PRINCETON UNIVERSITY

How Tight is the Labor Market?

Alan B. Krueger

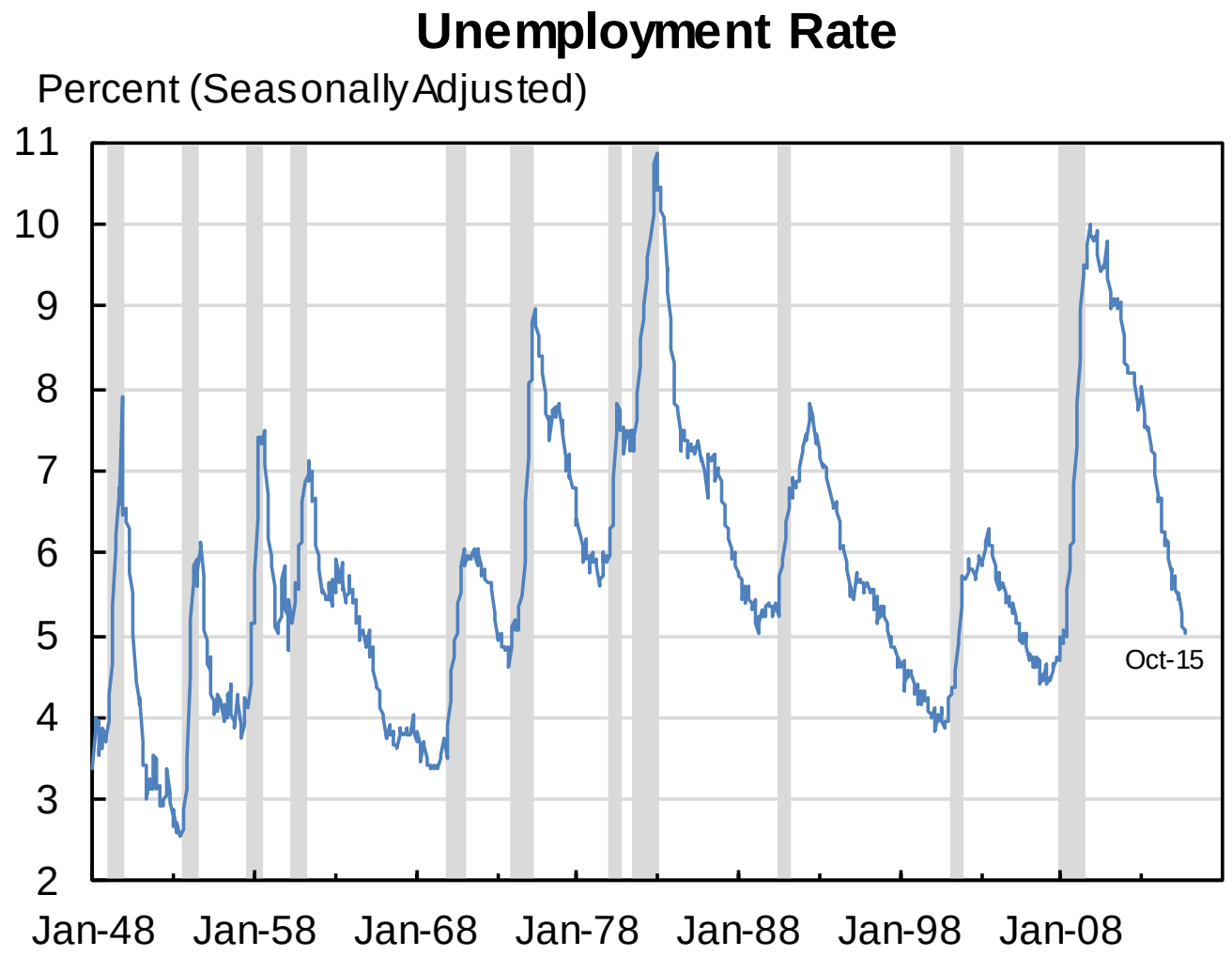
November 19, 2015

Federal Reserve Bank of Chicago

Outline

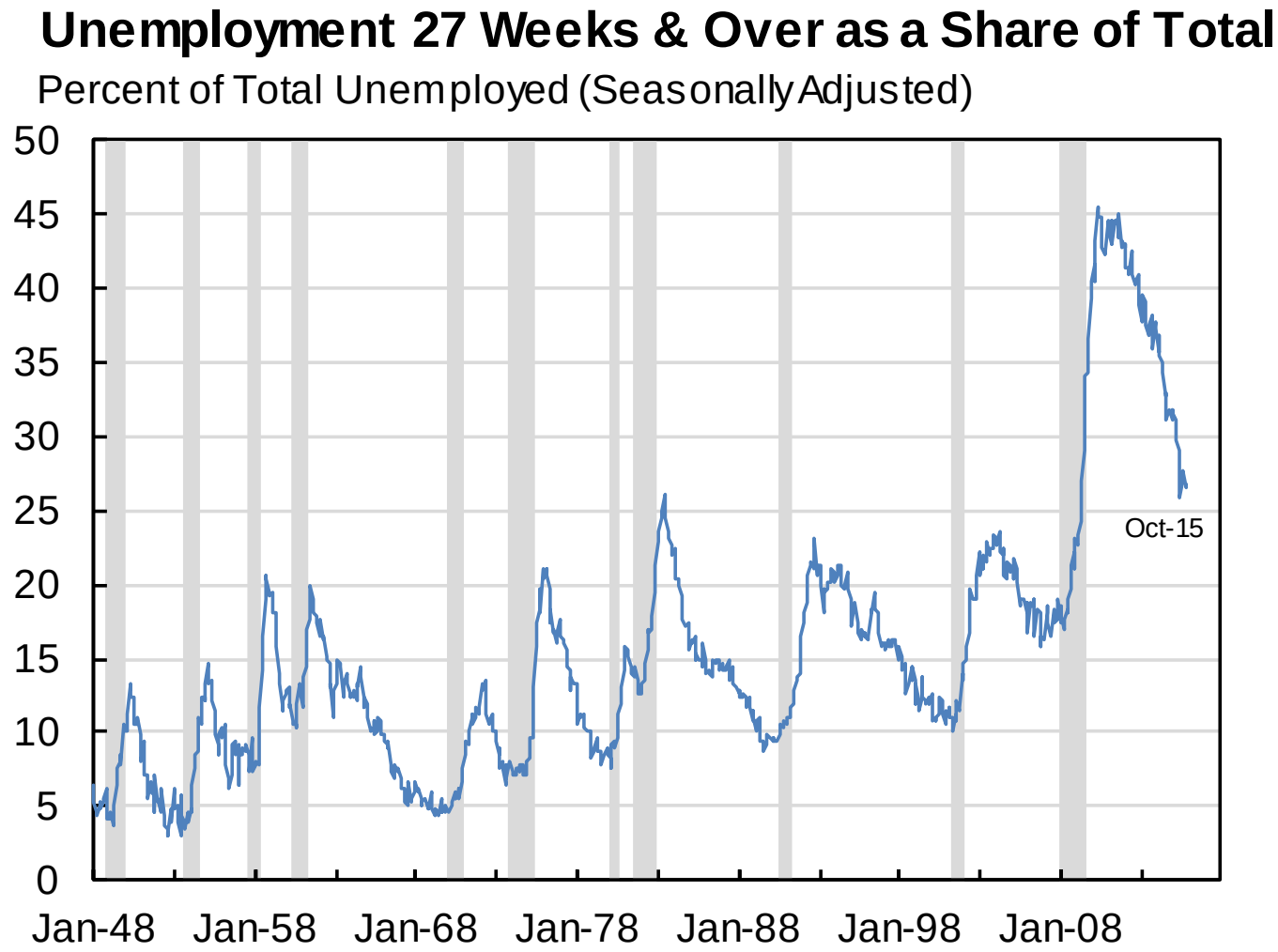
- U.S. unemployment rate is down from 10% in October 2009 to 5.0% in October 2015 – that represents real improvement.
- Long-term unemployment has declined rapidly but remains high.
- Many of the long-term unemployed are on the margins of the labor market and increasingly withdrawing from the labor force. Follows historical pro-cyclical pattern of withdrawal rates.
- Little prospect for a significant cyclical recovery in labor force participation.
- Phillips Curve evidence – Time-series and State level consistent with labor market tightening.
- Real wage growth consistent with current unemployment rate.

Unemployment Rate is Returning to Normal



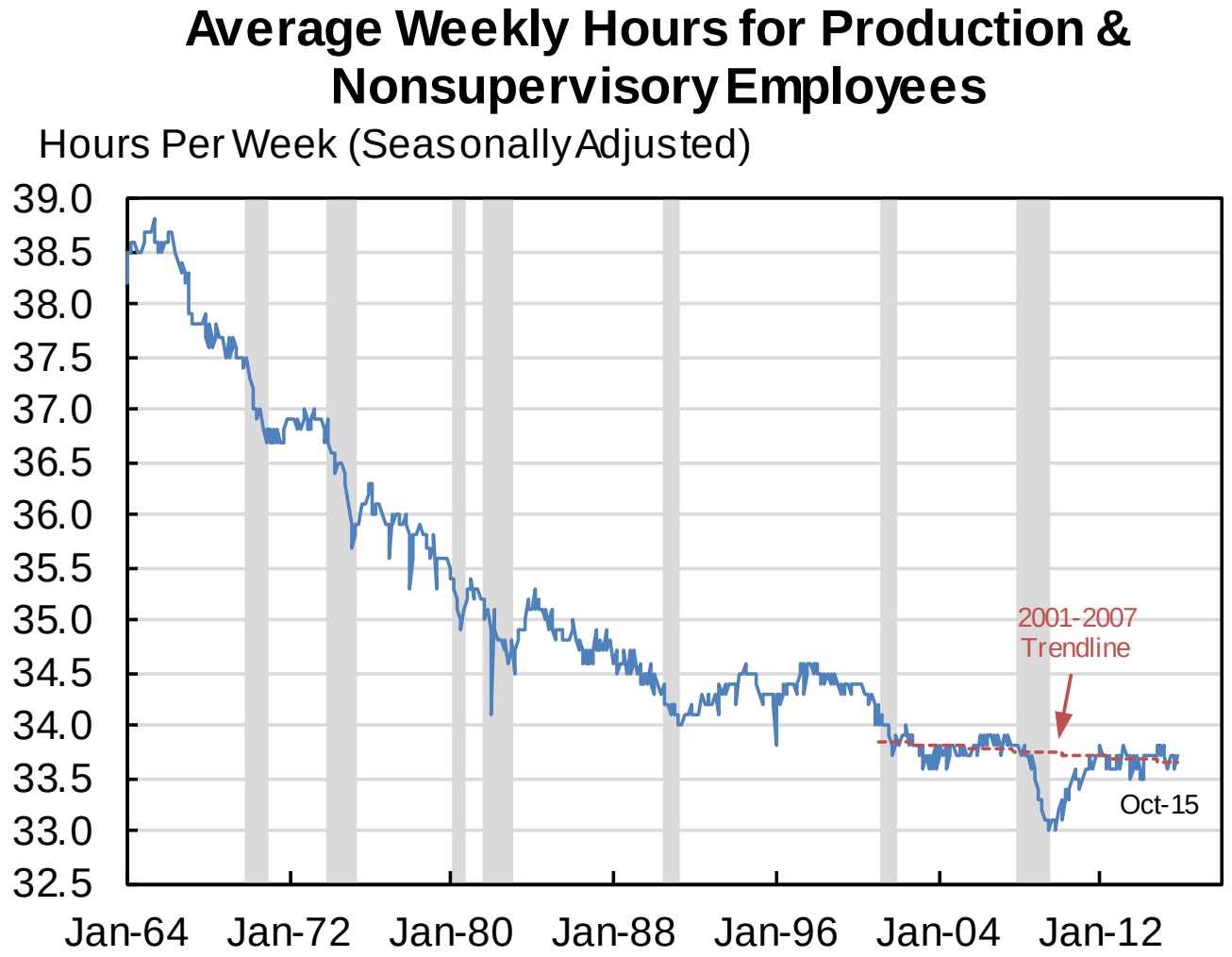
Note: Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research.

