Bart Hobijn (FRBSF, VU Amsterdam, and TI)

U.S. LABOR MARKET DYNAMICS
SINCE THE START OF THE GREAT RECESSION

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U.S. LABOR MARKET DYNAMICS
SINCE THE START OF THE GREAT RECESSION
AND COMPARED TO OTHER COUNTRIES

Stable pre-recession Beveridge curve…

Actual Beveridge Curve
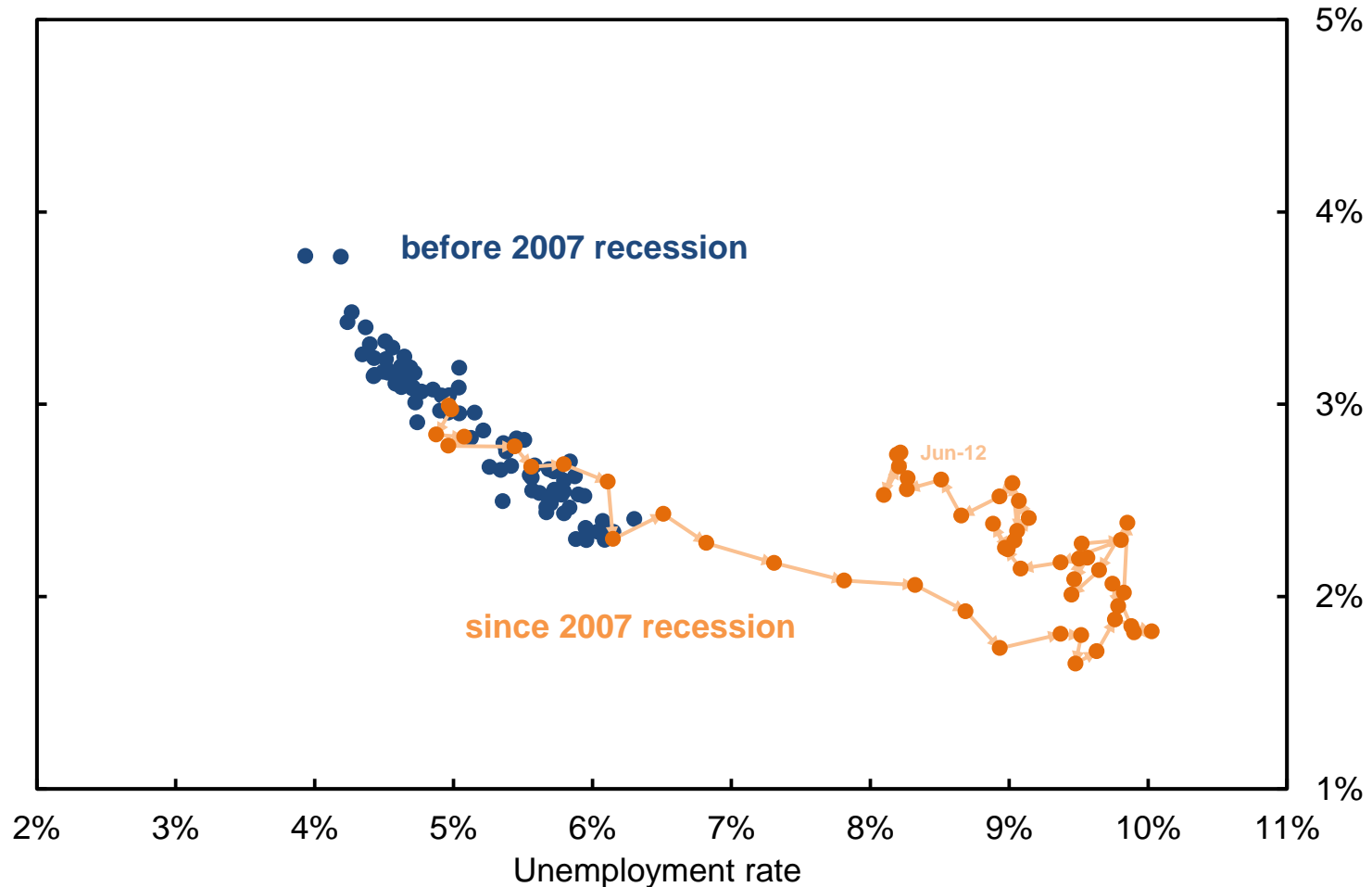Monthly observations; seasonally adjusted
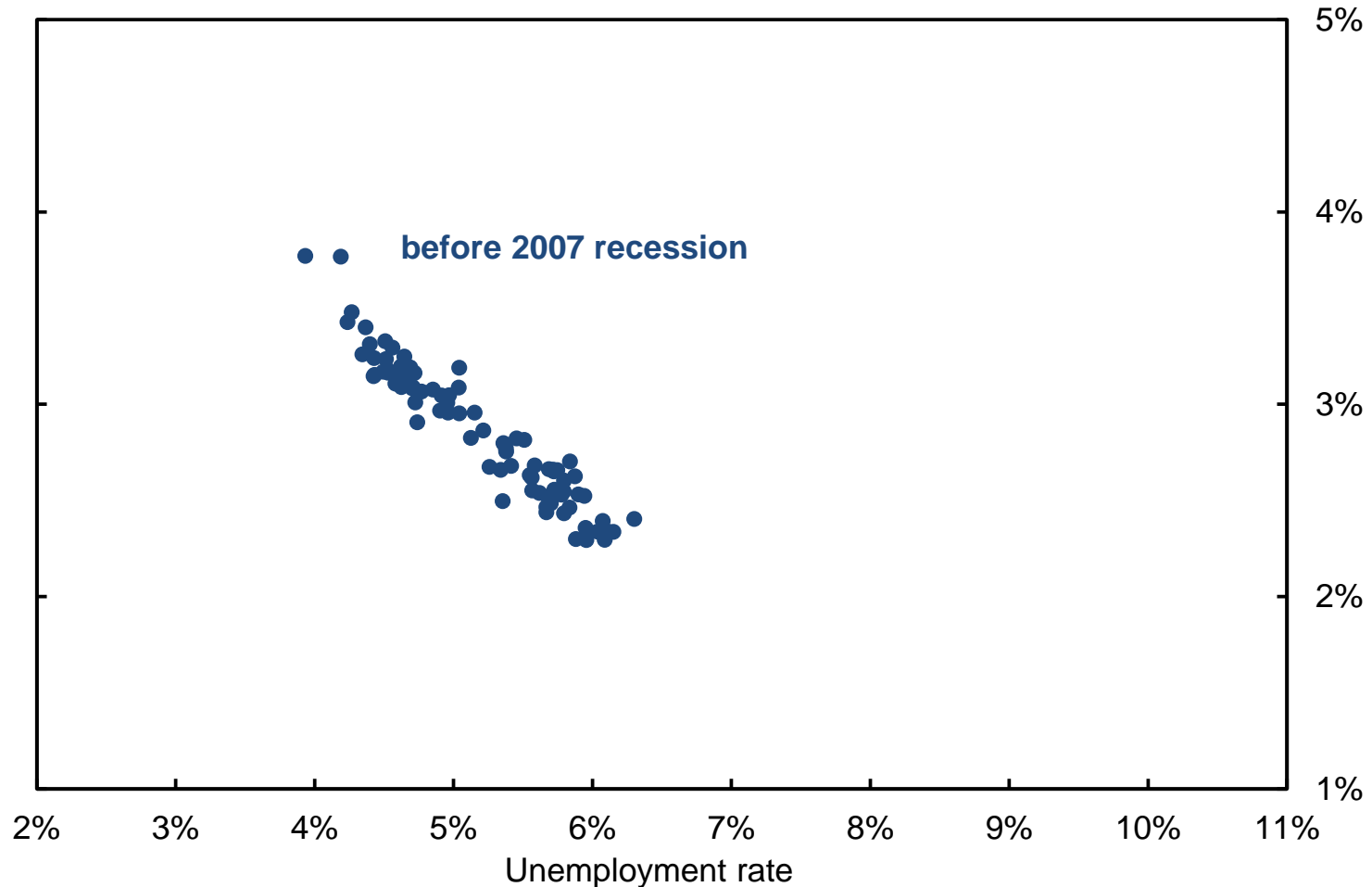
Source: JOLTS, CPS, and authors' calculations

… fell apart since Great Recession

Actual Beveridge Curve

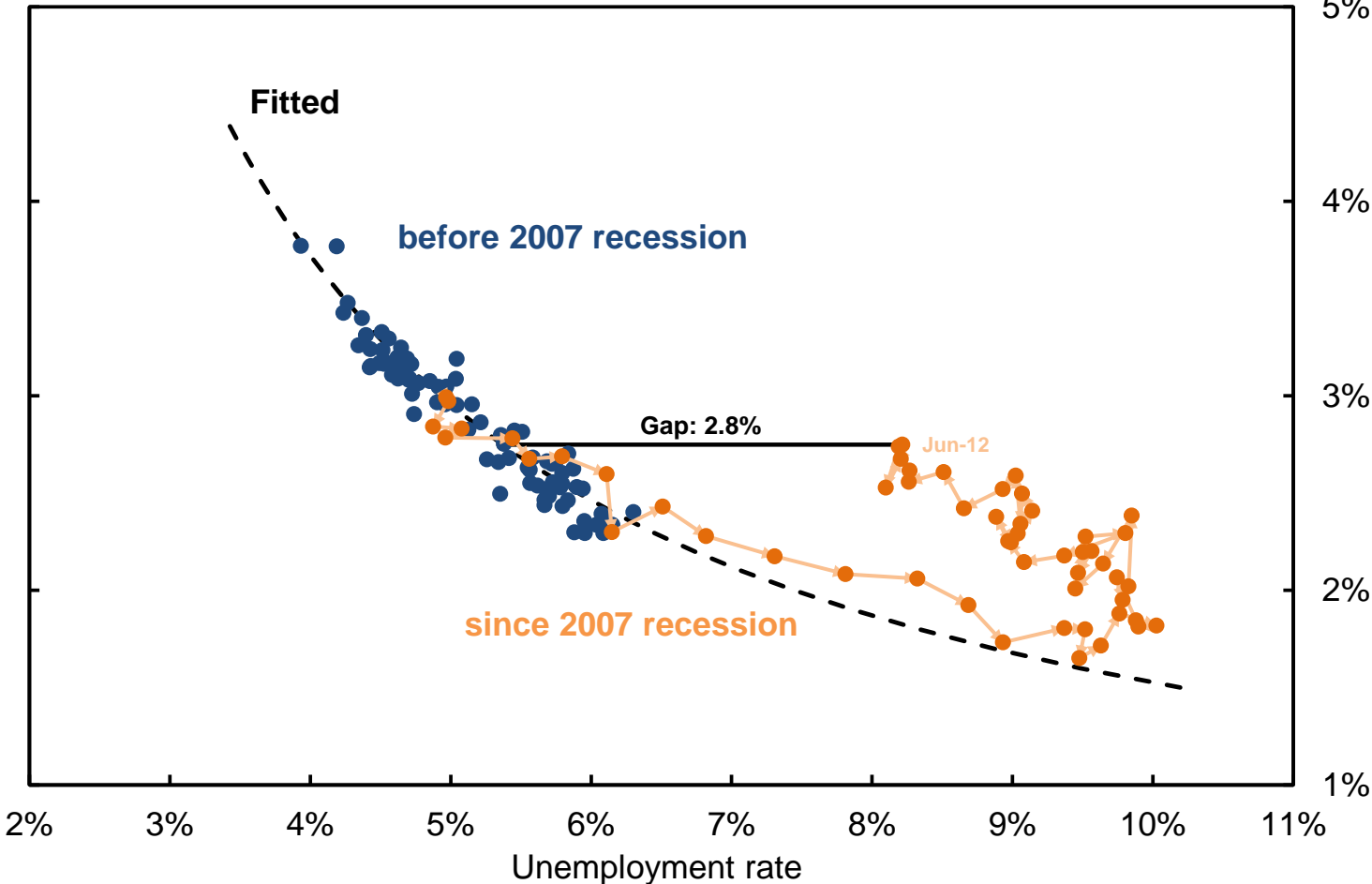Monthly observations; seasonally adjusted

Source: JOLTS, CPS, and authors' calculations

2.8 percentage points rightward shift

Actual and fitted Beveridge Curve

Monthly observations; pre-2007-recession fit

Job openings rate

Fitted

before 2007 recession

Gap: 2.8%

Jun-12

since 2007 recession

Unemployment rate

Source: JOLTS, CPS, and authors' calculations

What is cause of high unemployment?

- Cyclical/Slack:

  Overall weakness in economic activity and corresponding weakness in demand for labor.

- Structural:

  Increased frictions in labor market mean higher unemployment even if demand for labor recovers.
  - House lock
  - Unemployment Insurance
  - Skill mismatch between labor demand and supply
  - Sclerosis and long-term unemployment

My main lesson…

Dynamics of U.S. labor market are such that a large increase in the level of structural unemployment is very unlikely.

Three reasons

1. Beveridge curve shift in line with 5-6 percent natural rate of unemployment.

2. Shift of Beveridge curve largely transitory.
   – Sources of Beveridge curve shift either small or fleeting.

3. Amerisclerosis is a misdiagnosis.
   – U.S. long-term unemployed still finding jobs at relatively high rate.

Reason 1:

BEVERIDGE CURVE SHIFT IN LINE WITH 5 TO 6 PERCENT NATURAL RATE OF UNEMPLOYMENT

Barnichon, Elsby, Hobijn, and Şahin (2012), Daly, Hobijn, Şahin, and Valletta (2012)

Natural rate never exceeded 6.5 percent

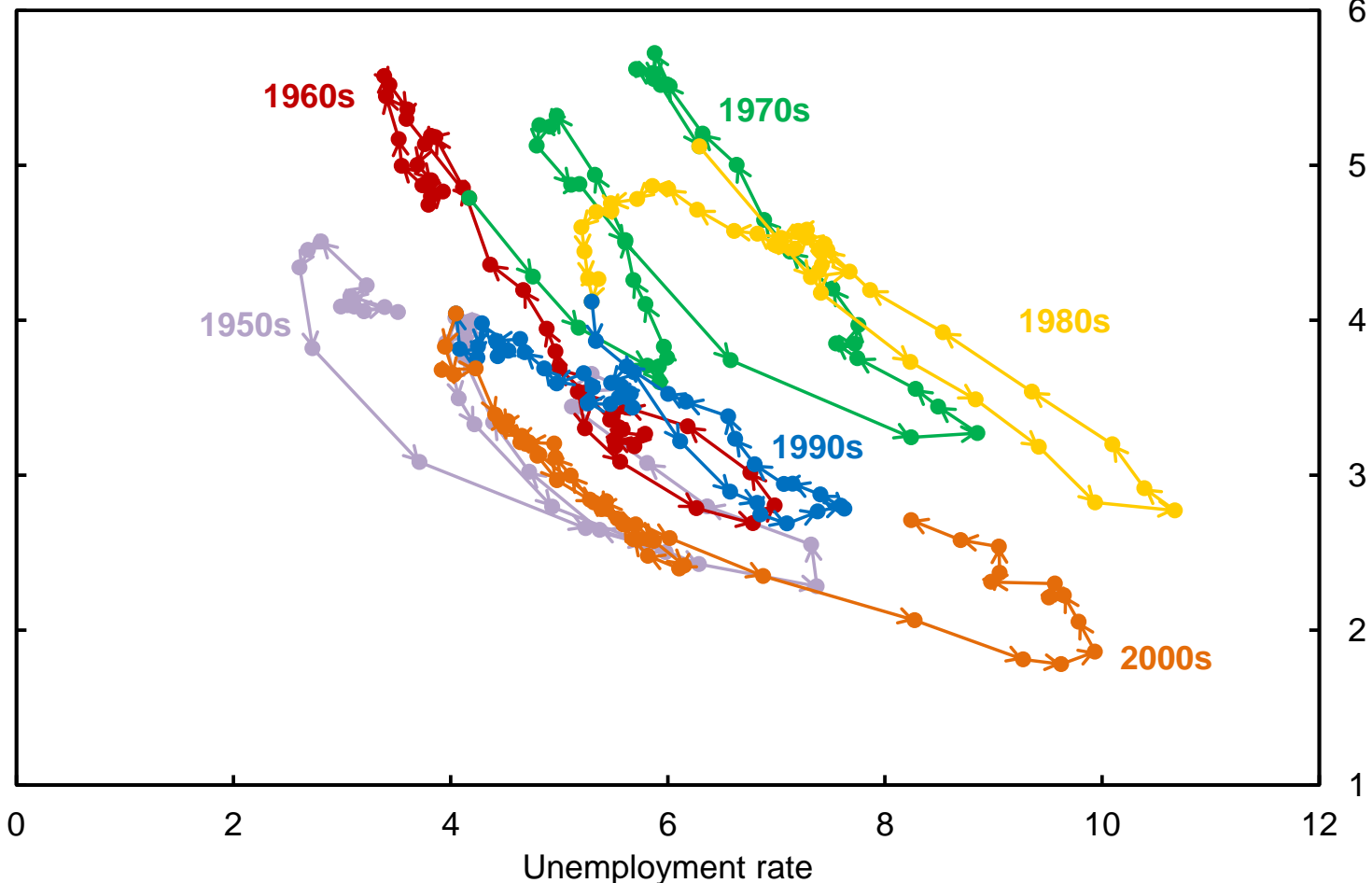**Unemployment Rate and Its Natural Rate**

