The Loose Concept of Labor-Market Slack

Bart Hobijn[a]

[a]FRB of Chicago

November 3rd 2023, Congressional Budget Office, Panel of Economic Advisors

Three things about labor-market "slack" that I will cover

"Slack" is not a unidimensional concept

- Quantification of resource slack a dimension reduction problem

"Common" and "uncommon" movements in labor market indicators

- A host of labor-market indicators have most of their cyclical fluctuations in common

What drives current deviations from historical patterns?

- Covid recession a very peculiar mixture of shocks against the backdrop of longer-term trends in demographics and technology

“Slack” not a unidimensional concept

Phillips curve as trade off between inflation and unemployment

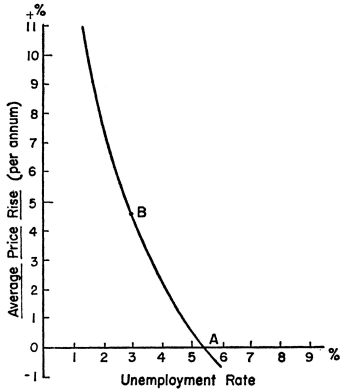
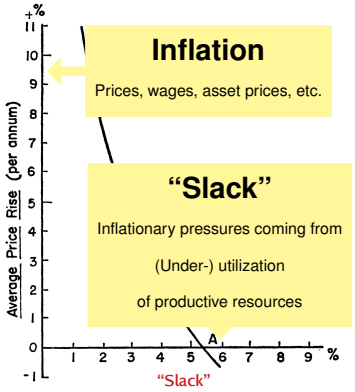


FIGURE 2

MODIFIED PHILLIPS CURVE FOR U.S.
This shows the menu of choice between different degrees of unemployment and price stability, as roughly estimated from last twenty-five years of American data.

Source: Samuelson and Solow (1960), called it a “menu” of unemployment-inflation options.

Relates inflation and “slack”



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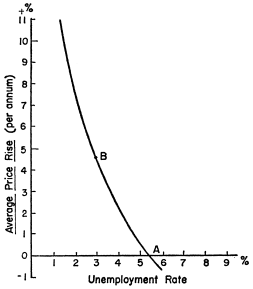
Unidimensionality a “Divine Coincidence”



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Distortions and dimensions of slack

- **Divine Coincidence**

  With only one nominal rigidity, output and inflation stabilization in a simple New-Keynesion model are one and the same. Blanchard and Gali (2007)

- **Many models with multiple distortions**
  - Different degrees of price rigidity
    Aoki (2001), Nakamura and Steinsson (2010), Eusepi *et al.* (2011)
  - Distortions along the supply chain Huang and Liu (2004), Rubbo (2023)
  - Real rigidities Klenow and Willis (2016), and many others
  - Search and matching / J2J transitions
    Moscarini and Postel-Vinay (2022), Dupraz *et al.* (2019)

- **Which distortions matter depends on shocks**

  What margins are distorted depends on history of shocks and endogenous response by agents and policymakers. Ramey (2016)

Two approaches to measuring “Slack”

A unique measure of “Slack” does not exist. At the end, quantification of resource slack a dimension reduction problem. Two broad approaches have been applied:

Extract common component(s) from measures of resource (under-)utilization

Burns and Mitchell (1946), NBER Business Cycle Dating Committee, Stock and Watson (2016)

- **Pro:** Uses non- and semi-parametric methods to identify common statistical properties of a broad set of measures of resource (under-)utilization.
- **Con:** Does not directly link slack measure to inflation.

Joint analysis of slack and inflationary pressures

DSGE models, e.g. Campbell *et al.* (2023), and more reduced-form joint analyses, e.g. Crump *et al.* (2019), Laubach and Williams (2003)

- **Pro:** Joint analyses of broad set of measures of real activity and inflation.
- **Con:** Requires very specific identifying assumptions to uncover slack that matters for Phillips curve.

Flat empirical Phillips curve due to policy response: Edge and Gurkaynak (2010), McLeay and Tenreyro (2020)

