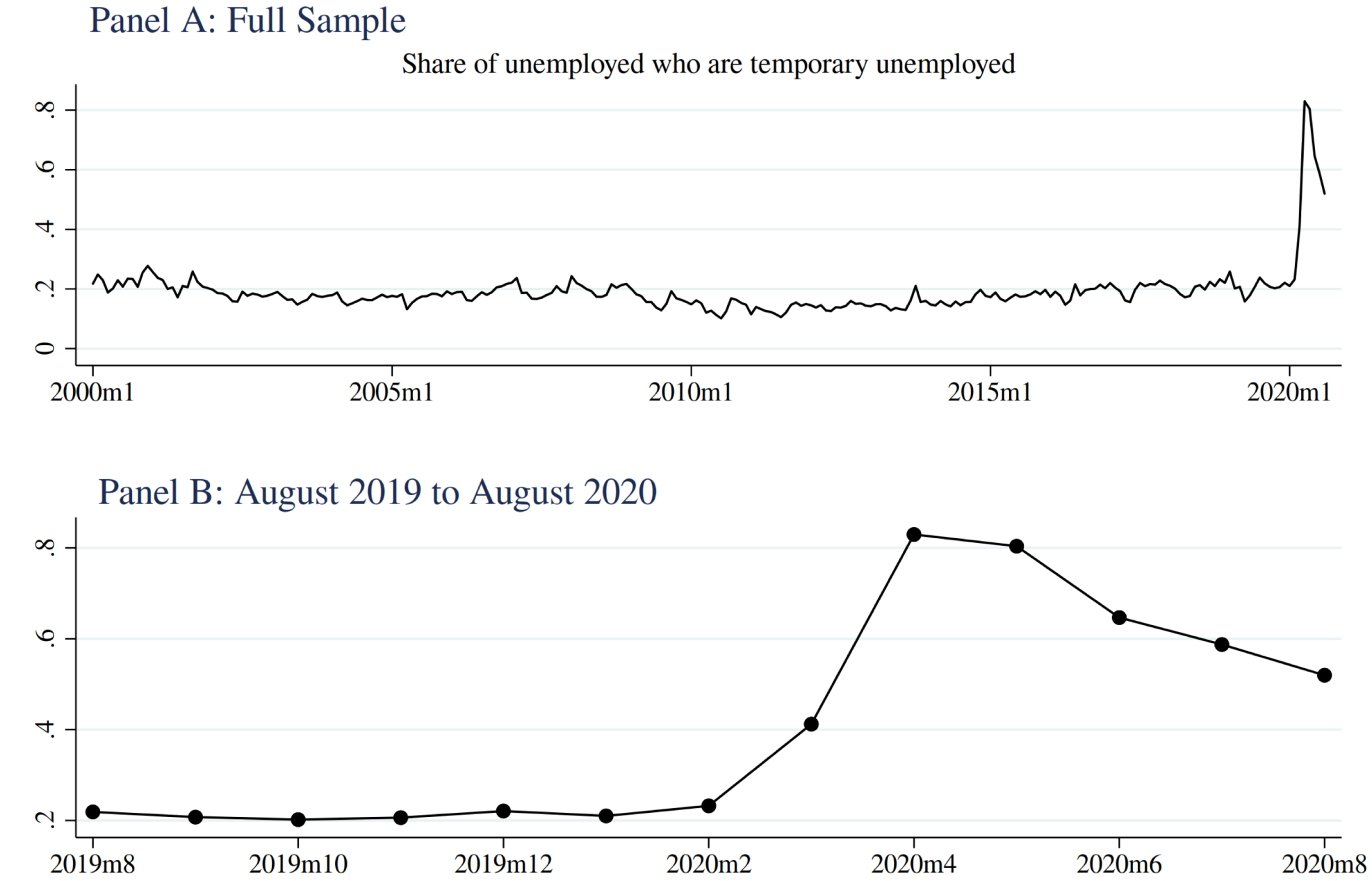


Seasonally adjusted

Job separation rates, *E*-to-*U*

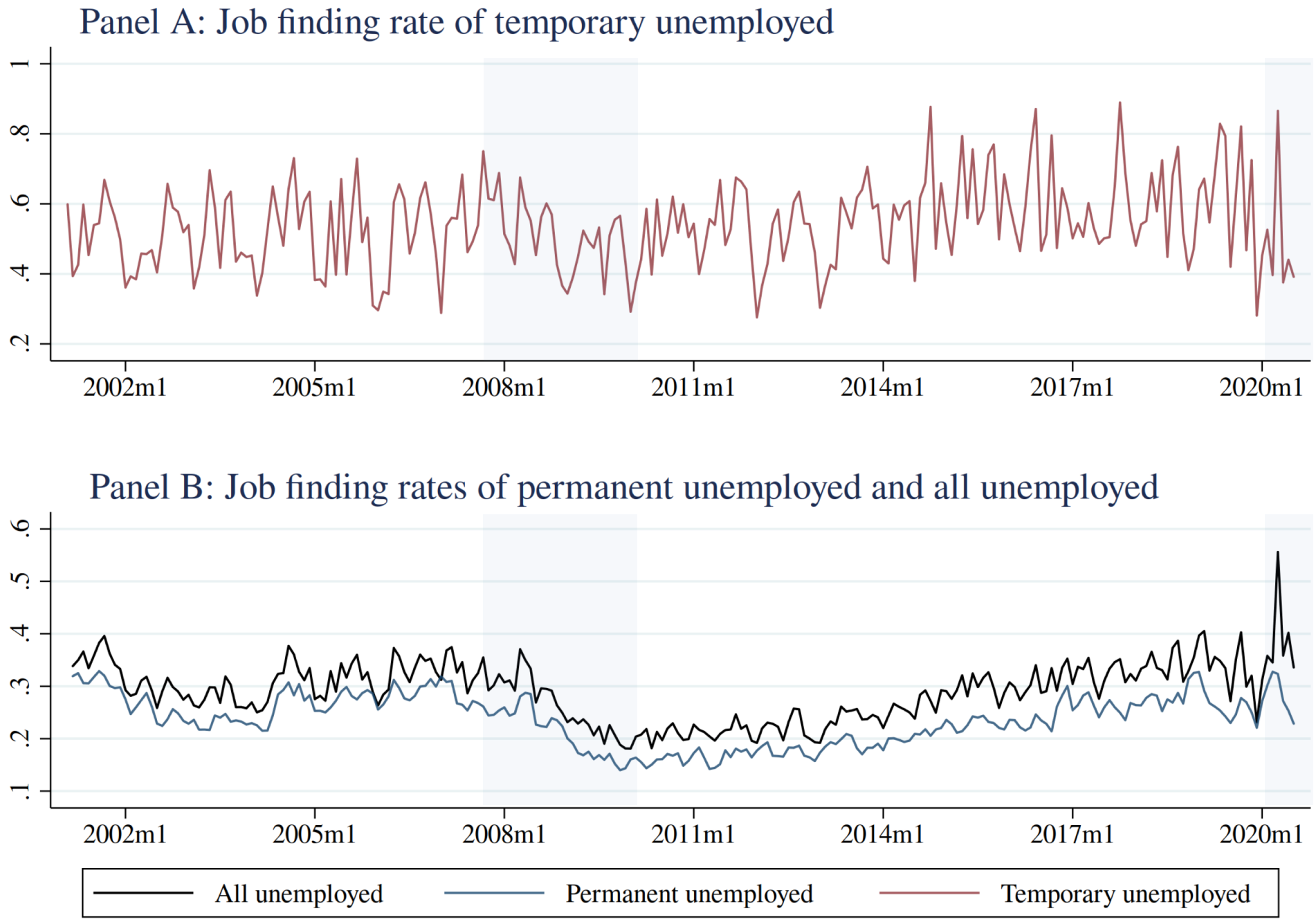


Temporary unemployed share, $T/(P+T)$

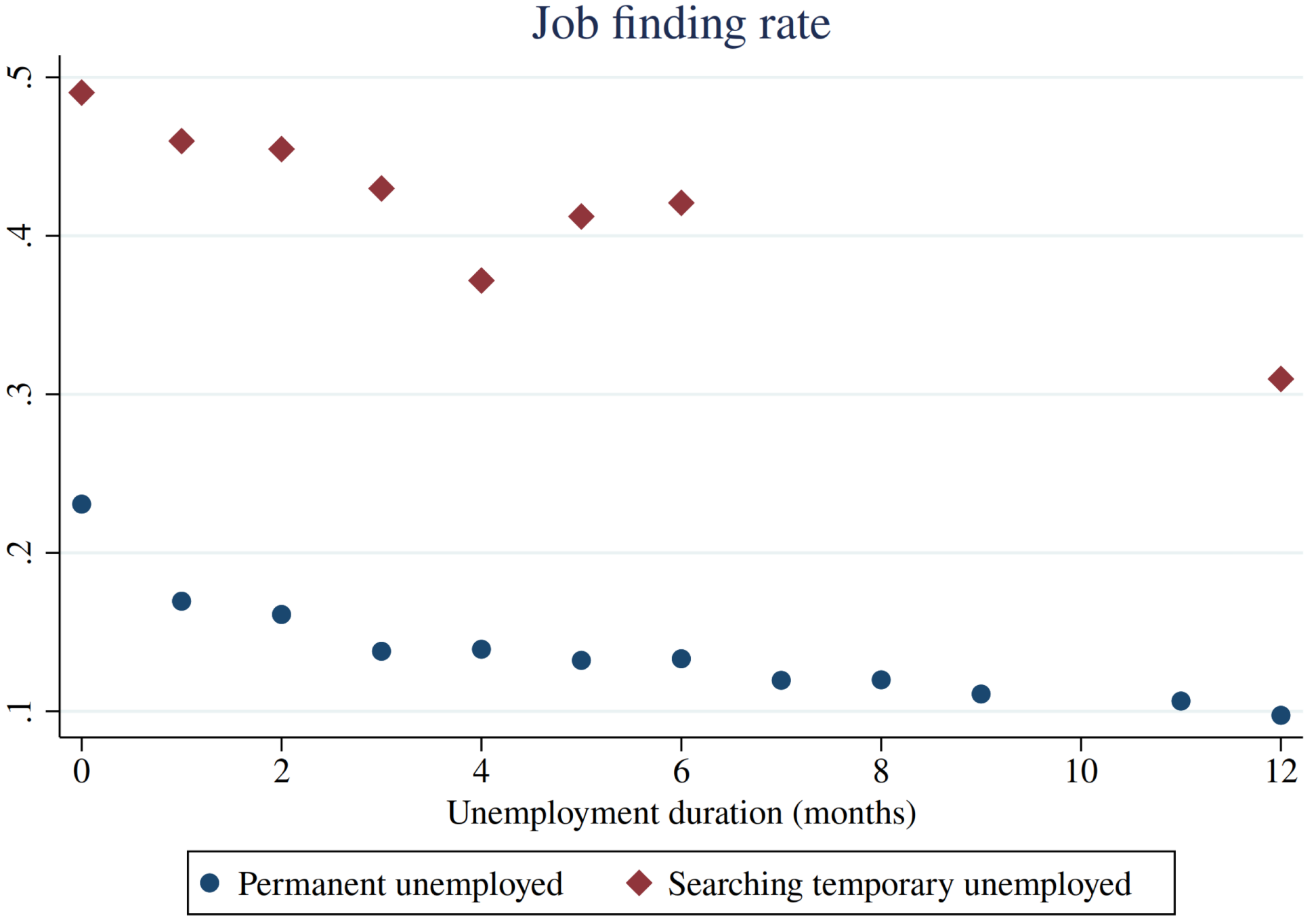


Seasonally adjusted

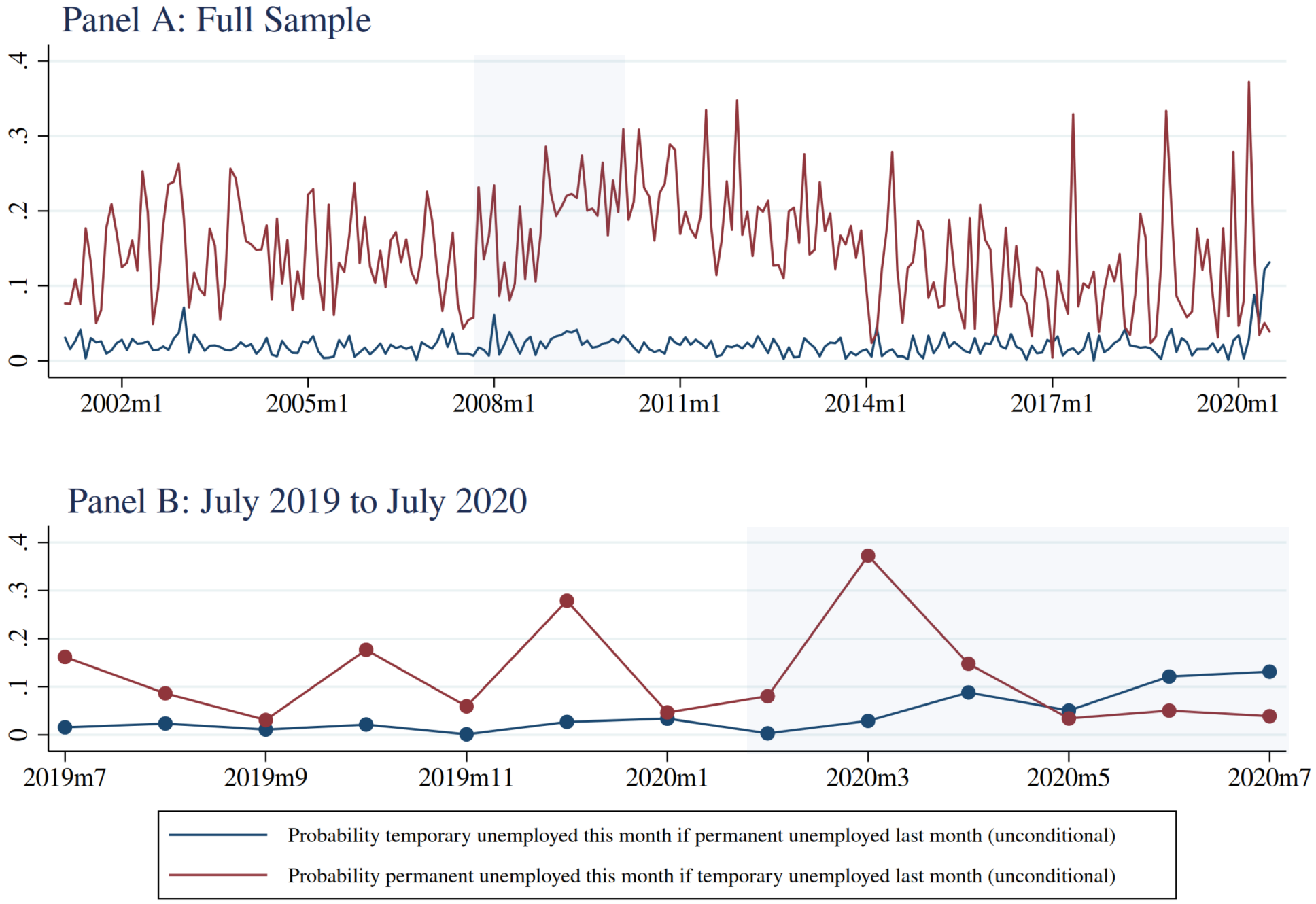
Job finding rates / re-employment rates



Negative duration dependence for T and P



Transitions between *T* and *P*



Transitions between *T* and *P*

Justin Wolfers
@JustinWolfers

The big problem: The labor market has moved on from temporary furloughs to growing permanent job loss. That'll cause the recession to drag... for years, says @BetseyStevenson.

11:21 AM · Sep 11, 2020 · Twitter Web App

Hall and Kudlyak (2020): *"[T]here has been no visible increase in the transition rate [from T to P] ... this is encouraging news, [but] there are reasons