MEASURING SLACK IN THE LABOR MARKET USING $u^* = \sqrt{uv}$

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WHAT ARE THE PROPERTIES OF A GOOD MEASURE OF LABOR-MARKET SLACK?

WE MEASURE SLACK AS DEPARTURE FROM LABOR-MARKET EFFICIENCY

- Unemployment gap= unemployment rate u – efficient unemployment rate u^*
  - Michaillat, Saez (2021) & Michaillat, Saez (2024)
- Theoretically desirable: $u - u^*$ is determinant of optimal stabilization policies
  - Monetary policy (Michaillat, Saez 2021)
  - Fiscal policy (Michaillat, Saez 2019)
  - Unemployment insurance (Landais, Michaillat, Saez 2018)
- Practically desirable: u^* is full-employment rate of unemployment (FERU)
  - Employment Act of 1946
  - Federal Reserve Reform Act of 1977
  - Full Employment and Balanced Growth Act of 1978

HOW SHOULD WE COMPUTE u^*?

FERU IS GIVEN BY $u^* = \sqrt{uv}$

- Planner's objective: minimize nonproductive use of labor $u + v$
  - Unemployment rate u: value of home production & recreation is offset by psychosocial cost of unemployment
  - Vacancy rate v: 1 vacancy requires 1 worker devoted to recruiting
- Subject to hyperbolic Beveridge curve $u \times v = A$
  - u and v cannot be reduced simultaneously
- First-order condition gives efficient unemployment rate u^*:

$$\frac{d[u + A/u]}{du} = 0 \Rightarrow 1 - A/(u^*)^2 = 0 \Rightarrow u^* = \sqrt{A}$$

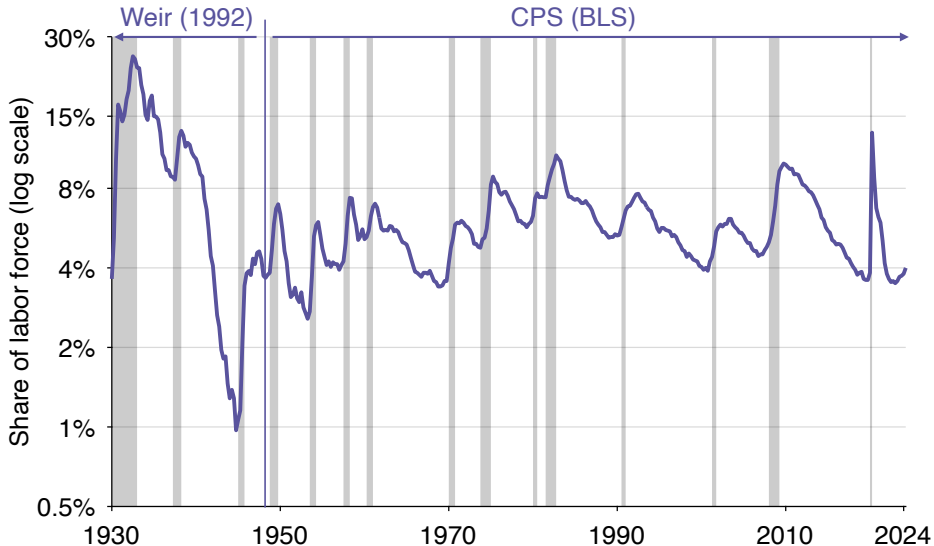
- FERU is geometric average of u and v: $u^* = \sqrt{uv}$