Quarterly observations; seasonally adjusted

Source: Bureau of Labor Statistics and Congressional Budget Office
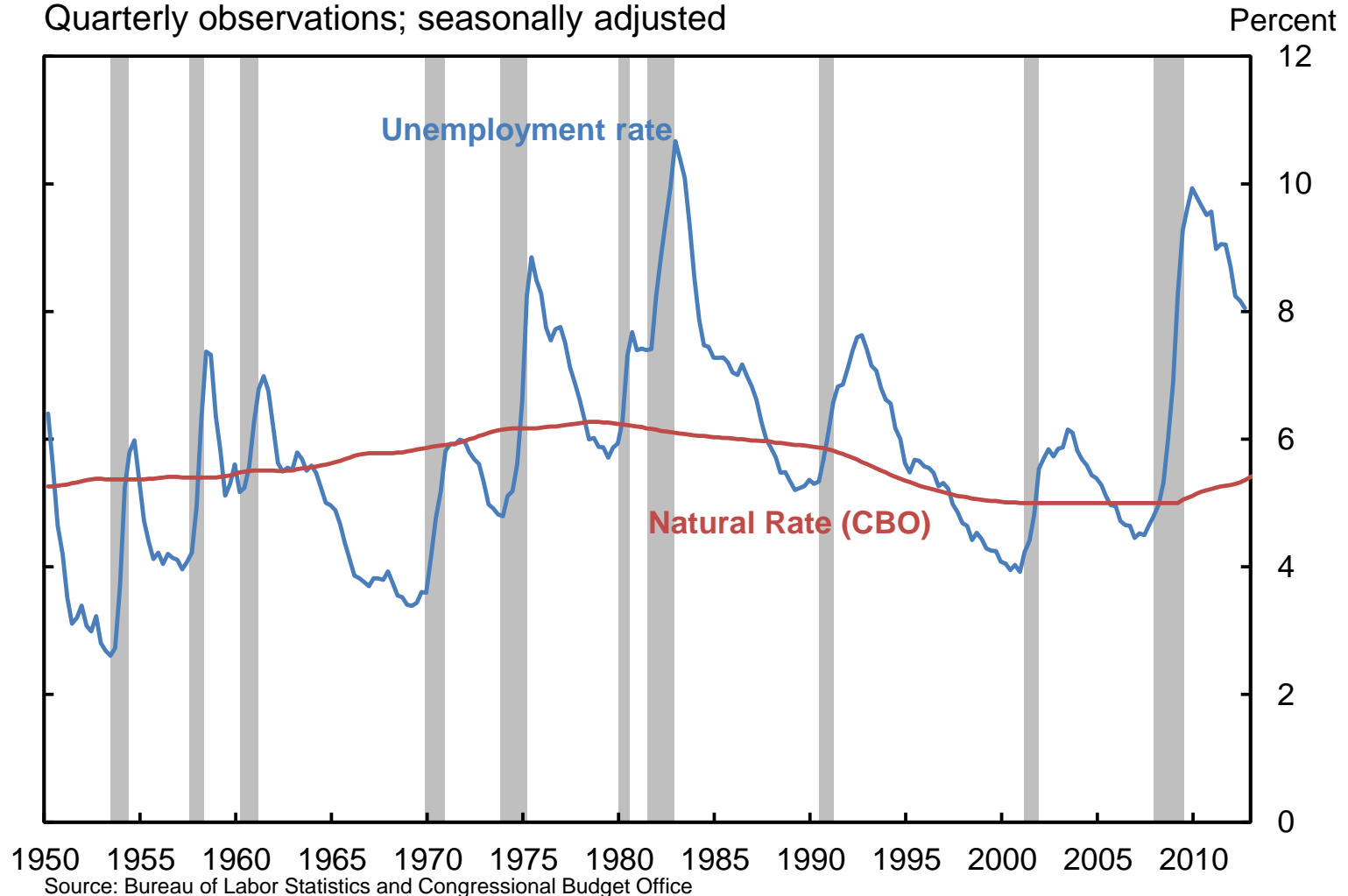
U.S. Beveridge curve shifted out before

Historical Beveridge Curve
Seasonally adjusted; quarterly observations; merged HWI and JOLTS   Vacancy rate
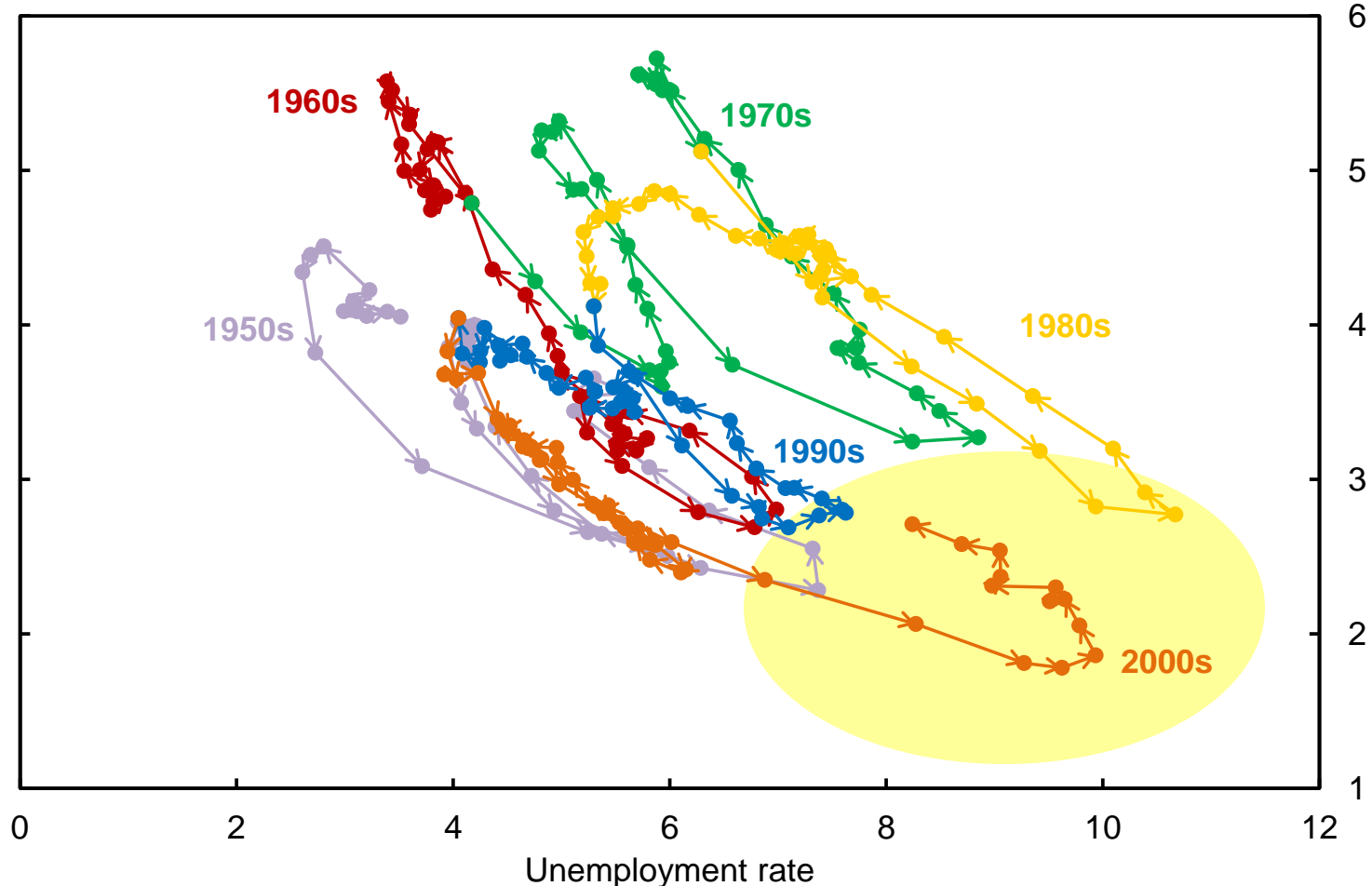
Unemployment rate

Source: BLS, Conference Board, Barnichon (2010) and authors' calculations

Current shift not the biggest ever

Historical Beveridge Curve
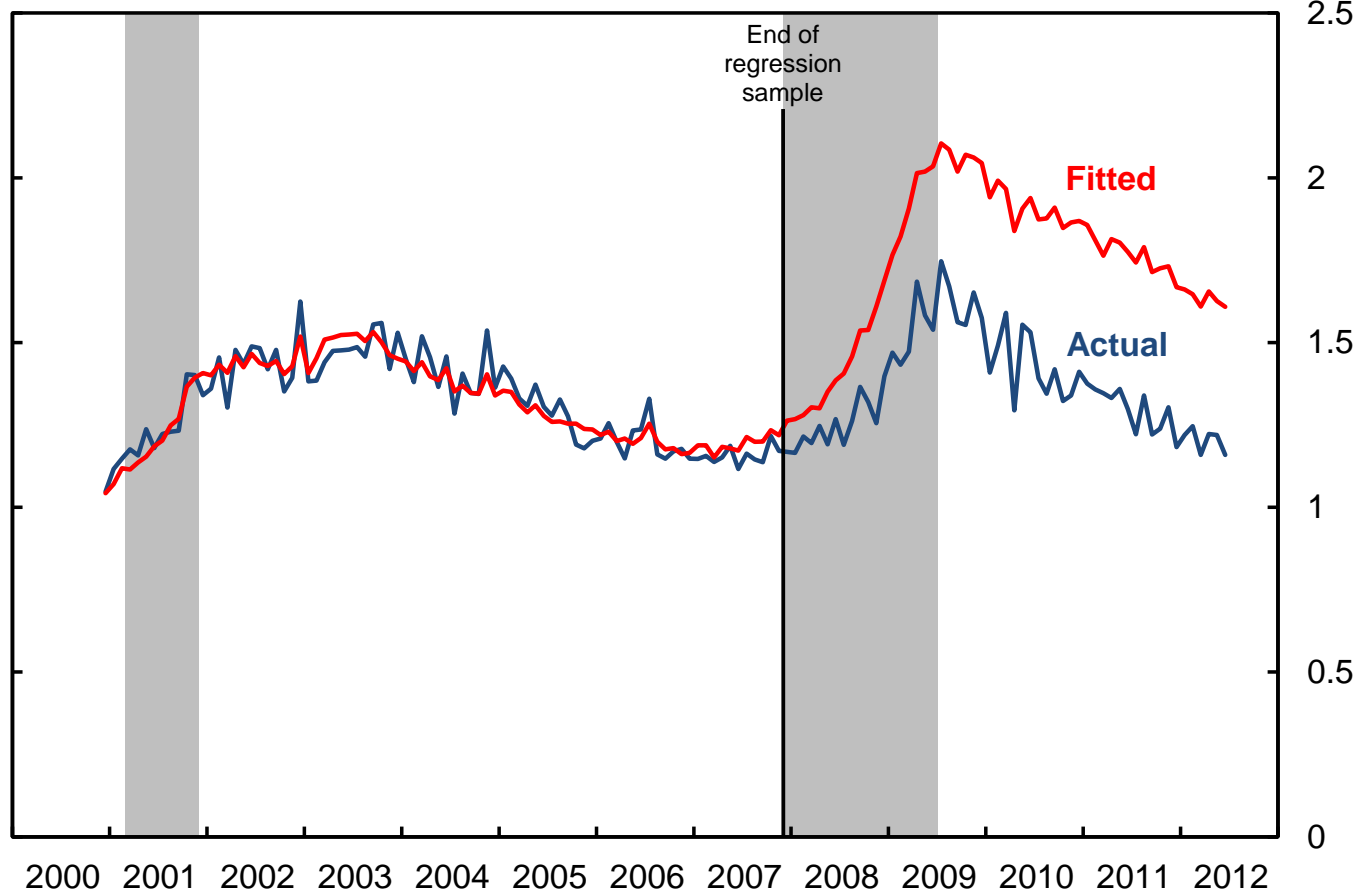Seasonally adjusted; quarterly observations; merged HWI and JOLTS

Source: BLS, Conference Board, Barnichon (2010) and authors' calculations

Decline in match efficiency

Actual and Fitted Vacancy Yield

Monthly data; seasonally adjusted; regression ends 11/2007

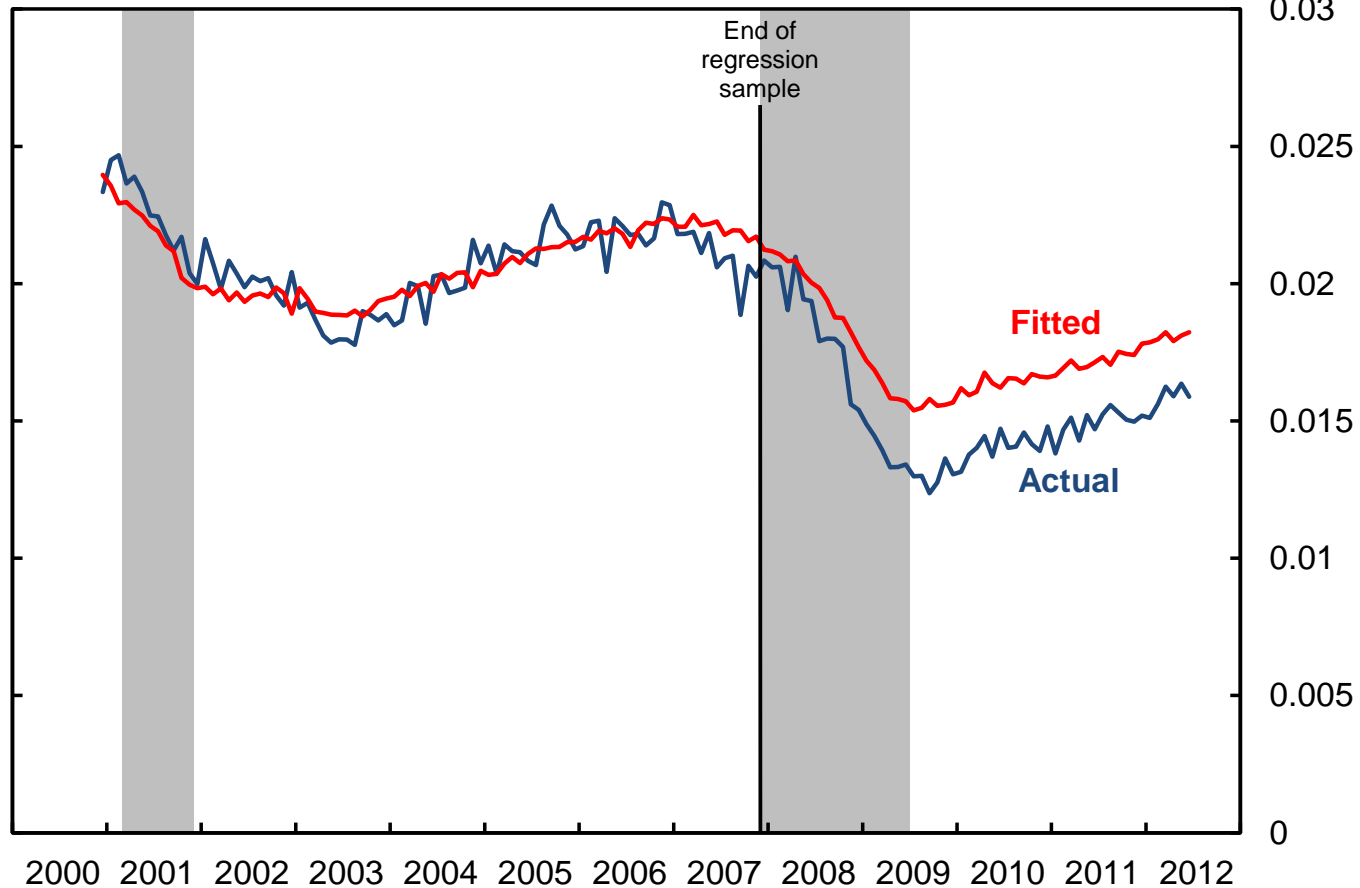Source: BLS and authors' calculations

Borowczyk-Martins et al. (2011), Davis, Faberman, and Haltiwanger (2012), and Sedláček (2012)

Workers stopped quitting jobs

Actual and Fitted Quits Rate (quits per employee)