to be cautious ... frequency of leakage from [T to P] increases during economic downturns ... consequently, leakage will increase if the pandemic recession resumes and unemployment rises."*

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Search-and-matching model

- Exogenous ("forcing") variables: job separation rates, transition rates between non-employment categories, recall rates for T^W
- Main endogenous objects: job finding rates for $P(d)$, $T(d)$, N
- Job finding rate (JFR) determined by matching model:

$$\frac{M(S_t,V_t)}{S_t} = m_0 x_t^{1-\alpha}, \text{ where } x_t = \frac{V_t}{S_t}$$

- For $P(d)$, JFR is:

$$\lambda_t^{P(d)\to E} = Prob(E_t|P_{t-1}(d)) = A(d)m_0 x_t^{1-\alpha}$$

- For N, JFR is:

$$\lambda_t^{N\to E} = Prob(E_t|N_{t-1}) = sm_0 x_t^{1-\alpha}$$

Job finding rates for T^W and T^A

- Job finding rate for $T^A(d)$ is:

$$\lambda_t^{T^A(d)\to E} = \pi\lambda_t^{T^W\to E} + (1-\pi\lambda_t^{T^W\to E})\lambda_t^{P(d)\to E}$$

- Total search effort given by:

$$S_t = \bar{P}_t + (1-\pi\lambda_t^{T^W\to E})\bar{T_t^A} + sN_t$$

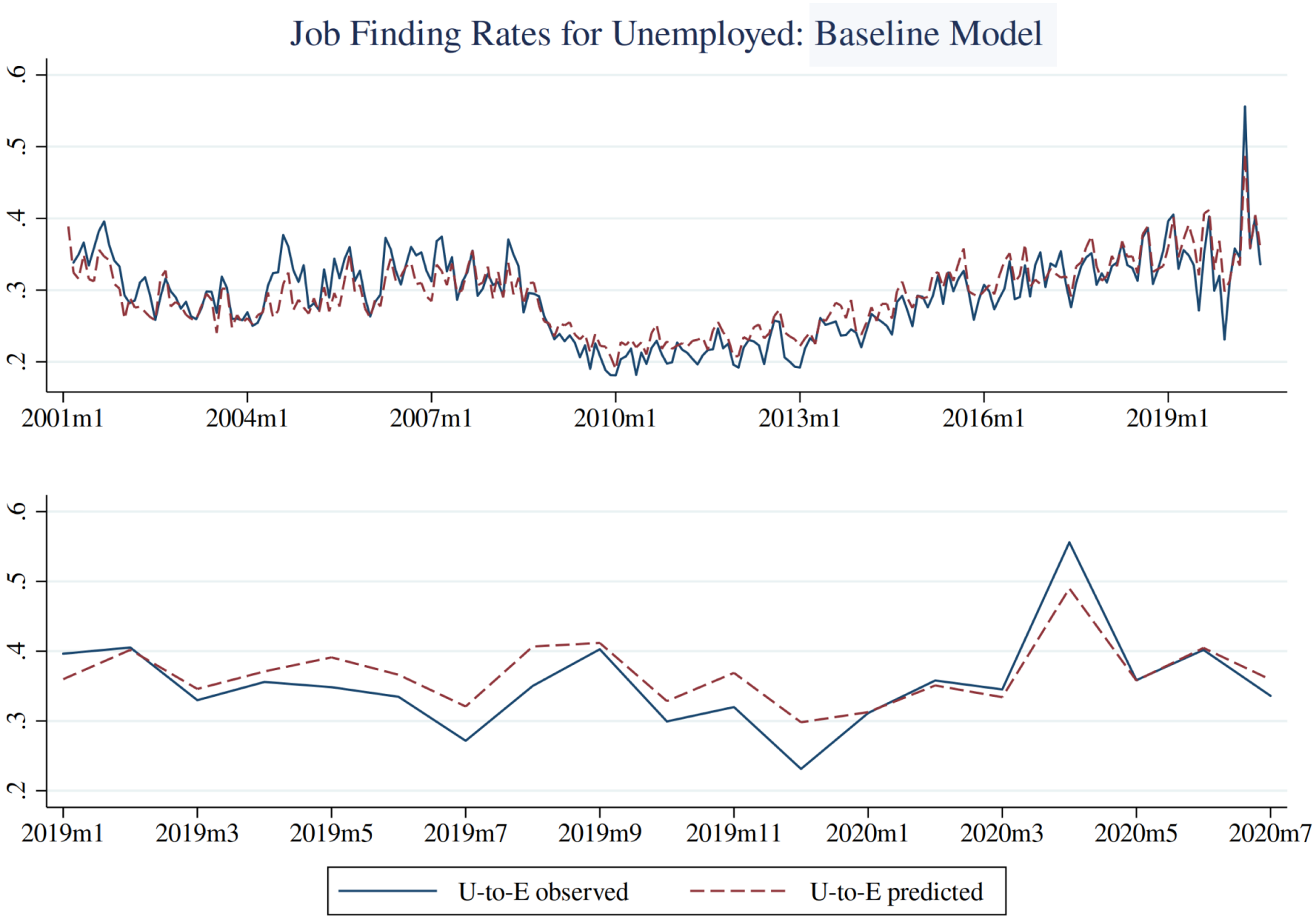
$$\bar{P}_t = \sum_{d=1}^{D} A(d)P_t(d)$$

$$\bar{T_t^A} = \sum_{d=1}^{D} A(d)T_t^A(d)$$

Calibration

1. Estimate stocks and transition rates using CPS data
2. Estimate $A(d)$ using 2001-2019 data following Kroft et al. (2019); assumed to be the same for $T^A(d)$ and $P(d)$ and stable over time
3. Estimate remaining model parameters using minimum distance on 2001-2019 data
4. In both (2.) and (3.) find very similar estimates to Kroft et al. (2016) which used only pre-2008 data. Suggests that the matching model parameters and duration dependence parameters are fairly stable