CRITERION FOR LABOR-MARKET EFFICIENCY

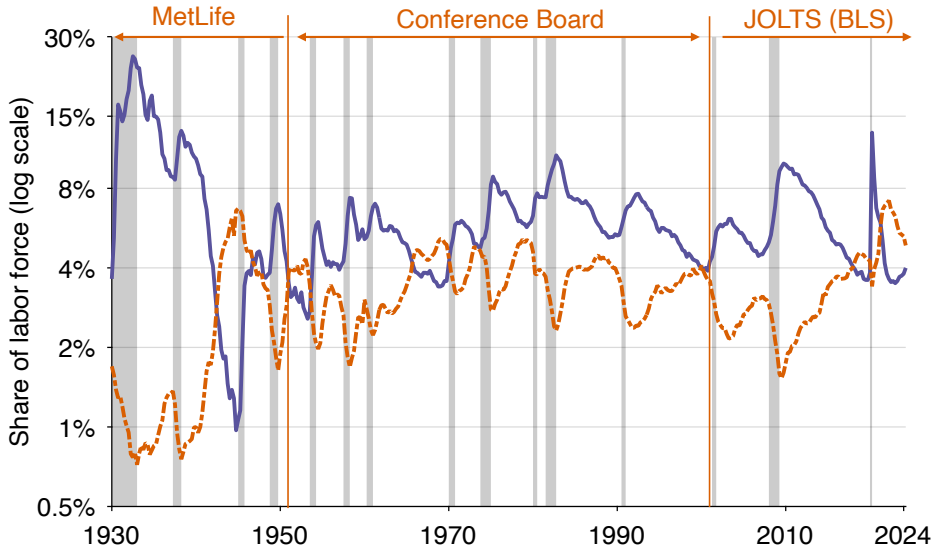
- Labor market is efficient when $u = u^* = \sqrt{uv}$
  - ⇝ Efficient when $u = v$
- Labor market is inefficiently slack when $u > u^* = \sqrt{uv}$
  - ⇝ Inefficiently slack when $u > v$
- Labor market is inefficiently tight when $u < u^* = \sqrt{uv}$
  - ⇝ Inefficiently tight when $u < v$

HOW SHOULD WE ESTIMATE u^*?

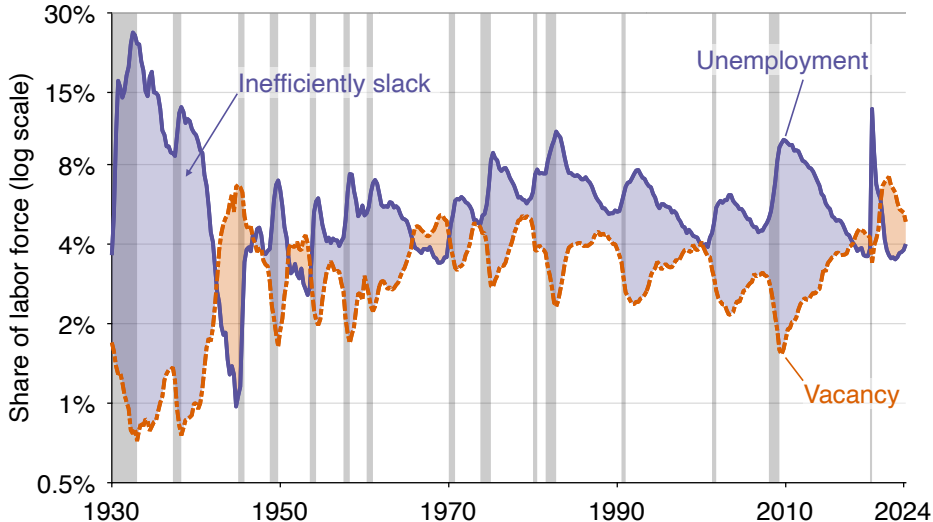
US UNEMPLOYMENT RATE (PETROSKY-NADEAU, ZHANG 2021)