Monthly data; seasonally adjusted; regression ends 11/2007

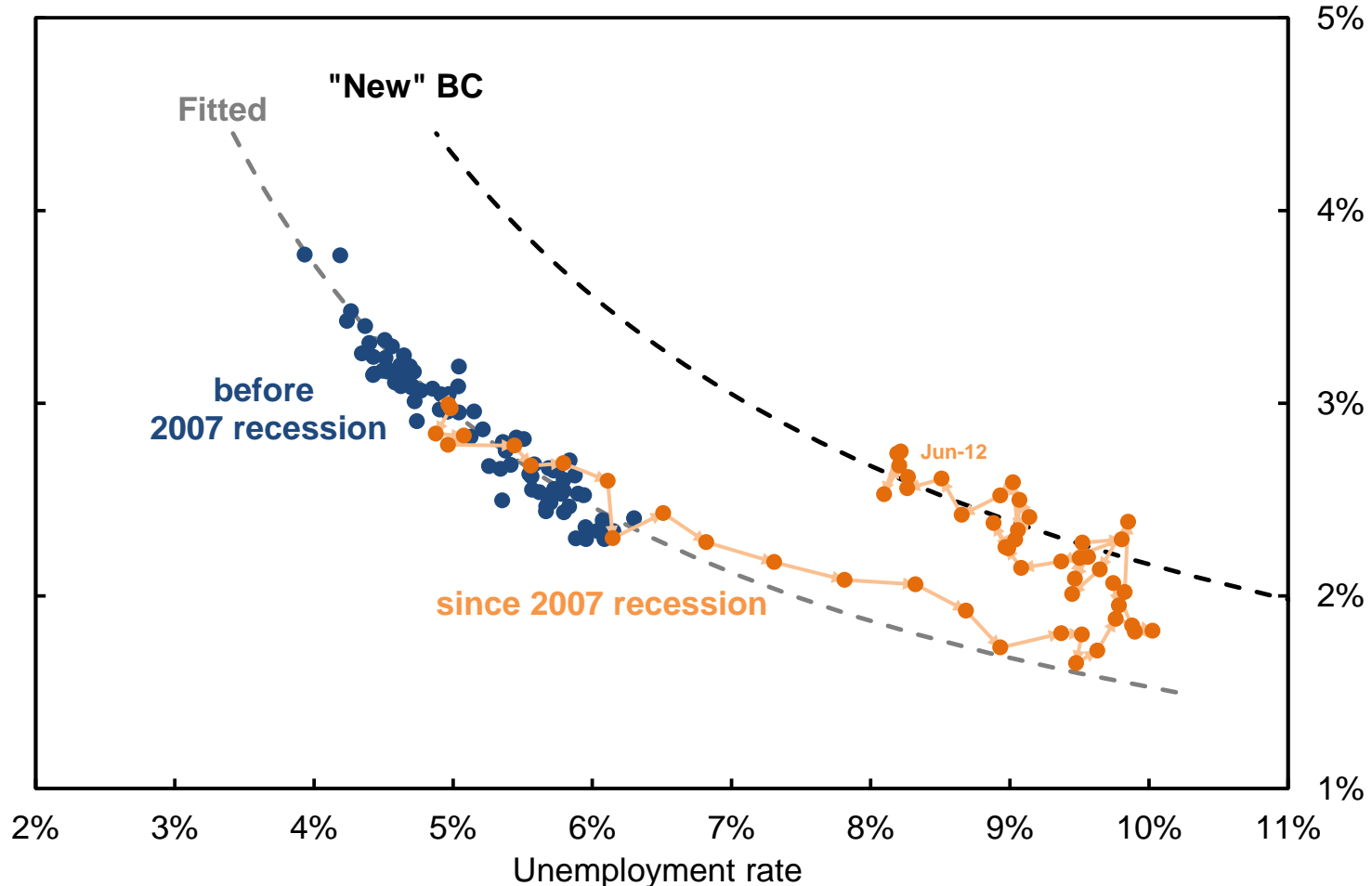Source: BLS and authors' calculations

Lazear and Spletzer (2012), Saint-Paul (1995)
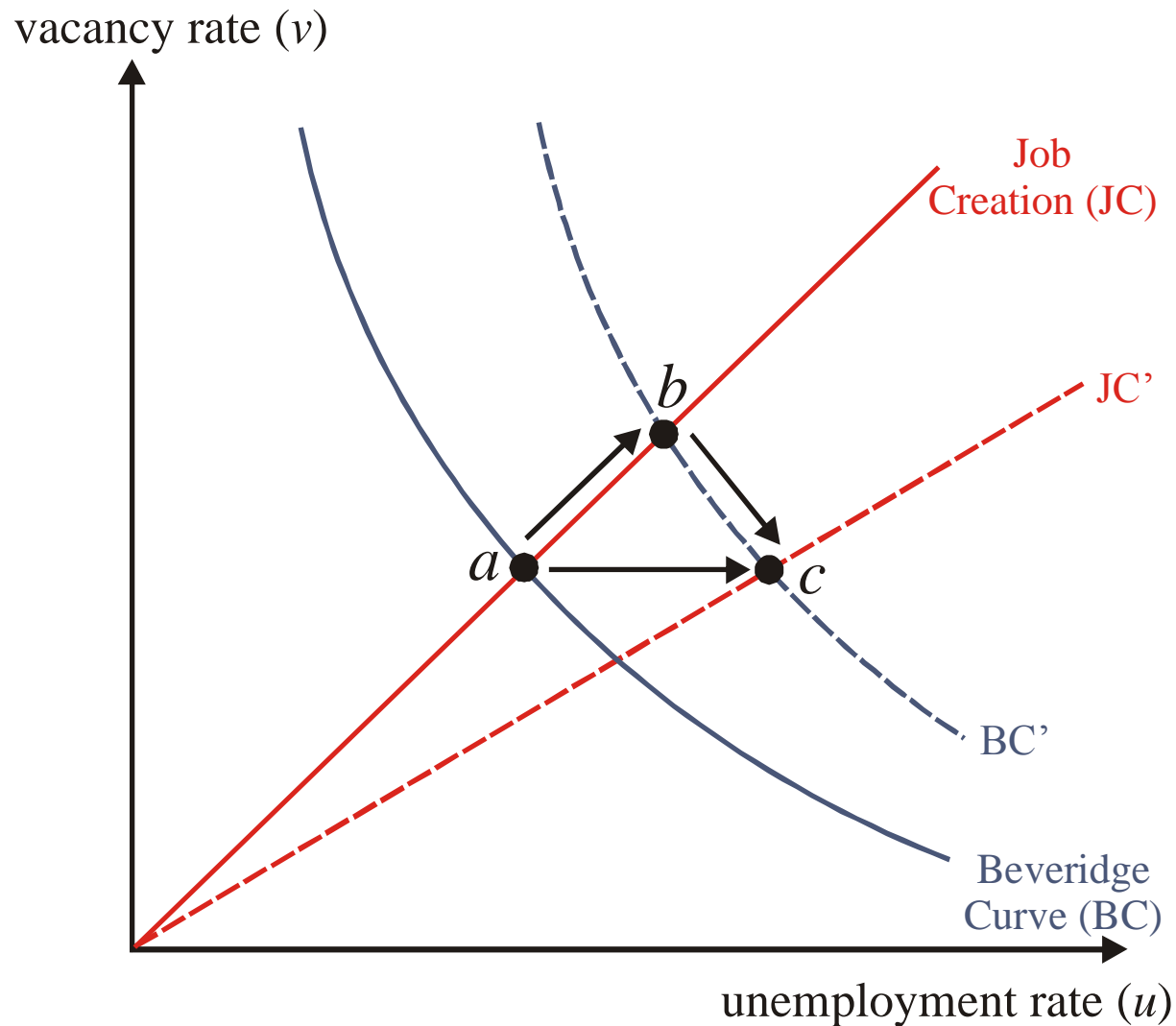
Reduction in churning moved BC

Fitted and "New" Beveridge Curve
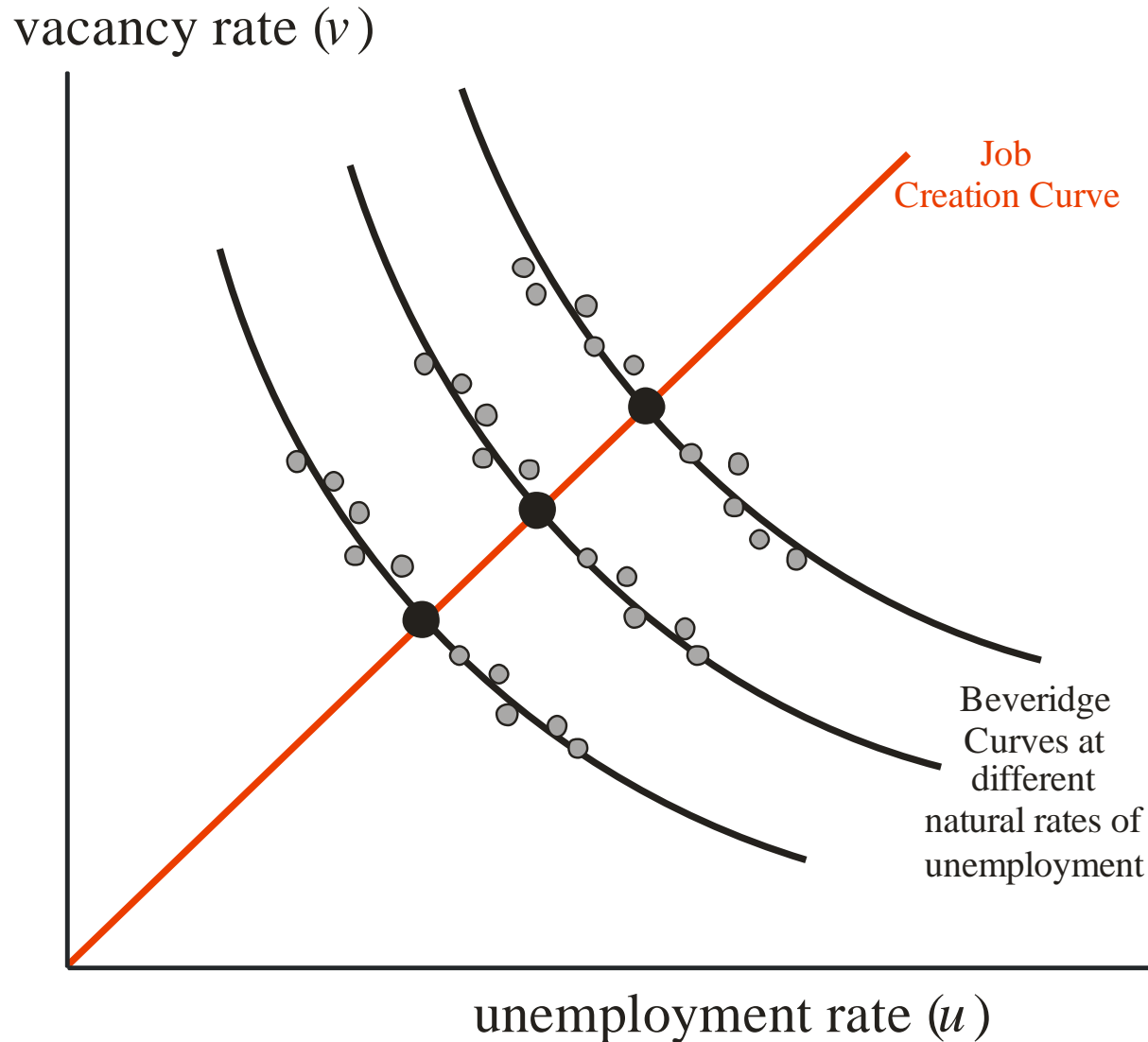Pre-2007-recession fit; Shift based on last 12-months

Source: JOLTS, CPS, and authors' calculations. New Beveridge curve estimate based on shift in match efficiency over last 12 months.

Where on new BC will we end up?

Tracing out the Job Creation curve

Labor Market Lessons

Tracing out the Job Creation curve
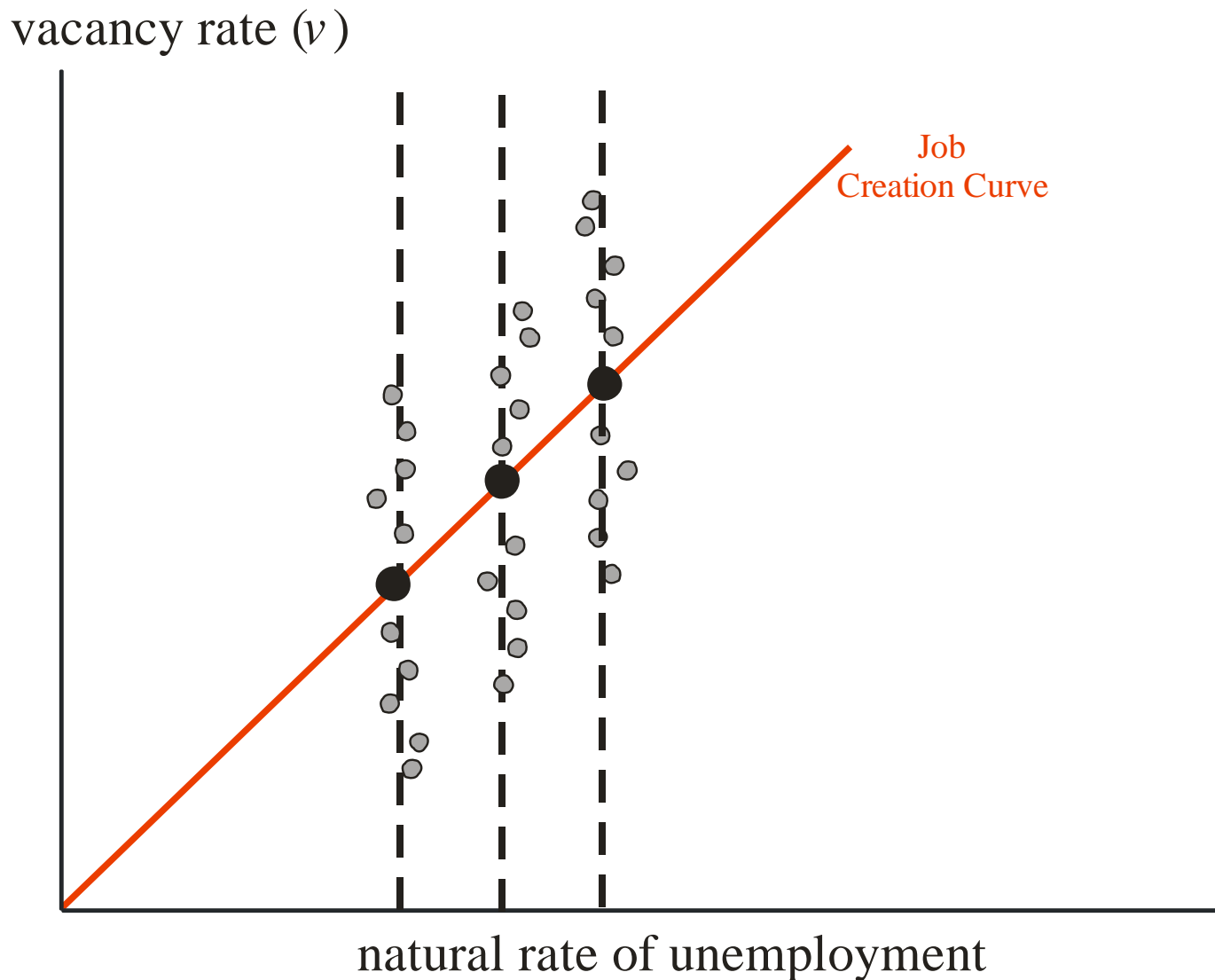
Estimate of historical JC curve

Historical Job Creation Curve

Seasonally adjusted; quarterly data; regression based on pre-2008 data

Vacancy rate

Before 2007 recession

Since 2007 recession

Regression: Vacancy rate = -2.7 + 1.2 * Natural rate of unemployment, R-squared = 0.34

Natural rate of unemployment
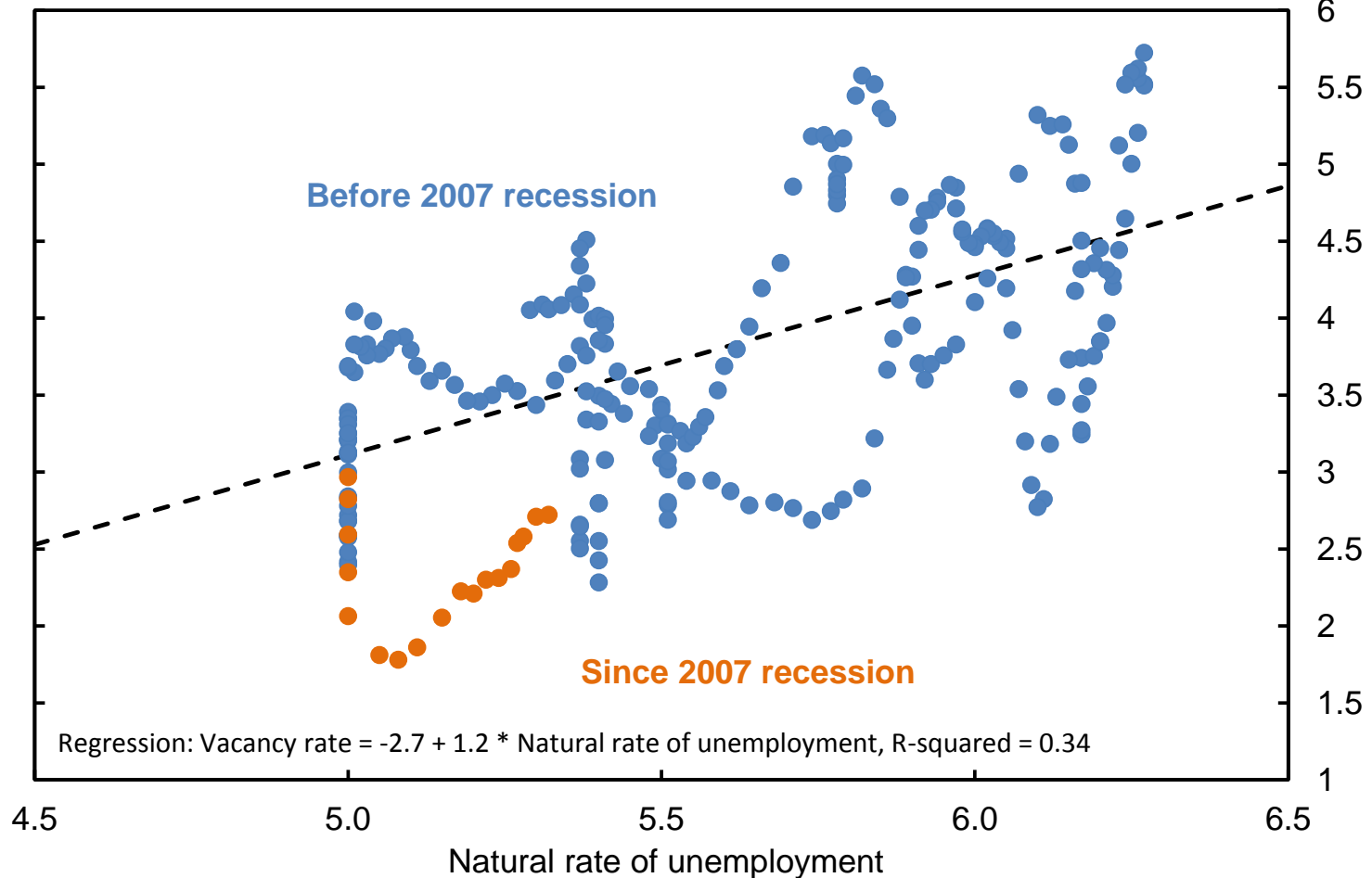
Source: JOLTS, BLS, CBO, and authors' calculations

