

Commentary: Long-Term Nonemployment and Job Displacement

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Introduction

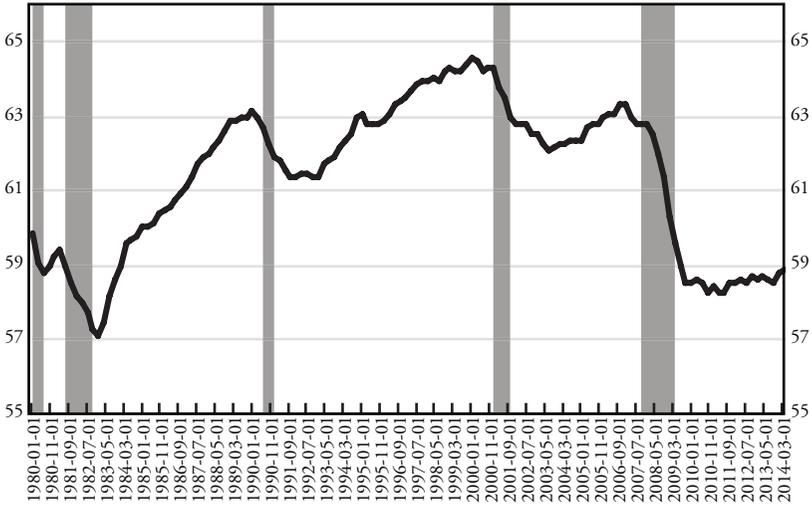
In these remarks I will first review the debate about how the recent evolution of the long-term unemployment rate and the labor force participation rate have complicated the assessment of the extent of labor market “slack” present in the U.S. economy. I will then discuss how the paper by Jae Song and Till von Wachter contributes to this debate, highlighting benefits and limitations of their analysis. I will move on to discuss the consequences of the debate for monetary policy. These consequences are more subtle than it may appear at first. I will conclude by emphasizing some open questions and avenues for future research.

I. Long-Term Unemployment and Participation

Chart 1 plots the employment-to-population ratio from 1980 to 2014. The employment rate has dropped during the Great Recession, from 62.8 percent to 58.3 percent, and since then it has only slightly recovered to 58.9 percent.

The assessment of full employment has been especially challenging during this most recent recessionary episode for two reasons. Labor markets have been undergoing exceptional structural change,

Chart 1
Employment-Population Ratio, 1980:Q1-2014:Q2



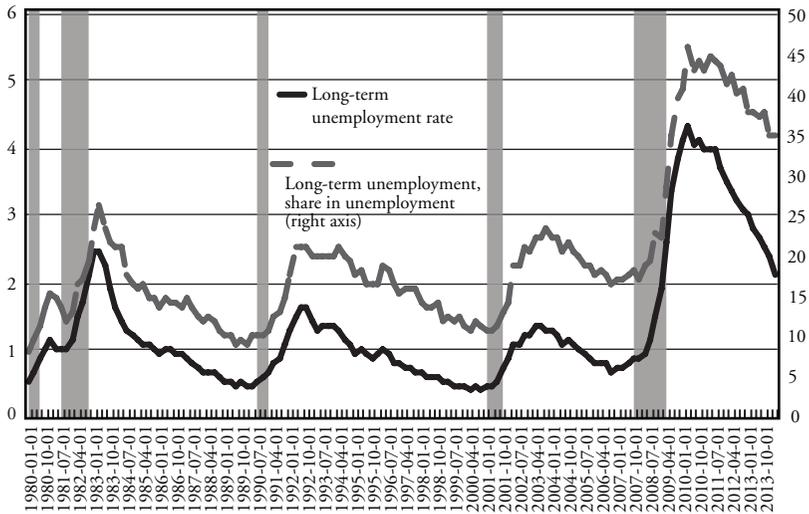
Source: Bureau of Labor Statistics.

complicating the task of disentangling structural and cyclical forces behind the drop in the employment rate. At the same time, the unprecedented cyclical downturn may have caused itself structural changes in labor markets and long-lasting effects on equilibrium employment (a phenomenon called hysteresis).