Job finding rates in-sample and out-of-sample



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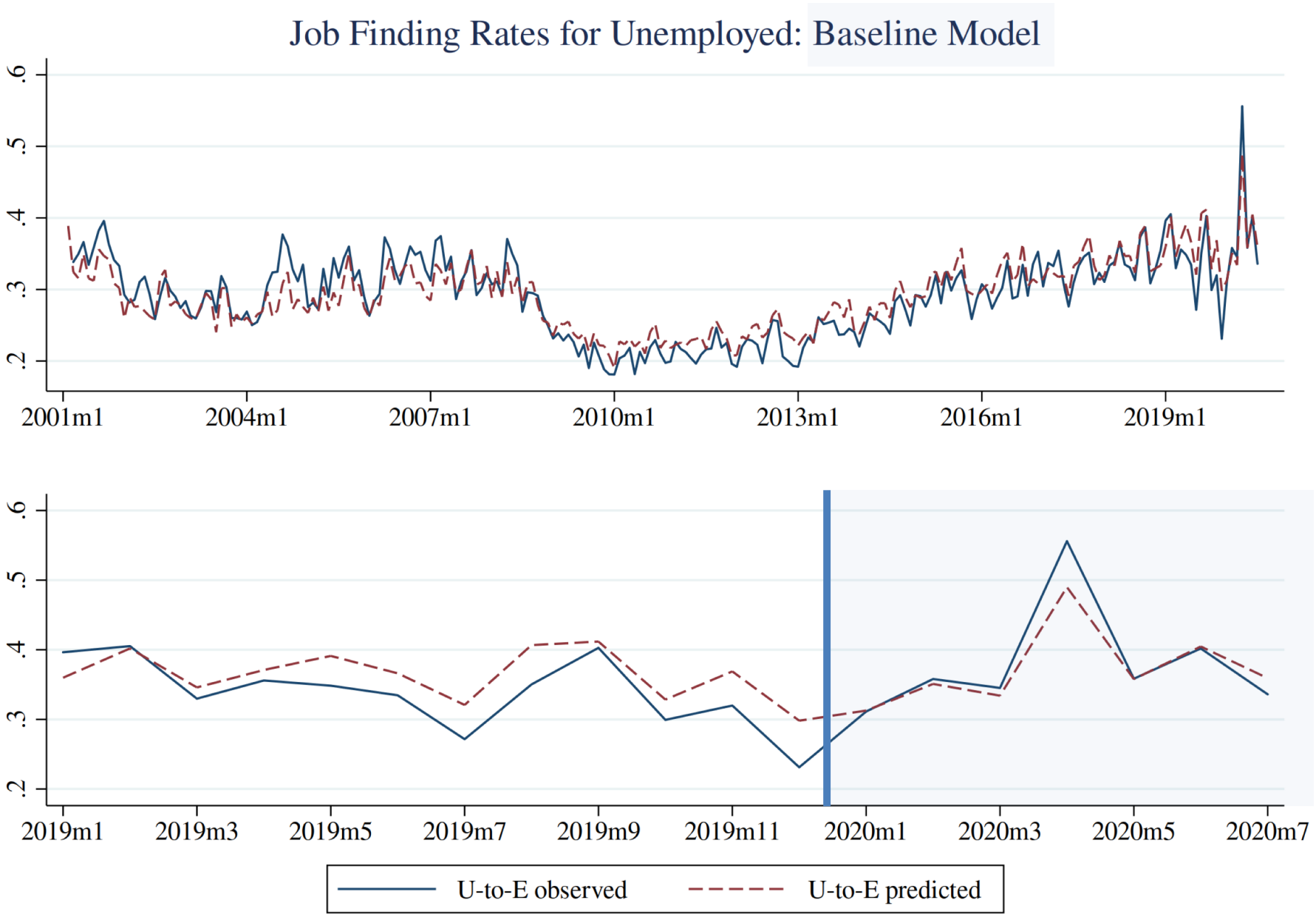
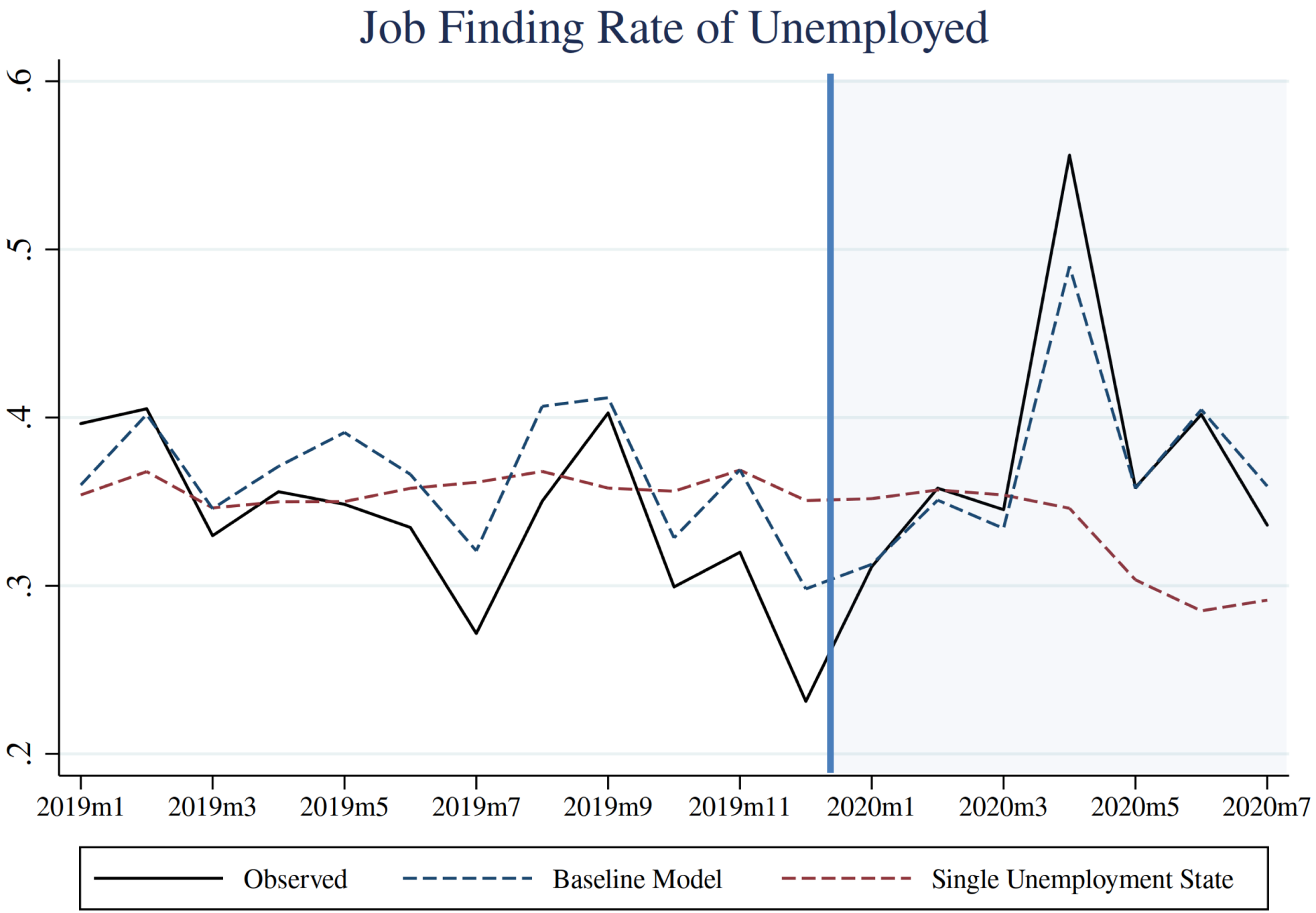
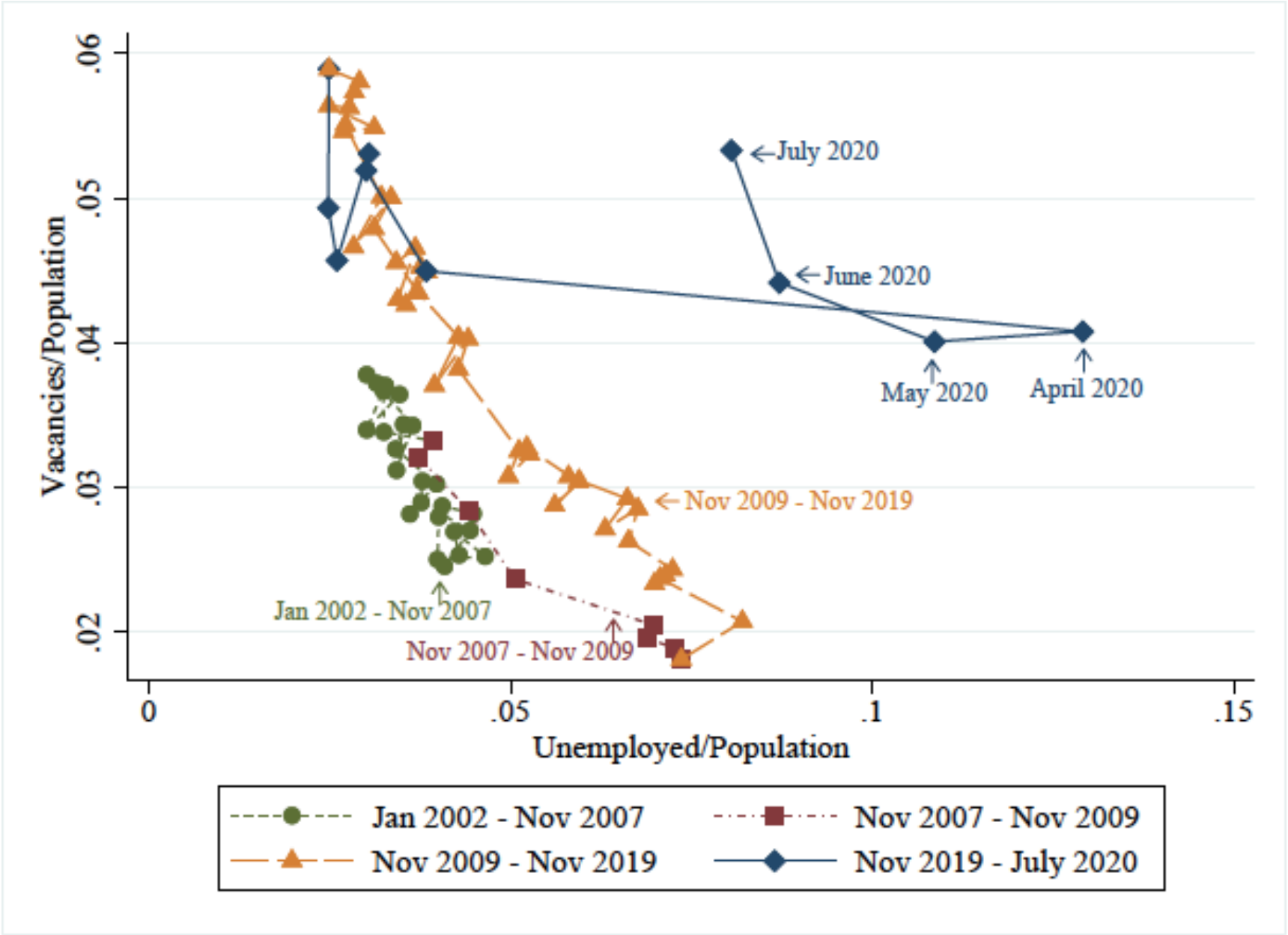