The Percentage of the Unemployed Who Are Out of Work for More Than 6 Months Hit a Record But is Declining Fast



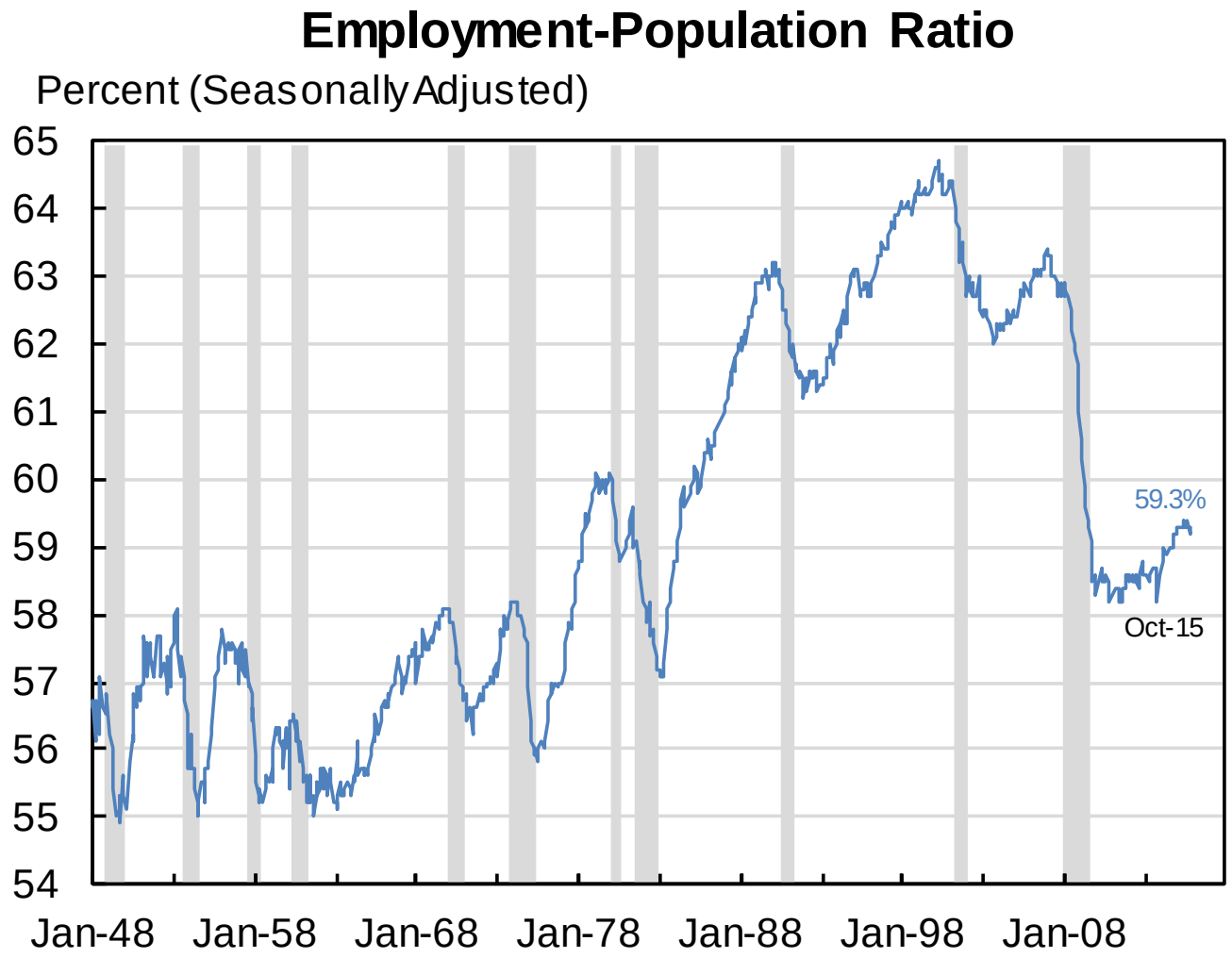
Note: Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research.

Average Work Hours Have Returned to Trend
Unlikely Much Remaining Slack on Hours Margin



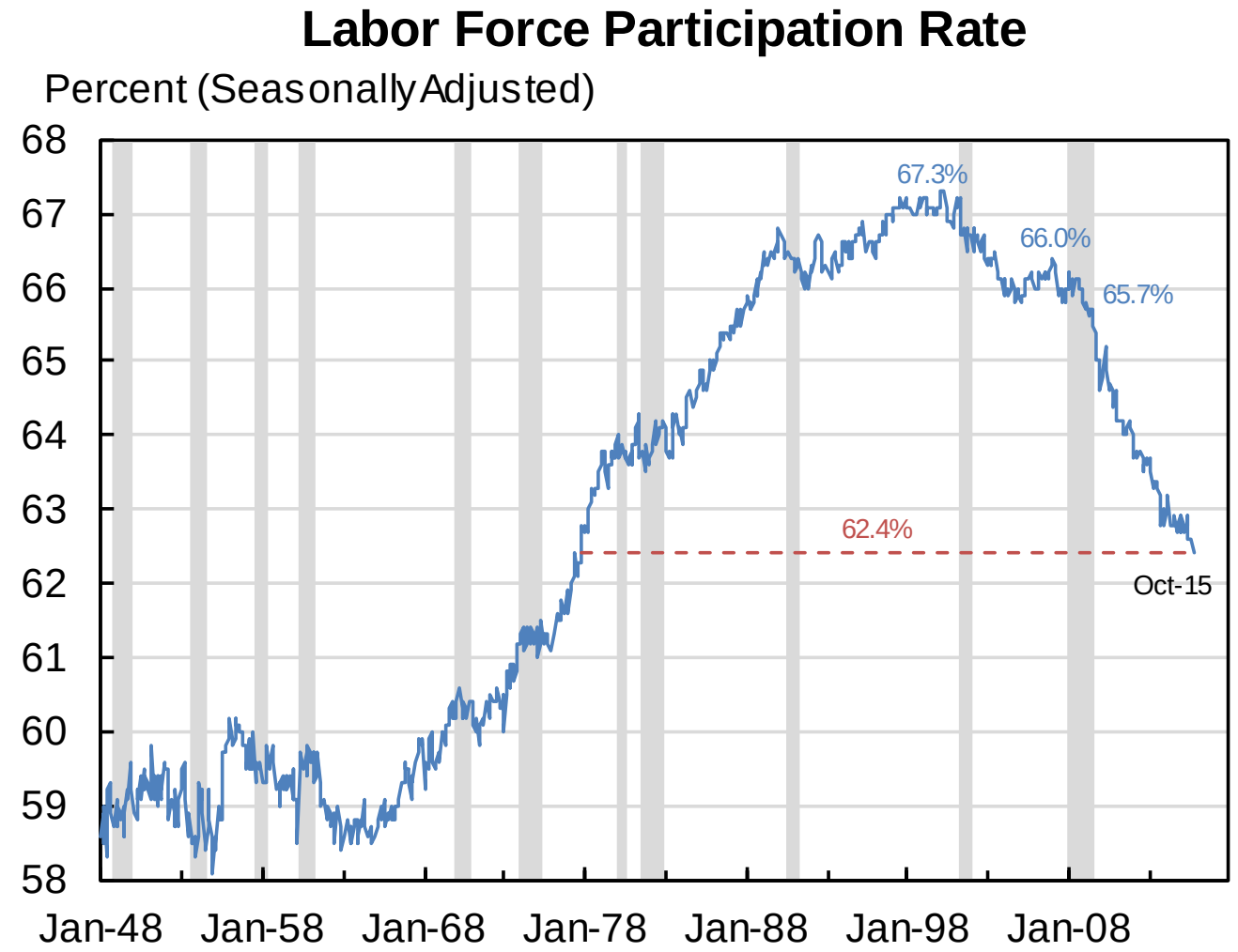
Note: Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research.

Employment Rate Has Improved, But By Less Than Unemployment Has Declined



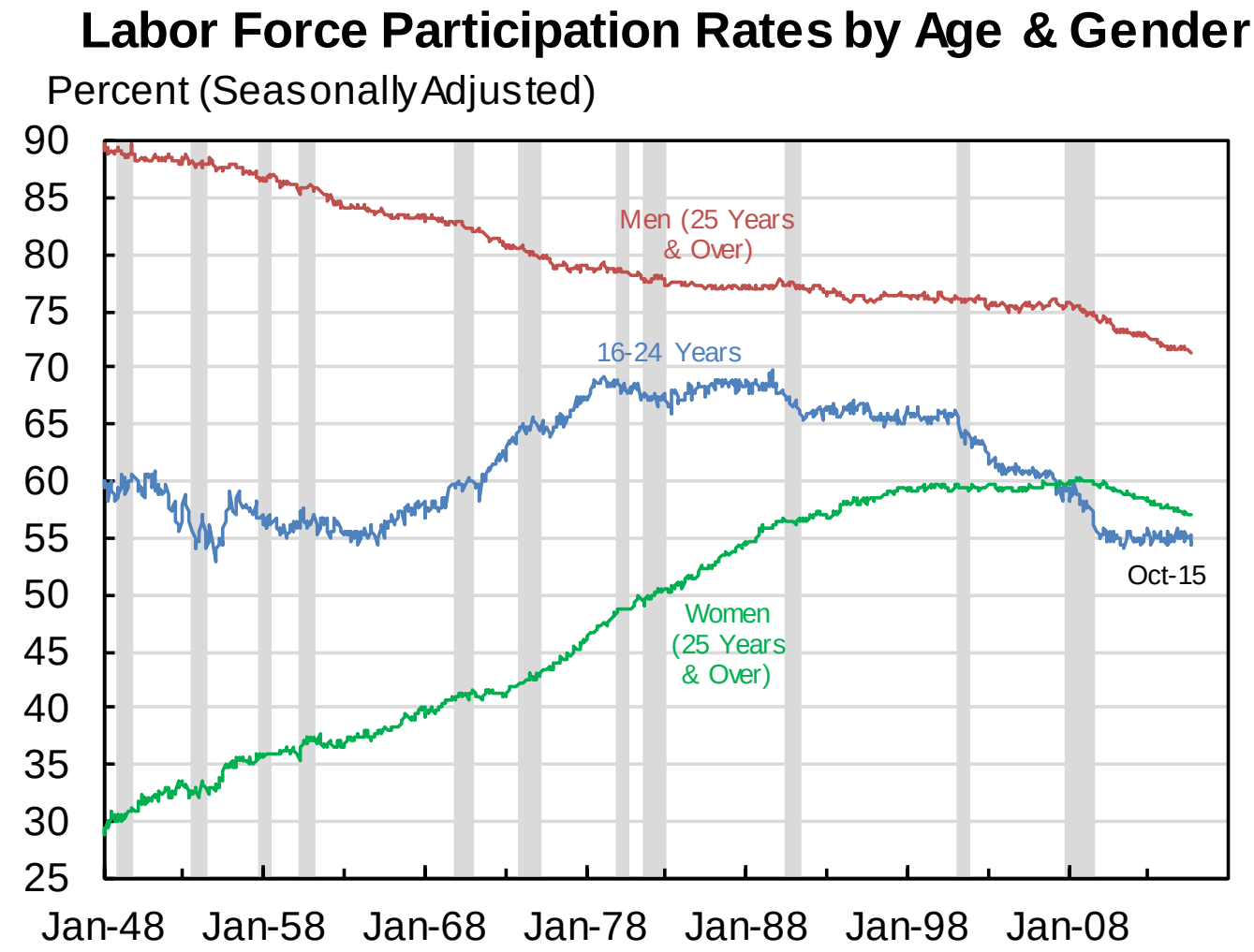
Note: Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research.

Labor Force Participation Rate Peaked in 2000



Note: Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research.

Labor Force Participation Rate for Men, Women, and Young Workers



Note: Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research.

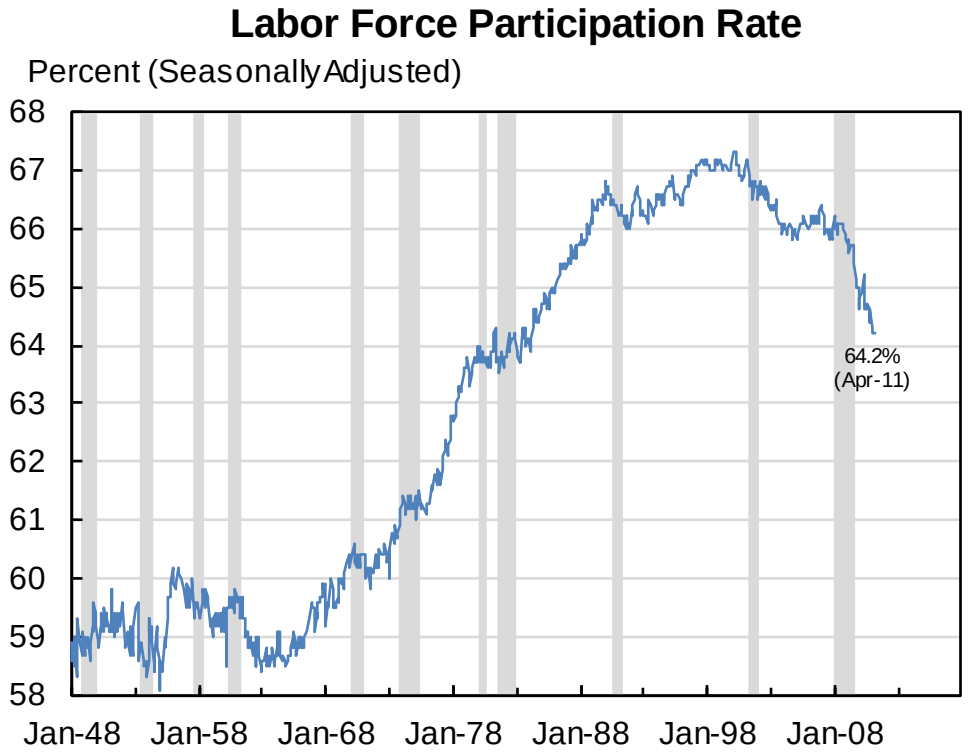
Bloomberg

The conventional wisdom now holds that the unemployment rate should rise because many workers who left the labor force will come back and start looking for a job as the economy improves.

While many jobless workers have indeed given up on searching, I'm going on record as a contrarian. I suspect a large rise in the labor force won't cause the unemployment rate to jump. Instead, I suspect we're going to see a continuing decline in the unemployment rate ....

[W]e might well see the labor force shrinking more even as the measured unemployment rate falls.

