

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

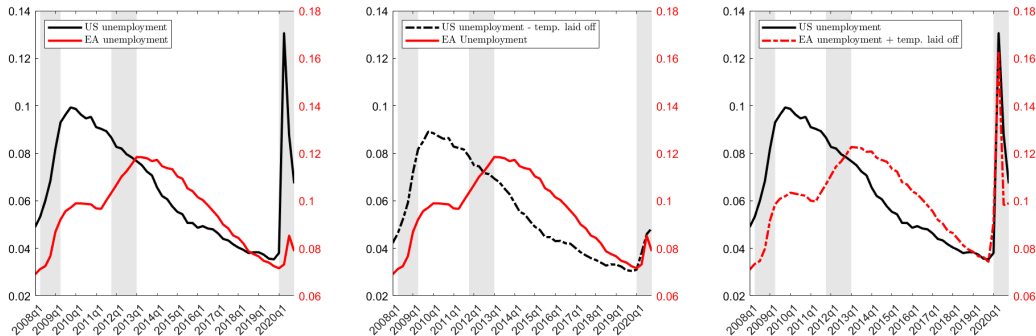
- ▶ Unemployment rate: primary measure of underutilization in labor markets
- ▶ Unemployed $\neq$ job seekers
 - ▶ Large flows from Nonparticipation $\rightarrow$ Employment
 - ▶ And from Employment $\rightarrow$ Employment

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 ; ρ_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:

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

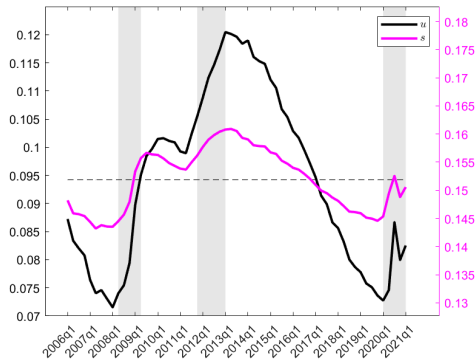
- ▶ Rate of effective job seekers:

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

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

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

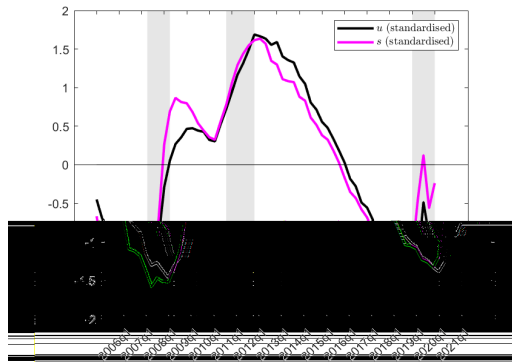
- ▶ Both measures are countercyclical, but s is less volatile than u
- ▶ How much less volatile?
 - ▶ $\sigma_s / \sigma_u = 0.35$
 - ▶ % increases during GFC + sovereign debt and Covid recessions:
 - ▶ 68% and 19% for u
 - ▶ 12% and 6% for s
- ▶ Why is the volatility dampened?
 - ▶ Offsetting changes 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

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