

The Unemployment-Inflation Trade-off Revisited: The Phillips Curve in COVID Times

Discussion

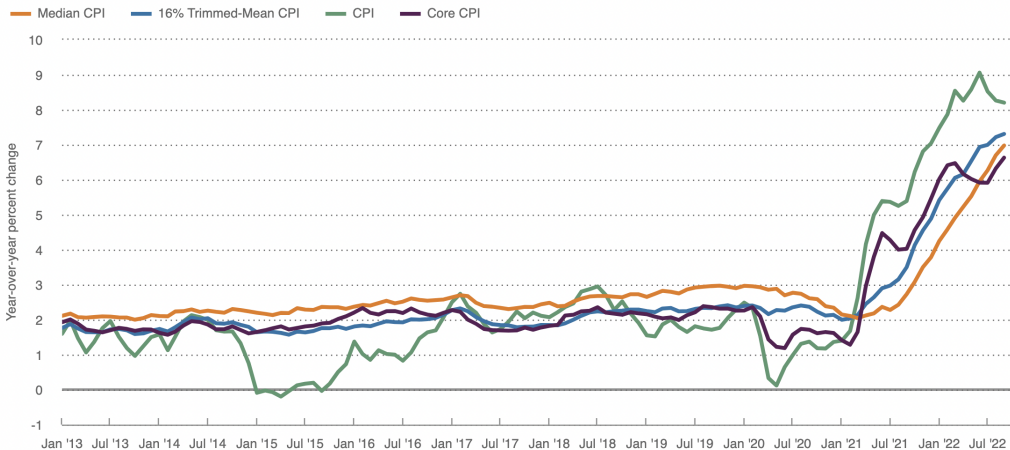
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Setting the Scene: Inflation is High

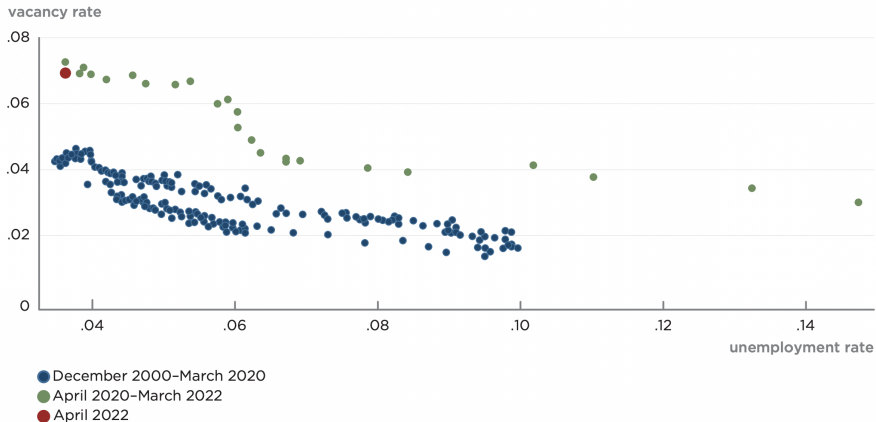
Median Consumer Price Index



Source: Bureau of Labor Statistics, Federal Reserve Bank of Cleveland, Haver Analytics

Setting the Scene: Search Frictions are High

Figure 1
Vacancy and unemployment rates, December 2000 to April 2022



Source: Blanchard, Domash & Summers (2022)

Setting the Scene: Search Frictions are High

- Chairman Powell (Sep 22, 2022):

"Job openings could come down significantly—and they need to—without as much of an increase in unemployment as has happened in earlier historical episodes."

- Blanchard, Domash & Summers (2022):

"The Federal Reserve seeks to cool an overheated US labor market to ease wage hikes and reduce job vacancies, without a painful spike in unemployment. But empirical evidence indicates that these goals have never been accomplished together and remain unlikely now."

This Paper

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What are the structural shocks determining inflation and unemployment dynamics after the pandemic?

(And what is the role of search frictions?)

Outline of the Discussion

- Summarize the paper:
 - Rise in inflation due to increase in natural rate of unemployment
- Main comment #1: great to see inflation modelling with search frictions
- Main comment #2: what explains the data?
 - CEGS explanation vs. temporarily steep Phillips Curve

Approach

- **Standard:** estimate a New Keynesian wage Phillips Curve
 - My abridged version

$$\pi_t^w = \pi_t^{\text{long run expected}} - \kappa \mathbb{E}_t \sum_{j=0}^{\infty} \beta^j (u_{t+j} - u_{t+j}^*)$$

- **Methodological innovation:** discipline unemployment using flow micro data cf. Crump et al (BPEA 2019)

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$$\underbrace{u_t}_{\text{unemployment}} = \underbrace{\bar{u}_t}_{\substack{\text{secular unemployment} \\ \text{(secular search frictions)}}} + \underbrace{(u_t - u_t^*)}_{\substack{\text{unemployment gap} \\ \text{(price stickiness)}}} + \underbrace{(u_t^* - \bar{u}_t)}_{\substack{\text{shocks to natural rate} \\ \text{(cyclical search frictions)}}$$