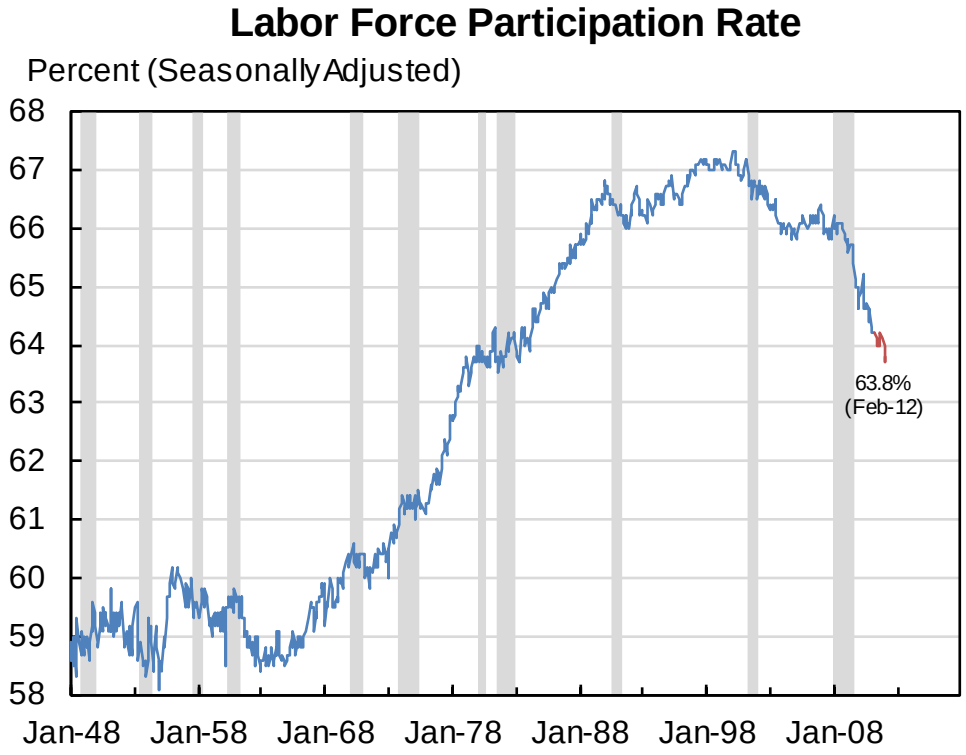
Alan B. Krueger
March 30, 2011



"We find that the labor force participation rate is likely to stop falling, which would raise the minimum amount of job growth needed to lower the unemployment rate."

Goldman's forecast for end of 2011 was for an increase from 64.2% in May to 64.6% in December.

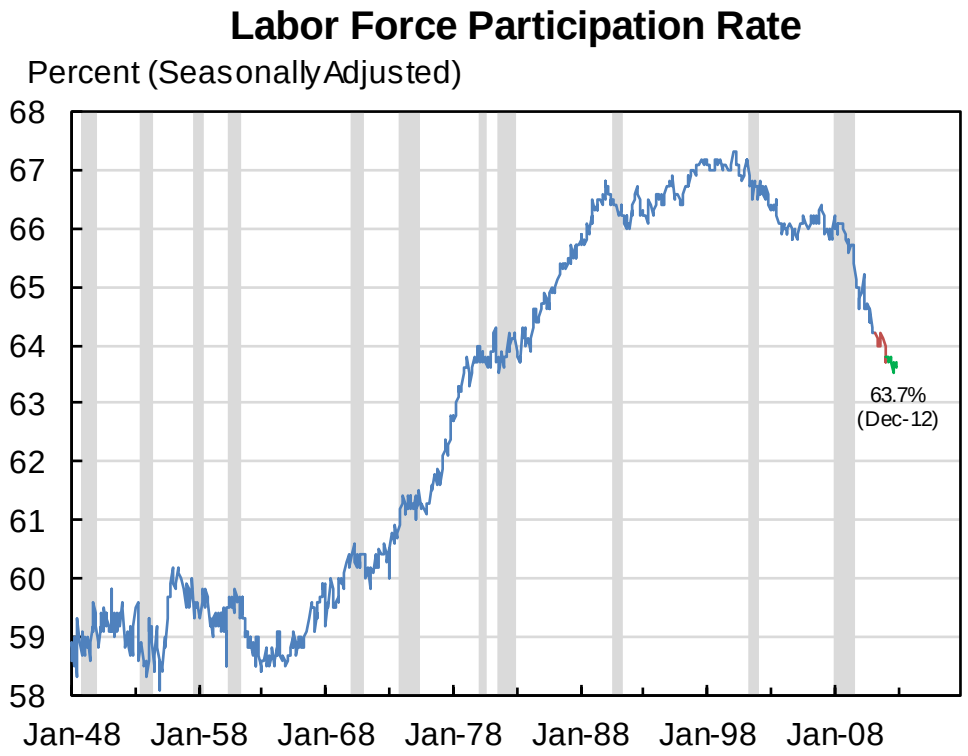
May 5, 2011



"... the labor force participation rate is likely to stabilize.

Demographics still push towards lower participation, but the improving labor market should encourage more marginal entrants to join the labor force."

March 9, 2012

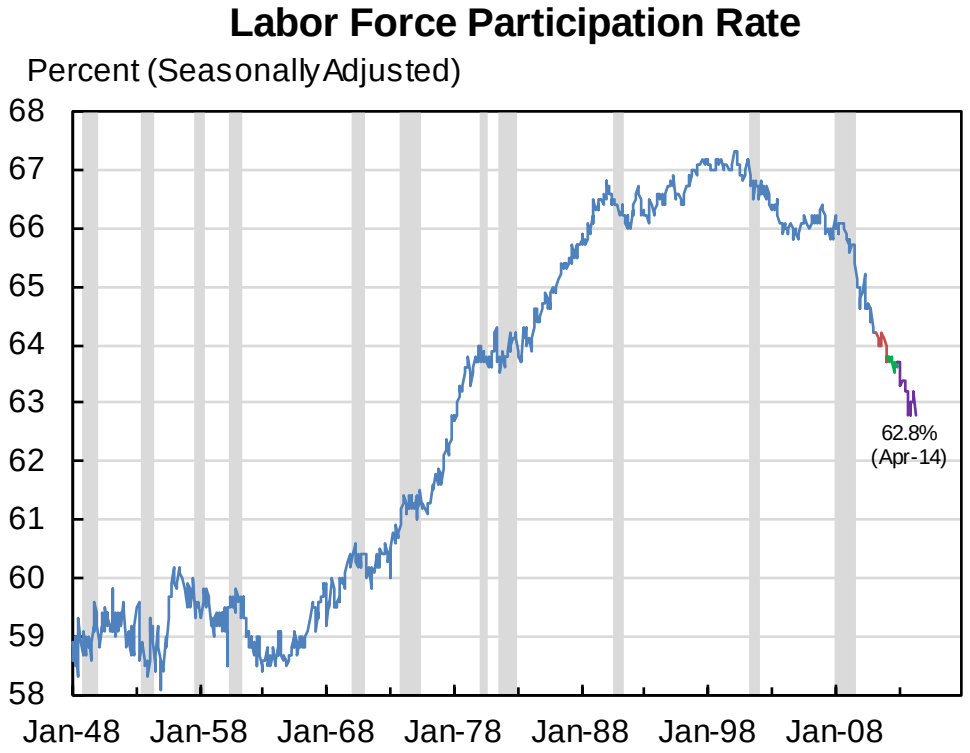


"... we expect the unemployment rate to fall much more slowly, from 7.8% now to 7.6% by the end of 2013." [Note it fell to 6.7%]

"The main reason is that we expect labor force participation to stabilize after three years of significant declines ....

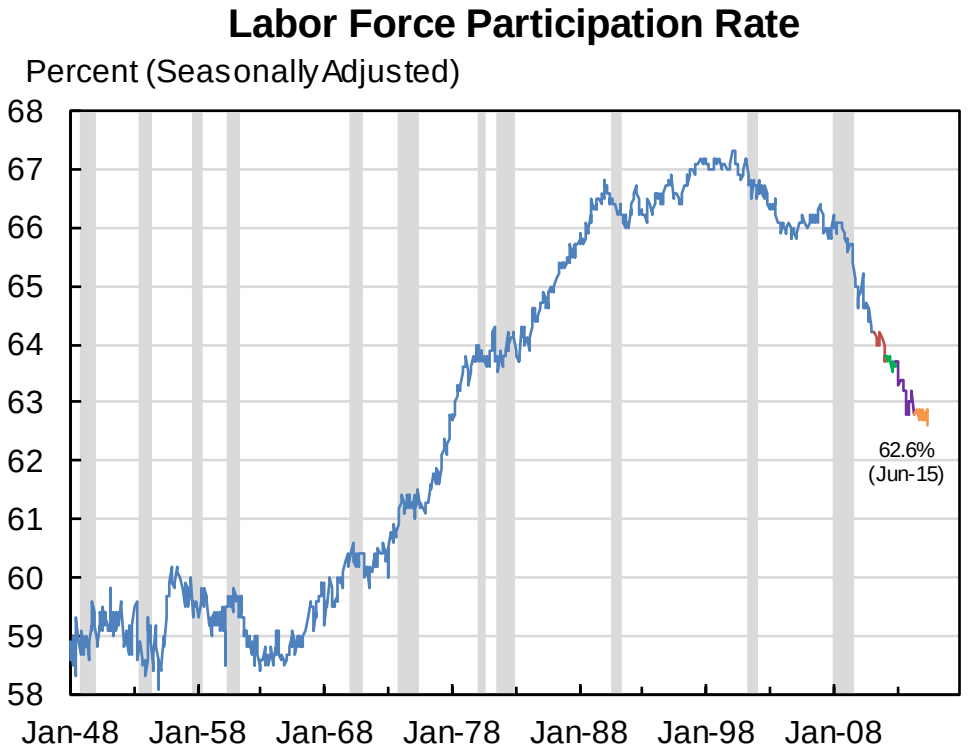
We expect the participation rate to stabilize because it is now about 1 percentage point below its structural trend, defined as the rate that would prevail if labor demand was at normal levels."

January 11, 2013



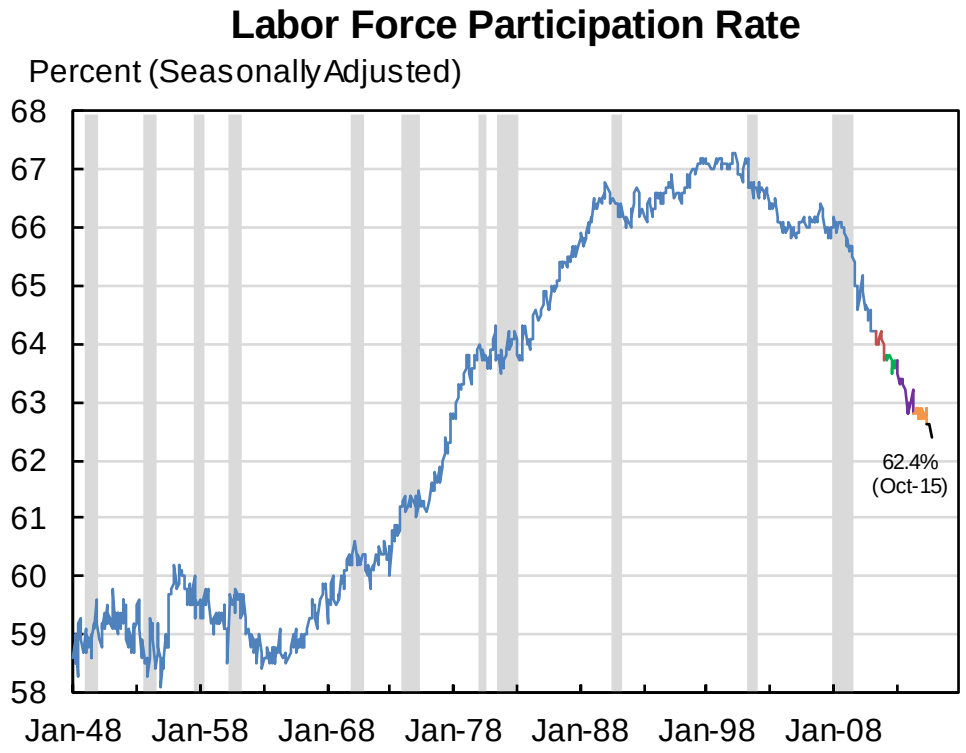
"Labor force participation has fallen by 3 percentage points since 2007. Despite the ongoing structural drag from an aging population, we expect a stabilization and perhaps a small increase in coming years."

May 14, 2014



"The sharp decline in both unemployment and labor force participation in June looks statistically anomalous …."