A different but related matter is that alternative measures of labor underutilization have been giving contrasting signals. For example, while the unemployment rate has declined from a peak of 10 percent to 6.2 percent in July this year, with the pace of the decline accelerating in recent months, the long-term unemployment rate has risen to record high levels and is still more than double its pre-recession level. At the same time, the labor force participation rate has dropped significantly from the start of the recession. Even though participation had been decreasing since before the Great Recession, the speed of the decline has accelerated since 2007.

Long-term unemployment (the number of people with spells of unemployment lasting 27 weeks or longer) has been at the center of the debate about the labor market state and the focus of much recent research. Chart 2 plots the long-term unemployment rate as well as

Chart 2
Long-Term Unemployment Rate and Share in Unemployment



Source: Bureau of Labor Statistics.

the share of long-term unemployment in total unemployment. The long-term unemployment rate peaked at 4.3 percent, a record high in the postwar period, and currently equals 2.1 percent, well above its pre-recession rate of 0.8 percent. As a share of total unemployment, long-term unemployment increased dramatically during the Great Recession, rising from about 17 percent to an historical record of 46 percent and decreasing only to about 35 percent in the latest data.

This of course raises the question of what lies behind the exceptional increase in the incidence of long-term unemployment that has characterized the latest downturn. A number of recent studies have argued that the rise in long-term unemployment is not primarily explained by changes in the composition of the unemployed pool toward demographic groups or industries that are overrepresented among the long-term unemployed. The long-term unemployed appear to be similar to the short-term unemployed in terms of several observable characteristics such as education, occupation, industry, region and gender, and to differ only in terms of the duration of their joblessness. Duration dependence in job finding rates combined with the severity of the recession is the preferred explanation for the

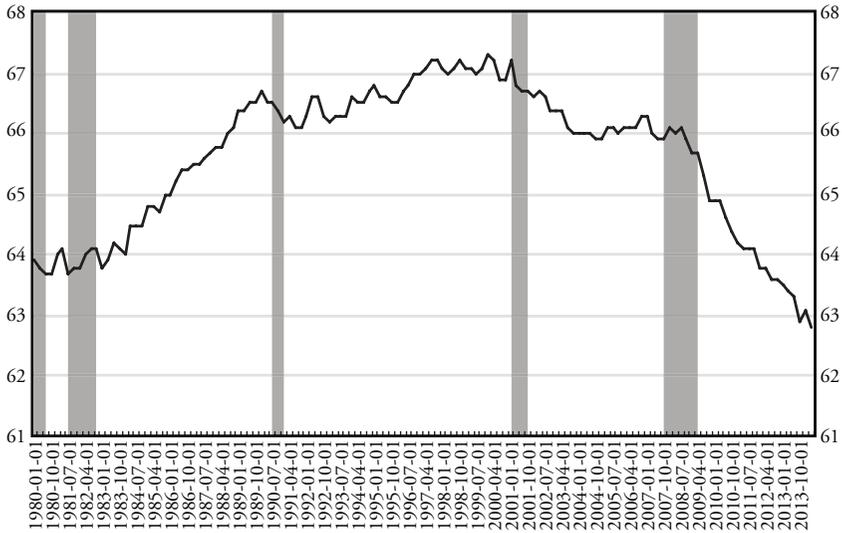
unprecedented increase in long-term unemployment. Unemployed workers who have not found a job in the first few months of the extremely slow recovery that has followed the latest recession have faced lower job finding rates, which have further lengthened their joblessness spell and contributed to raising long-term unemployment. Several factors, in turn, may explain lower job finding rates for the long-term unemployed, from the reduced search intensity of the unemployed due to discouragement, to discrimination from the part of employers based on the presumption that the length of the jobless spell signals lower productivity, to simply skill erosion.¹

So, what is the debate about? The debate is about whether eventually the long-term unemployed will permanently exit the labor force, causing a lasting decline in employment (as argued in a recent paper by Krueger, Cramer and Cho 2014), or instead will return to employment if labor market conditions further improve (as argued, among others, by Elsby, Hobijn, Şahin and Valletta 2011). The outcome will depend on how the transition rates of the long-term unemployed either into employment or out of the labor force will evolve as the economy moves forward in the recovery. Whether the exceptional rise in long-term unemployment in the latest downturn and subsequent recovery has caused a lasting decline in employment or instead represents “slack” remains unsettled.