Comparing to model without temporary unemployment



Beveridge curve



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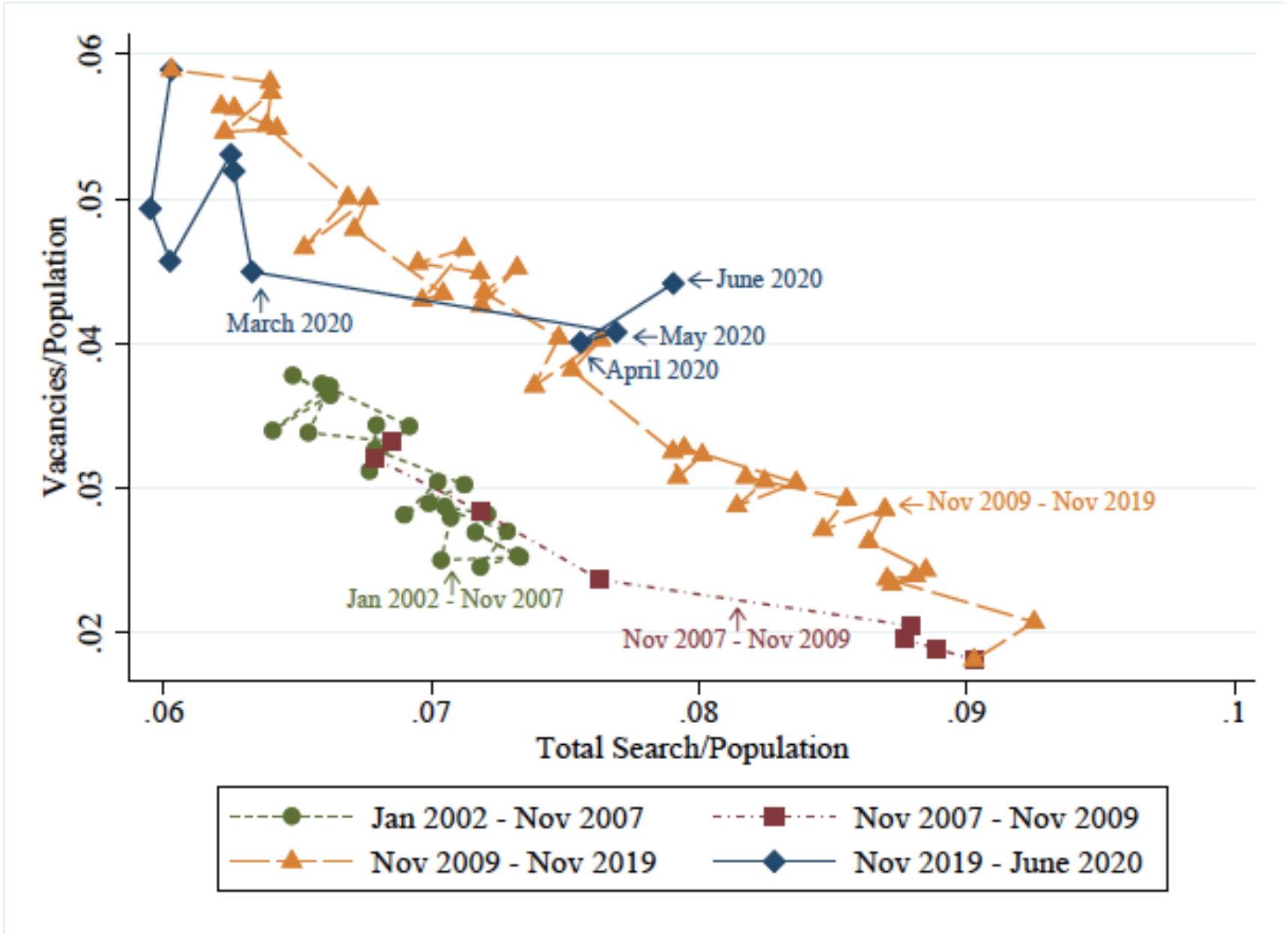