July 2, 2015

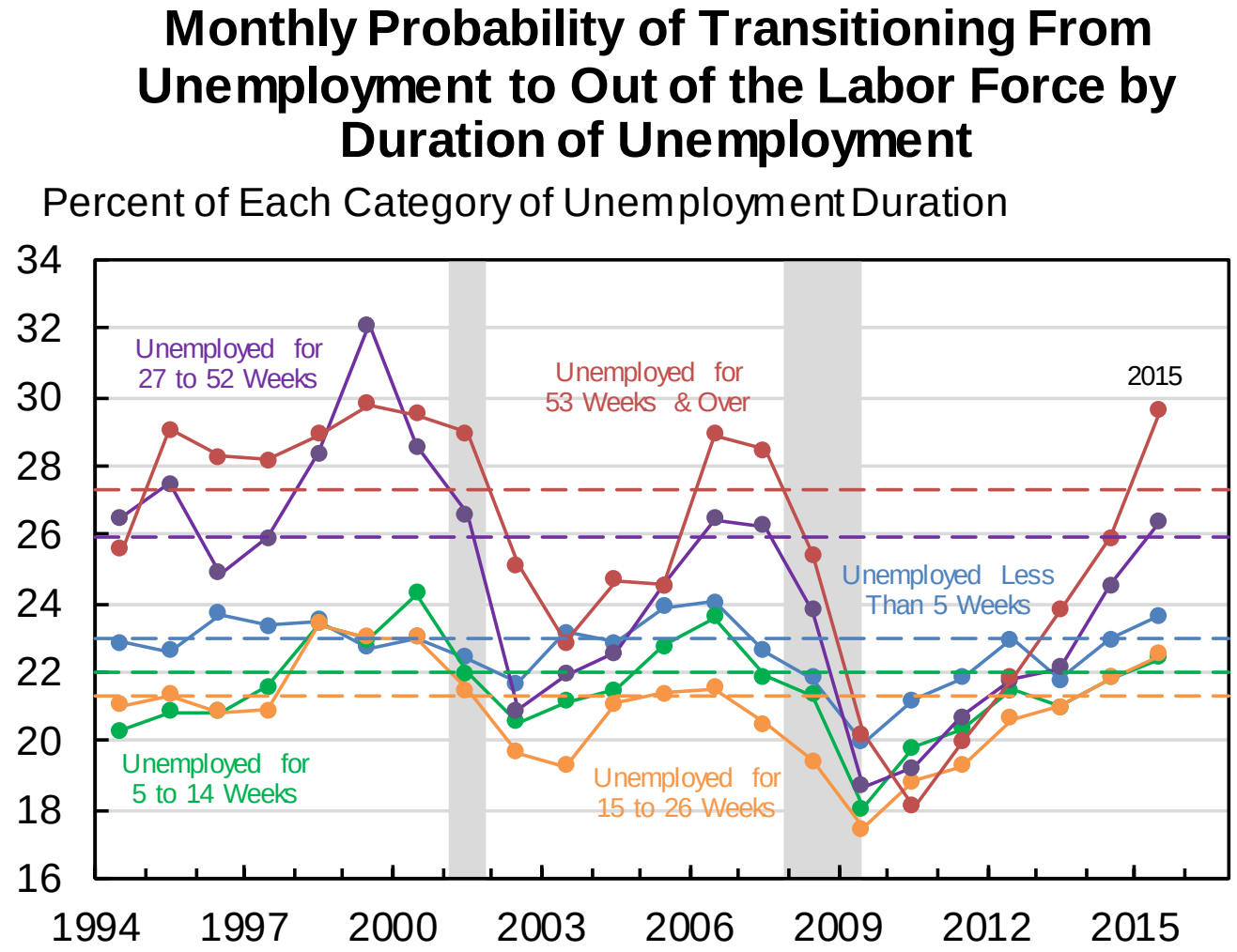


"Not for the first time, the labor force participation rate has undershot our expectations over the past year ....

As a result, we now expect the participation rate to fall by about ¼ percentage point per year in coming years."

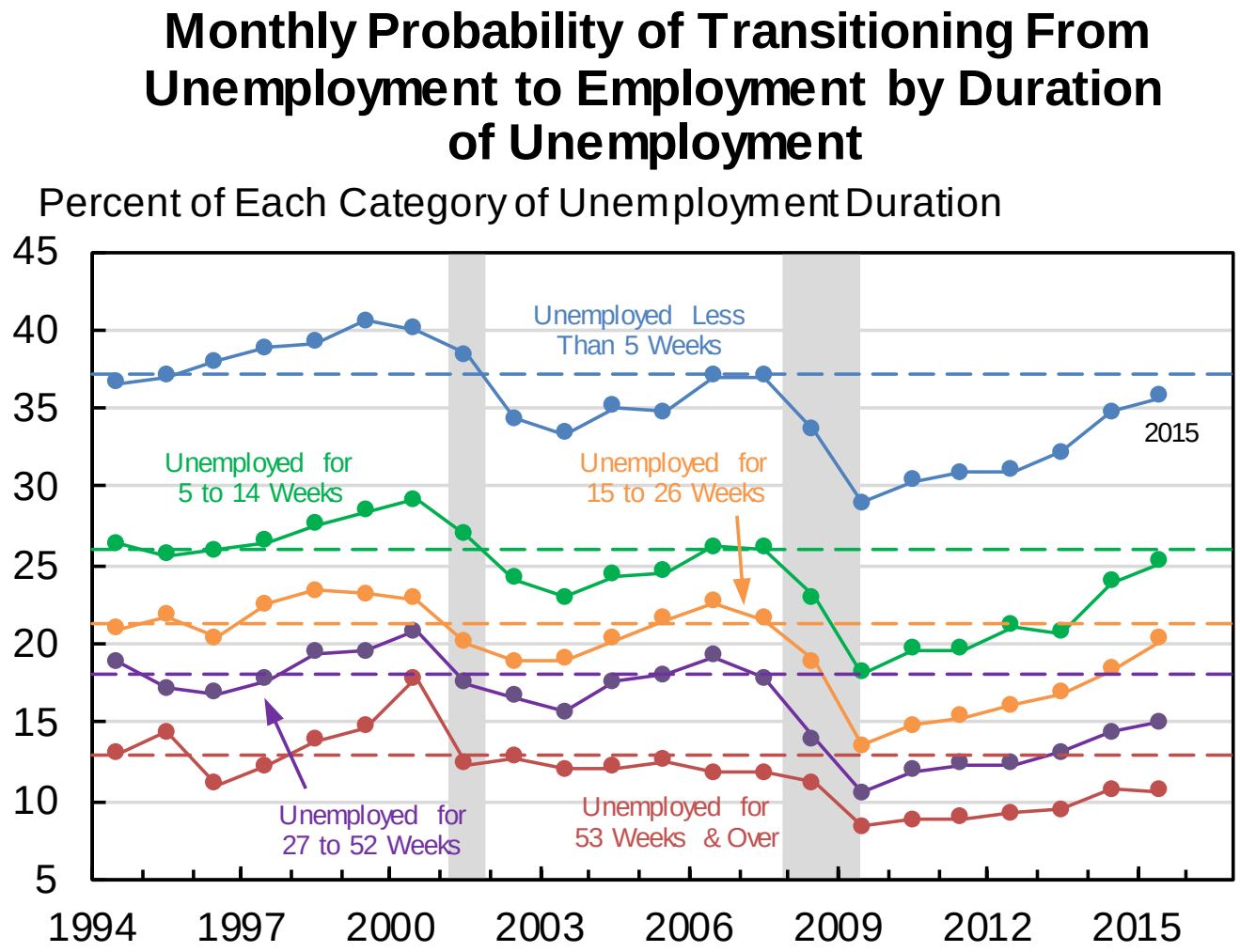
October 10, 2015

Average Monthly Labor Force Withdrawal Rate in the United States



Note: Data for 2015 available through October. Dashed lines represent 1994-2007 averages. Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research.

Average Monthly Job Finding Rate in the United States Consistent With Duration Dependence

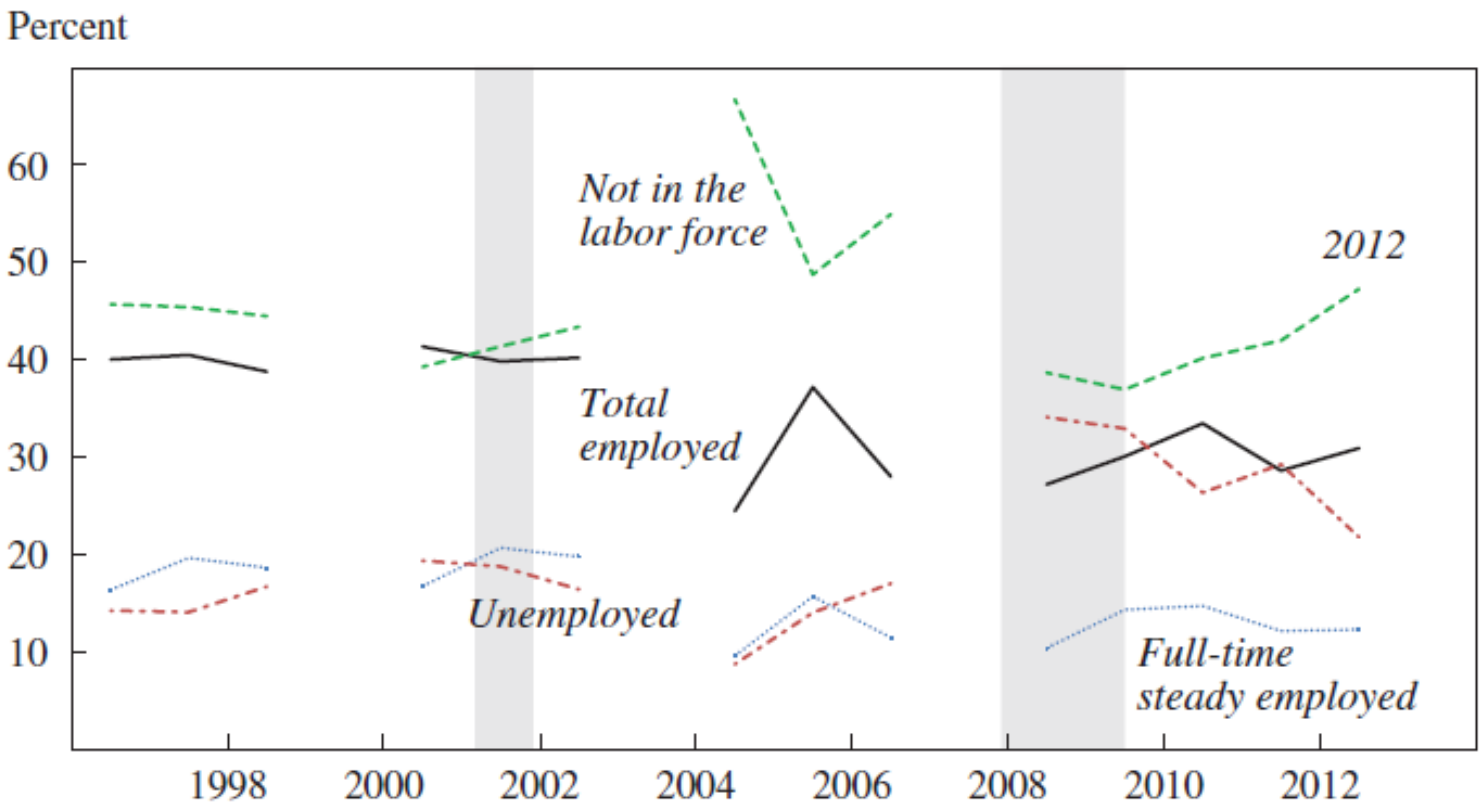


Note: Data for 2015 available through October. Dashed lines represent 1994-2007 averages. Shading denotes recession.

Source: Bureau of Labor Statistics; National Bureau of Economic Research.

The Long-Term Unemployed Normally Face Bleak Prospects and Inconsistent Employment

Figure 13. Transition Rates for Long-Term Jobless Spells, 15 Months after Start of Spell, 1996–2013[a]



Note: Data cover all workers who became unemployed in the calendar year. Once becoming unemployed, they were jobless, either unemployed or not in the labor force, for at least six consecutive months. Shading denotes recessions.
Source: Krueger, Cramer, and Cho. "Are the Long-Term Unemployed on the Margins of the Labor Market?" *Brookings Papers on Economic Activity*. Spring 2014.

