How should central banks approach employment stabilization?

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OUTLINE

- Brief history and definition(s) of full/maximum employment
- Norges Bank's approach to maximum employment
- Flow approach to labor market analysis
  - Unemployment and participation
  - Vacancies and Beveridge curve
- Connection to price stability
  - Soft landings in Norway and the U.S.

A Brief History

Central banks were not created to fight inflation or stabilize employment

The Great Depression marked a major turning point:

- Employment stabilization became a central policy issue.
- Full employment emerged as a macroeconomic policy objective.
- In some countries, the goal of maximum employment later became embedded in central bank mandates (Fed, RBA, Norges Bank).

What is full/maximum employment?

The idea that the government should follow a maximum employment policy goes back to Keynes, Beveridge and Robinson.

Keynes in *General Theory* (1936):

Full employment corresponds to the level of employment, which entails *the equality of the real wage to the marginal disutility of employment.*

What is full/maximum employment?

The idea that the government should follow a maximum employment policy goes back to Keynes, Beveridge and Robinson.

Beveridge in *Full Employment in a Free Society* (1944):

It [full employment] means having always more vacant jobs than unemployed men, not slightly fewer jobs. It means that the jobs are at fair wages, of such a kind, and so located that the unemployed men can reasonably be expected to take them; it means, by consequence, that the normal lag between losing one job and finding another will be very short.

What is full/maximum employment?

The idea that the government should follow a maximum employment policy goes back to Keynes, Beveridge and Robinson.

Robinson in *The Accumulation of Capital* (1956)

Full employment means a situation in which workers can change their jobs without fear of becoming unemployed.

What is full/maximum employment?

The idea that the government should follow a maximum employment policy goes back to Keynes, Beveridge and Robinson.

Friedman in Presidential Address to AEA (1968):

The natural rate of unemployment is defined as the unemployment rate such that, controlling for supply shocks, inflation remains stable.

To avoid misunderstanding, let me emphasize that by using the term "natural" rate of unemployment, I do not mean to suggest that it is immutable and unchangeable... Improvements in employment exchanges, in availability of information about job vacancies and labor supply, and so on, would tend to lower the natural rate of unemployment.

How do central banks approach maximum employment?

- More variation among central banks in employment goals—dual mandate, hierarchical mandate, etc.
- The employment goal remains *intentionally* vague—often not even defined.
- This is in contrast to inflation mandates—which are often tied to explicit numeric targets.
- Explicit acknowledgement of limited control over employment common.

Norges Bank’s Approach

Norges Bank's mandate for monetary policy

The task of monetary policy is to ensure **low and stable inflation** *and to* **help keep employment as high as possible**.

.....

In its conduct of monetary policy, the Committee therefore seeks to stabilise employment around its maximum sustainable level. **This level is primarily determined by structural factors such as wage formation, the tax and social security system and population composition.** *The highest sustainable level cannot be directly observed, and it will vary over time.*

....

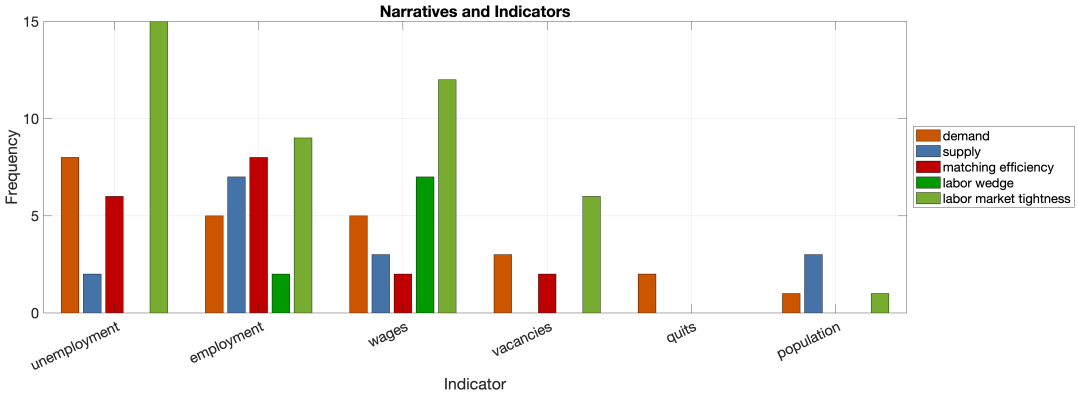
Contributing to sustaining the level of economic activity so that **as many people as possible can find work without having to search for too long** *is therefore an important consideration for monetary policy as well.*

Norges Bank's monetary policy strategy statement

HOW DOES THE NORGES BANK TALK ABOUT THE LABOR MARKET?