Putting new BC and JC curve together
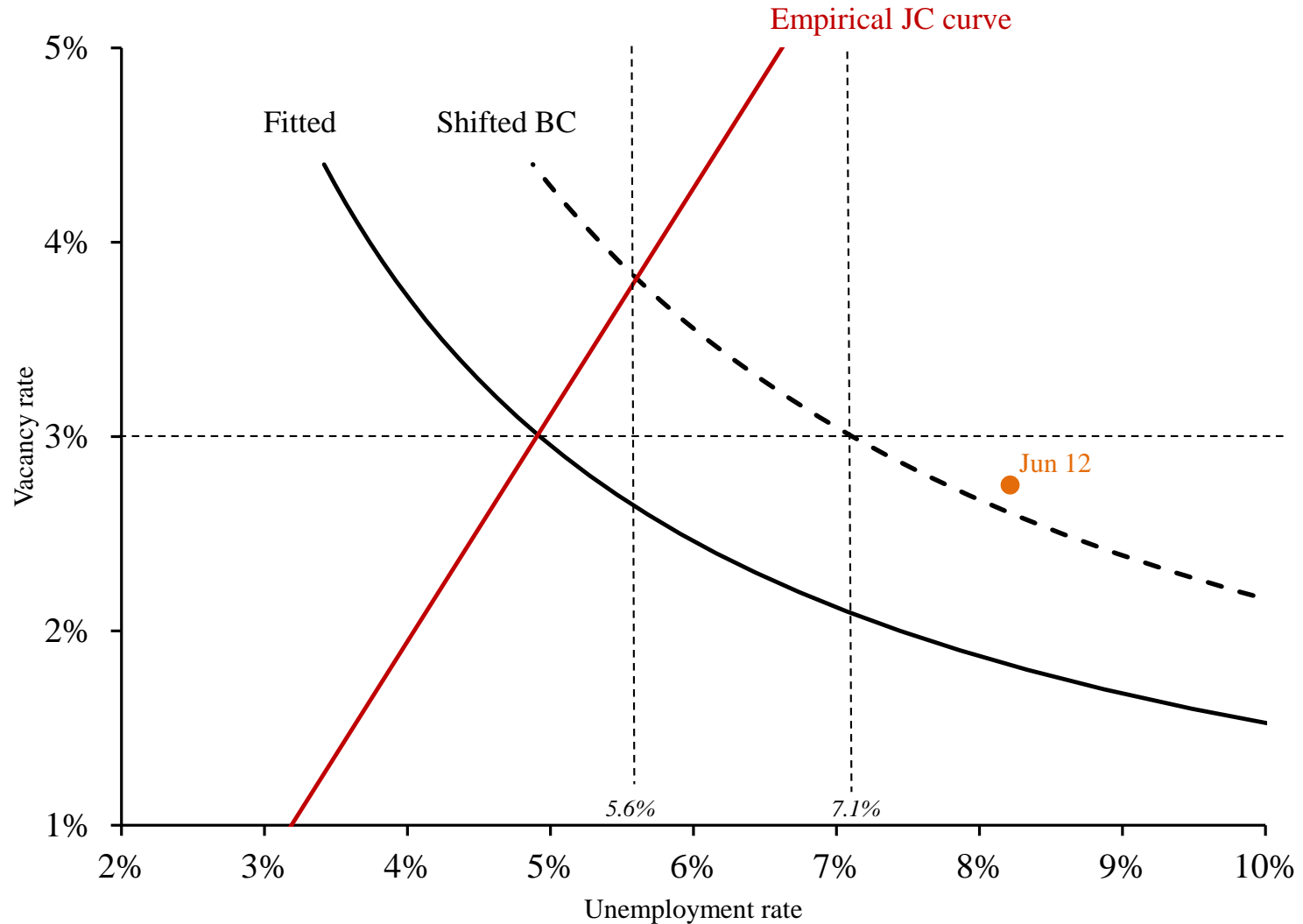
Source: JOLTS, CPS, CBO, and authors' calculations

Is the U.S. like Japan?

Beveridge curve: Japan

Annual data

Vacancy index (mean=100)

after financial crisis

before financial crisis

before financial crisis

since '91 financial crisis

Unemployment rate
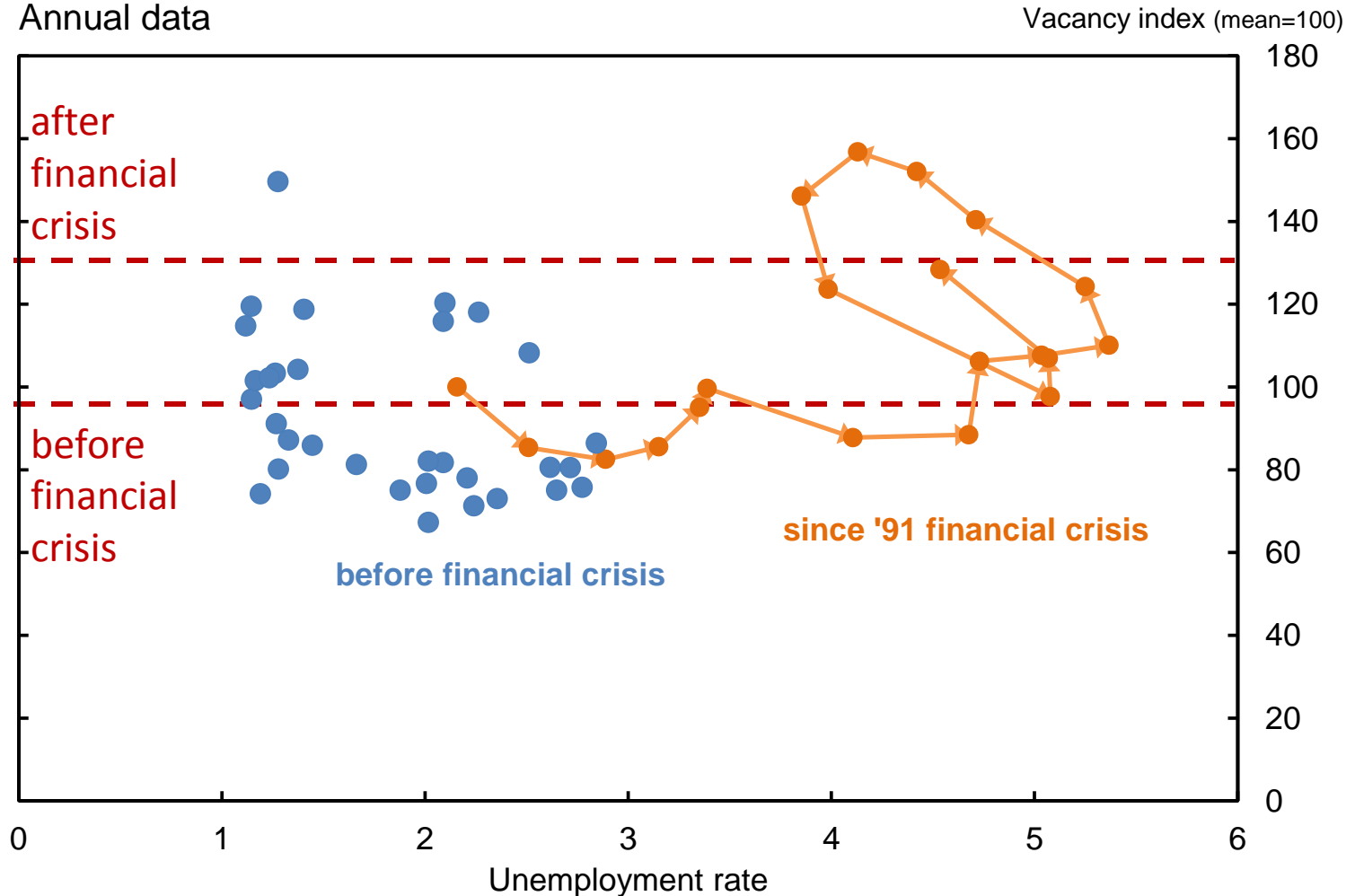
Source: Hobijn and Şahin (2012)

Potential caveat

- Match efficiency shock that moves Beveridge curve also lowers job creation.

    Barlevy (2011), Borowczyk-Martins et al. (2011), Furlanetto and Groshenny (2012)

- Simultaneous equations methods yield similar results to ours.

    Dickens (2009), Fleischman and Roberts (2011), and Dickens and Triest (2012)

Job creation remains a puzzle

- Model-implied elasticity of job creation with respect to match efficiency too high?

- We are still working out theory of level and cyclical fluctuations of job creation.

"Shimer Puzzle": Andolfatto (1996), Shimer (2005), Amaral and Tasci (2012)

Bartelsman, Gautier, and de Wind (2011), Basu and Bundick (2012)

Reason 2:

SHIFT OF BEVERIDGE CURVE LARGELY TRANSITORY

Elsby, Hobijn, and Şahin (2010), Daly, Hobijn, Şahin, and Valletta (2012)
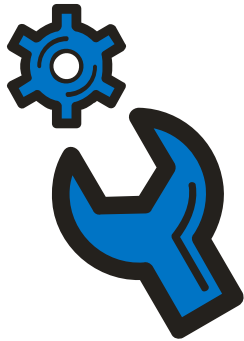
Three main sources of shift

House lock

UI extensions

Mismatch

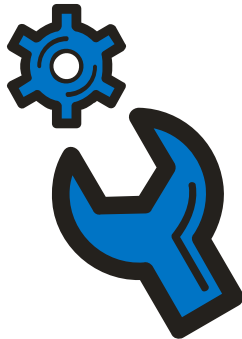# Effects either small or fleeting

House lock
Unimportant

UI extensions
Expected to expire early 2013

Mismatch
Largely transitory

HOUSE LOCK

Concern about house lock

- Historical cross-country movements in Beveridge curves correlated with home ownership rates.

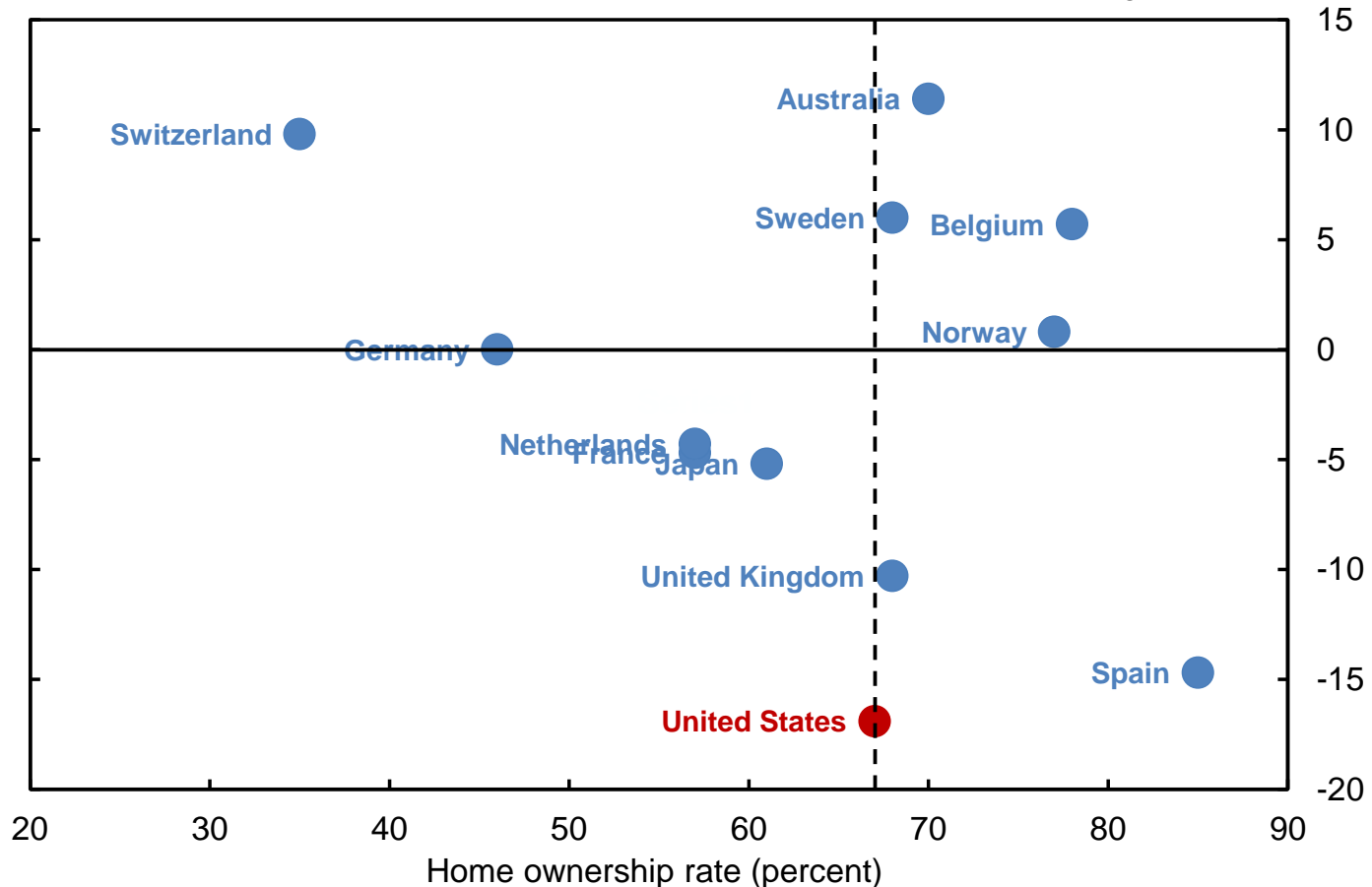 Oswald (1997), Nickell et al. (2001)

- Housing crisis prevents underwater homeowners from moving to take another job.

U.S. had big house price declines

Homeownership rates and house price declines

House price declines in percent from 2007 - 2010 — Change in house prices

Source: Pollock (2010), Department for Communities and Local Government (2012), OECD (2011)
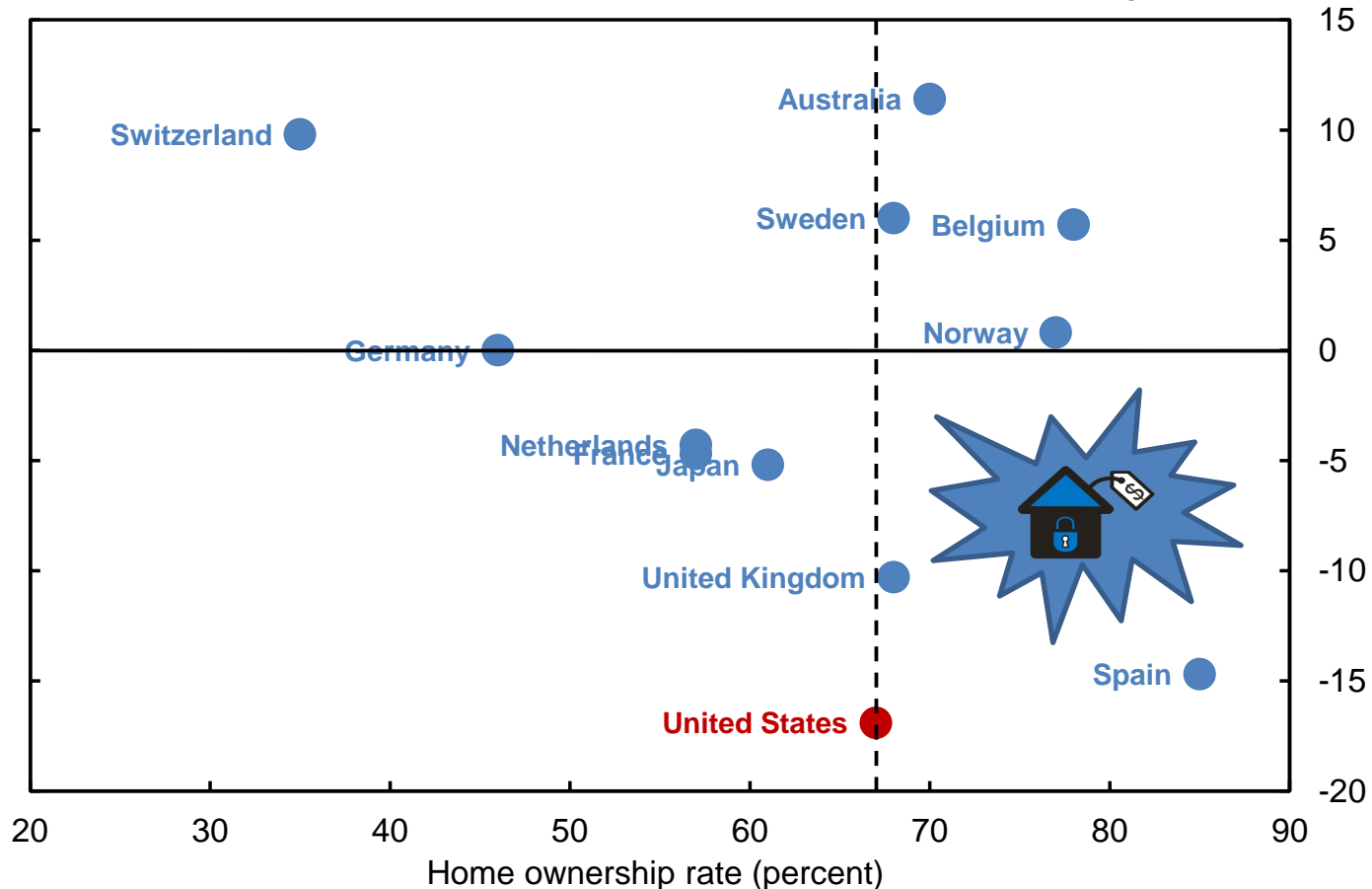
Hobijn and Şahin (2012)

U.S. had big house price declines

Homeownership rates and house price declines

House price declines in percent from 2007 - 2010 · Change in house prices

Home ownership rate (percent)

Source: Pollock (2010), Department for Communities and Local Government (2012), OECD (2011)

Hobijn and Şahin (2012)

Little evidence of house lock in U.S.