Long-Term Unemployment Takes a Toll

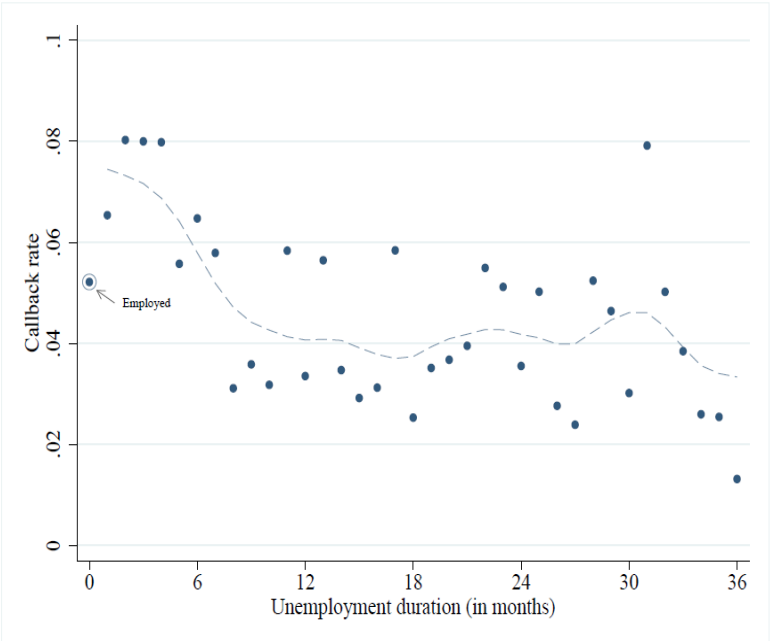
- Mental Health and Self-Esteem (e.g., Clark and Oswald)
- Physical Health and Mortality (e.g., Sullivan and von Wachter, 2009)
- Family Dissolution and Stress (e.g., Lindner and Peters, 2013)
- Job search activity declines (e.g., Krueger and Mueller; Wanberg, 2011)
- Social Isolation (e.g., Krueger and Mueller, 2012; Toole, et al. 2015)
- Repeated Job Loss
- 15-30% Lower Re-employment Earnings (e.g., Farber)

→ Erosion of Human Capital and Discouragement

Long-Term Unemployment Weakens Both Supply-Side and Demand-Side of Job Finding Prospects

Source: Wanberg (2011)

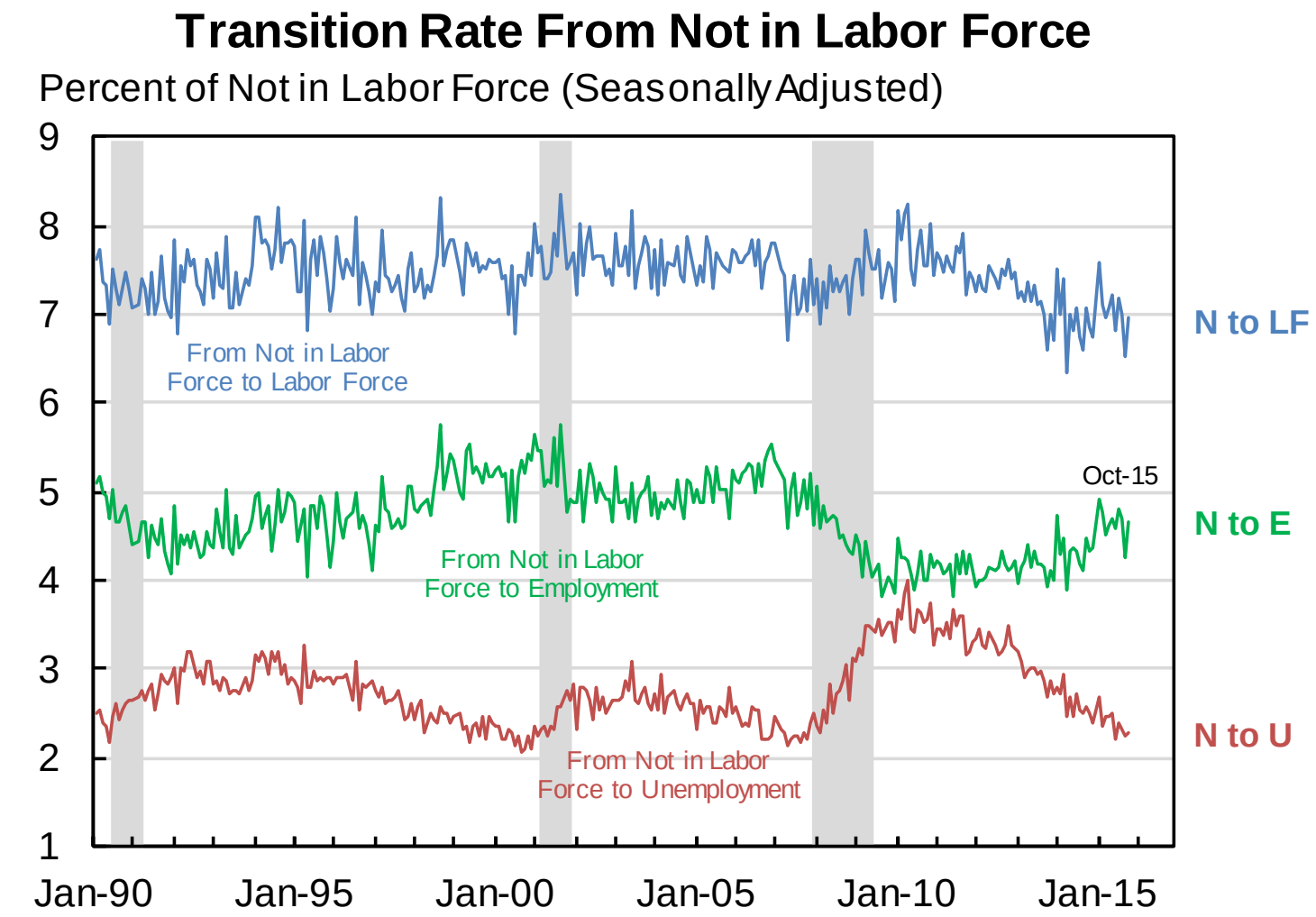
FIGURE II: CALLBACK RATE VS. UNEMPLOYMENT DURATION



Source: Kroft, Lange, and Notowidigdo. "Duration Dependence and Labor Market Conditions: Evidence From a Field Experiment." *Quarterly Journal of Economics*, 128(3): 1123-1167. August 2013.

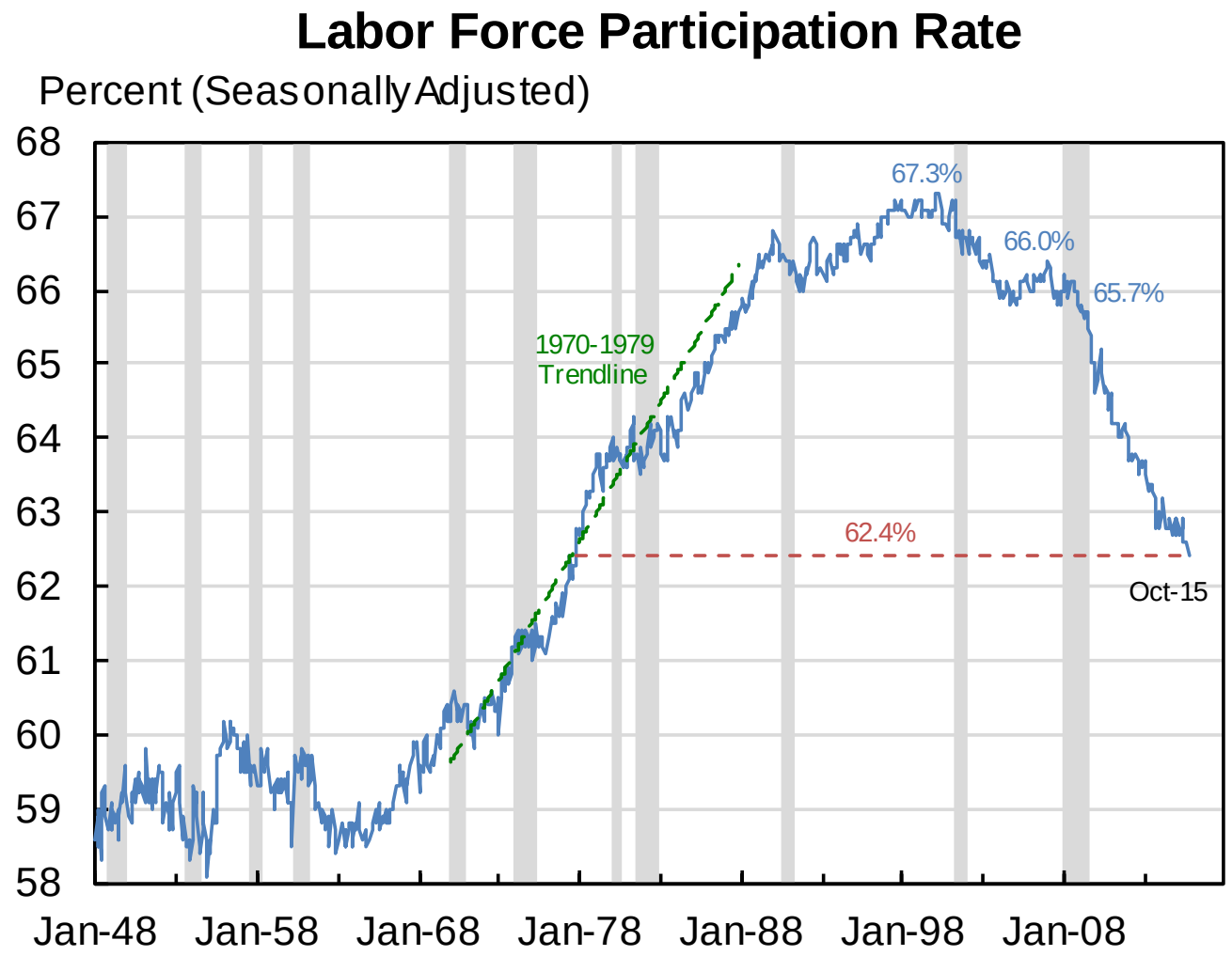
Won’t People Re-Enter the Labor Force if the Economy Strengthens?

Little Historical Precedent for Bounce Back in LFPR



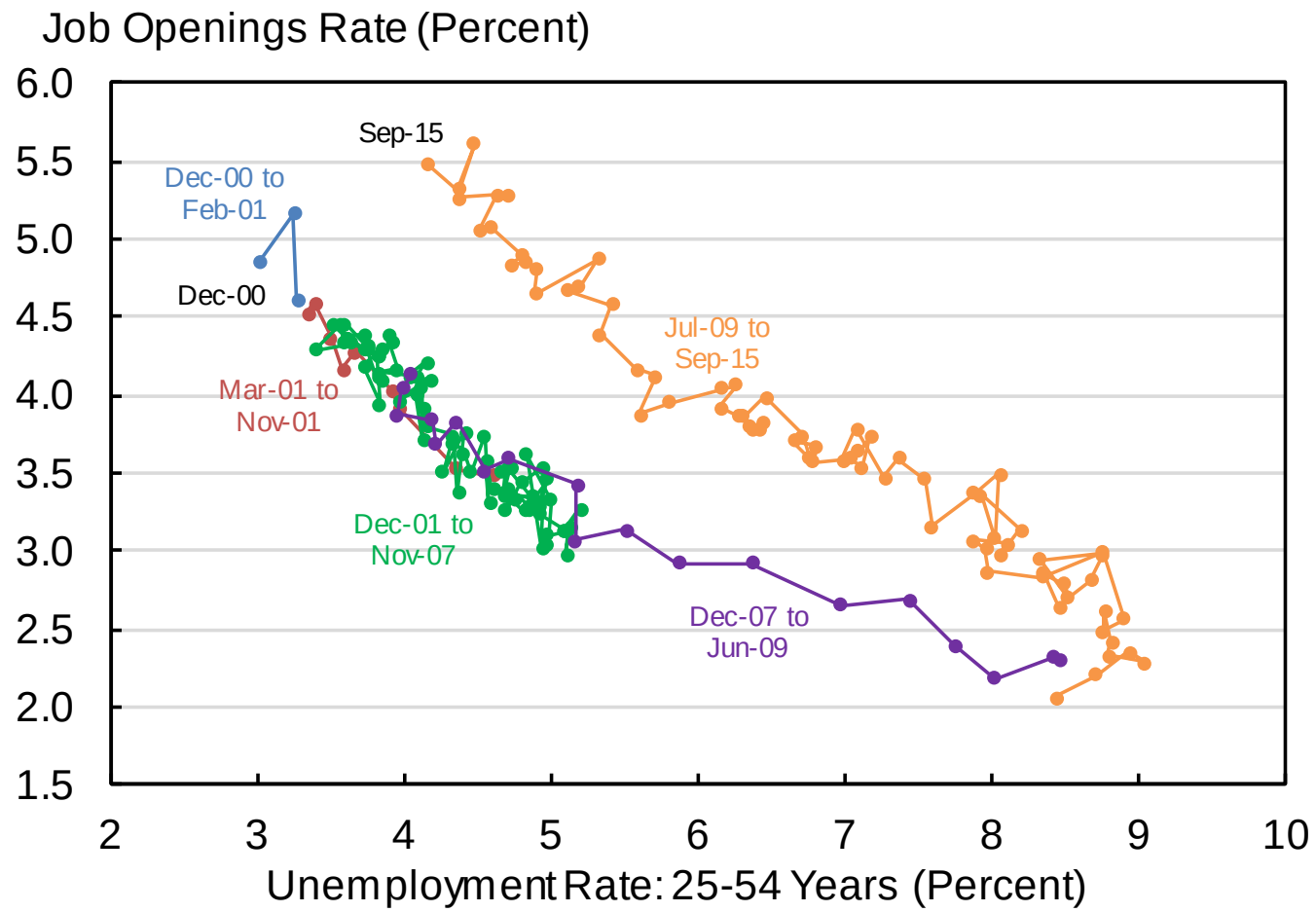
Note: Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research.