The labor force participation has also been at the center of the debate about the state of the labor market. Chart 3 shows that since the end of 2007, the participation rate has dropped from 65.9 percent to a current 62.8 percent, a decline of 3.1 percentage points. The debate is about the reasons for the drop, in particular about what fraction of the drop can be explained by structural changes and pre-existing trends and what fraction by cyclical changes.

A recent report of the Council of Economic Advisers (2014b) estimates that about half of the decline is due to aging effects (most prominently by the retirement of the baby boomers), 0.5 percentage point to normal business cycle effects and a residual 1 percentage point to a combination of other pre-existing trends and the unique effect of the severity of the Great Recession. According to their estimates, the severity of the Great Recession has caused a disproportionate cyclical

Chart 3
Labor Force Participation Rate



Source: Bureau of Labor Statistics.

inflow into nonparticipation, as compared to historical patterns and after controlling for the depth of the downturn and the slow pace of the recovery.

Chart 4, constructed using data made available by Fujita (2014), clearly shows that all components of nonparticipation—discouragement, retirement, disability insurance and school enrollment—have contributed to the rise in nonparticipation. What is hard to assess is in which proportions they have accounted for the special cyclical effect associated with the Great Recession and whether the effect is going to persist over time or reverse. For example, discouraged workers, who would like a job but have not searched for one recently, will most likely rejoin the labor force when job prospects improve. Many of them have probably already done so, as it appears from Chart 4. On the other hand, workers who retired early or partially disabled workers who went on disability insurance may find that the benefits of rejoining the labor force are too low compared to its costs and thus will not return to the labor force, causing a lasting decline in employment. It may also be the case, however, that a substantial improvement in labor market conditions will bring back at least some of those workers.² Whether the cyclical decline in participation

Chart 4
Not in Labor Force by Reason Cumulative Change
Relative to Peak



Source: Fujita (2014).

associated with the Great Recession has permanently reduced the employment rate also remains unsettled.

II. This Paper's Contribution and Some Limitations

This paper contributes to this unsettled debate by measuring the re-employment outcomes of long-term nonemployed workers, both unemployed and nonparticipants, as well as of displaced workers, and by comparing these re-employment outcomes in the Great Recession and in previous downturns. This is a very timely paper, which addresses the current debate from a different angle than most other studies and using different data. For these reasons, it provides an interesting and valuable contribution to the literature.

II.i. Summary and Results

The paper is divided into two parts that are only loosely connected. In the first part, the focus is on nonemployed workers, the sum of unemployed and nonparticipants, excluding the new labor force entrants. The second part of the paper focuses on job-displaced workers, a subset of all job losers. There is not much overlap between these two measures of labor underutilization.

Specifically, in the first part of the paper, using annual longitudinal administrative earnings data from tax records from the Social Security Administration, the authors construct a new measure of the rate of long-term nonemployment (LTNE) and study its incidence and duration structure over the 1980-2012 period. Their baseline one-year LTNE at time t is the number of people who had non-zero earnings in a base year $t-1$ and zero earnings in the following year t , capturing workers nonemployed for at least one *calendar* year, up to two *calendar* years. Other longer-term measures of LTNE are similarly constructed as the number of workers that experienced non employment spells lasting from two to 10 consecutive calendar years. Taken together, these measures deliver survivor curves for individuals remaining nonemployed, that is, measures of the number of individuals in year $t+s$ who had a nonemployment spell of s calendar years, with s ranging from one to 10.