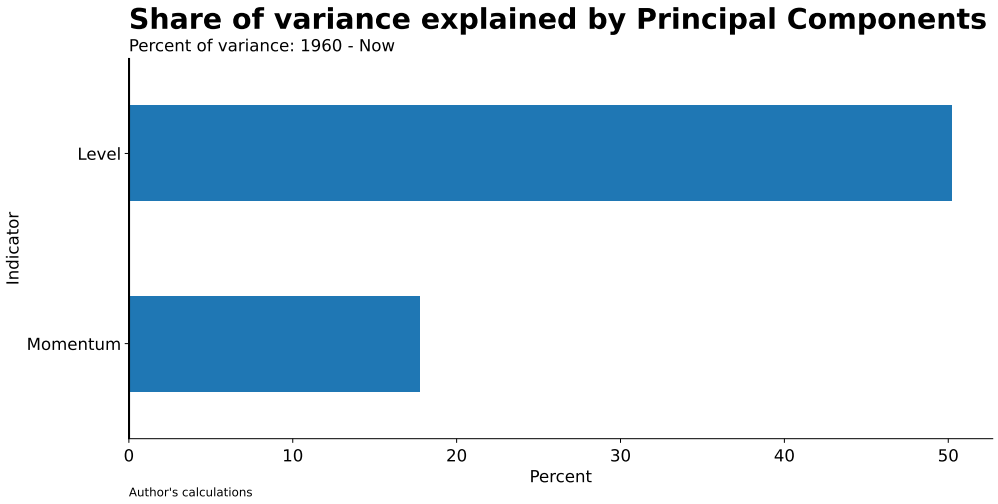
“Common” and “uncommon” movements in labor market indicators

Analysis closely related to KC Fed Labor Market Conditions Indicators and Gilchrist and Hobijn (2021)

Explore a broad menu of cyclical (labor-market) indicators

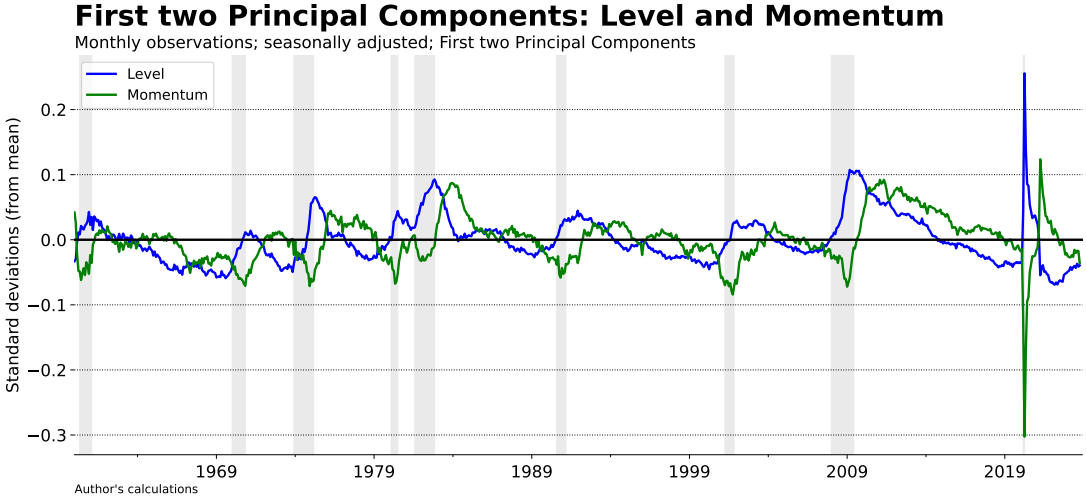
Indicator	Source	Procyclical	First month
Unemployment rate (U3)	Bureau of Labor Statistics	False	1960-01
Part-time for economic reasons	Bureau of Labor Statistics	False	1960-01
Broad unemployment rate (U6)	Bureau of Labor Statistics	False	1994-01
Median duration of unemployment	Bureau of Labor Statistics	False	1967-07
Long-term unemployed (27 weeks or more)	Bureau of Labor Statistics	False	1960-01
Unemployment Rate - 20 Yrs. and Over, Women	Bureau of Labor Statistics	False	1960-01
Unemployment Rate - Black or African American	Bureau of Labor Statistics	False	1972-01
Unemployment Rate - Hispanic or Latino	Bureau of Labor Statistics	False	1973-03
Participation Cycle	FRBC (based on Hobijn and Sahin (2022))	True	1978-01
Expect more jobs, net (CB)	Conference Board	True	1967-02
Expected job availability (U of Michigan)	University of Michigan	True	1978-01
Job Losers as a Percent of Total Unemployed	Bureau of Labor Statistics	False	1967-01
Initial claims	Department of Labor Employment and Training Administration	False	1967-01
Announced Job Cuts	Challenger, Gray, and Christmas	False	1989-03
Layoffs rate	Bureau of Labor Statistics	False	2000-12
Job flows: E to U	Bureau of Labor Statistics	False	1990-02
Job flows: U to E	Bureau of Labor Statistics	True	1990-02
Hires rate	Bureau of Labor Statistics	True	2000-12
Job openings rate	Bureau of Labor Statistics	True	2000-12
Manufacturing Employment Index (ISM)	Institute for Supply Management	True	1960-01
Services Employment Index (ISM)	Institute for Supply Management	True	1997-07
Percent of firms with positions not able to fill right now (NFIB)	National Federation of Independent Businesses	True	1973-10
Percent of firms planning to increase employment (NFIB)	National Federation of Independent Businesses	True	1973-10
Labor shortage (NFIB)	National Federation of Independent Businesses	True	1993-04
Quits rate	Bureau of Labor Statistics	True	2000-12
Job leavers as a percent of the unemployed	Bureau of Labor Statistics	True	1967-01
Capacity utilization	Federal Reserve Board of Governors	True	1967-01
Private nonfarm payroll employment (Change)	Bureau of Labor Statistics	True	1961-01
Aggregate Weekly Hours (Temporary help employment (Change)	Bureau of Labor Statistics	True	1991-01
EPOP ratio (Change)	Bureau of Labor Statistics	True	1961-01
Labor Force Participation Rate (Change)	Bureau of Labor Statistics	True	1961-01