Relative to Trend, There Was Essentially No Catch-Up in Labor Force Participation After 1980-82 Recession



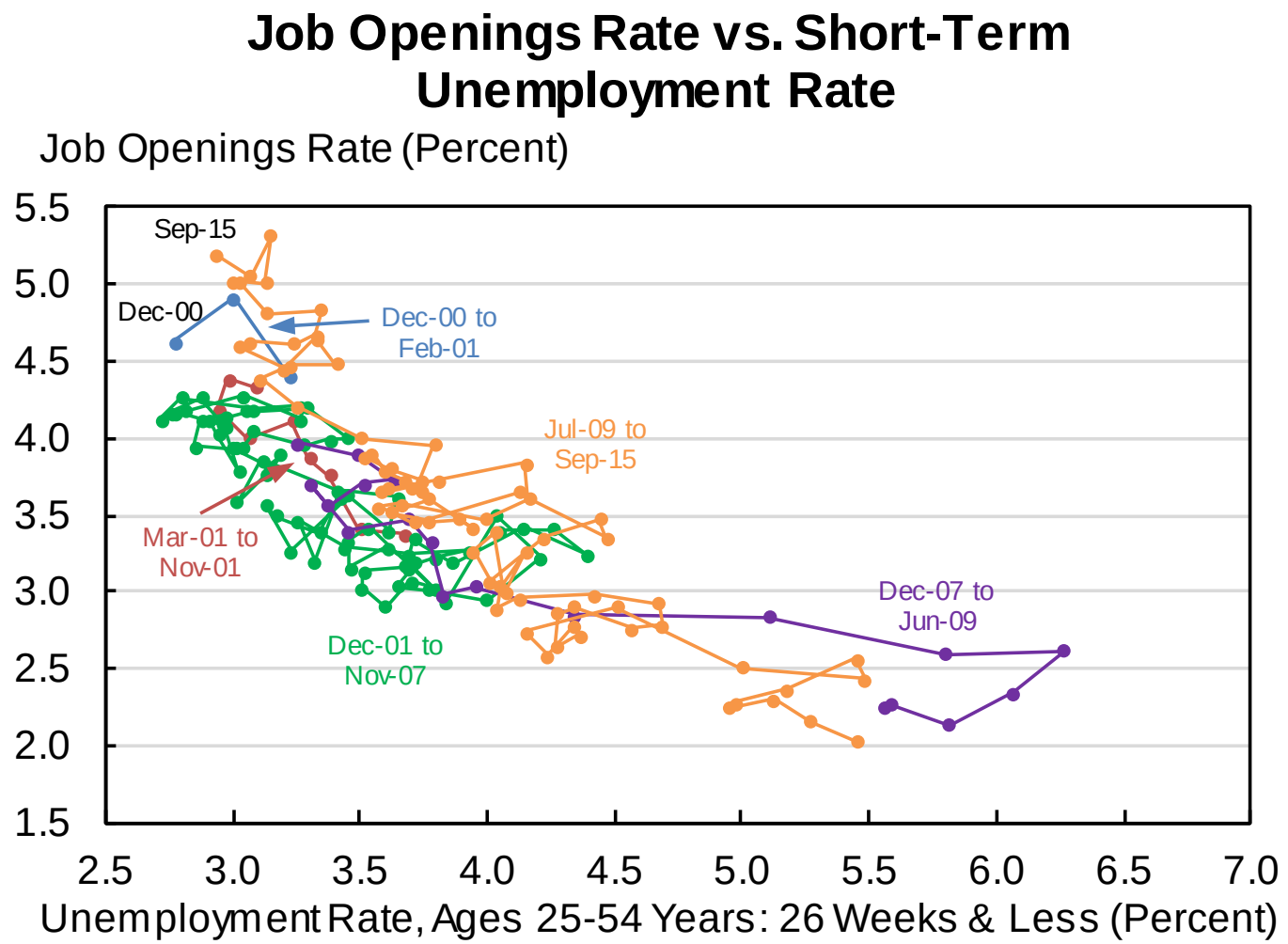
Note: Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research; author's calculations.

Lower Matching Rate of LTU Helps Explain Beveridge Curve Shift



Note: Both job openings and unemployment rates are percentages of the labor force aged 25 to 54.
Source: Bureau of Labor Statistics; author's calculations.

Beveridge Curve Using Short-Term Unemployment Rate



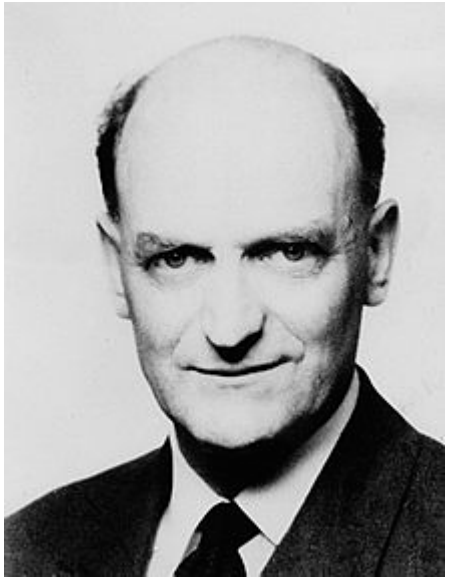
Note: Both job openings and unemployment rates are percentages of the labor force aged 25 to 54. The short-term unemployment rate for workers aged 25 to 54 is a centered 3-month moving average of not seasonally adjusted data.
Source: Bureau of Labor Statistics; author's calculations.

Results of Shimer-Type Calibrated Matching Model with Differential Labor Force Withdrawal by Duration

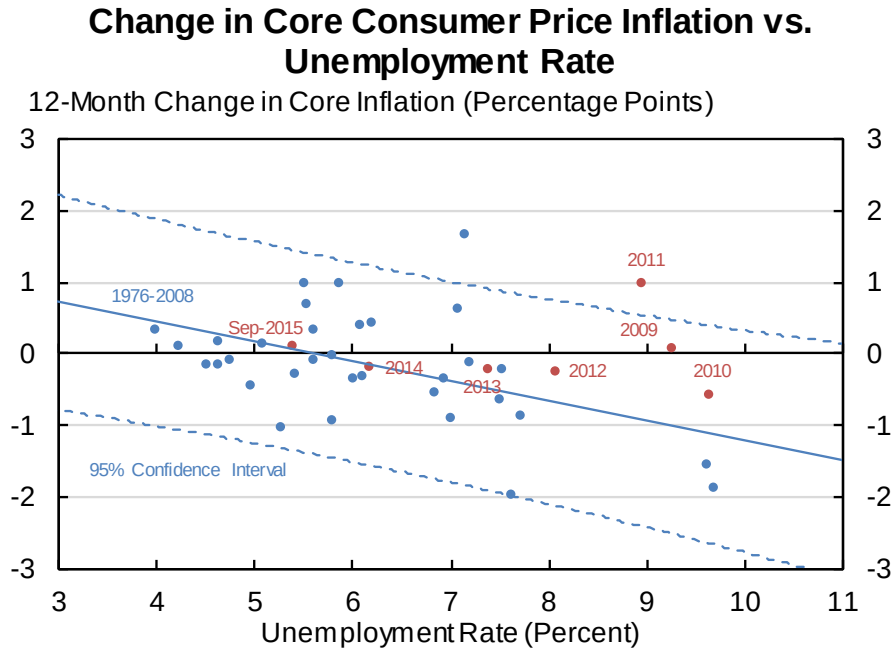
- Increase in labor force withdrawals of long-term unemployed explains about half of the decline in the LTU share of unemployment since 2010.
- Because long-term unemployed less than half of all unemployed, their exits account for a minority of the overall decline in the unemployment rate (~0.8 pp) since 2010.
- Increased job finding of long-term unemployed and return to labor force of LTU played relatively minor roles in decline in LTU share.
- Also, short-term unemployed became more likely to find jobs, so fewer people became long-term unemployed.
- Labor market "normalizes" by gradual withdrawal of many long-term unemployed. This could lead to a return to the original Beveridge Curve. If flows then return to normal, then the original Beveridge Curve would hold.
- This pattern was less apparent in the past because LTU share was low.

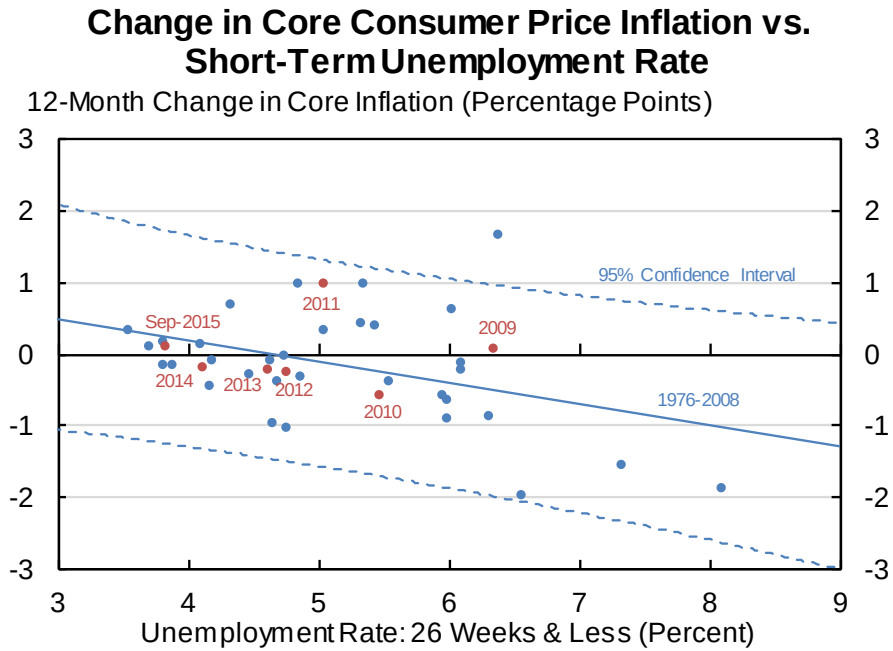
Further Evidence on Effect of Long-Term Unemployed From Phillips Curves

- Briefly discuss Price Phillips Curve
- Focus on Wage Phillips Curve because focus is on labor market
- **Avoid Money Illusion:** Focus on Expected Real Wage Growth because labor market tightening should affect real wages
- Aggregate Time Series and then State/Year Panel from CPS



Price Phillips Curve in the United States Using Overall and Short-Term Unemployment Rate





Note: Change in core consumer price inflation is defined as the 12-month percent change in the personal consumption expenditures chain price index excluding food and energy items less the previous year's 12-month percent change in the personal consumption expenditures chain price index excluding food and energy items. Inflation rate used for 2015 is the annualized growth rate from December 2014 to September 2015.
Source: Bureau of Economic Analysis; Bureau of Labor Statistics; author's calculations.

$$\pi_t - \pi_t^e = \alpha + \beta u_t + \varepsilon_t$$

$$\pi_t - \pi_{t-1} = \alpha + \beta u_t + \varepsilon_t$$

Range of Interpretations of Shift in Phillips Curve

Long-term Unemployed Matter Less:

- Ricardo Llaudes (2005)
- James Stock (2011)
- Robert Gordon (2013)
- Mark Watson (2014)
- 2014 *Economic Report of the President*
- Ball and Mazumder (2014)

Alternative Views:

- Ben Bernanke: inflation expectations anchored
- Ball and Mazumder / Akerlof, Dickens and Perry: convexity of Phillips Curve and distribution of price changes
- Fed minutes (May 2014): Nominal wage rigidities

What About Wages?

$$\Delta w_t - \pi_{t-1} = \alpha + \beta u_t + \varepsilon_t$$

"The High-Pressure Labor Market of the 1990s"

Table 8. Estimated Equations for Wage Phillips Curves by Percentile of the Wage Distribution

	Place of wage earner in wage distribution[a]				
	10th percentile	*30th percentile*	*Median*	*70th percentile*	*90th percentile*
Independent variable	*8-1*	*8-2*	*8-3*	*8-4*	*8-5*
Constant	9.74 (3.27)	9.44 (1.70)	5.89 (1.79)	7.74 (1.92)	7.19 (1.82)
CPI-U-X1 inflation lagged one year[b]	1.00*	1.00*	1.00*	1.00*	1.00*
Unemployment rate	–1.57 (0.42)	–1.40 (0.22)	–0.86 (0.23)	–1.02 (0.25)	–0.95 (0.24)
Percentage change in the log minimum wage	0.14 (0.08)	(0.02 (0.04)	0.00 (0.05)	–0.04 (0.05)	0.00 (0.05)
Post-1988 dummy	–0.81 (1.09)	–1.66 (0.57)	–1.25 (0.60)	–1.65 (0.64)	–1.63 (0.61)
Root-mean-squared error	2.24	1.16	1.22	1.31	1.25
Durbin-Watson statistic	2.68	2.06	2.08	2.24	2.08
Implied URZERCG,[c] 1974–88	6.2	6.7	6.8	7.4	7.6
Implied URZERCG,[c] 1989–98	5.7	5.6	5.4	5.7	5.8

Source: Authors' calculations based on data from the Bureau of Labor Statistics World Wide Web site and the Economic Policy Institute.

a. Dependent variable is the annual change in the logarithm of the wage for the worker at the indicated percentile times 100. Wage data calculated from May CPS (1973–78) and ORG CPS (1979–98) by the Economic Policy Institute. Sample size is twenty-five observations. The mean (standard deviation) of the dependent variable is 4.74 (3.47) for column 8-1, 4.74 (2.38) for column 8-2, 4.78 (2.32) for column 8-3, 4.98 (2.43) for column 8-4, and 5.36 (2.32) for column 8-5.

b. An asterisk indicates that the coefficient was constrained to equal 1.

c. Unemployment rate associated with zero expected real compensation growth.

Source: Lawrence F. Katz and Alan B. Krueger. "The High-Pressure Labor Market of the 1990s." *Brookings Papers on Economic Activity*. Spring 1999.