The first remarkable result is that the incidence of LTNE is similar in the Great Recession and in the previous downturns of the 1980s, 1990s and 2000s. This is in stark contrast to the record-high incidence of long-term unemployment in the Great Recession. The authors also find comparable survivor curves, indicating similar re-employment rates by duration across downturns. One surprising result is that their estimated re-employment rates are not cyclical: they are on average very similar across recessions and expansions. At the same time, while broadly comparable across cyclical episodes, the survivor curves have been shifting up since the 1980s. For example, about 40 percent of the initially nonemployed remained nonemployed after four years in the cyclical episode of the 1980s, while this number rises to 50-60 percent in the Great Recession and subsequent recovery. This seems like a non-negligible difference, despite the authors somehow dismissing it.

In any event, based on similar incidence and duration of LTNE across cyclical episodes and based on LTNE not having resulted in persistent decreases in the employment rate in previous downturns, Song and von Wachter conclude that there is no evidence that LTNE in the Great Recession has led to a significant persistent decline in equilibrium employment.

In the second part of the paper, and based on the argument that the survivor curves may not capture the causal effect of spell duration on re-employment probabilities, the authors estimate the effect of job displacement on a worker's future employment using the same administrative data. A worker is defined to be a displaced worker if he had at least three years of job tenure at a firm with at least 50 employees and left that employer during a lasting decline in employer size of at least 30 percent. Definitions and methodology follow closely earlier joint work by von Wachter and Steve Davis (2011). There, they estimated the effect of job displacement on long-term earning losses. Here, von Wachter and Song estimate the effect of job displacement on long-term employment losses. The authors find that a job displacement reduces employment prospects at both short and long horizons, with a 5 percent to 10 percent reduction at the 20-years horizon. Most significantly, they find that the effect of job displacement on employment is similar in the Great Recession and previous ones.

Finally, Song and von Wachter conduct a tentative calculation to conclude that job losses in the Great Recession caused small lasting declines in the aggregate employment. To do that, they first obtain an estimate of the fraction of the population experiencing a job loss in the Great Recession and then assume that the effect of a job loss on employment for the entire population of job losers equals the effect that they estimate for the smaller subset of job-displaced workers. They conclude that a 0.5 percent to 1 percent reduction in equilibrium employment is an upper bound estimate of the effect of job losses in the Great Recession.

II.ii. Advantages and Disadvantages of the LTNE Measure

In my view, the headline result of the paper is that the Great Recession may not be that different from earlier downturns if one focuses on the rate of LTNE as opposed to the rate of long-term unemployment. It is therefore essential to understand what we lose and gain by adopting the new measure.

From a measurement viewpoint, there are three main advantages of LTNE relative to survey-based measures of labor underutilization,

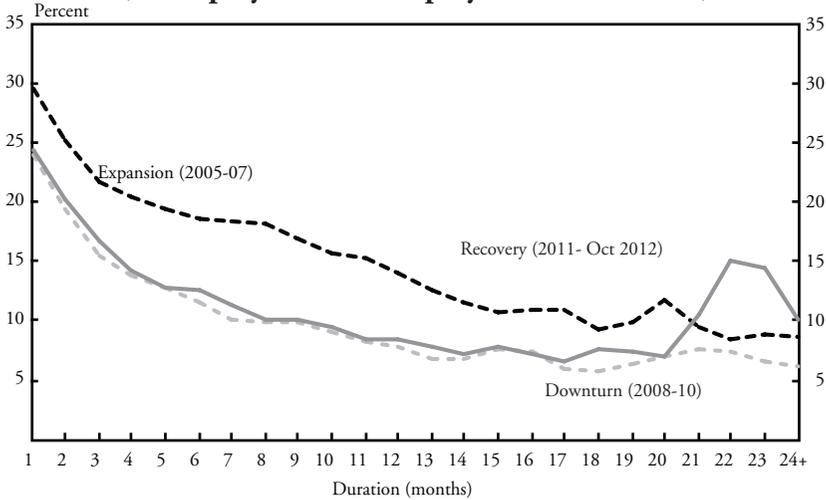
in particular long-term unemployment. First, LTNE solves the recall problem associated with surveys by using administrative data. Second, LTNE is not subject by construction to self-reporting errors. There is evidence that unemployment and nonparticipation are not clearly distinct states in surveys (for example, individuals may report themselves as not in the labor force one month and unemployed with duration longer than a month the following month). At the same time, changes in social norms and institutions over time may change reporting behavior (individuals may declare themselves unemployed only to collect unemployment benefits). Third, LTNE covers a large sample of workers spanning over 30 years.