How does the Fed talk about the labor market?

HOW DOES THE NORGES BANK TALK ABOUT THE LABOR MARKET?



Employment is shaped by unemployment, participation and population growth:

$$\underbrace{E_t}_{\textit{Employment}} = \underbrace{(1 - u_t)}_{\textit{Unemployment}} \times \underbrace{LFPR_t}_{\textit{Participation}} \times \underbrace{POP_t}_{\textit{Population}}$$

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Changes in employment reflect hiring and separations:

$$\underbrace{E_{t+1} - E_t}_{\text{Employment growth}} = \underbrace{q_t V_t}_{\text{hires}} - \underbrace{s_t E_t}_{\text{separations}}$$

where q_t is the job-filling rate and V_t is vacancies.

A Flow Approach

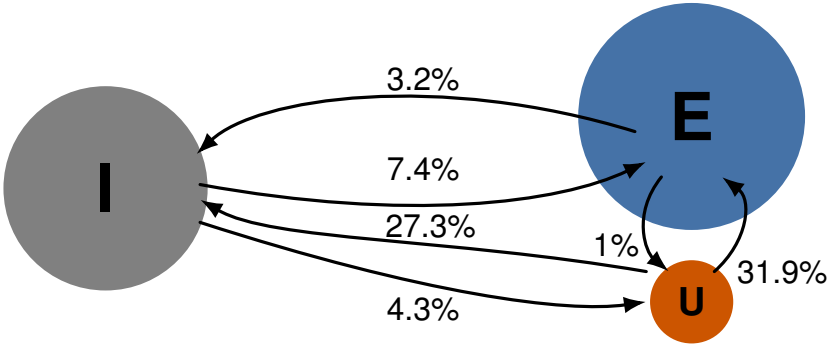
A Flow Approach

Flow approach provides a more accurate picture of the labor market and the additional richness it delivers captures important implications of labor market mechanisms for macroeconomics.

Blanchard and Diamond (1990)

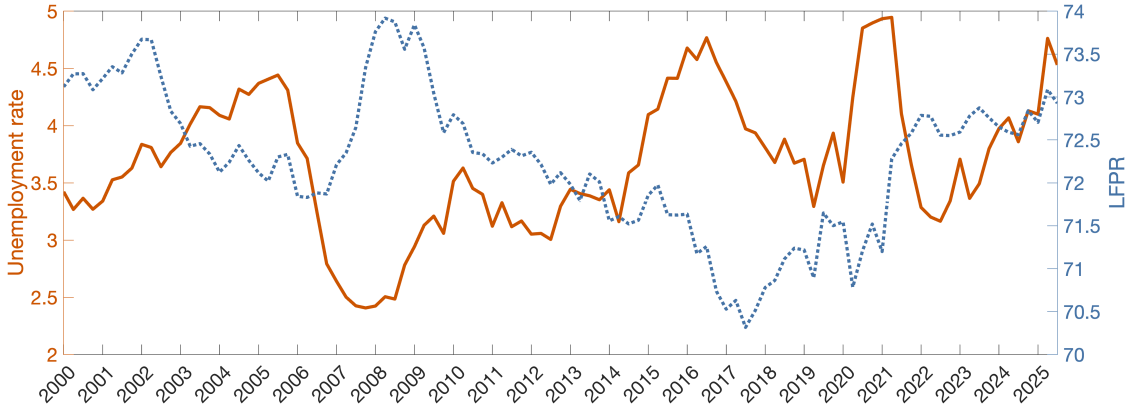
- Provides a unified framework to link **a wide range of indicators**.
- Connects **directly** to the underlying labor market dynamics.
- Helps identify **nonmonetary factors**.
- Distinguishes mechanisms that affect monetary policy transmission.