Forcing variables

Forcing variable	Mar 2019-Feb 2020 Average	March 2020	April 2020	May 2020	June 2020	July 2020
Vacancies	7,108,250	5,857,000	5,305,000	5,222,000	5,843,000	6,949,000
E to N transition rate	0.023	0.017	0.053	0.041	0.024	0.023
E to T transition rate	0.005	0.021	0.140	0.037	0.018	0.019
E to P transition rate	0.006	0.006	0.010	0.006	0.007	0.006
T to P transition rate	0.112	0.372	0.148	0.034	0.050	0.039
T to N transition rate	0.181	0.535	0.571	0.144	0.129	0.128
P to N transition rate	0.403	0.371	0.636	0.419	0.321	0.229
P to T transition rate	0.017	0.029	0.088	0.051	0.121	0.131
N to P transition rate	0.055	0.048	0.046	0.047	0.074	0.051
N to T transition rate	0.004	0.009	0.032	0.059	0.047	0.039
Share of temporary unemployed searching	0.181	0.108	0.083	0.124	0.194	0.234
Job finding rate of waiting temporary unemployed	0.642	0.455	0.805	0.373	0.451	0.416

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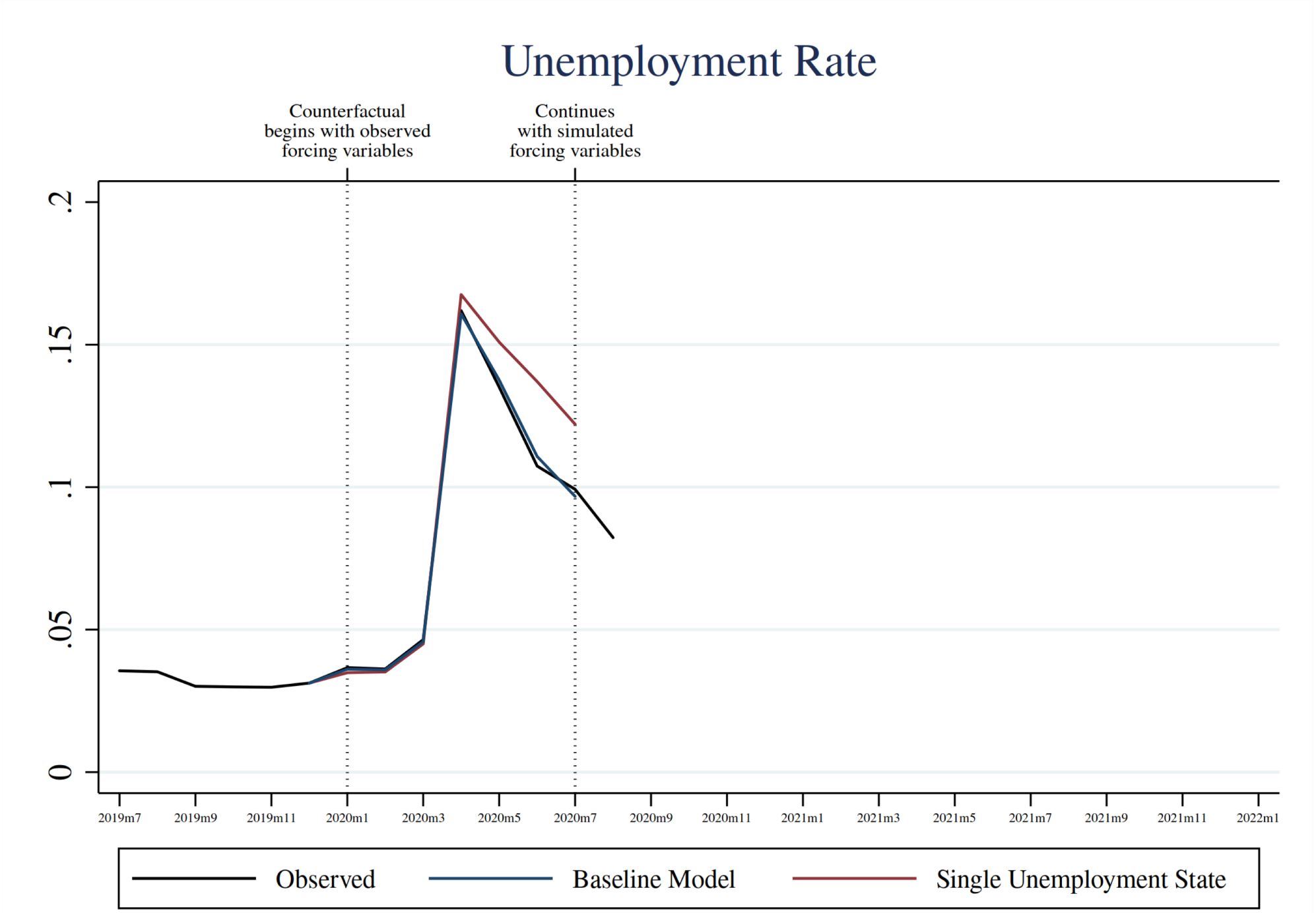
Baseline vs. model without temporary unemployment



