How to Measure Labor Market Slack?
Worker Heterogeneity and Monetary Policy

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Assessing labor market underutilization is key to monetary policy

▶ Relation between inflation and activity: complex and imperfectly understood
⇒ Undesirable to focus on price stability as a single goal

(The ECB's medium-term orientation in pursuing the primary goal of price stability allows to contribute to the achievement of the EU's full employment objective)

▶ Timely measures of labor market slack are then a key input to monetary policy:

  ▶ Provide a measure of the cyclical position of the economy and permit assessing whether short-run inflationary pressures are acceptable in presence of a trade-off

  ▶ Provide a signal of demand-related inflationary pressures

Hidden labor market slack: pool of effective job seekers

▶ Unemployment rate: primary measure of underutilization in labor markets

▶ Unemployed ≠ job seekers
  ▶ Large flows from Nonparticipation → Employment
  ▶ And from Employment → Employment

  Unemployment rate does not capture all margins of labor market slack

▶ Pool of job seekers is heterogeneous
  ▶ E.g. marginally attached workers less likely to find jobs than the unemployed
  ▶ Unemployed themselves are heterogeneous (demographics, duration, history)

  Counts of # of seekers (e.g. U6) fail to capture heterogeneous search intensities

A tale of two unemployment rates: US vs. EA during Covid
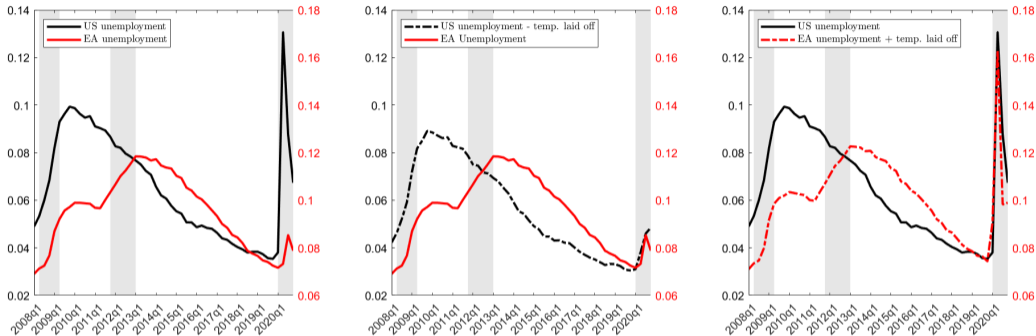
- ▶ Unemployment measured differently in US and EA, e.g. temporary laid off workers
- ▶ Temporarily laid off workers do not search as intensively as the (permanently) unemployed
  2 limit scenarios:
    1. They do not search at all (middle panel)
    2. They search as intensively as the unemployed (right panel)
- ▶ Rigorous assessment: weight temporarily laid off by their actual search intensity

Constructing a measure of effective job seekers

▶ Effective job seekers:

$$S_t = \sum_i \rho_t^i S_t^i$$

$S_t^i = \#$ of job seekers of type i; $\rho_t^i =$ search intensity of job seeker of type i

▶ Challenge: measuring search intensities

▶ Building on Hall and Schulhofer-Wohl (2018), Abraham, Haltiwanger and Rendell (2020): i) assume job finding rates only differ by search intensities; ii) use CPS data to track flows to employment by initial state; iii) adjust for demographics

▶ AHR estimate relative job finding rates for 22 groups: 13 among the unemployed; 7 among the nonparticipants; 2 among the employed

▶ Employment probabilities vary a wide range by initial status Estimated relative job finding rates

A (very rough) measure of effective job seekers in the Euro Area

▶ Eurostat (LFS-based) data, 2006Q1-2021Q1: unemployment by duration, supplementary indicators, transition rates

▶ Effective job seekers (with 6 labor market states):

$$S_t = \underbrace{\rho^{ST} U_t^{ST} + \rho^{LT} U_t^{LT}}_{\text{Unemployed}} + \underbrace{\rho^{SNA} N_t^{SNA} + \rho^{ANS} N_t^{ANS} + \rho^O N_t^O}_{\text{Nonparticipants}} + \underbrace{\rho^E E_t}_{\text{Employed}}$$

▶ Weights given by relative average raw transition rates to employment:

$$\rho^{ST} = 1, \ \rho^{LT} = 0.41, \ \rho^{SNA} = 0.38, \ \rho^{ANS} = 0.27, \ \rho^O = 0.11, \ \rho^E = 0.11$$

▶ Rate of effective job seekers:

$$s_t = \frac{S_t}{U_t + N_t + E_t}$$

▶ Some EA caveats: job retention schemes; fixed-term vs. open-ended contracts

# Effective job seekers rate (s) less volatile than the unemployment rate (u)

- Both measures are countercyclical, but s is less volatile than u

- How much less volatile?
    - $\sigma_s/\sigma_u = 0.35$
    - % increases during GFC + sovereign debt and Covid recessions:
        - 68% and 19% for u
        - 12% and 6% for s