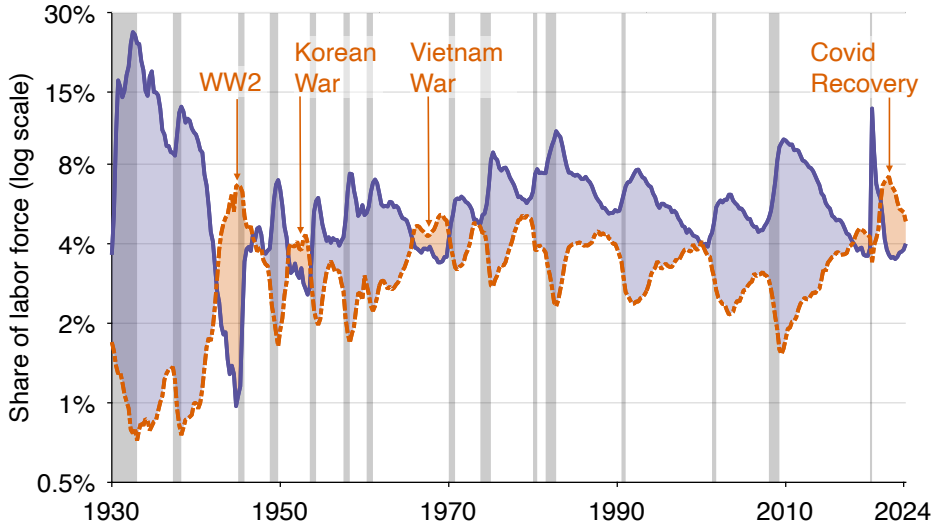
US VACANCY RATE (PETROSKY-NADEAU, ZHANG 2021)