- No sudden decline in mobility after 2008.

  <div align="center">Molloy, Smith, and Wozniak (2010), Schulhofer-Wohl (2010), Valletta (2010)</div>

- Adding house lock to theoretical search models gives small effects.

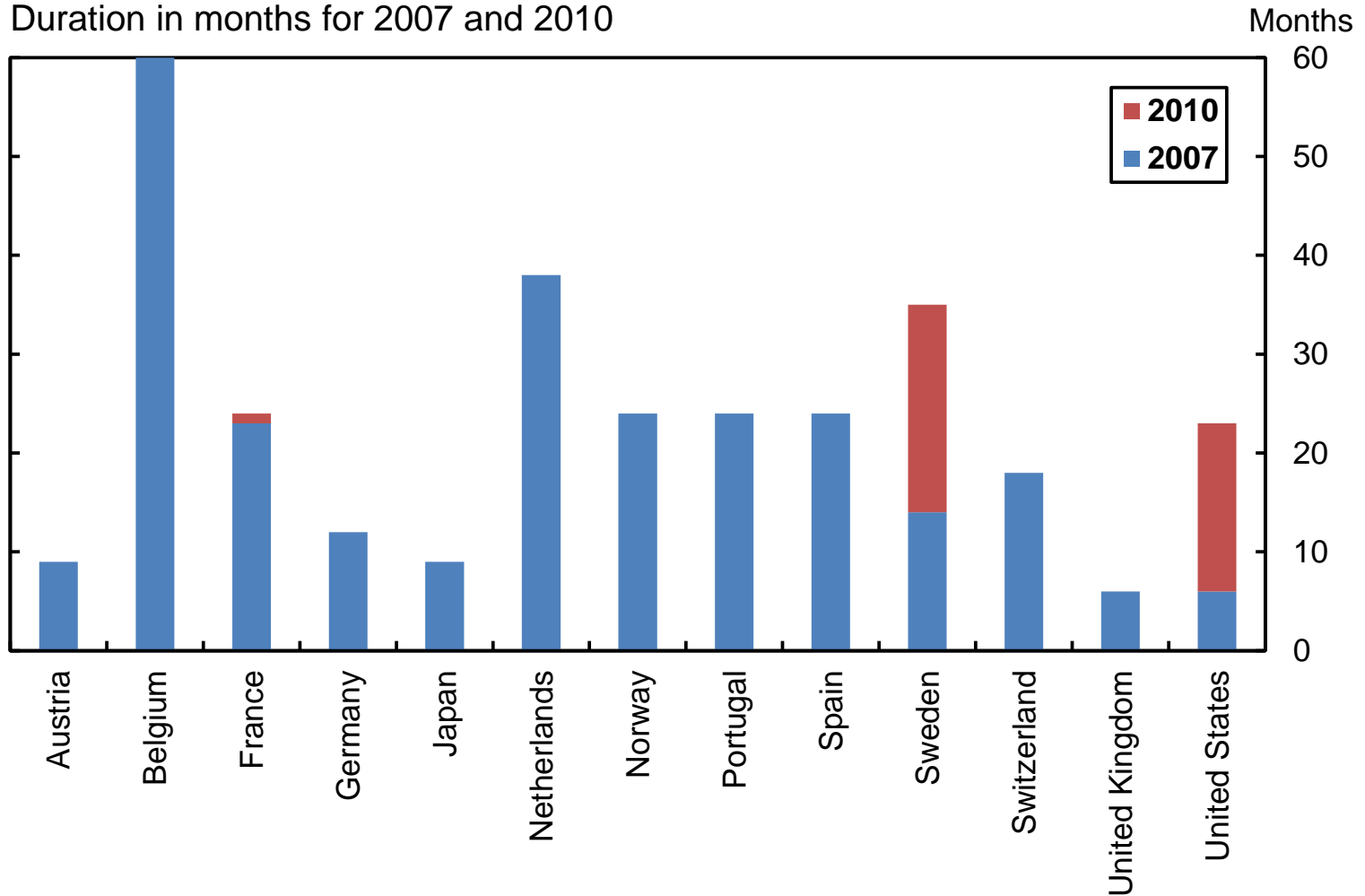 <div align="right">Sterk (2010), Karahan and Rhee (2012)</div>

UI EXTENSIONS

U.S. and Sweden extended UI

Duration of Unemployment Insurance Benefits
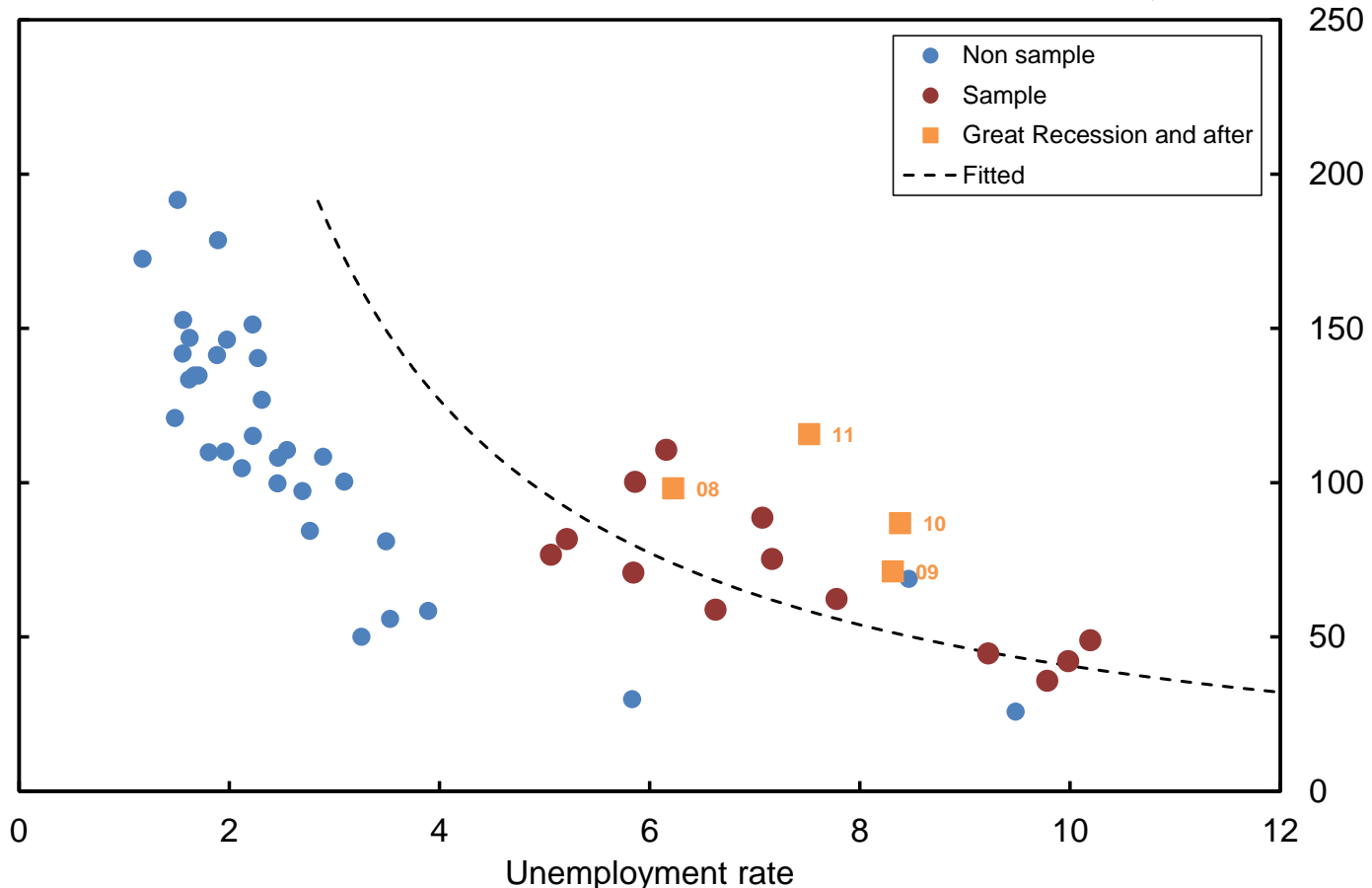Duration in months for 2007 and 2010

Source: OECD (2012)

Swedish UI extensions are moving BC

Actual and Fitted Beveridge Curve: Sweden

Annual data; fitted curved based on pre-2007 data on tenure. Vacancy rate (index avg=100)

Source: OECD, Nickell and Nunziata (2004), Eurostat (2012), and authors' calculations

Forslund and Krueger (2010), Hobijn and Şahin (2012)

UI is moving U.S. Beveridge curve but expiring

- Most studies find an effect of UI extensions on unemployment rate of around 1 percentage point or less.

  Aaronson, Mazumder, and Schecter (2010), Farber and Valletta (2011), Fujita (2010)
  Nakajima (2010), Rothstein (2011), Valletta and Kuang (2010)

- Duration of benefits mainly affects labor supply and not search incentives.

  Rothstein (2011), Hu and Schechter (2011), Nickell et al. (2001)

- UI extensions set (and expected) to expire on January 2 2013.
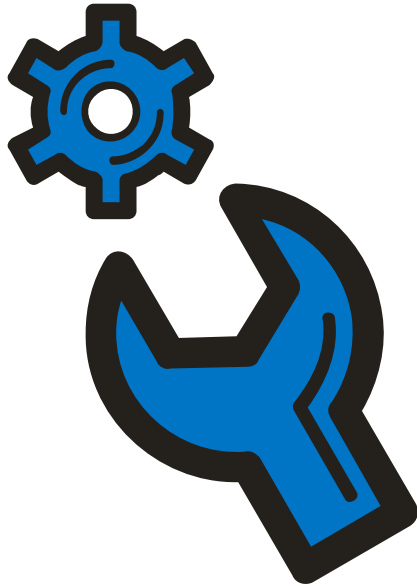
MISMATCH

Measured mismatch already declining

- Simple measures of mismatch…
  - … show increase during Great Recession and subsequent decline.

    Dickens and Triest (2012), Daly, Hobijn, Şahin and Valletta (2012), Lazear and Spletzer (2012)
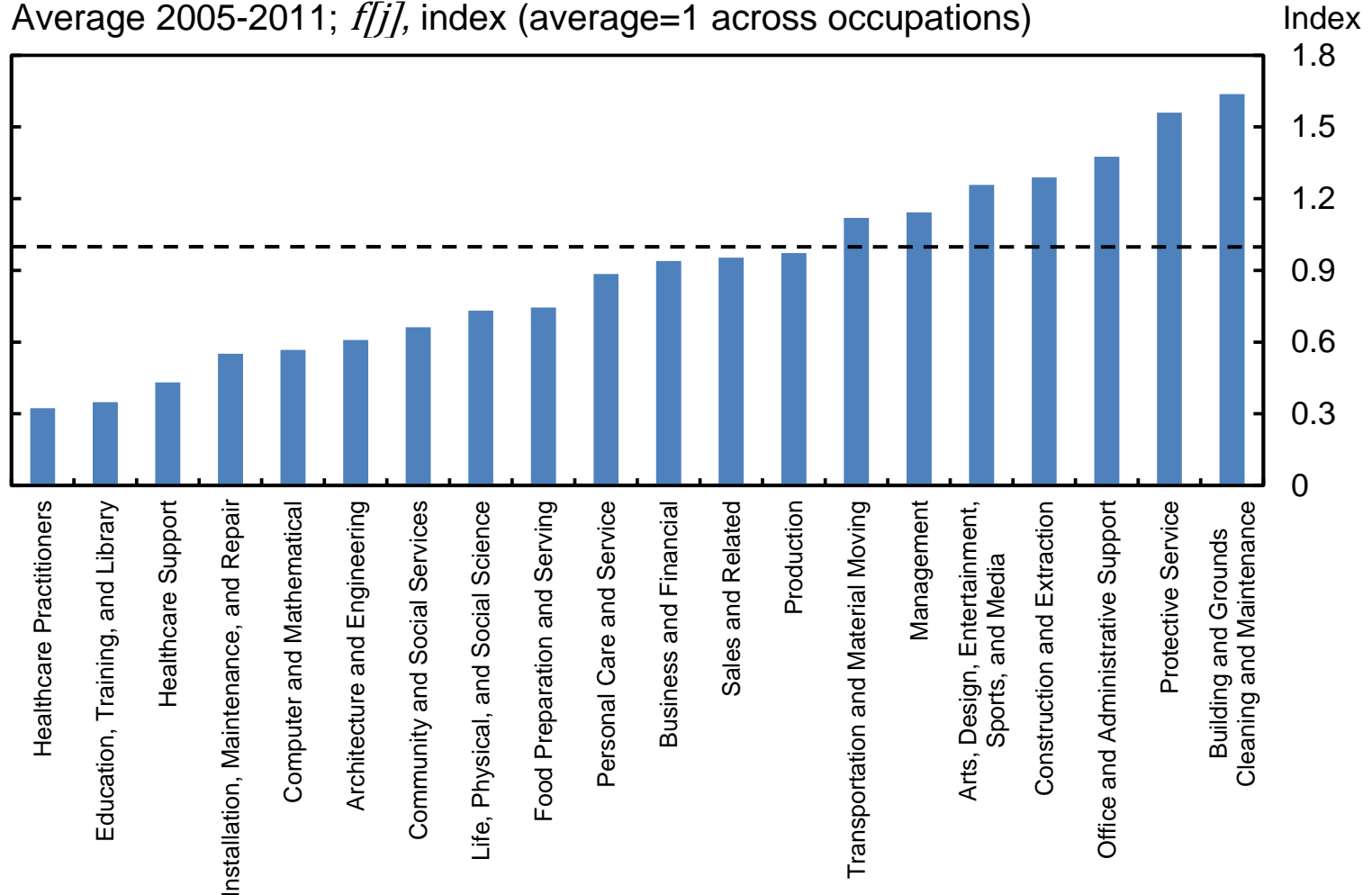
  - … tend to capture a lot of cyclical fluctuations.

    Abraham and Katz (1986)

- More micro-founded index of mismatch…
  - … mismatch $\leq$ 1/3 of increase in unemployment.
  - … finds occupational mismatch most important.

    Şahin, Song, Topa, and Violante (2011)

Hires per vacancy vary by occupation

Relative vacancy yield by occupation

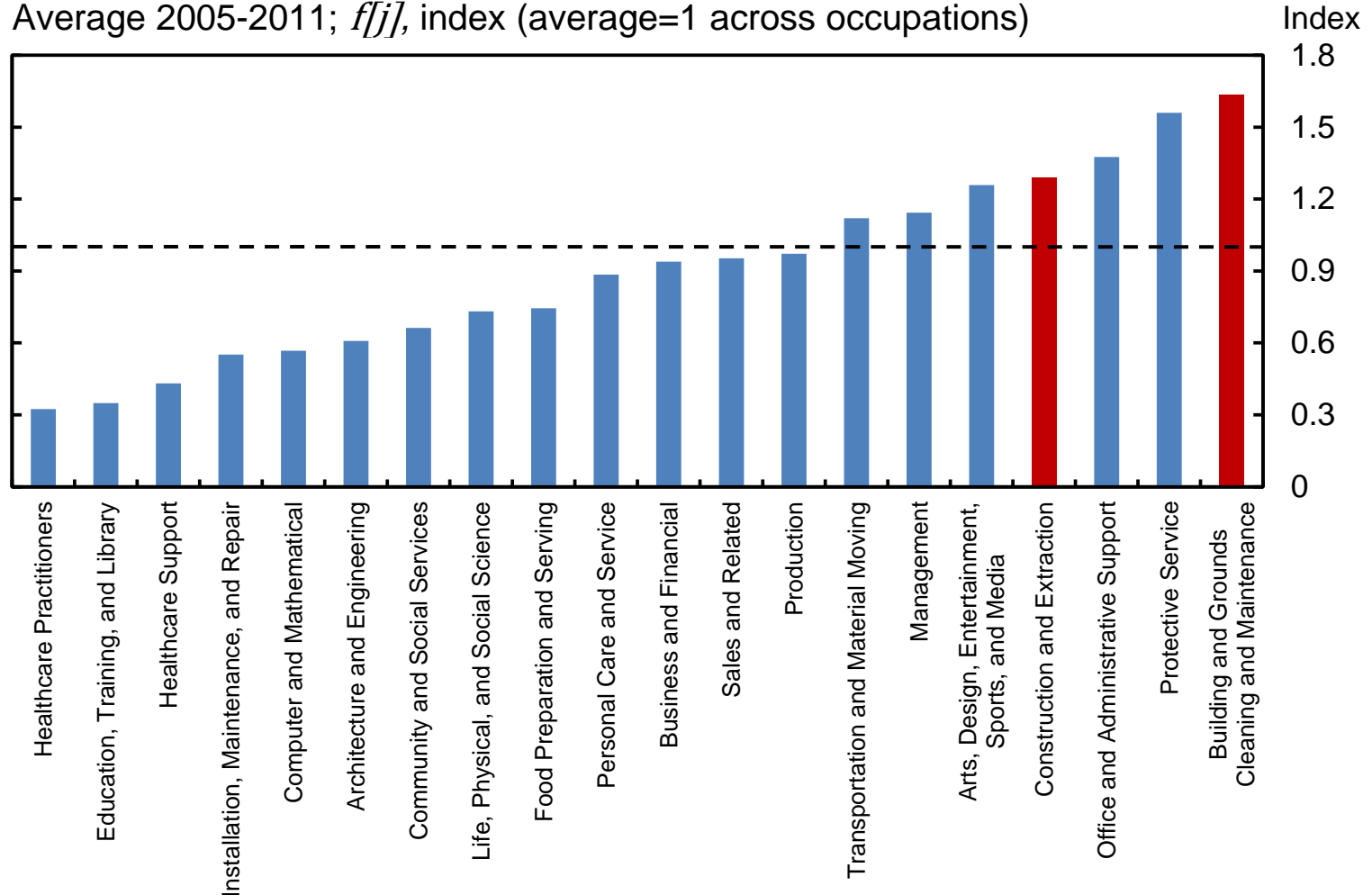Average 2005-2011; *f[j],* index (average=1 across occupations)