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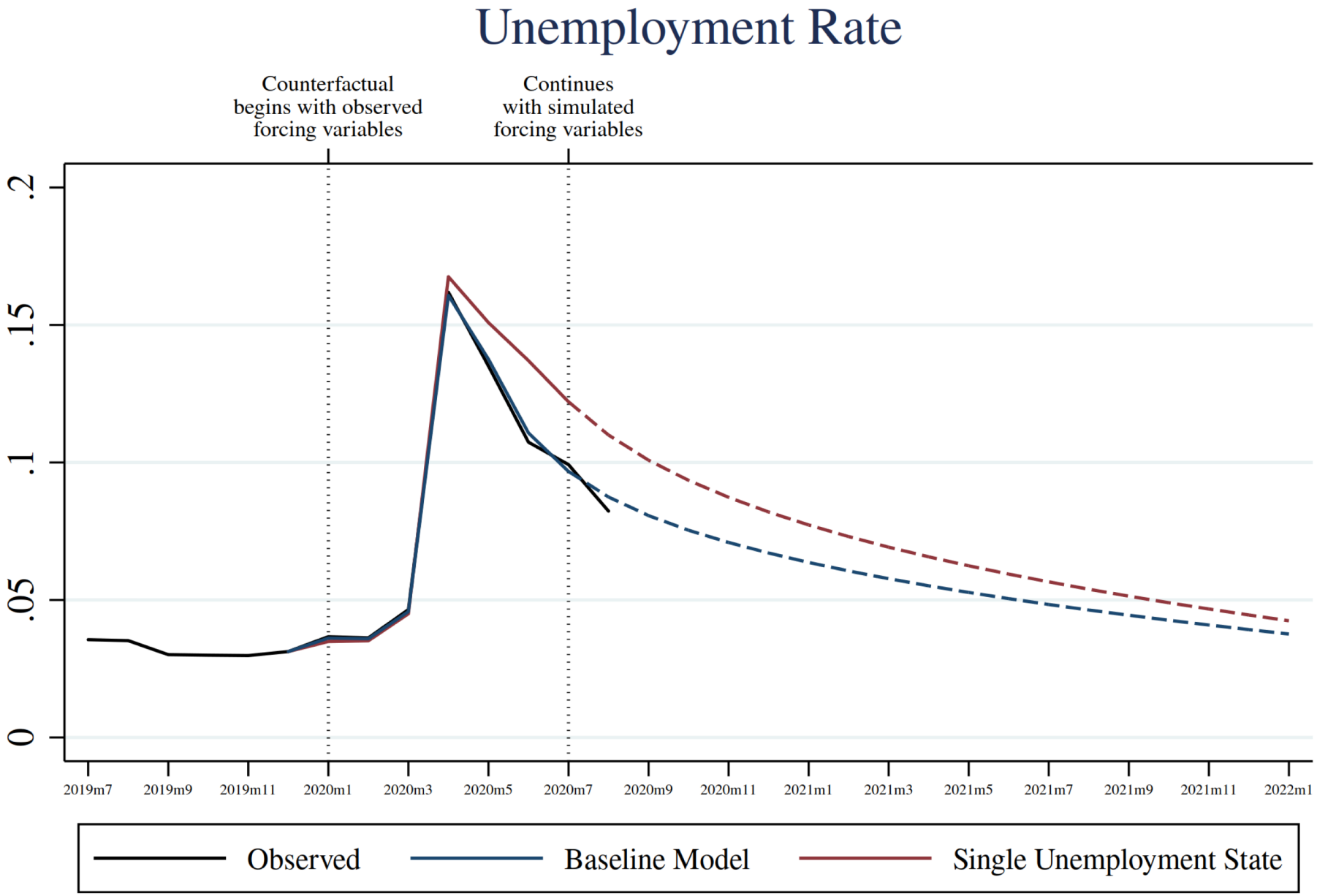

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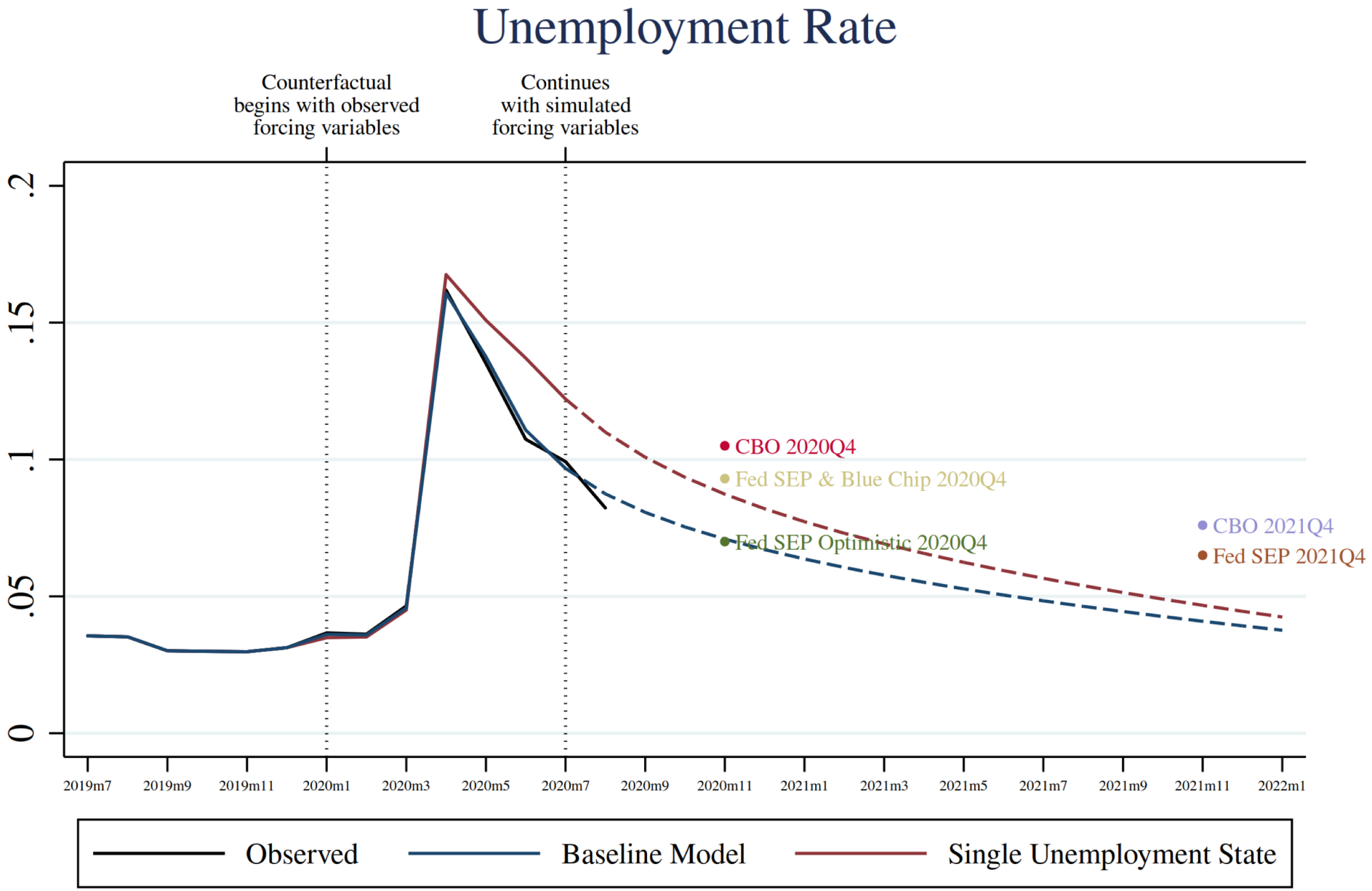
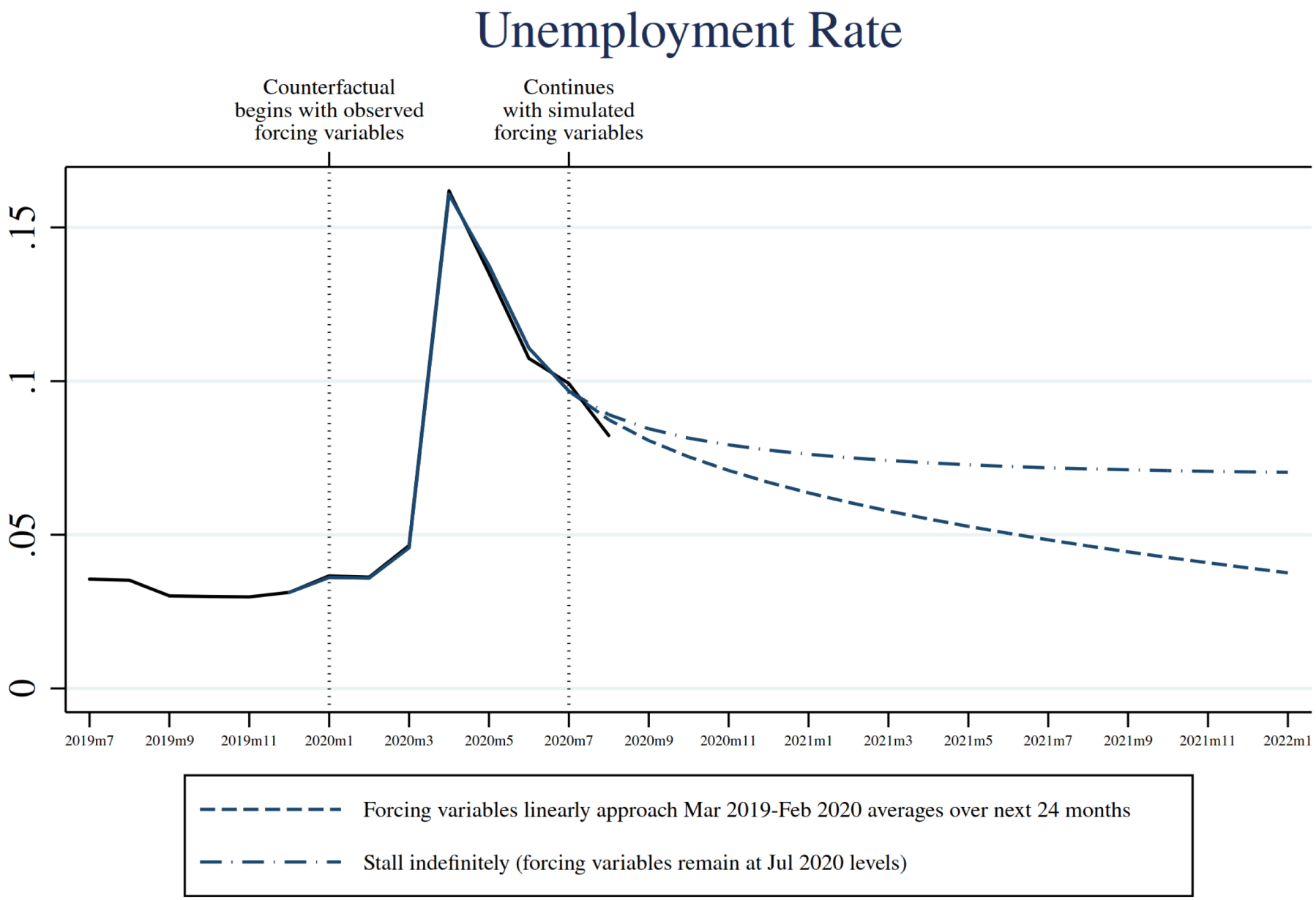