First two Principal Components explain two-thirds of variation

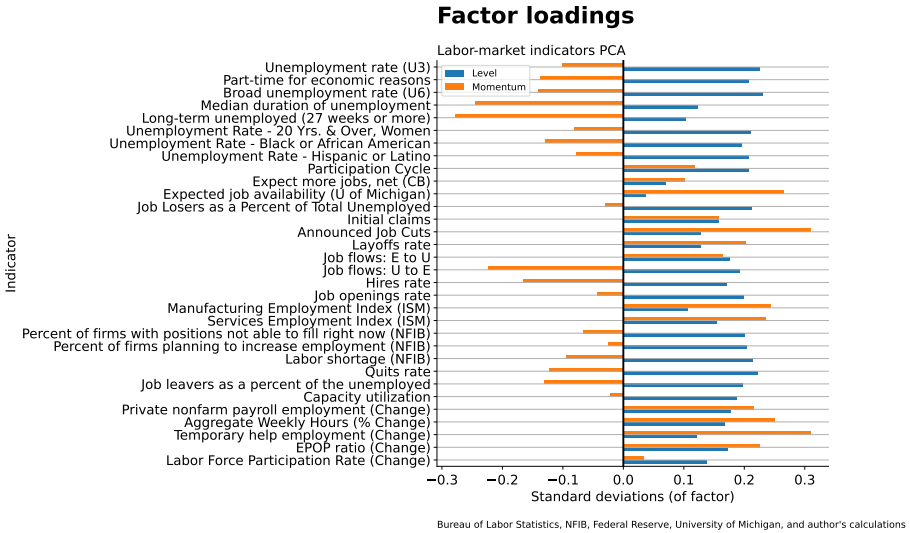


There is a very clear business cycle in the labor market. Hooray for Burns and Mitchell (1946)!

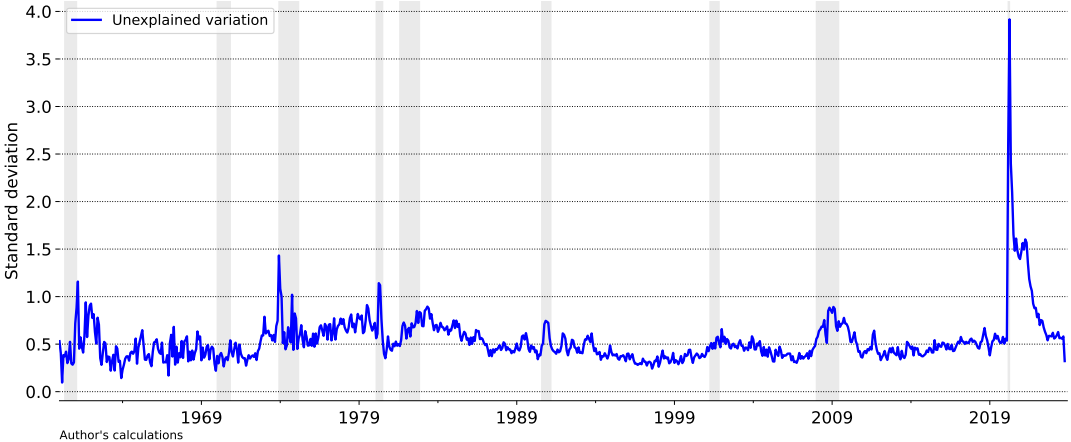
Level and Momentum of labor-market “slack”