Source: Author's calculations

Many hires per vacancy in construction

Relative vacancy yield by occupation

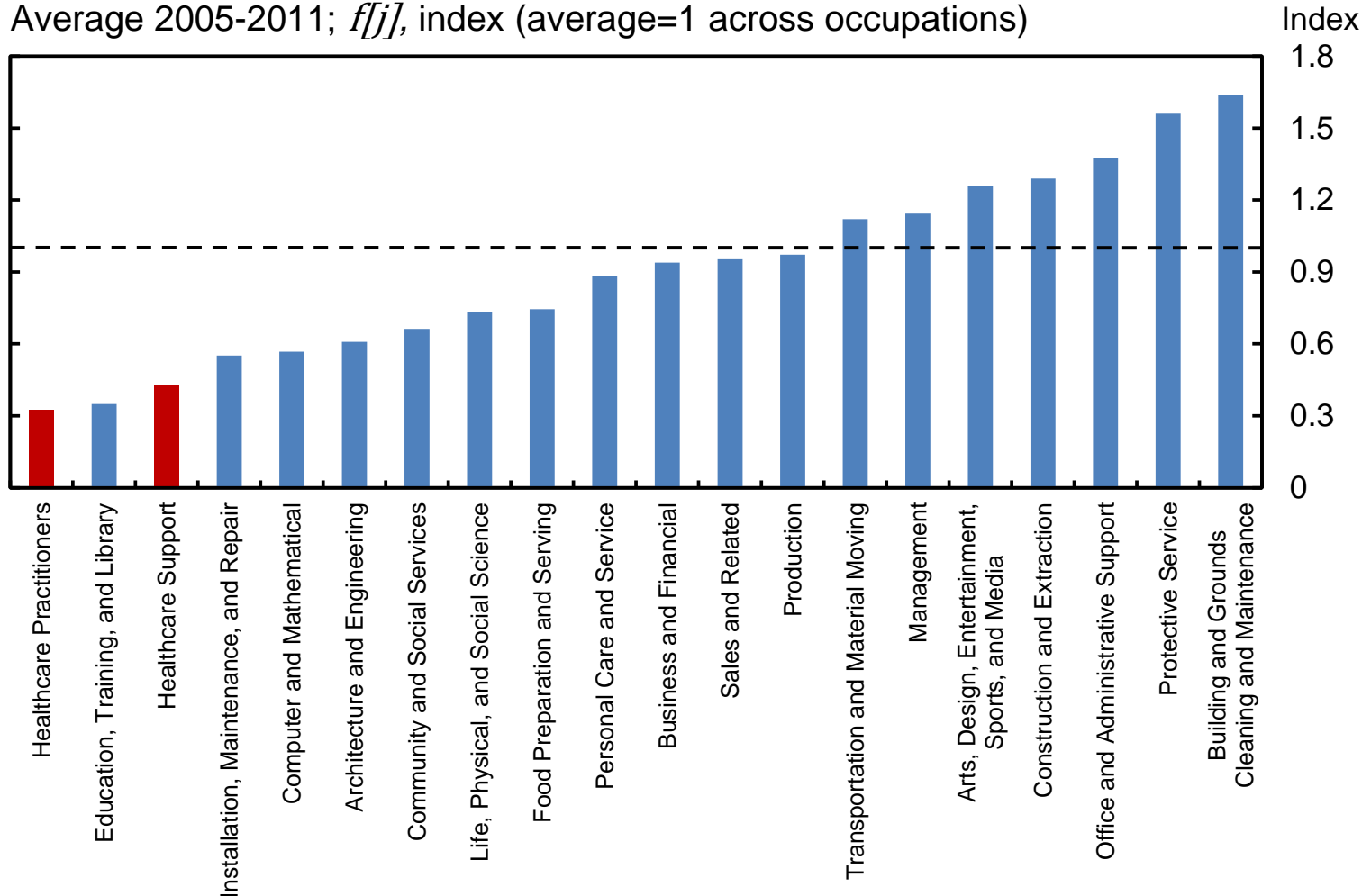Average 2005-2011; $f[j]$, index (average=1 across occupations)

Source: Author's calculations

Health care workers hard to find

Relative vacancy yield by occupation
Average 2005-2011; *f[j],* index (average=1 across occupations)


Source: Author's calculations

Shift in demand to hardest to find

- Occupational composition of labor demand changed during recession and recovery
  - … from construction workers.
  - … to health care professionals.

- Large part of compositional change cyclical.

- A lot workers switch occupations.

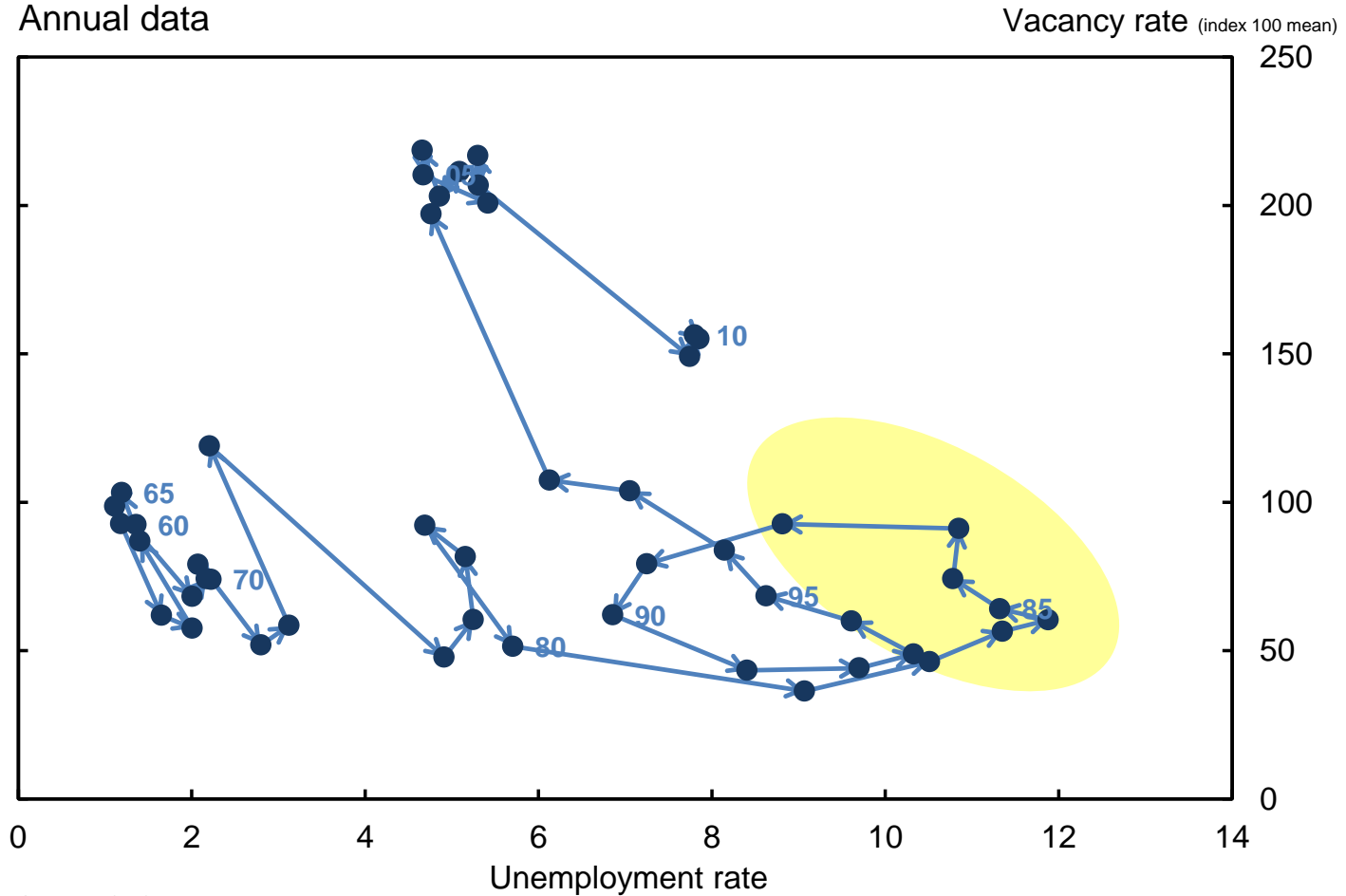# High mobility alleviates mismatch

Hires that change occupation

12-month moving average; by level of occupational detail

Percent

Source: Current Population Survey and author's calculations
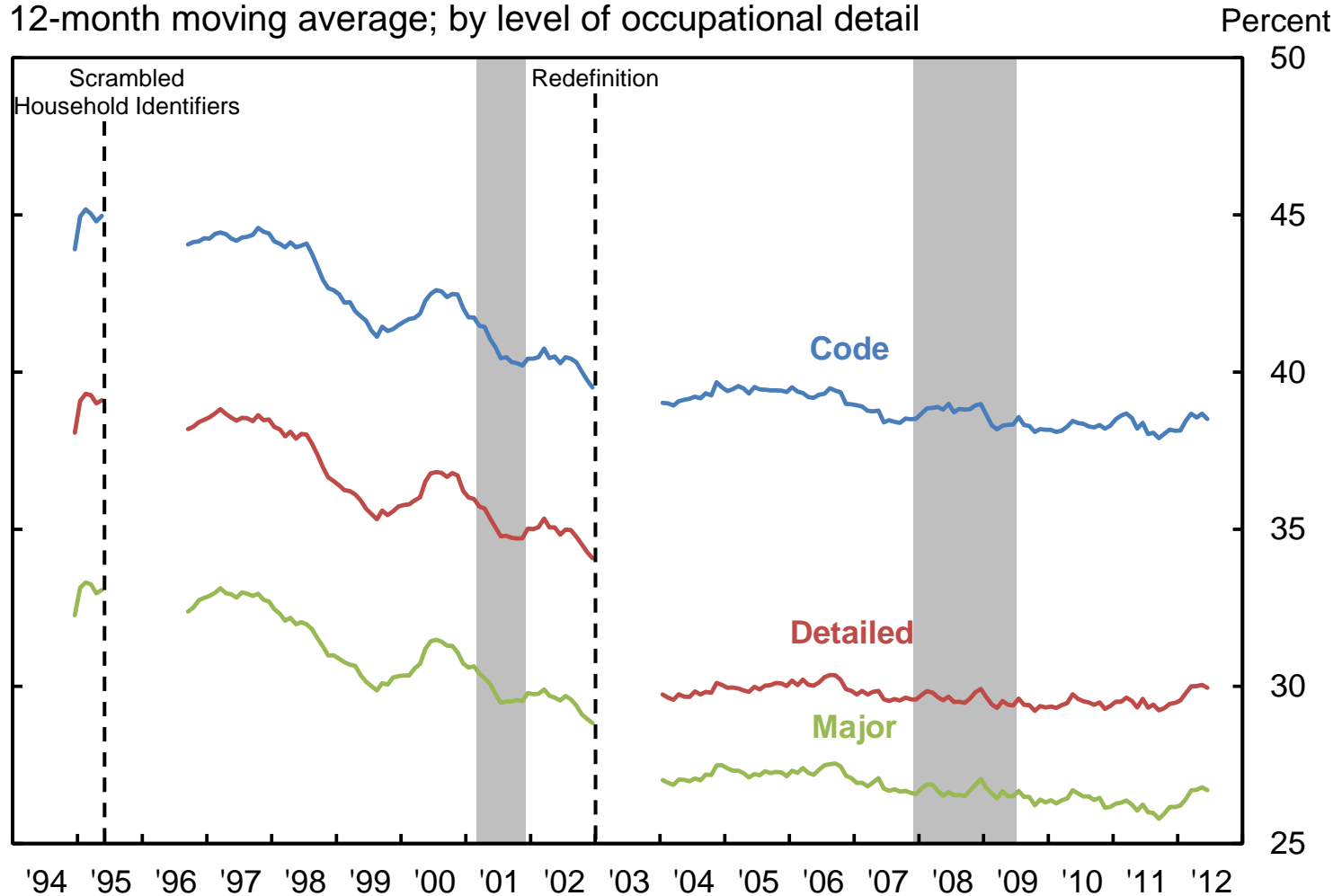
Mismatch can generate prolonged loop

Beveridge Curve: United Kingdom

Annual data

Vacancy rate (index 100 mean)

Unemployment rate

Source: OECD and authors' calculations

Pissarides (2006), Hobijn and Şahin (2012)

Reason 3:

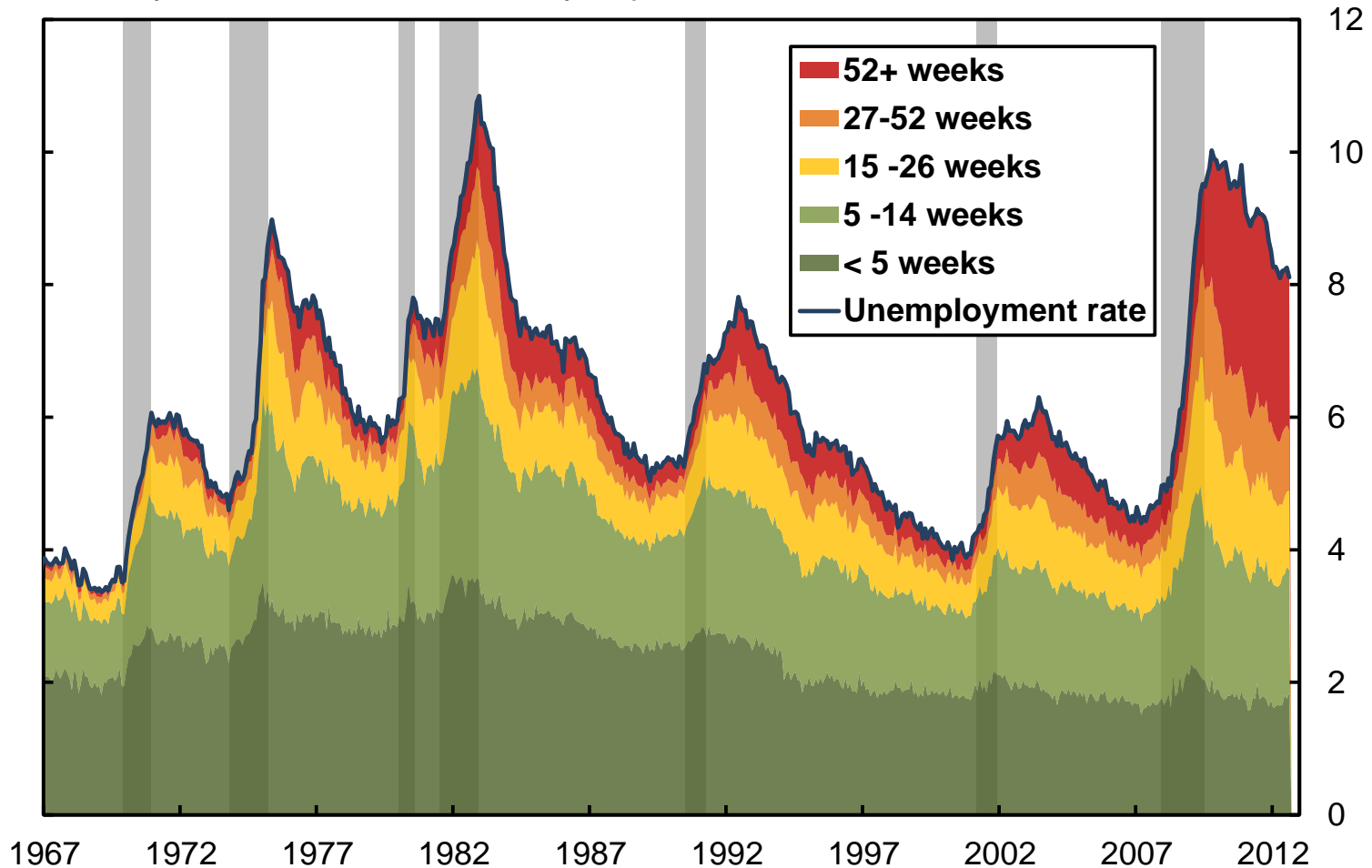## AMERISCLEROSIS IS MISDIAGNOSIS

Elsby, Hobijn, Şahin, and Valletta (2011)

Record long-term unemployment

Unemployment rate split up by duration

Monthly observations; seasonally adjusted

Percent of labor force

Legend:
- 52+ weeks
- 27-52 weeks
- 15 -26 weeks
- 5 -14 weeks
- < 5 weeks
- Unemployment rate

Source: Bureau of Labor Statistics

Eurosclerosis coming to America?