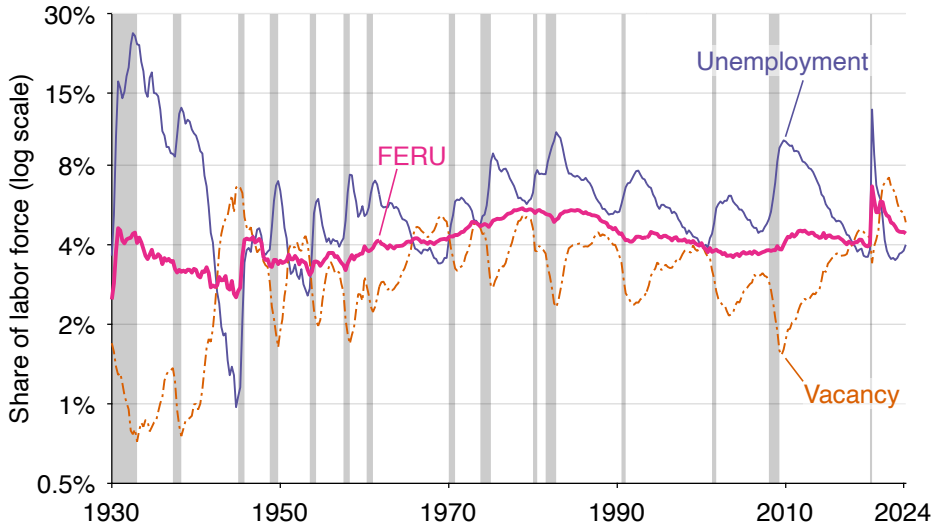
LABOR MARKET IS GENERALLY TOO SLACK



LABOR MARKET IS TOO TIGHT DURING WARS, COVID RECOVERY

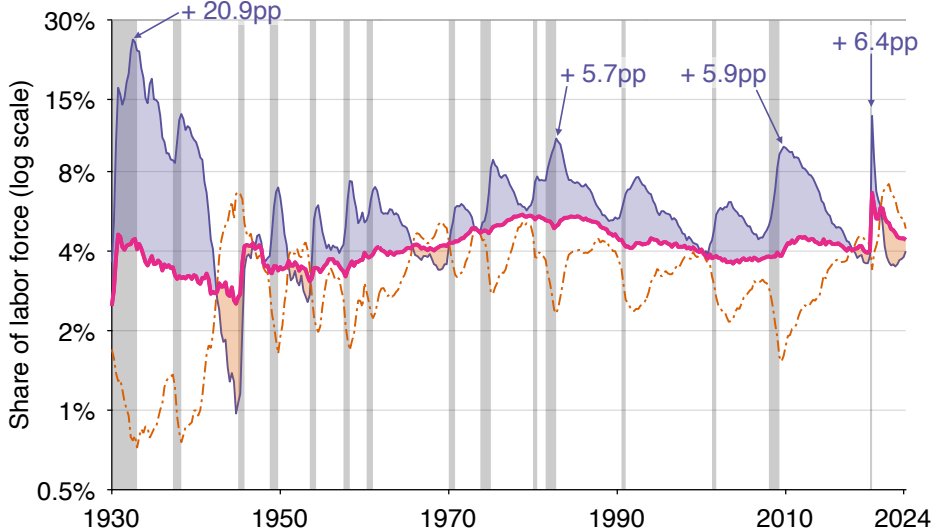


FERU $u^* = \sqrt{uv}$ AVERAGES 4.1% AND IS STABLE



IS THE GAP BETWEEN u^* AND THE UNEMPLOYMENT RATE A USEFUL MEASURE OF LABOR-MARKET SLACK?

UNEMPLOYMENT GAP $u - u^*$ IS SHARPLY COUNTERCYCLICAL



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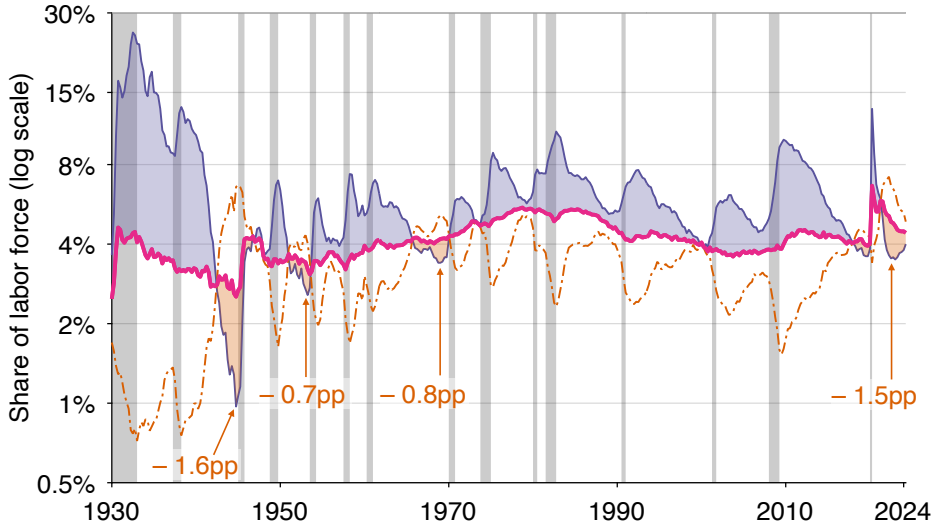


IMPLICATIONS FOR OPTIMAL STABILIZATION POLICIES

- Optimal nominal interest rate is procyclical
  - Divine coincidence: optimal for monetary policy to eliminate unemployment gap
  - No divine coincidence: optimal for monetary policy to reduce unemployment gap
- Optimal government spending is countercyclical
  - Optimal for government spending to reduce unemployment gap
- Optimal unemployment insurance is countercyclical
  - Optimal for unemployment insurance to reduce tightness gap

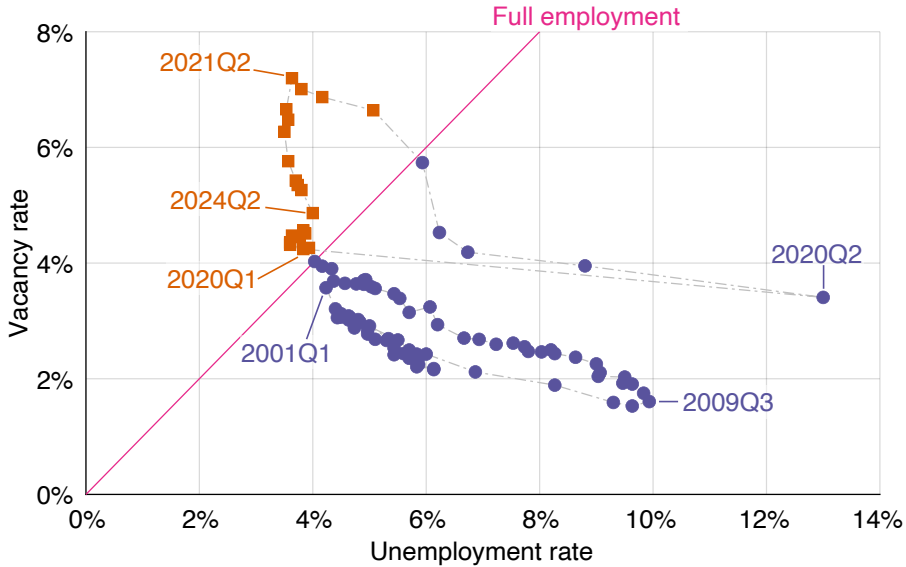
WHAT IS THE LINK BETWEEN LABOR-MARKET SLACK AND IMMIGRATION?