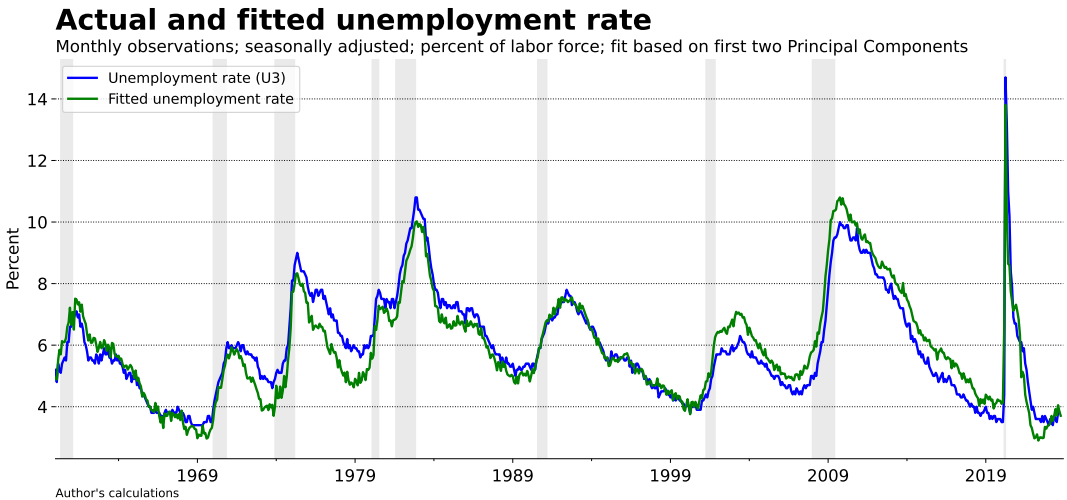
Level similar across indicators, Momentum is different



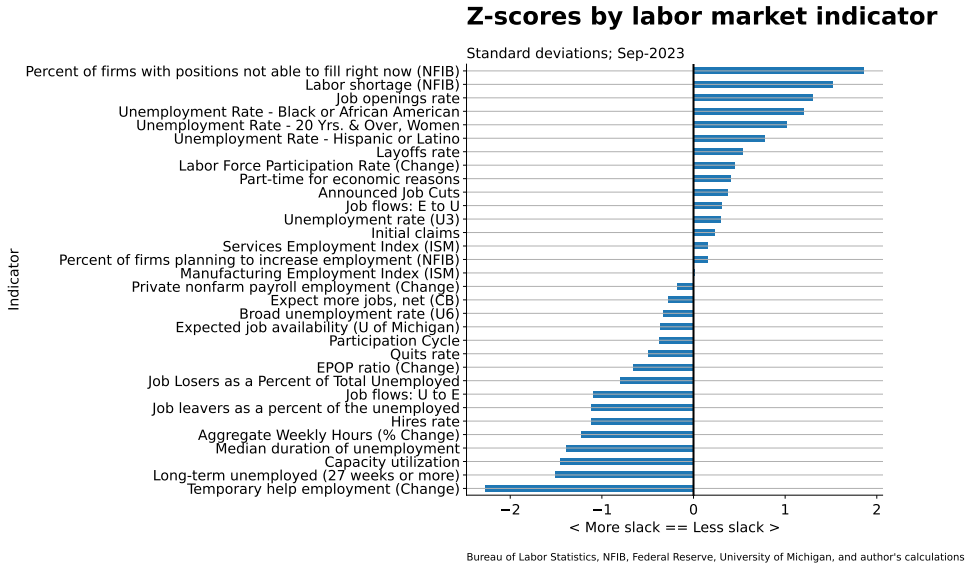
Covid caused major deviations from historical comovements



Unemployment rate in line with broad signal from menu of indicators



But participation elevated and job openings still high and hard to fill



Bureau of Labor Statistics, NFIB, Federal Reserve, University of Michigan, and author's calculations

What drives current deviations from historical patterns?

Covid a peculiar mixture of shocks against the backdrop of longer-term demographic and technological trends

1. *Mixture* of shocks: Covid was an unusual combination of shocks

- Covid recession as much a relative demand shock as an aggregate demand shock — Ferrante *et al.* (2023)

2. *Magnitude* of shocks: Covid was an unusually large shock

- Covid recession large shock to labor market with quick rebound — Hall and Kudlyak (2022), Hobijn (2022)

3. Recent developments mainly a *return to pre-Covid trends*

- Labor supply and participation — Hobijn and Şahin (2023), Abraham and Rendell (2023)

4. Recent developments reflect *Covid-induced change in trends*

- Shift towards (partly) working from home — Bick *et al.* (2023), Hansen *et al.* (2023)

Focus on “common” movements not on “variables-du-jour”

Extract slack measure from common fluctuations across indicators

Burns and Mitchell (1946)

- Two Principal Components capture bulk of business cycle fluctuations
- First component alone captures half of fluctuations and is highly correlated with unemployment rate

Avoid “variables-du-jour” approach

- Adding different variables to Phillips curve specification for different recessions/episodes. e.g. Ball *et al.* (2022)
- What works now, might not work in the future. Furman and Powell III (2021)

Rethinking drivers of inflation beyond slack is important

- “Slack” factors explain only a small part of inflation fluctuations. Bernanke and Blanchard (2023)

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