Labor market flows in Norway



Source: Statistics Norway, 2025Q4

Unemployment and Participation



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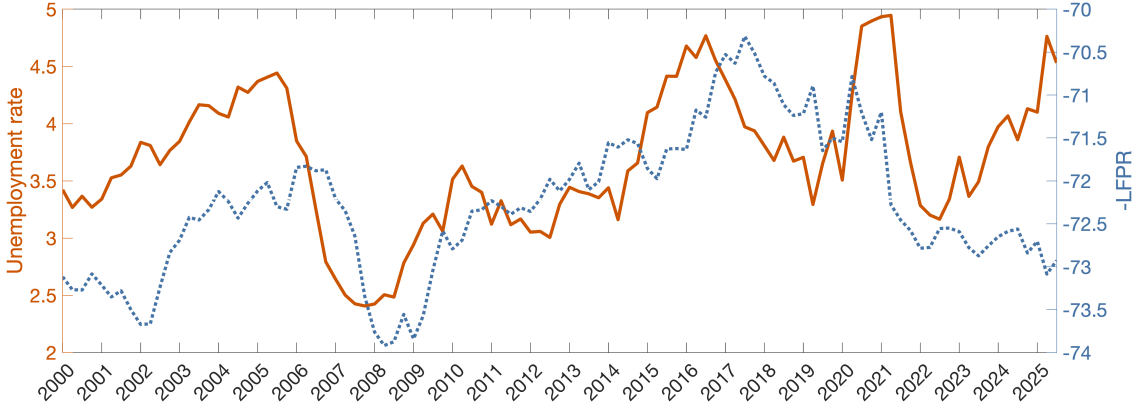
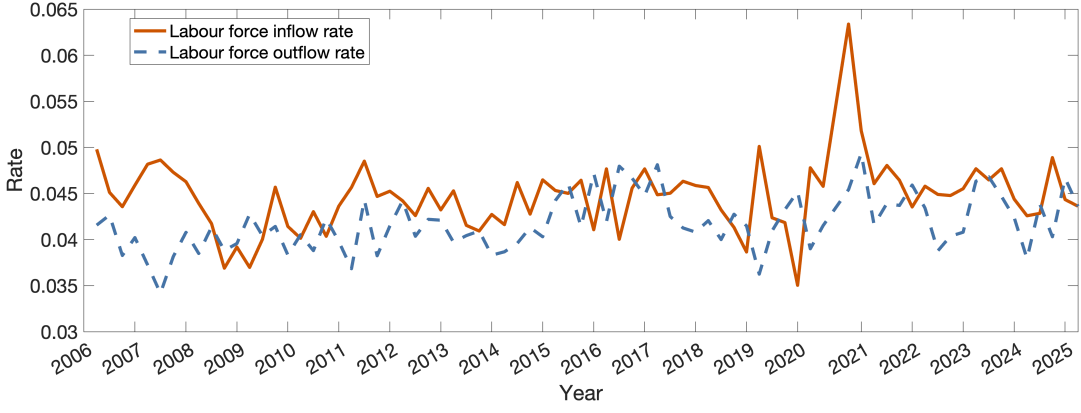


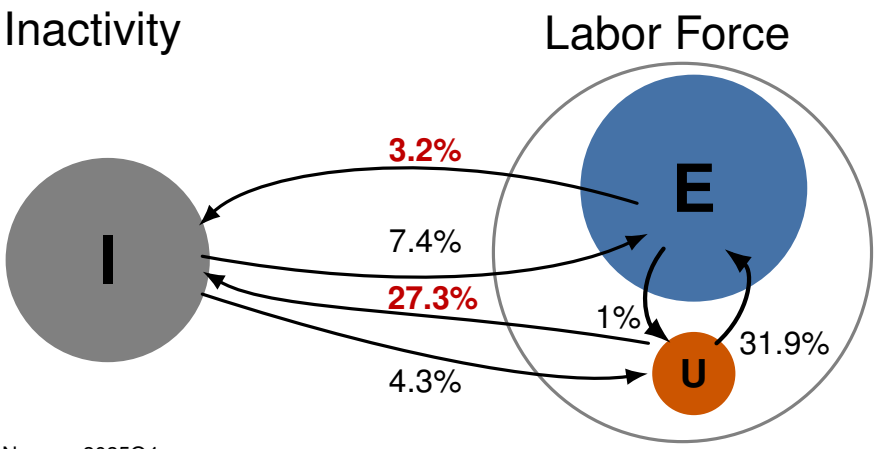
Source: Statistics Norway

Labor force inflows and outflows



Source: Statistics Norway

Employment Stability is key



Source: Statistics Norway, 2025Q4

Employment growth depends on separations and how fast vacant positions get filled:

$$g_t = \frac{E_{t+1} - E_t}{E_t} = q_t \frac{V_t}{E_t} - s_t$$

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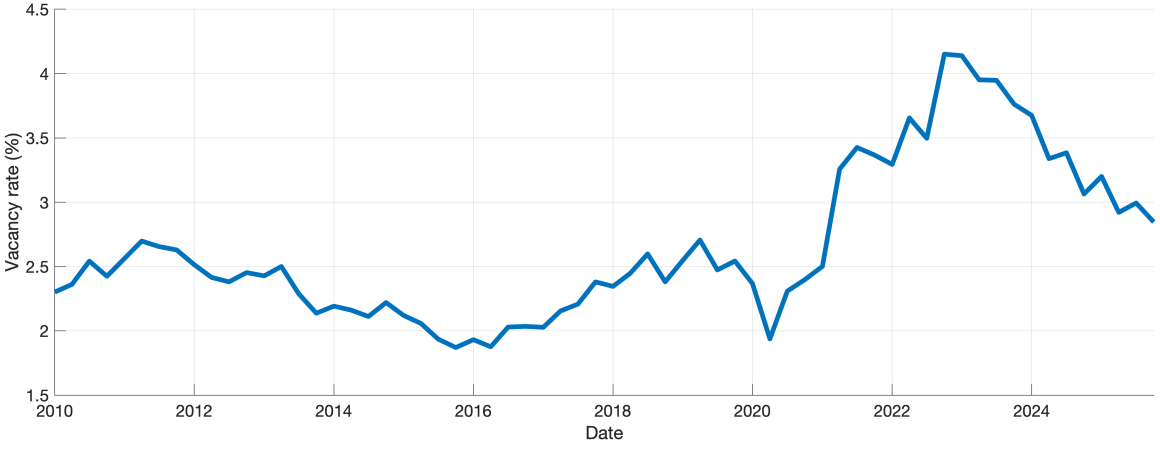
Therefore, the vacancy rate depends on employment growth g_t, separations s_t and the job-filling rate q_t:

$$V_t = \frac{1}{1 + \frac{q_t}{g_t + s_t}}$$

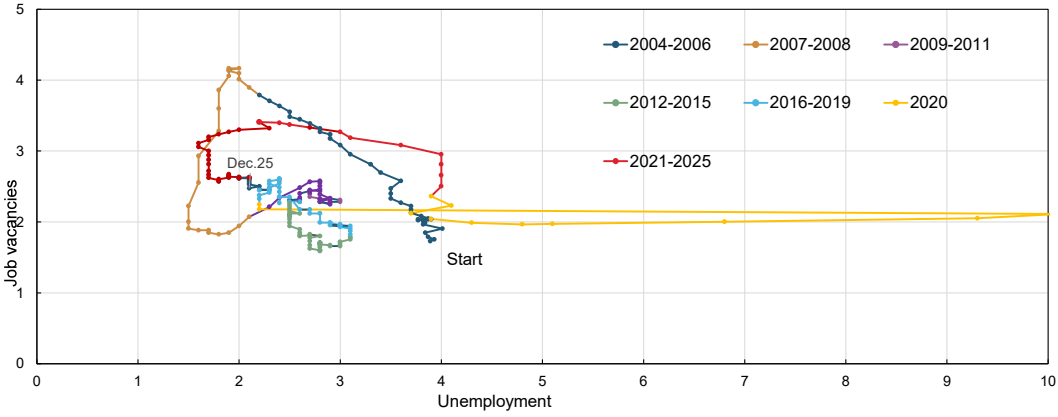
$g_t \approx 0.23\%$ and $s_t \approx 4\%$ in Norway (excluding job-job transitions).

Natural rate of vacancies depends on turnover!