- **Fear of hysteresis:**
  - The damage has already been done.
  - The long-term unemployed have lost their skills and face very low odds of finding a job.
  - America now is facing same problem as Continental Europe in the late 1980's.
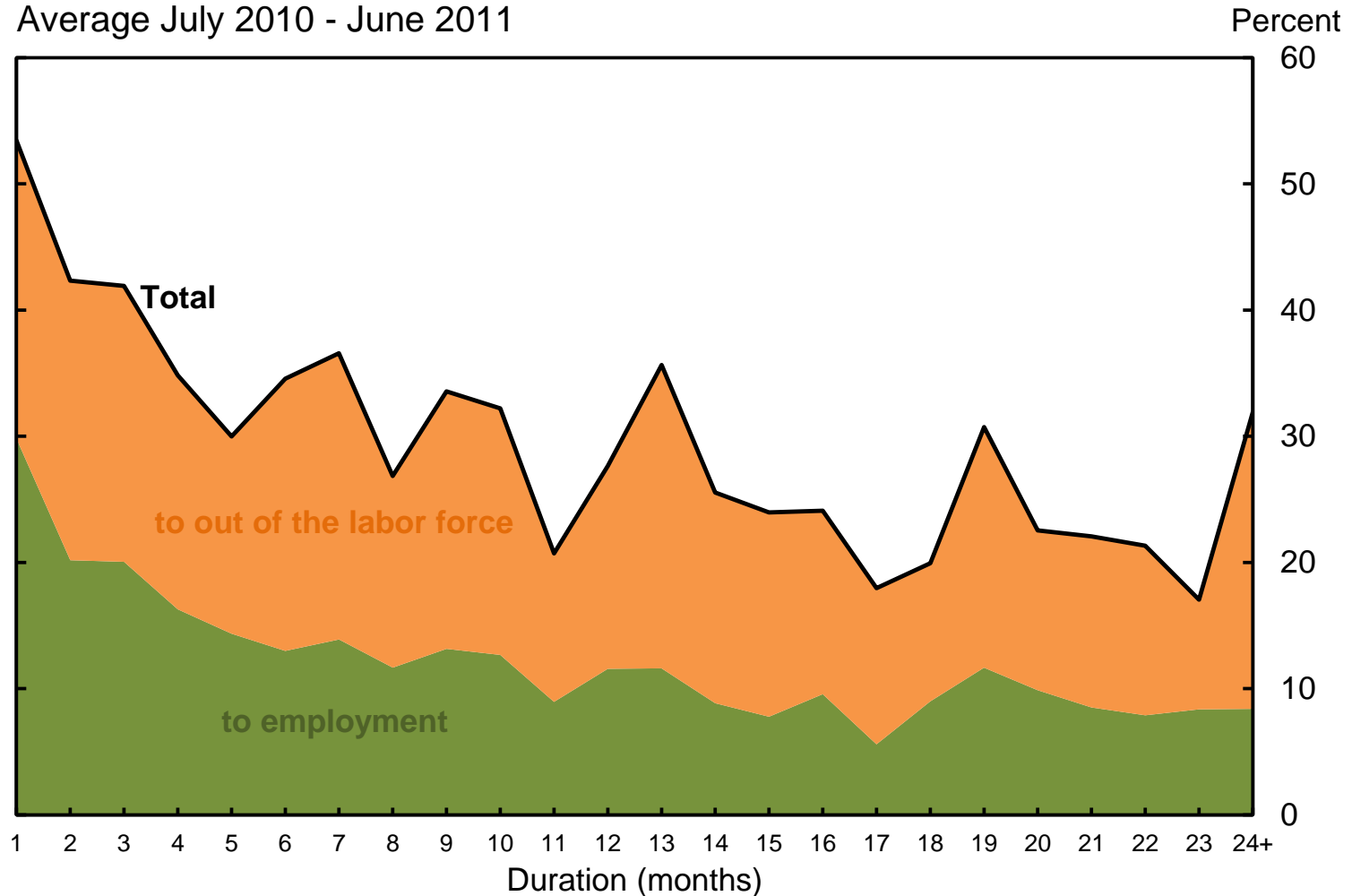
- This fear is unfounded!

Textbook unemployment dynamics

Labor Market Lessons
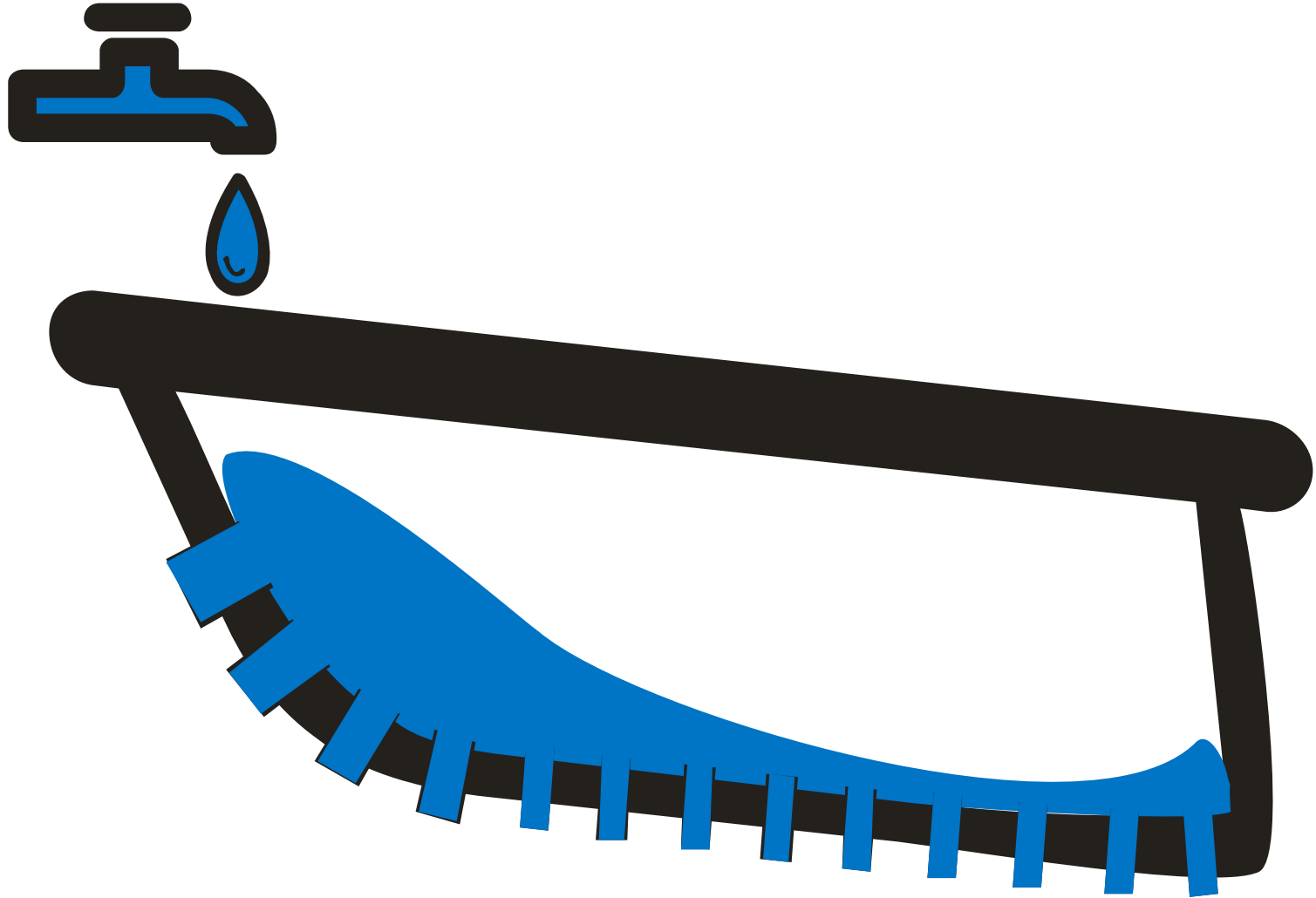
U.S. long-term unemployed still finding jobs

Monthly outflow rates out of unemployment

Average July 2010 - June 2011

Percent

Total

to out of the labor force
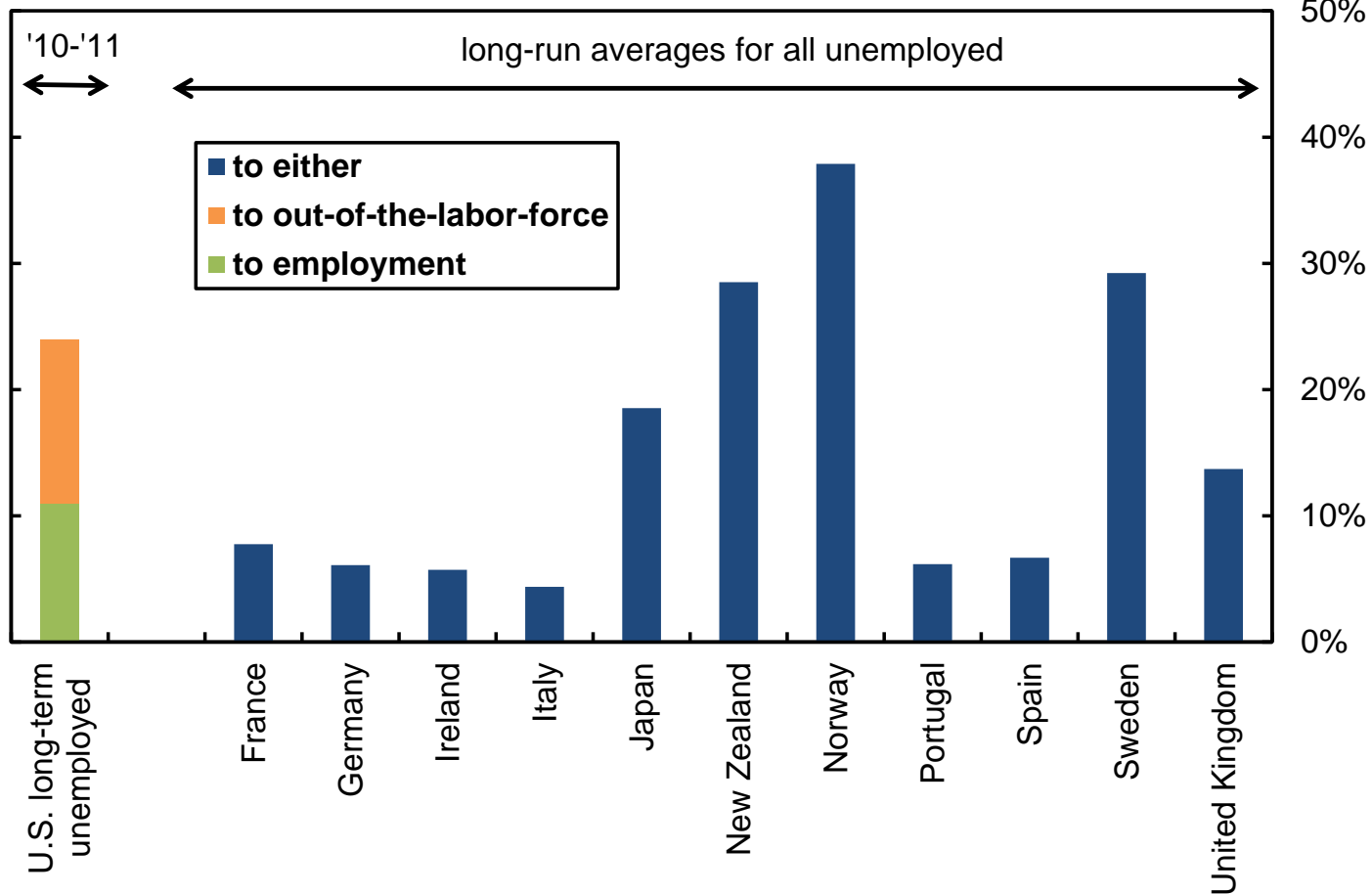
to employment

Duration (months)

Source: Current Population Survey and authors' calculations

U.S. long-term unemployed still finding jobs

Outflow rates out of unemployment

Monthly flow rates by destination

Monthly flow rate

Elsby, Hobijn, and Şahin (2010), Elsby, Hobijn, Şahin, and Valletta (2011)
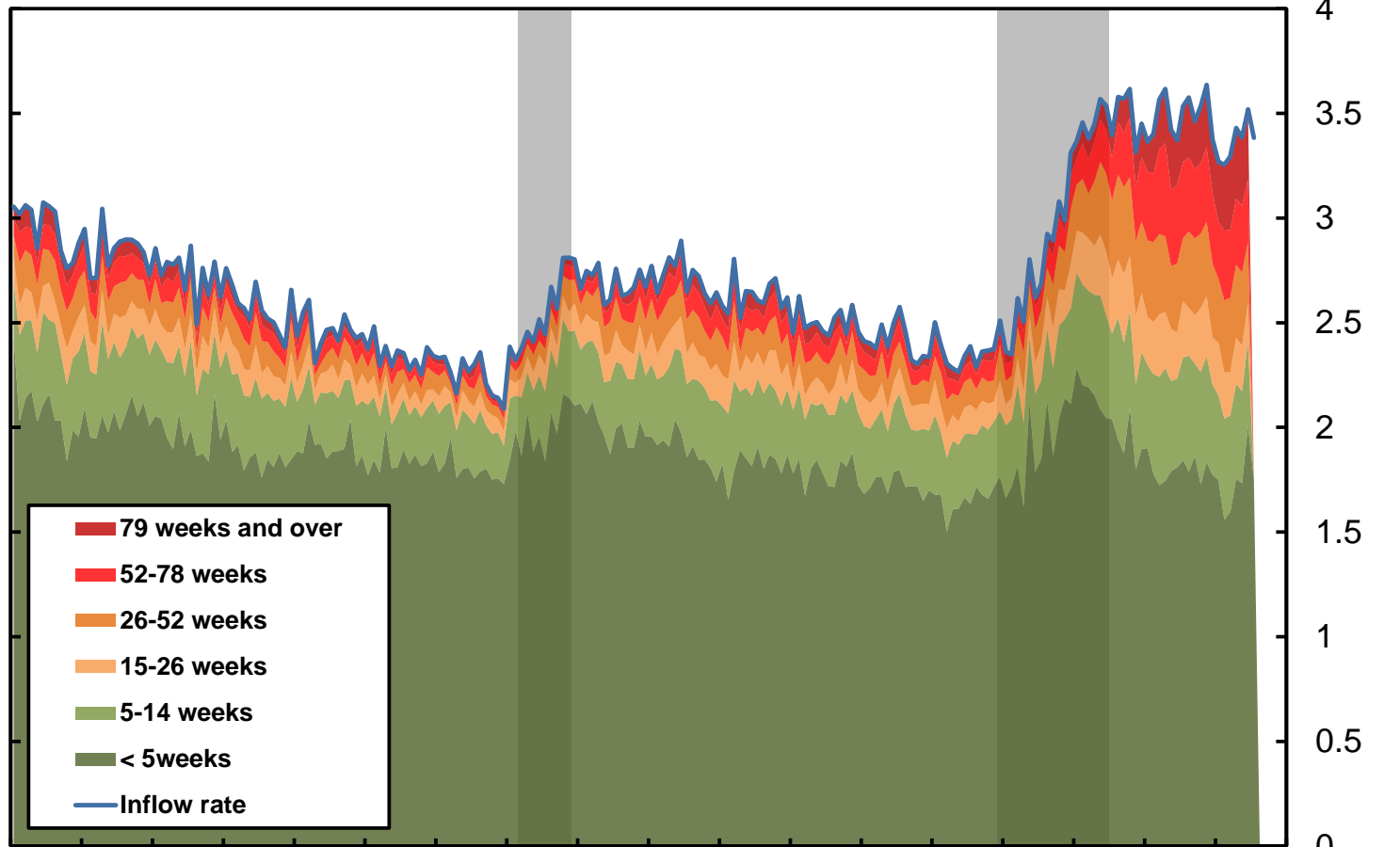
U.S. duration distribution puzzle

- How can such high outflow rates out of unemployment at different durations result in observed level of long-term unemployment?

- Because there are inflows into unemployment at high durations.

- Important for empirical and theoretical studies of duration distribution.

Elsby, Hobijn, and Şahin (2010), Rothstein (2011)
Farber and Valletta (2012), Hornstein (2012)

Record inflows at high durations

Unemployment inflow rates by duration

Seasonally adjusted monthly observations; share of labor force

Percent

Legend:
- 79 weeks and over
- 52-78 weeks
- 26-52 weeks
- 15-26 weeks
- 5-14 weeks
- < 5weeks
- Inflow rate

1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011

Source: Bureau of Labor Statistics, Current Population Survey and authors' calculations

Plumbing of U.S. unemployment flows
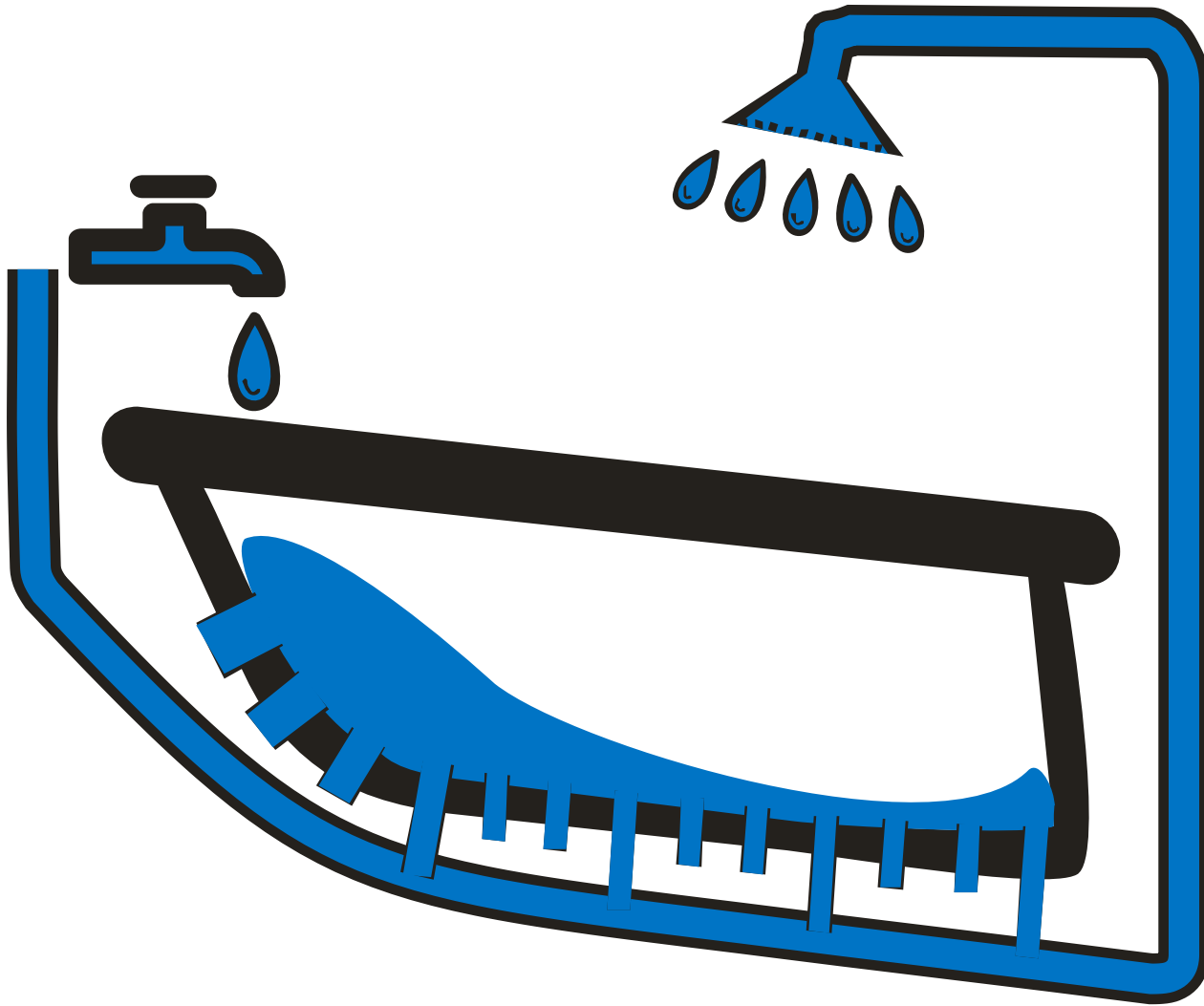
Amerisclerosis a misdiagnosis

- If U.S. labor demand for short-term unemployed recovers to pre-recession levels…
  - Unemployment rate will go down very quickly.
  - Long-term unemployment rate will go down as well.