OPTIMAL IMMIGRATION POLICY IS DETERMINED BY UNEMPLOYMENT GAP (MICHAILLAT 2024)

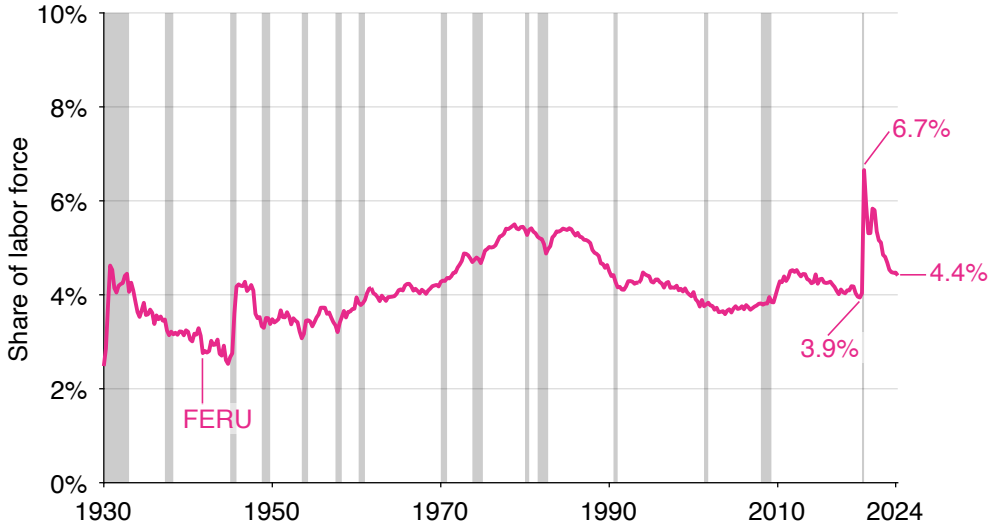
- In inefficiently tight labor markets: immigration improves local welfare
  - By reducing tightness, immigration raises firm profits
- In inefficiently slack labor markets: immigration reduces local welfare
  - By reducing tightness, immigration lowers local labor income
- Optimal immigration policy is procyclical
  - Inefficiently slack labor market $\rightsquigarrow$ no immigration
  - Inefficiently tight labor market $\rightsquigarrow$ enough immigration to lower tightness below 1

HAS THE BEVERIDGE CURVE SHIFTED POST-PANDEMIC?

THE BEVERIDGE CURVE SHIFTED OUTWARD IN 2020Q2...