Vacancy rate in Norway

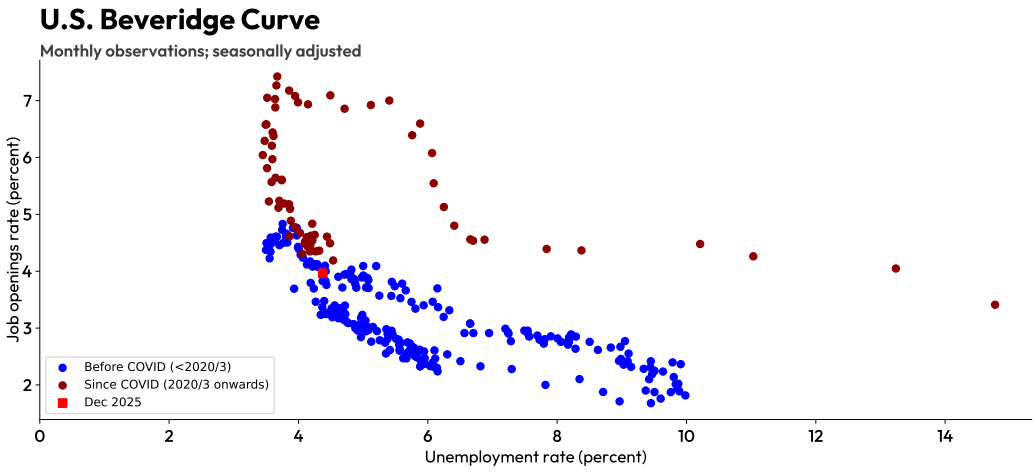


Norway Beveridge Curve



Source: Nav, Statistics Norway and Norges Bank

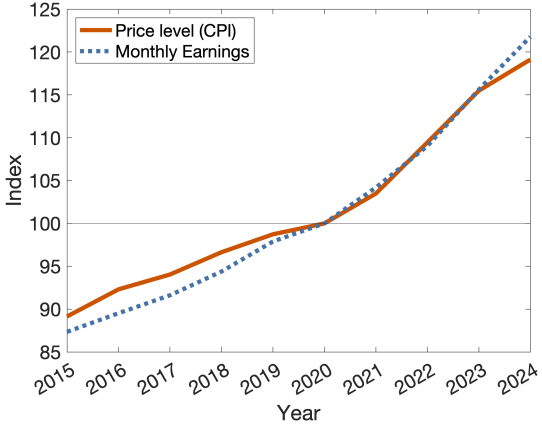
U.S Beveridge Curve

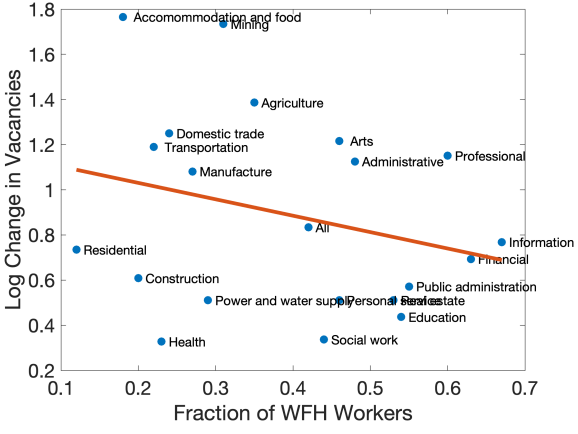


Source: Bureau of Labor Statistics

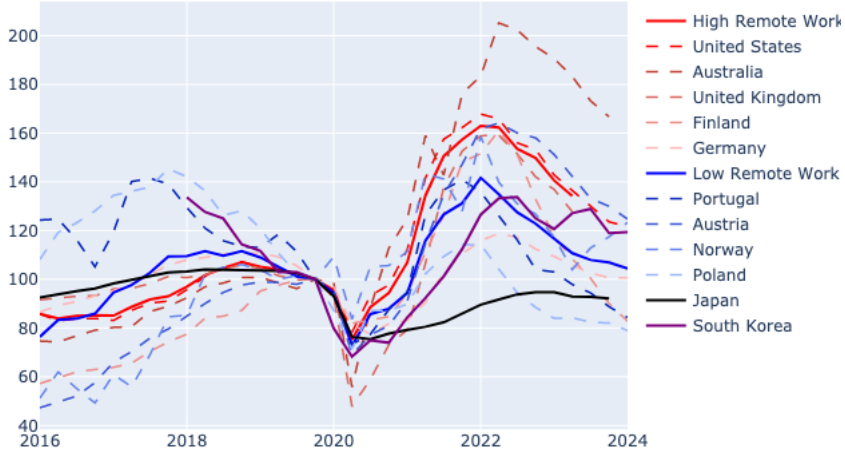
www.labormarketupdate.net

Prices, wages and work from home



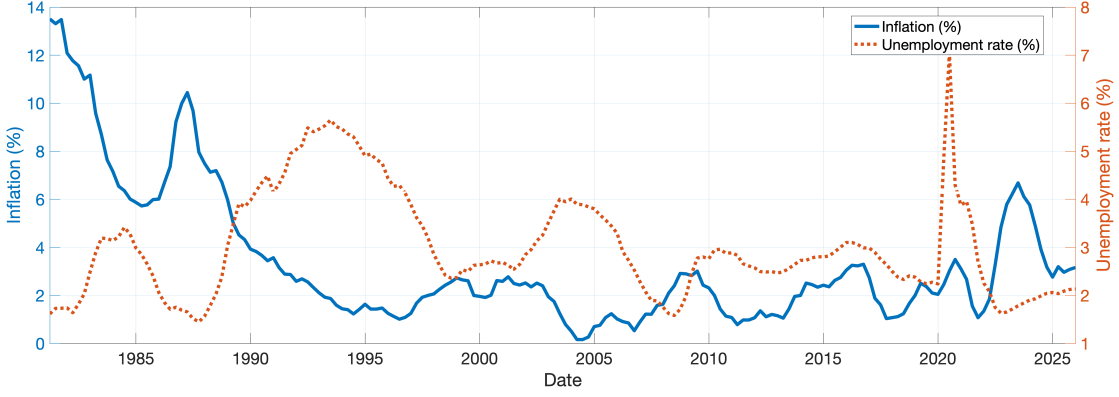


Remote work and vacancies



Connection to Price Stability

Inflation and Unemployment in Norway



Source: Norges Bank

Common practice is to change the slack indicator to *fix* the Phillips curve

2020s

Vacancy-to-unemployment ratio

2010s

Short-term unemployment rate

1980s

Prime-age male unemployment rate

1970s

Demographically-adjusted unemployment rate

Natural rate of unemployment a là Friedman (1968)

Natural rate of unemployment:

$$u_t^* = \bar{u}_t + \tilde{u}_t$$

- Consistent with stable level of inflation
- Driven by non-monetary factors and time varying

Natural rate of unemployment a là Friedman (1968)