- Best way to solve long-term unemployment problem is to make sure people do not become long-term unemployed.
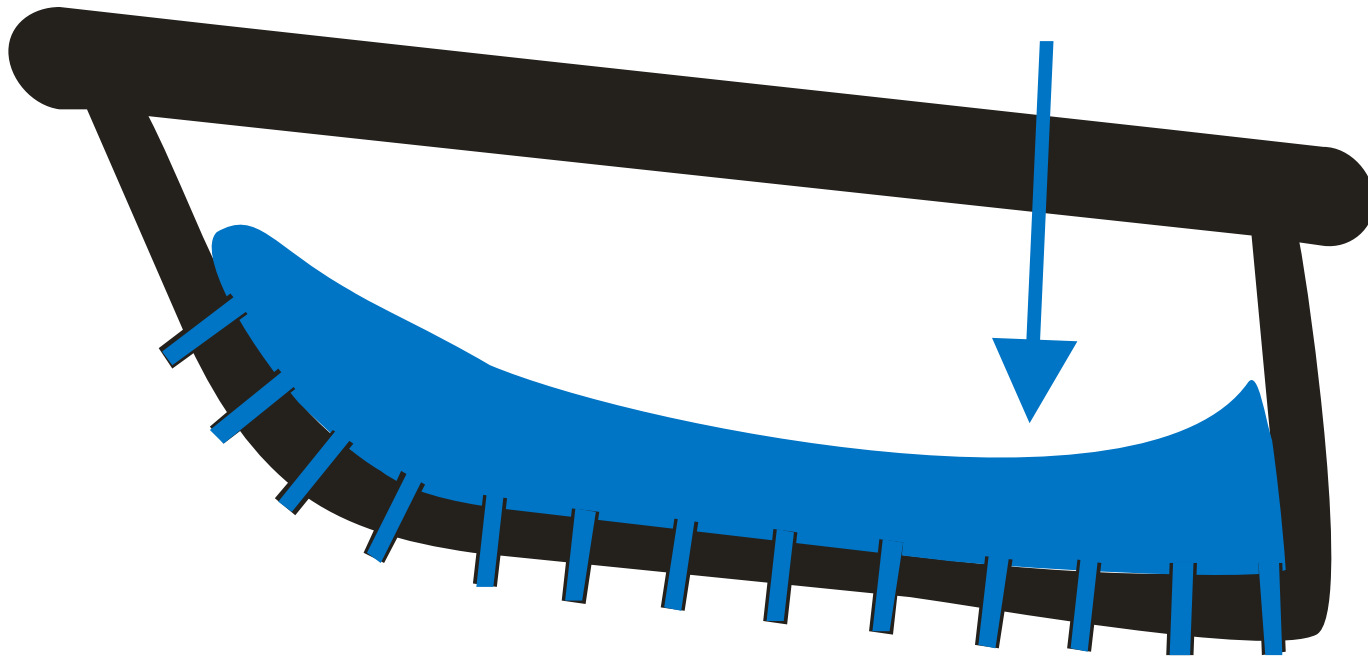
Nickell (1997)

U.S. DYNAMICS ARE THE EXCEPTION: SPAIN AS A COUNTEREXAMPLE

Low flows cause Eurosclerosis
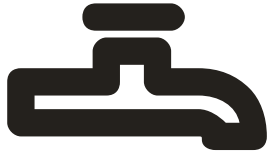
Uniformly low outflow
rates cause many
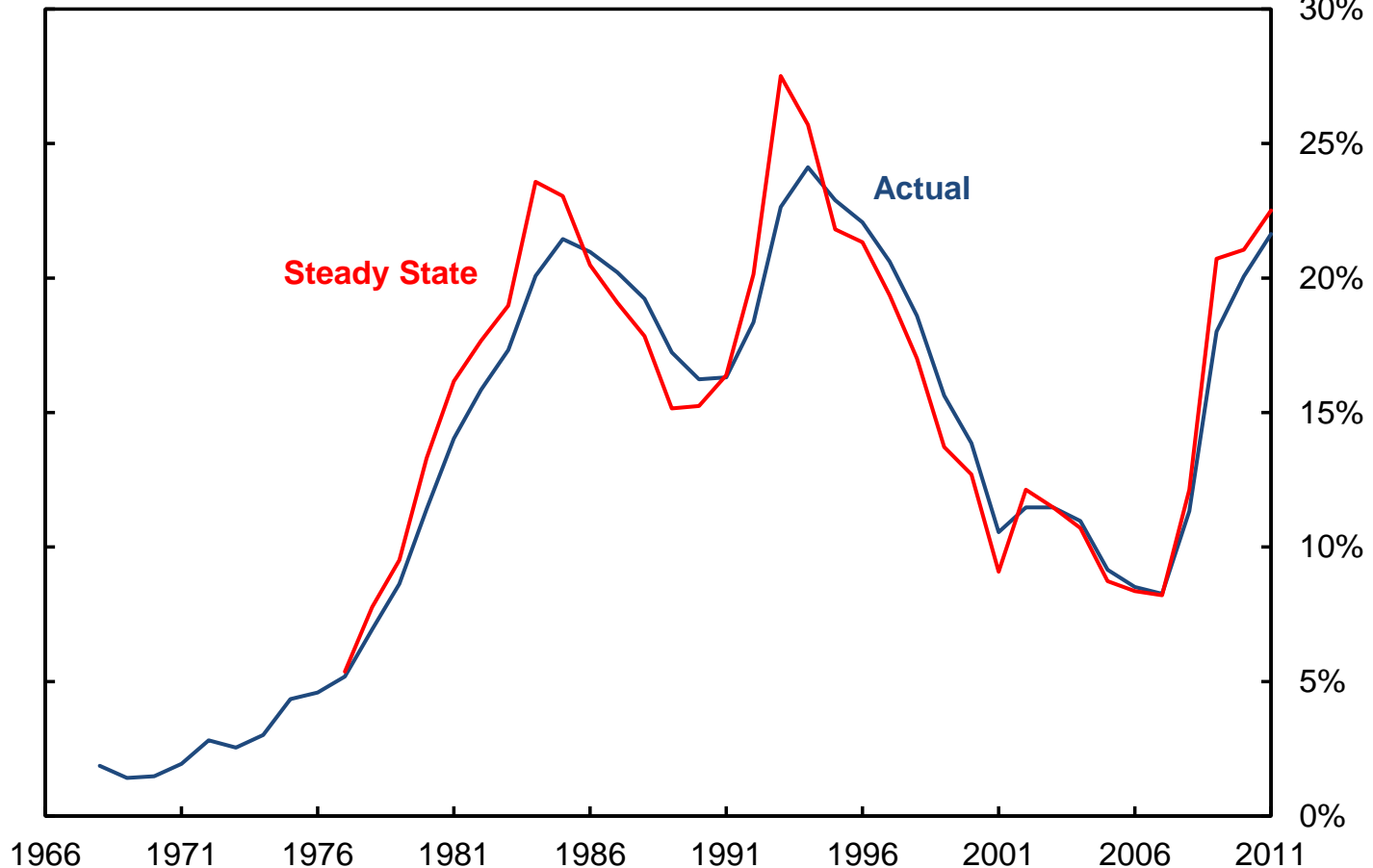to end up in long-term
unemployment in
Eurosclerotic countries

Labor Market Lessons

Spain's slow dynamics…

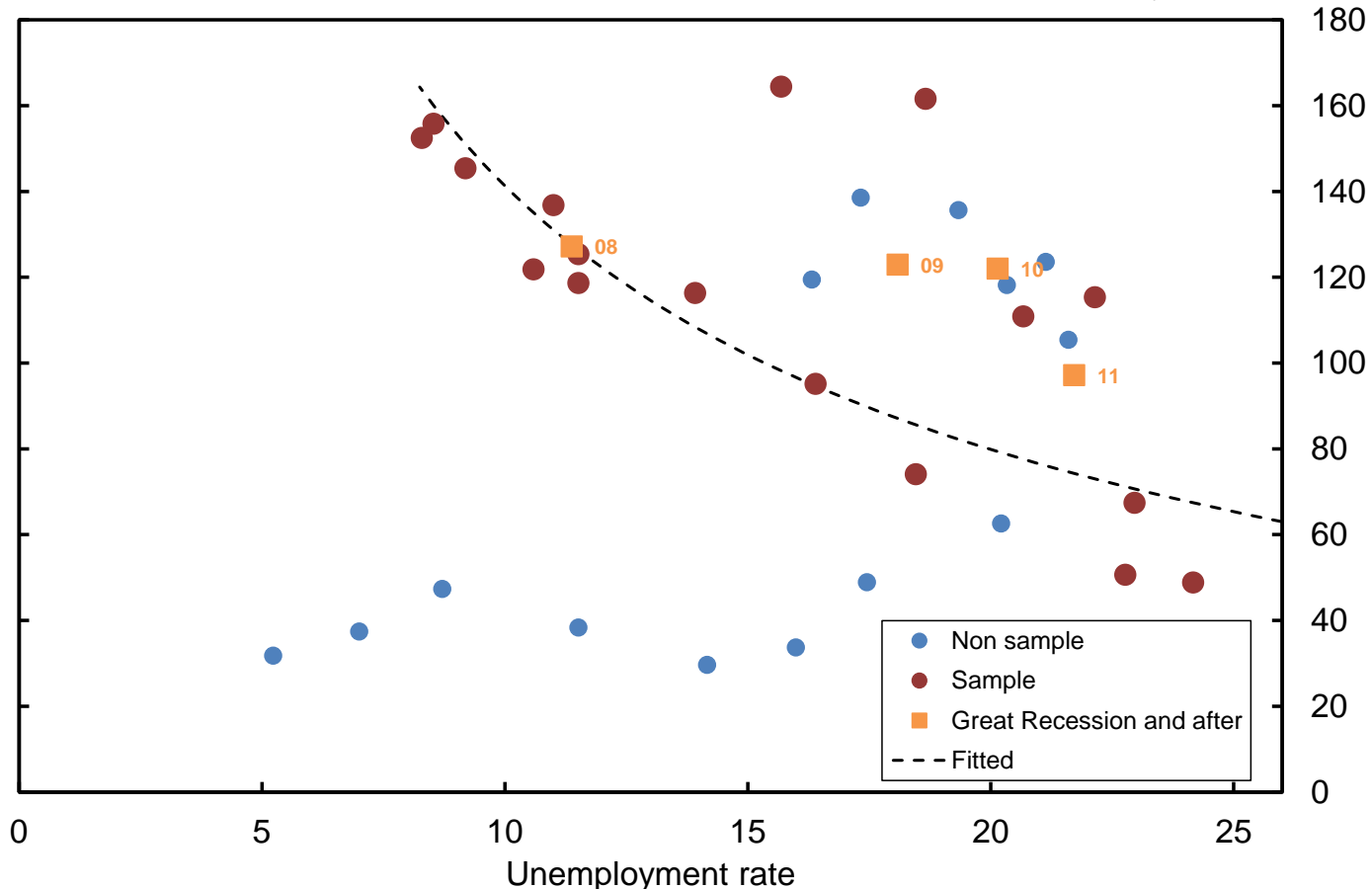**Spain: Actual and steady-state unemployment rates**

Elsby, Hobijn, and Şahin (2010), Barnichon and Nekarda (2012)

… result in "loose" Beveridge curve

Actual and Fitted Beveridge Curve: Spain

Annual data; fitted curved based on pre-2007 data on tenure. Vacancy rate (index avg=100)
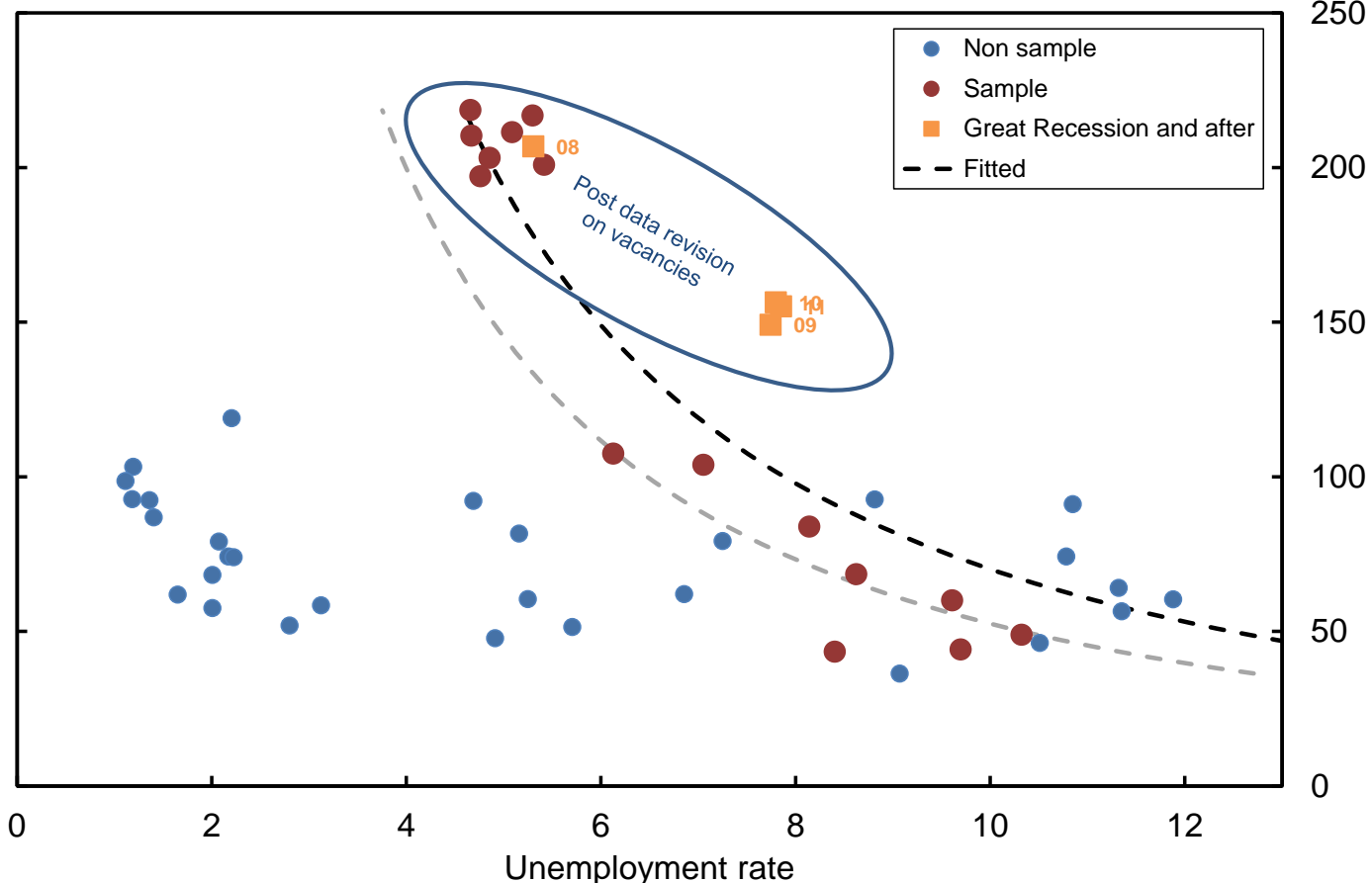

Source: OECD, Nickell and Nunziata (2004), Eurostat (2012), and authors' calculations

Hobijn and Şahin (2012)

Help! How to think about U.K.?

Actual and Fitted Beveridge Curve: United Kingdom

Annual data; fitted curved based on pre-2007 data on tenure. Vacancy rate (index avg=100)

Source: OECD, Nickell and Nunziata (2004), Eurostat (2012), and authors' calculations

Smith (2012), Hobijn and Şahin (2012)

In case you just walked in…

Dynamics of U.S. labor market are such that a large increase in the level of structural unemployment is very unlikely.

- Beveridge curve shift in line with 5-6 percent natural rate of unemployment.

- Shift of Beveridge curve largely transitory.

- Amerisclerosis is a misdiagnosis.