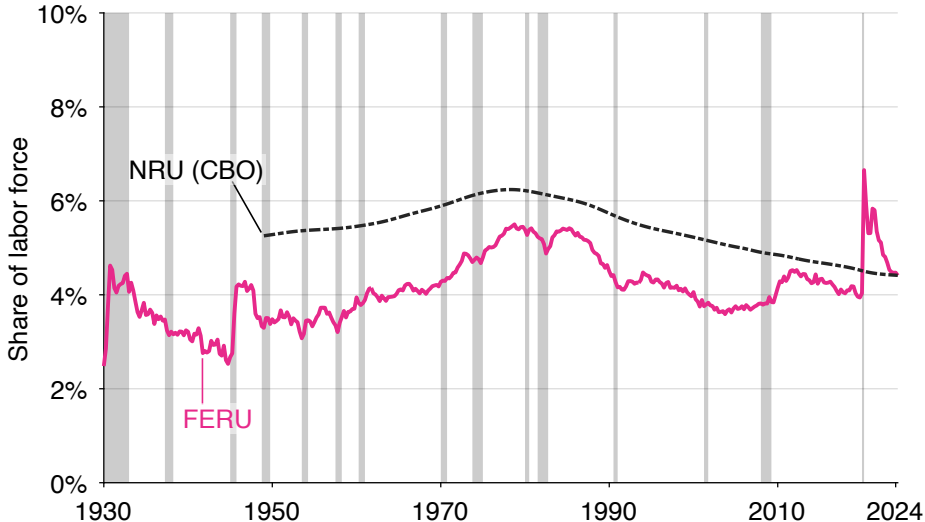


. . . SHARPLY RAISING THE FERU



WHAT ARE MERITS & LIMITATIONS OF EXISTING MEASURES OF u^*?

EXISTING MEASURES OF u^* DO NOT CAPTURE LABOR-MARKET EFFICIENCY



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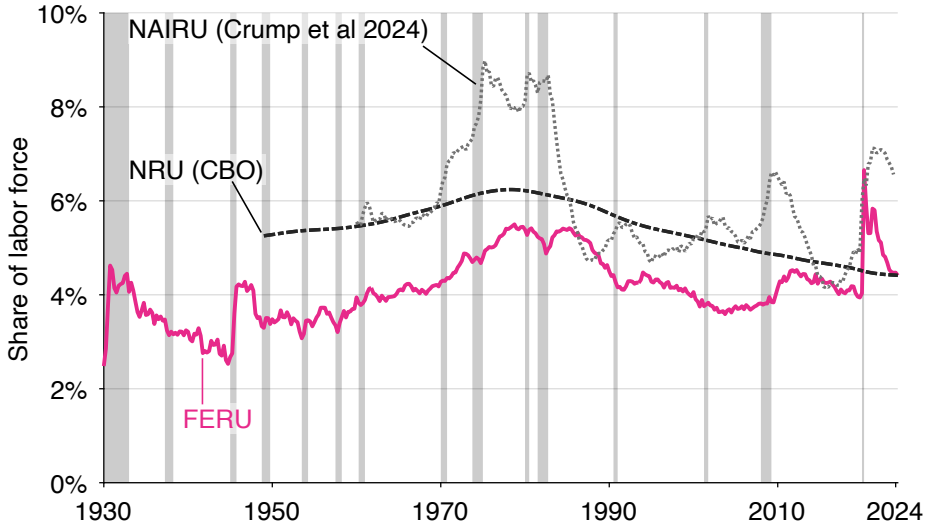
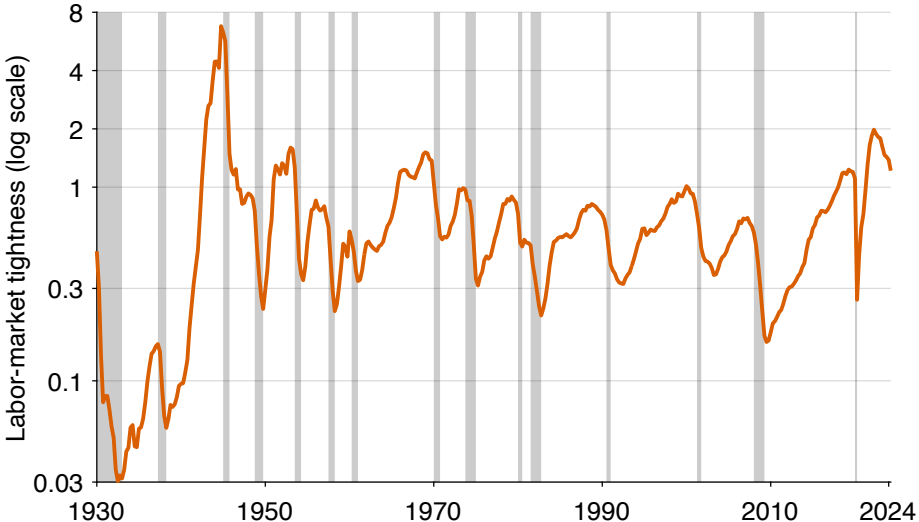


ARE THERE SPECIFIC INDICATORS WE SHOULD TRACK BESIDES THE TRADITIONAL ONES?