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Unemployment gap:

$$x_t = u_t - u_t^*$$

- Captures degree of inflationary pressures
- Affected by business cycle conditions and monetary policy

Inflation reflects current and *future* labor market conditions as measured by the unemployment gap.

Galí (2011)

$$\pi_t = \underbrace{\pi_t^* - \kappa x_t - \kappa\beta\mathbb{E}_t \sum_{T=t}^{\infty} \beta^{T-t} x_{T+1}}_{\text{Underlying inflation}} + \underbrace{\mathbb{E}_t \sum_{s=t}^{\infty} \beta^{s-t} g_{a,t}}_{\text{Temporary 'supply shocks'}}$$

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π_t: inflation

π_t^*: long-run inflation expectations

$g_{a,t}$: productivity and markups

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Possible to estimate u_t^* using:

1. Unemployment rate u_t and flows to estimate $\bar{u}_t$
2. CPI inflation (π_t)
3. Measures of labor compensation
4. Inflation expectations: Long-run (π_t^*) and short-run

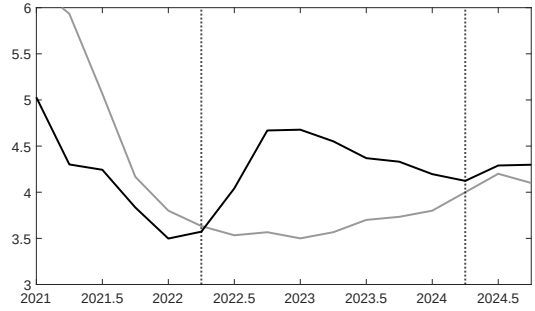
Reference: Crump, Eusepi, Giannoni, Şahin (2019, 2022)