Real Wage Phillips Curve Allowing for Differential Effects of Short- and Long-Term Unemployment

Estimated Expected Real Wage Phillips Curve

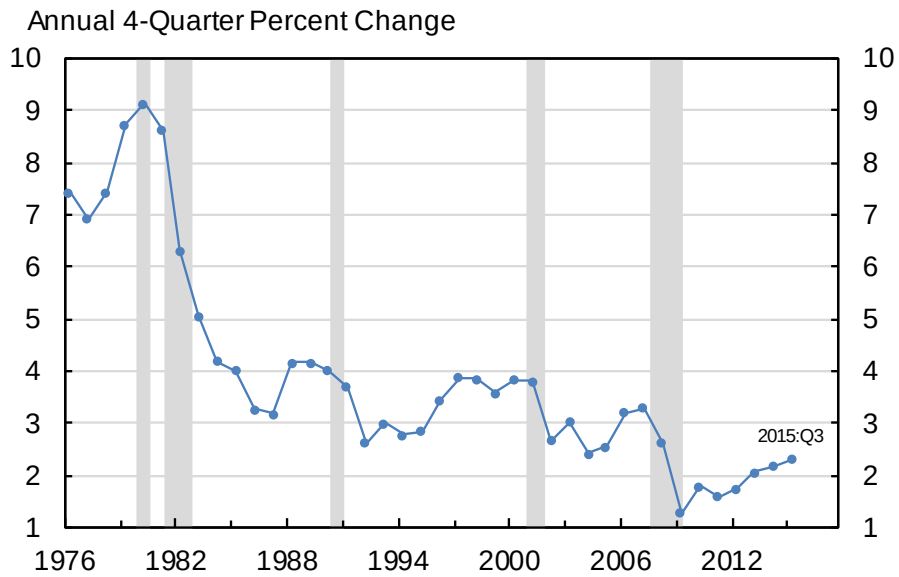
Dependent Variable: Annual Percent Change in CES Average Hourly Earnings for Private Production and Nonsupervisory Employees Less Previous Year's Annual Percent Change in Core Consumer Price Inflation

	(1)	(2)
Intercept	3.936	5.718
	(1.322) ***	(0.715) ***
Unemployment Rate	-0.550	
	(0.224) **	
Unemployment Rate: 26 Weeks or Less		-1.045
		(0.169) ***
Unemployment Rate: 27 Weeks or More		0.041
		(0.230)
Wald Test for Equal Unemployment Variables: p-Value		0.003
Adjusted R-Squared	0.371	0.582

Levels of significance: *** = 1%, ** = 5%, * = 10%.
Note: Annual data from 1976 to 2013. Newey-West standard errors with 3 lags shown in parentheses.
Source: Bureau of Labor Statistics; Bureau of Economic Analysis; author's calculations.

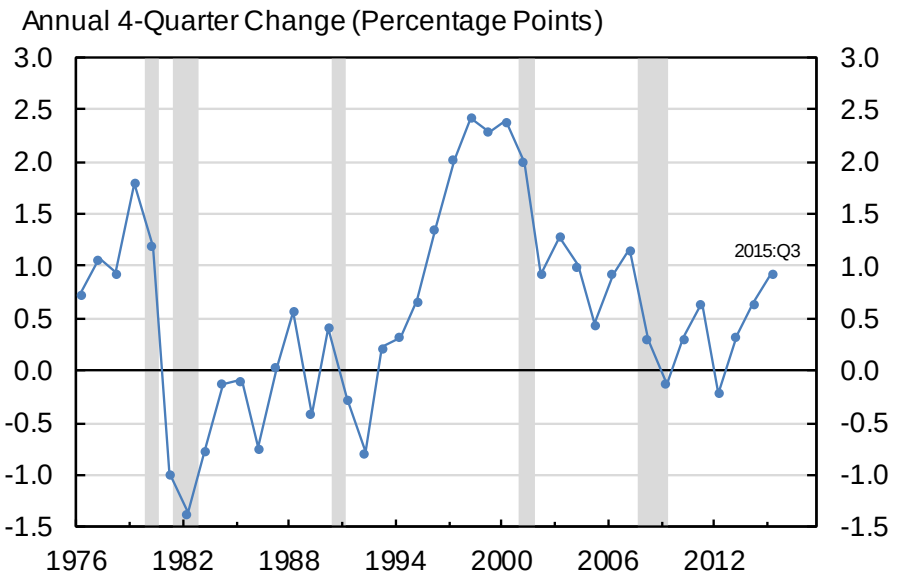
4-Quarter Percent Change in Employment Cost Index Less Previous Year's Core Price Inflation

Change in Nominal ECI Private Wages & Salaries



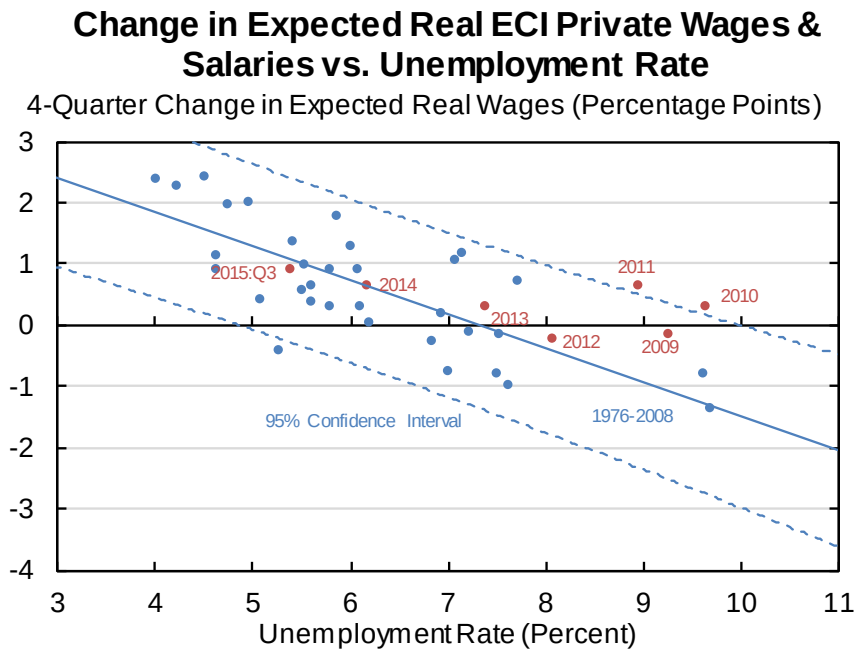
Note: 2015:Q3 reflects annualized percent change in wage and salary compensation for private sector employees from 2014:Q4 to 2015:Q3. Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research.

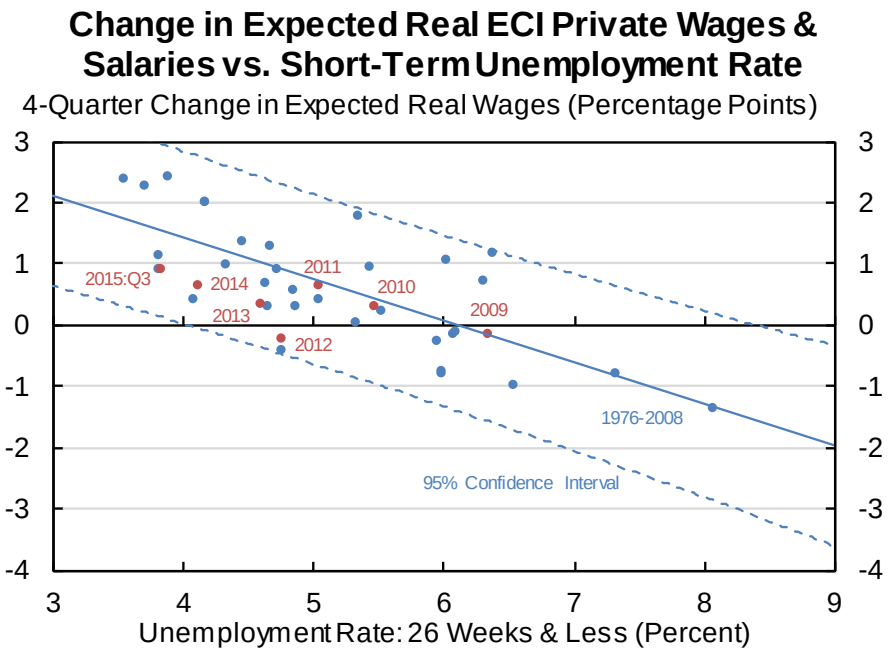
Change in Expected Real ECI Private Wages & Salaries



Note: Change in expected real wages and salaries is the 4-quarter percent change in wage and salary compensation for private sector employees less the previous year's 12-month percent change in the personal consumption expenditures chain price index excluding food and energy items (core PCEPI). 2015:Q3 reflects annualized percent change in wages and salaries from 2014:Q4 to 2015:Q3 less the 12-month percent change in core PCEPI for 2014. Shading denotes recession.
Source: Bureau of Labor Statistics; Bureau of Economic Analysis; National Bureau of Economic Research.

Real ECI Wage Phillips Curve in the United States Using Overall and Short-Term Unemployment Rate



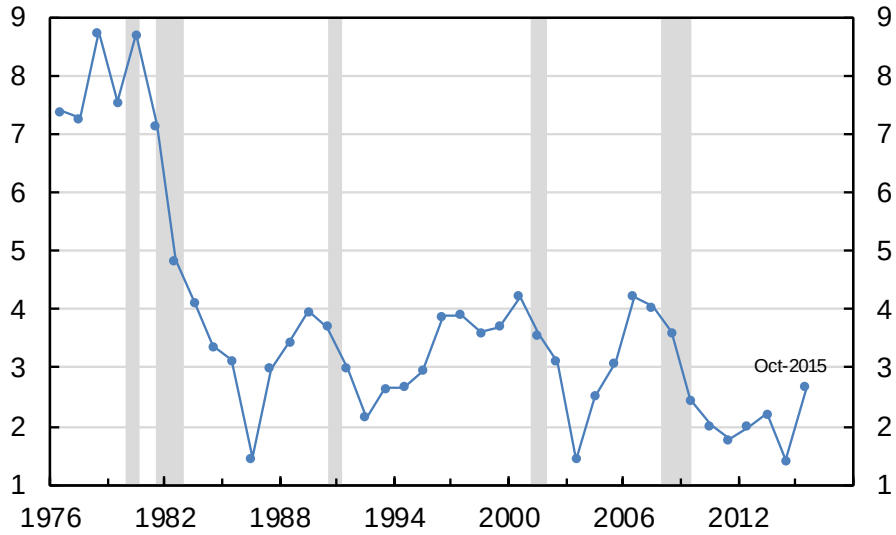


Note: Change in expected real wages and salaries is the 4-quarter percent change in wage and salary compensation for private sector employees less the previous year's 12-month percent change in the personal consumption expenditures chain price index excluding food and energy items. Wage data for 2015 are annualized rate of growth through 2015:Q3. Fitted line 1976-2008 and 95% confidence interval.
Source: Bureau of Labor Statistics; Bureau of Economic Analysis; author's calculations.

12-Month Percent Change in Production/Nonsupervisory Earnings Less Previous Year's Price Inflation

Change in Nominal CES Average Hourly Earnings: Production & Nonsupervisory Employees

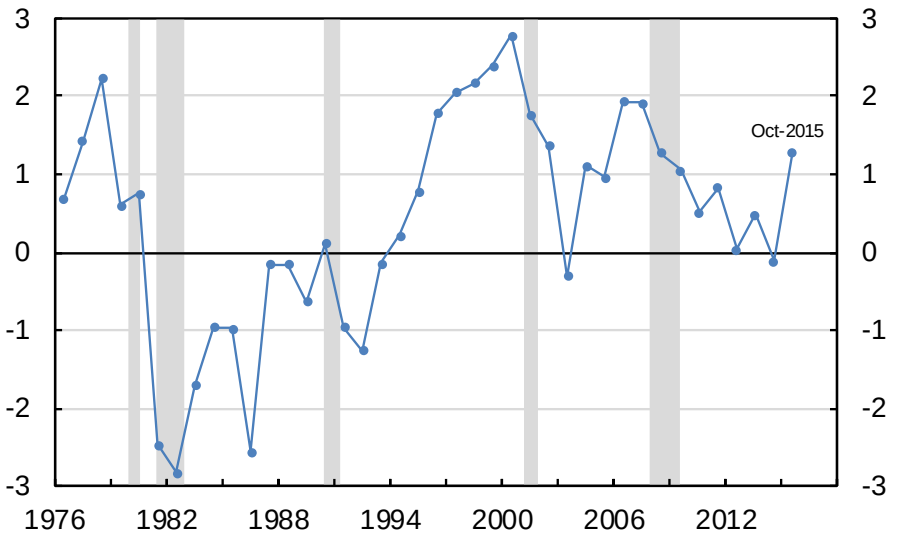
Annual 12-Month Percent Change



Note: Oct-2015 reflects annualized percent change in average hourly earnings from December 2014 to October 2015. Shading denotes recession.
Source: Bureau of Labor Statistics; National Bureau of Economic Research.