TIGHTNESS v/u COMPLETELY DESCRIBES STATE OF LABOR MARKET



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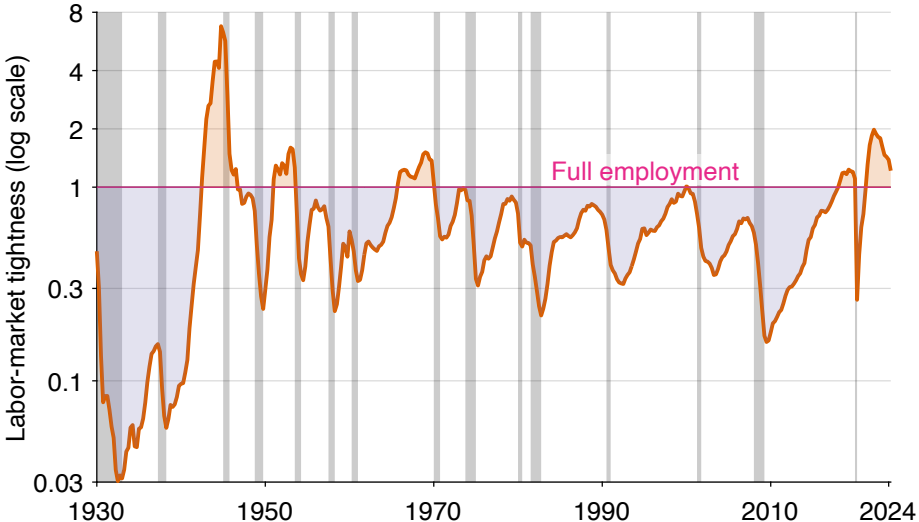

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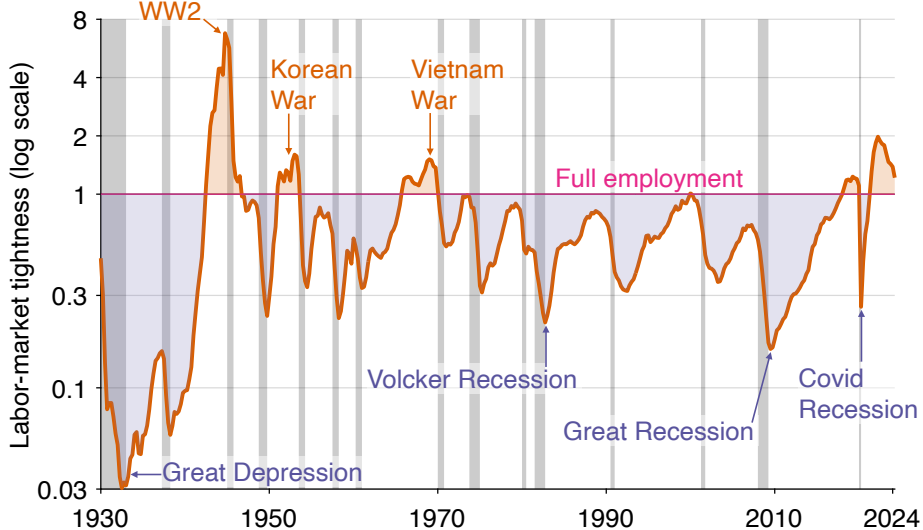

IS THERE A LINK BETWEEN LABOR-MARKET SLACK AND PRICE DYNAMICS?

QUITE POSSIBLY ⇝ BEVERIDGEAN PHILLIPS CURVE (MICHAILLAT, SAEZ 2024)