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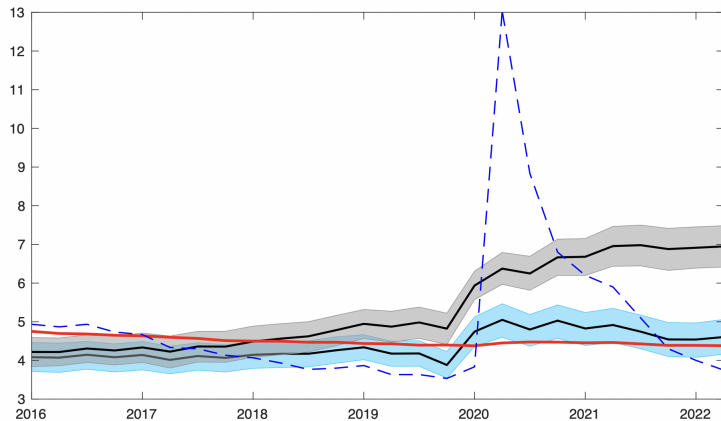
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$$\underbrace{u_t}_{\text{observed}} = \underbrace{\text{microdata on flows by demographic groups} + \text{unobserved components model}}_{\bar{u}_t} + \underbrace{(u_t - u_t^*) + (u_t^* - \bar{u}_t)}_{\text{joint unobserved components model}}$$

Natural Rate of Unemployment



Estimation

- Blue = w/o wages
- Grey = with wages

Main Result:

- High inflation is due to **large increase in natural rate of unemployment**
- Which model infers from **high wage growth**

Under the Hood—Intuition for the Results

■ New Keynesian Phillips Curve

$$\pi_t^w = \pi_t^{\text{long run expected}} - \kappa \mathbb{E}_t \sum_{j=0}^{\infty} \beta^j (u_{t+j} - u_{t+j}^*)$$

■ Data:

1. Weak wage inflation-unemployment correlation pre-pandemic
2. Steep wage inflation-unemployment post-pandemic
3. $\pi_t^{\text{long run expected}}$ relatively stable (for now)

■ CEGS explanation:

- Low value of κ explains (1)
- Large rise in u_{t+j}^* explains (2)

My Comments

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- **Main comment #1:** This is a great **modelling framework**
 - In general: great to discipline macro models with micro data + search
 - **Timely given current search frictions**
 - Aside—could take “search block” even further:
 - Explicitly model search frictions
 - How does the model interpret the shifting Beveridge Curve?
 - Blanchard, Domash & Summers vs. Powell & Waller ...

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- **Main comment #2:** what about a temporarily steeper Phillips Curve?

Explanations: CEGS vs. temporarily steeper Phillips Curve

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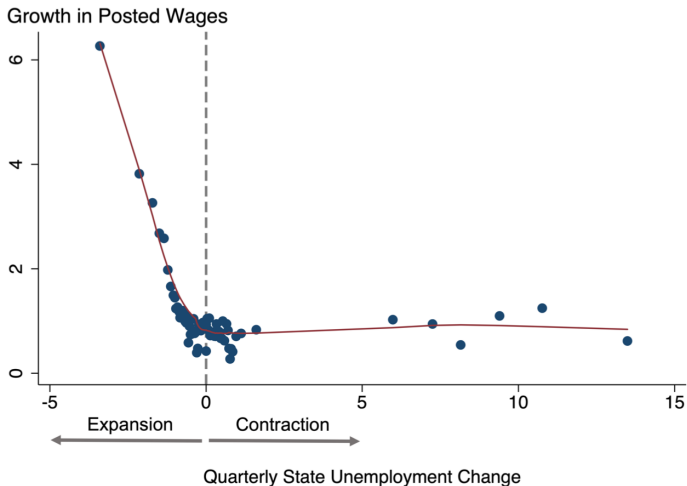
■ Alternative explanation:

- Low κ before pandemic, high κ after (explains 1 + 2)
- Smaller changes in u_{t+j}^*

Reason for Temporary Steepness: Downward Wage Rigidity

- Suppose that wages are rigid downward **but flexible upwards**
- Then the correlation between inflation and unemployment is higher:
 - In a tight labor market
 - After a sequence of positive shocks

Wages: Rigid Downward, but Flexible Upward



Source: Hazell & Taska (2022) and Burning Glass data

Temporary Steepness vs. Rising Natural Rate

- **Future:** CEGS model rule out a temporarily steeper Phillips Curve?
 - E.g. estimate time varying κ , or use region/industry data?
 - Hazell, Herreno, Nakamura & Steinsson (QJE 2022) find **intermediate** time variation in κ w/ state data
- Why does alternative explanation versus CEGS matter?
 - Sacrifice ratio
 - Forecasting
 - Optimal policy

Conclusion

- Great paper and **modelling framework, especially now**
- Comments:
 1. More exciting work to be done with search
 2. Another possibility to consider: temporarily steeper Phillips Curve