Soft Landing from the view point of the NKPC

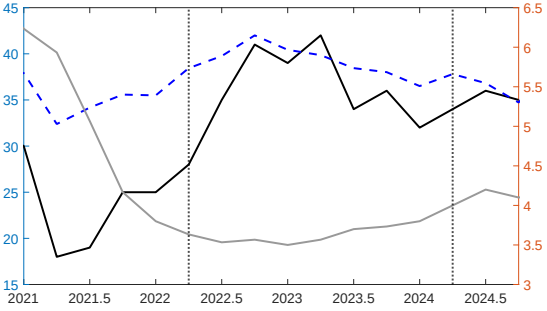
$$\textit{Underlying inflation} = \pi_t^* - \underbrace{\kappa x_t}_{\textit{slack}} - \underbrace{\kappa\beta\mathbb{E}_t \sum_{T=t}^{\infty} \beta^{T-t} x_{T+1}}_{\textit{expected slack}}$$

Soft Landing in the US: The role of Expectations

BCEI forecast and unemployment



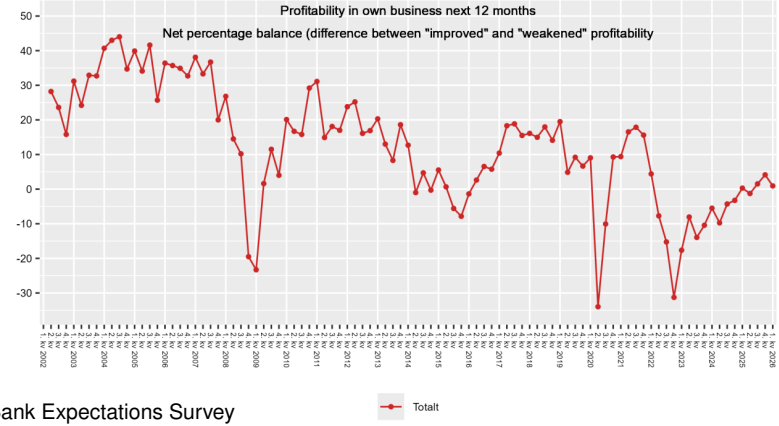
SCE/Michigan forecasts and *unemployment*



Source: Eusepi and Şahin (2025)

- Increase in unemployment expectations of forecasters and households....
- ...while the unemployment rate remained low.

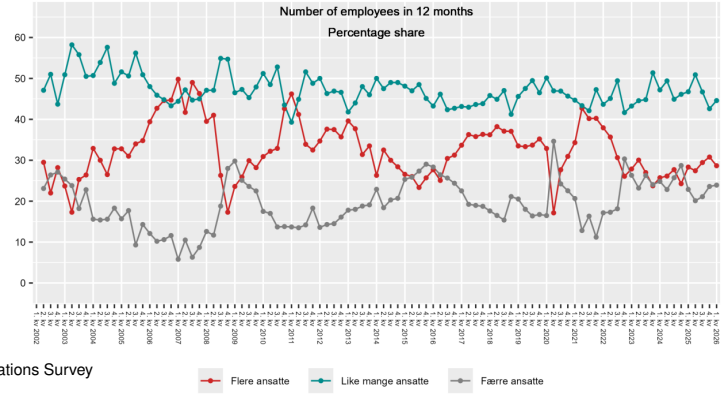
Do you think that over the next 12 months, the profitability of your business, as measured by the operating margin (EBITDA), will improve, remain unchanged or weaken?
(The question was marginally changed from Q1 2015 – see technical comment)[5]



Source: Norges Bank Expectations Survey

Soft Landing in Norway: The role of Expectations

Do you think that in 12 months, your business will have more employees than currently, the same number of employees or fewer employees?



Source: Norges Bank Expectations Survey

Key takeaways

- The vagueness of employment mandates makes them vulnarable to interpretation.
- This vagueness reflects genuine uncertainty. Focus on job finding and job loss simplifies it.
- Unemployment rate remains to be the most transparent indicator as a slack measure as well as a communication tool.
- Shifts in slack measures used in Phillips curve estimation not productive as each indicator has its natural rate.

Work in Progress: Estimate narrative factors from rich cross-sectional data.