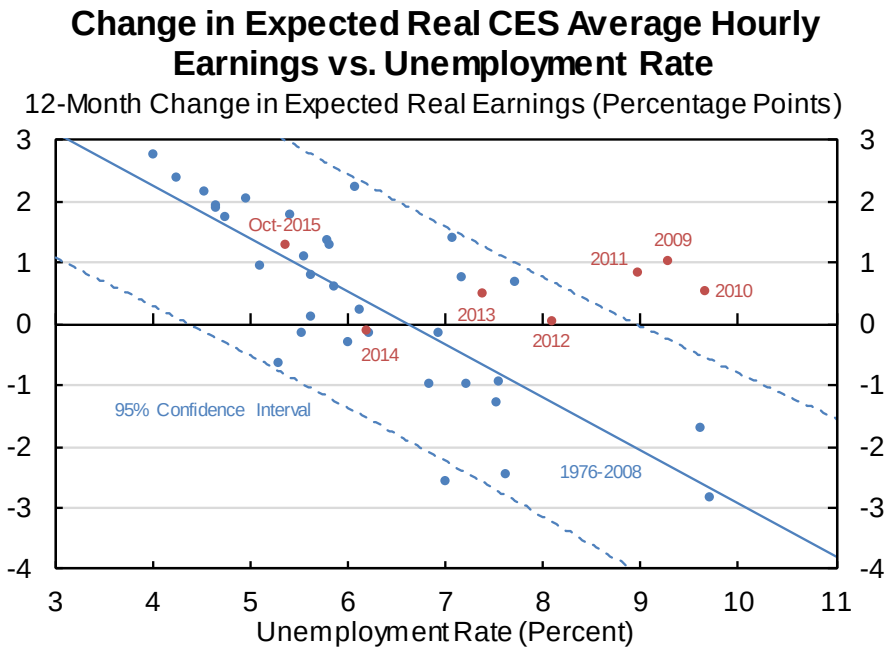
Change in Expected Real CES Average Hourly Earnings: Production & Nonsupervisory Employees

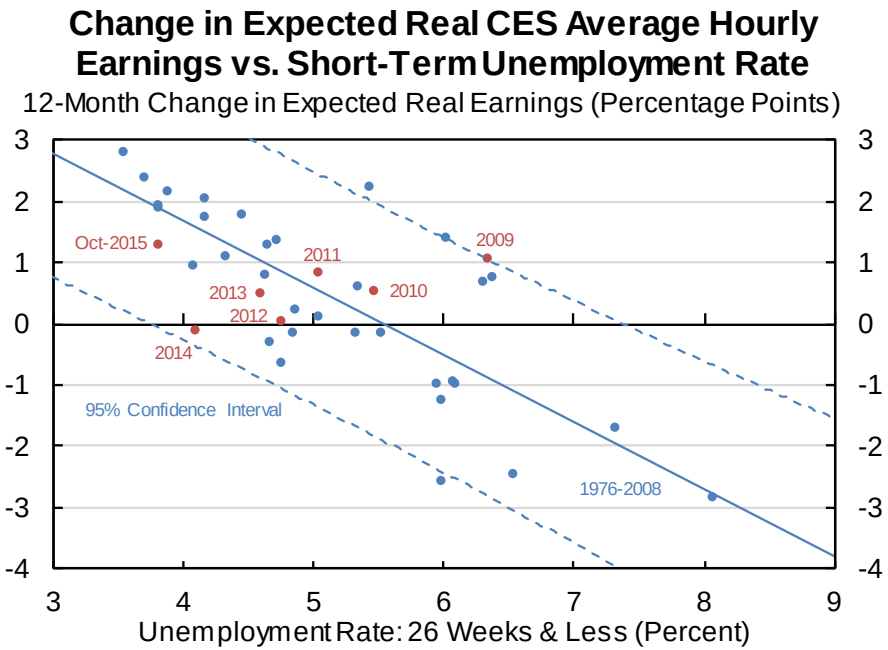
Annual 12-Month Change (Percentage Points)



Note: Change in expected real average hourly earnings is December to December percent change in average hourly earnings for private production and nonsupervisory employees less the previous year's 12-month percent change in the personal consumption expenditures chain price index excluding food and energy items (core PCEPI). Oct-2015 reflects annualized percent change in average hourly earnings from December 2014 to October 2015 less the 12-month percent change in core PCEPI for 2014. Shading denotes recession.
Source: Bureau of Labor Statistics; Bureau of Economic Analysis; National Bureau of Economic Research.

Real Wage Phillips Curve in the United States Using Overall and Short-Term Unemployment Rate





Note: Change in expected real average hourly earnings is 12-month percent change in average hourly earnings for private production and nonsupervisory employees less the previous year's 12-month percent change in the personal consumption expenditures chain price index excluding food and energy items. Wage data for 2015 are annualized rate through October. Fitted line 1976-2008 and 95% confidence interval.
Source: Bureau of Labor Statistics; Bureau of Economic Analysis; author's calculations.

State-Level Phillips Curves

Real Time Economics

Economic insight and analysis from The Wall Street Journal.

11:58 am ET
Nov 19, 2014 CENTRAL BANKING

The New York Fed's Takedown of Alan Krueger, Part III

There is little evidence workers who have been out of a job for a prolonged period contribute any less to inflation trends than the short-term jobless, according to **the third installment of a blog series** by **Federal Reserve Bank of New York** staffers that argues directly against the research of a former top White House adviser.

Alan Krueger, former chairman of President Barack Obama's **Council of Economic Advisers** and a professor at **Princeton University**, **wrote an influential paper earlier this year** arguing the long-term jobless face such unusual challenges in finding work that policy makers should count them out when trying to gauge potential unused capacity in the labor market – also known as slack—and its effect on inflation pressures.

"Overall, there is little evidence in the cross-state data that the long-term unemployed exert less pressure on wages," the five New York Fed researchers counter, referring to people out of work for more than six months. "This finding, as well as the differences between the labor market outcomes of long-term unemployed workers and nonparticipants, suggests that the long-term unemployed should not be dismissed when considering labor market slack."

Summary of Federal Reserve Studies of the Phillips Curve Using State-Level Data

	Study	Dependent Variable	Time Period	Regression Coefficient: Short-Term Unemployment Rate	Regression Coefficient: Long-Term Unemployment Rate	Wald Test: p-Value
1	Kumar & Orrenius (2015)	%Δ Avg Hourly Wages (CPS)[a]	1994-2013	-0.50 **	-0.01	--
	Federal Reserve Bank of Dallas	%Δ Median Hourly Wages (CPS)[a]	1994-2013	-0.33 **	-0.35 **	--
		%Δ Manufacturing Avg Hourly Earnings (CES)[a]	1994-2013	-0.54 **	0.02	--
		%Δ Avg Weekly Wages (QCEW)[a]	1994-2013	-0.25 **	-0.07	--
2	Dent, Kapon, Karahan, Pugsley & Sahin (2014)	Log New Hire Avg Monthly Earnings (QWI)[b]	94:Q1-13:Q1	-0.65 ***	-0.82 ***	0.51
	Federal Reserve Bank of New York	Log New Hire Avg Monthly Earnings (QWI)[b]	05:Q1-13:Q1	-0.45 ***	-0.63 ***	0.33
3	Aaronson & Jordan (2014)	%Δ Avg Hourly Wages (CPS)[c]	1982-2013	-0.40 ***	-0.38 ***	--
	Federal Reserve Bank of Chicago	%Δ Avg Hourly Wages (CPS)[c]	1994-2013	-0.25 **	-0.21 **	--
4	Smith (2014)	%Δ Median Hourly Wages (CPS)[d]	1985-2013	-0.60 ***	-0.50 ***	0.68
	Federal Reserve Board	%Δ Median Hourly Wages (CPS)[d,e]	1985-2013	-0.50 ***	-0.41 *	0.80
		%Δ Median Hourly Wages (CPS)[d]	1994-2007	-0.54	-0.82	0.74
5	Higgins (2014)	Log Δ Avg Hourly Earnings (CPS)[f,g,h]	1995-2014	-0.44 **	-0.10	--
	Federal Reserve Bank of Atlanta	Log Δ Avg Hourly Earnings (CPS)[f,g,i]	1995-2014	-0.40 ***	-0.07	--
	Average Across 5 Studies of Wage Growth			-0.45	-0.36	--

Notes: All regression specifications include time-specific and location-specific fixed effects. Levels of significance: *** = 1%, ** = 5%, * = 10%.

a. This regression specification is weighted by employment.

b. This regression specification is weighted by employment and also includes sector-specific fixed effects.

c. Prior to estimating the regression, the dependent variable is adjusted for changes in gender, education, a quartic in age, gender × education, gender × quartic in age, and marital status.

d. This regression specification is weighted by population, includes one lag of the dependent variable, and controls for population shares of age group, gender, and education.

e. This regression specification also controls for state-specific time trends.

f. Prior to estimating the regression, the dependent variable is adjusted for changes in the composition of labor as in Staiger, Stock, and Watson (2001).

g. This regression specification is weighted by population.

h. This regression specification includes the difference between the U-5 and U-3 labor underutilization rates as well as the difference between the U-6 and U-5 labor underutilization rates.

i. This regression specification includes the difference between the U-6 and U-5 labor underutilization rates.

My Analysis of State-Level CPS Data

- Analyze panel of CPS data for 50 states plus DC from 1994-2013 (1,020 observations)
- Wages measured by usual hourly earnings (including overtime, tips, and commissions); adjust for top-coding of weekly earnings
- Inflation measured by regional core CPI
- Analysis appears to be in line with the range of estimates from previous Federal Reserve studies
  - Short-term unemployment has a larger effect on expected real average wage growth than does long-term unemployment (which is not significant)
  - Effect of long-term unemployment is significant for growth in expected real median wages, but coefficient is still larger for short-term unemployment
  - State-level results don't reject national aggregate time series data

My State-Year Analysis Based on CPS: 1994-2013 Real Wage Growth Regressions

Estimated State-by-Year Expected Real Wage Phillips Curve

	Dependent Variable: Expected Real Log Δ in			
	Average Wages		Median Wages	
	(1)	(2)	(3)	(4)
Short-Term Unemployment Rate	-0.670	-0.449	-0.548	-0.417
	(0.107) ***	(0.107) ***	(0.107) ***	(0.166) **
Long-Term Unemployment Rate	-0.199	-0.012	-0.335	-0.296
	(0.051) ***	(0.119)	(0.054) ***	(0.132) **
Wald Test for Equal Unemployment Variables: p-Value	0.003	0.031	0.164	0.591
State Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	No	Yes	No	Yes
Adjusted R-Squared	0.089	0.266	0.080	0.153

Levels of significance: *** = 1%, ** = 5%, * = 10%.

Note: Annual data from 1994 to 2013. Regressions are weighted by employment in each state and year. Both the average and the median are calculated from the distribution of nominal usual hourly earnings (including overtime, tips, and commissions) in each state and year. Dependent variable is the log change in nominal CPS hourly wages for each state in a given year less the previous year's log change in the corresponding regional Consumer Price Index. Short-term unemployment rate refers to workers unemployed 26 weeks or less as a percentage of the civilian labor force. Long-term unemployment rate refers to workers unemployed 27 weeks or more as a percentage of the civilian labor force.

Source: Bureau of Labor Statistics; author's calculations.

State-Year Analysis of Expected Wage Growth at Various Deciles

Estimated State-by-Year Expected Real Wage Phillips Curve

	Dependent Variable: Expected Real Log Δ in				
	10th Pct of Wages	30th Pct of Wages	Median of Wages	70th Pct of Wages	90th Pct of Wages
	(1)	(2)	(3)	(4)	(5)
Short-Term Unemployment Rate	-0.463	-0.423	-0.417	-0.214	-0.611
	(0.234) *	(0.249) *	(0.166) **	(0.157)	(0.165) ***
Long-Term Unemployment Rate	0.017	-0.346	-0.296	-0.190	0.215
	(0.127)	(0.188) *	(0.132) **	(0.126)	(0.202)
Wald Test for Equal Unemployment Variables: p-Value	0.161	0.847	0.591	0.923	0.008
State Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Adjusted R-Squared	0.222	0.183	0.153	0.117	0.096

Levels of significance: *** = 1%, ** = 5%, * = 10%.

Note: Annual data from 1994 to 2013. Regressions are weighted by employment in each state and year. Quantiles are calculated from the distribution of nominal usual hourly earnings (including overtime, tips, and commissions) in each state and year. Dependent variable is the log change in nominal CPS hourly wages for each state in a given year less the previous year's log change in the corresponding regional Consumer Price Index. Short-term unemployment rate refers to workers unemployed 26 weeks or less as a percentage of the civilian labor force. Long-term unemployment rate refers to workers unemployed 27 weeks or more as a percentage of the civilian labor force.

Source: Bureau of Labor Statistics; author's calculations.

Targeted Policies to Aid Long-Term Unemployed and Raise LFPR

- **Use "Overwhelming Force" to avoid problem in first place**
- **Cyclical recovery and industry-specific policy insufficient once problem becomes widespread**
- Tax Credit for Employers to hire LTU
- Public Service Employment/Supported Work
- Volunteering
- Active Labor Market Policies: Job Search Assistance and Training
- Probationary employment paid for by UI Office
- Wage Loss Insurance
- **Address structural decline in labor force participation (e.g., family-friendly policies; DI reform)**

Conclusions

- Long-term unemployment is declining quickly in U.S. in part because the long-term unemployed are exiting the labor force, as predicted by historical pattern.
- About half of the decline in the long-term unemployed's share of unemployment since January 2011 is due to their increased labor force withdrawal rate.
- Don't need to resort to extraordinary role for EUC because 2002-2007 experience captures 2008-2015 patterns well.
- Little prospect for wave of labor force dropouts re-entering labor market, contrary to conventional wisdom.
- Decline in labor force participation has become a structural problem.
- Tighter job market is starting to lead to stronger real wage growth, and likely to continue.