- Why is the volatility dampened?
    - Offsetting changes in the cyclical composition of searchers: during recessions more unemployed, but less employed job seekers
    - Downweighting of the long-term unemployed reduces the volatility from this component
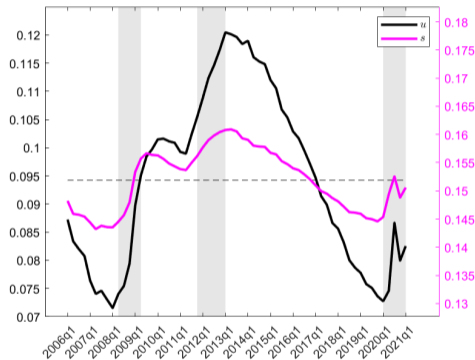
Alternative measures of effective job seekers

Unemployment rate (u) imperfect signal of effective job seekers rate (s)

- Standardize both u and s for comparison
- u imperfect signal of s:
    - u underestimates slack during recessions (and immediate aftermath in GFC case), relative to expansions
    - Downweighting of the long-term unemployed (more sluggish) implies s raises more promptly
    - Different story during Covid: i) raise in inactivity; ii) drop in long-term unemployment
- s-based wage Phillips curve possibly flatter during recessions, compared to u-based one:
    - for given $\Delta \pi^w$, $\Delta s > \Delta u$, hence $\frac{\Delta \pi^w}{\Delta s} < \frac{\Delta \pi^w}{\Delta u}$
- Caveat: need estimates of benchmark rates s^* and u^*
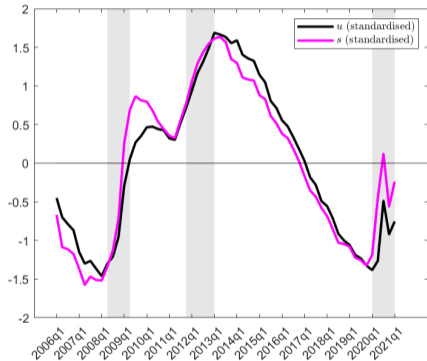
Inequality and monetary policy: role of worker heterogeneity?

- Welfare depends on: inflation, aggregate activity & consumption inequality

- New trade-off in HANK models:
  - A higher level of activity raises inflation, but also mitigates consumption inequality
  - Case for tolerating higher inflation volatility to reduce that of consumption inequality

- What role of worker heterogeneity for the trade-off?
  - If high MPC workers have more cyclical jobs (Patterson, 2021), the case is stronger
  - If the measure of slack that is relevant for inflationary pressures assigns little weight to high MPC individuals (e.g. the long-term unemployed), the case is likely weaker

- New empirical questions arise, requiring new granular cross-sectional data:
  - How does risk from financial markets correlate with risk from labor markets?
  - How does risk in financial/labor markets correlate with role in wage determination?

Estimated relative job finding rates Back

	Share (%)	JFR	Rel. JFR
Unemployed: Recently left job	0.09	27.81	0.48
Unemployed: Recently permanently laid off	0.29	23.12	0.38
Unemployed: Recently temporarily laid off	0.28	51.8	1.00
Unemployed: Temporary job recently ended	0.13	32.88	0.56
Unemployed: Recently newly entered	0.12	12.65	0.22
Unemployed: Recently reentered	0.27	21.3	0.37
Unemployed: Left job months ago	0.16	19.29	0.32
Unemployed: Permanently laid off months ago	0.90	14.41	0.24
Unemployed: Temporarily laid off months ago	0.26	36.15	0.60
Unemployed: Temporary job ended months ago	0.24	20.06	0.33
Unemployed: Newly entered months ago	0.24	9.41	0.16
Unemployed: Reentered months ago	0.57	16.45	0.28
Unemployed: Long-term unemployed	2.14	10.92	0.18
Want Job: Discouraged	0.47	11.33	0.19
Want Job: Looked last 12 months	0.52	9.76	0.17
Want Job: Other	1.27	12.3	0.21
Not in Labor Force: In school	5.07	6.28	0.11
Not in Labor Force: Retired	15.56	1.41	0.02
Not in Labor Force: Disabled	5.17	1.42	0.02
Not in Labor Force: Other	7.26	6.76	0.12
Employed: Involuntary part-time	3.73	3.63	0.06
Employed: Not involuntary part-time	55.27	1.77	0.03

Alternative measures of effective job seekers Back

Legend:
- $u^{ST} + u^{LT}$ (black solid)
- $(u^{ST+} + \rho^{LT} u^{LT}) + 0.02$ (red dash-dot)
- $(u^{ST+} + \rho^{LT} u^{LT} + \rho^{SNA} n_t^{SNA} + \rho^{ANS} n_t^{ANS}) + 0.01$ (green dash-dot)
- $(u^{ST+} + \rho^{LT} u^{LT} + \rho^{SNA} n_t^{SNA} + \rho^{ANS} n_t^{ANS} + \rho^{O} n_t^{O}) - 0.03$ (blue dash-dot)
- $s_t - 0.09$ (magenta solid)