Baseline vs. “stalling out” scenario



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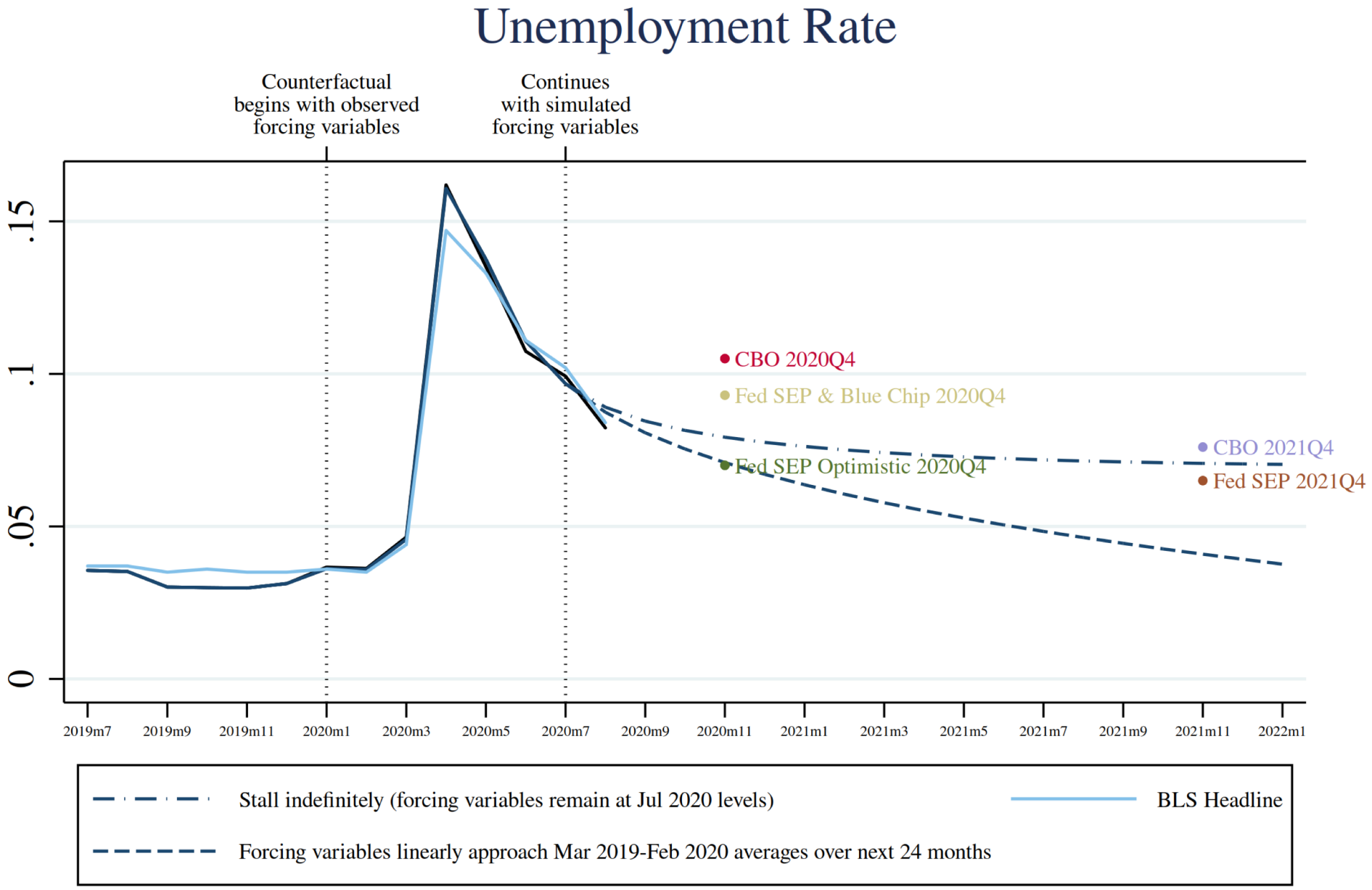

Summary of calibration results

- We find that ***u*** declines more rapidly compared to a model without *T*/*P* distinction & compared to forecasts
- To match professional forecasts, need a "U-turn" in job separations (or substantial reductions in vacancies and the recall rate for *T*)
- Results are consistent with small share of workers reporting that "jobs are hard to get" => jobs may not be "scarce" for the unemployed workers actively searching for a job
- No meaningful increase in long-term unemployment (LTU) during recovery; we project LTU share approaching 25% (similar to 2019 levels), compared to 50% LTU share for several years following Great Recession

Conclusions

- The COVID-19 recession is unusual: job finding rates usually fall during recessions following a rapid inflow into unemployment (Elsby et al. 2010)
- Assuming that the unemployment "outflow rate" follows the dynamics of past recessions may lead to overestimating the recovery time for the labor market
- Calibrated model provides rigorous support for focusing somewhat less on the "headline" unemployment rate as a measure of labor market slack; instead, need to look at composition of unemployed alongside vacancies and job separations