There are, however, a number of measurement shortcomings associated with LTNE that may overtake the advantages. First, compared to long-term unemployment, capturing unemployment spells lasting 27 weeks or longer, LTNE can only capture very long durations, that is, nonemployment spells lasting one year or longer. Why is this an issue? The reason is that most of the action in the duration structure of unemployment, and possibly of nonemployment, seems to be at short and medium durations, rather than at the very long durations over a year as captured by LTNE. Chart 5 borrowed from Valletta (2013) and plotting job finding rates by duration of unemployment for the years 2005-12 constructed using CPS data makes this point clearly.

While job-finding rates for unemployed individuals decline with the length of the unemployment spell, they are largely flat for durations above 12-15 months. At the same time, the job-finding rates for the expansion years of 2005-07 generally lie above the job-finding rates in the recession years of 2008-10 and the recovery years of 2011-12, indicating cyclicity in job-finding rates. Nevertheless, the difference in job-finding rates in expansion and recession years essentially disappears at durations longer than 12-15 months. This likely explains why Song and von Wachter find no cyclicity in the re-employment probabilities of the LTNE.

Second, while LTNE solves the recall and self-reporting problems associated with survey data, it suffers from other problems leading to potentially imprecise measurement of incidence and duration. Notably, the LTNE measure misses individuals with nonemployment spells

Chart 5
Monthly Job-Finding Rates
(Unemployment-to-Employment Transitions)



Source: Valletta (2013).

overlapping two calendar years. Consider as an example a worker employed in January 2009, losing her job in February 2009 and resuming employment in December 2010. She will not be counted in the baseline one year to two year LTNE despite she has a 22-month non-employment spell. Moreover, the shorter the length of the spell, the less likely it will cover a full calendar year and thus the more likely it will be missed. If true re-employment rates are higher in expansions, the incidence and duration of LTNE will exhibit a pro-cyclical bias. This makes it even more challenging to explain why there is no pro-cyclicality in their measured re-employment rates. Furthermore, LTNE misses individuals nonemployed with “false” positive earnings. For example, a worker losing a job in December 2009 may still show records of earnings associated with the lost job in early 2010 because of severance or other deferred payments. The “zero earnings threshold” to determine nonemployment is very strict. The authors should explore sensitivity to less strict thresholds (for example earnings down to less than 10 percent) and conduct a battery of robustness checks.

Conceptually, LTNE has advantages and disadvantages. The key idea behind LTNE is that the distinction between unemployment and nonparticipation may not be as meaningful as survey data may

suggest. In fact, the primary interpretation for the incidence of long-term nonemployment being similar across, say, the 1980 and the 2007 downturns is the effect of extended unemployment benefits in the Great Recession. According to this idea, extensions of unemployment insurance may have induced some individuals to declare they are unemployed in the recent recovery only to collect benefits, resulting in the exceptional incidence of long-term unemployment. However, unemployment insurance extensions may also have kept some nonemployed truly attached to the labor force, in which case the distinction is actually meaningful. At the same time, it is certainly desirable to pool together unemployed and involuntary nonparticipants who may potentially return to employment, for example workers who have not looked for work recently because of discouragement. Nevertheless, it is not appropriate to include nonparticipants who voluntarily exited for reasons unrelated to the economic downturn, for example retired workers or nonparticipants because of family responsibilities. This is particularly problematic because there are secular trends in these components of participation that may affect the incidence and duration structure of LTNE and make the comparison across different downturns meaningless. For example, the somehow lower re-employment rates that the authors estimate in the latest recession relative to the downturn of the 1980s, may be partly explained by the downward trend in participation due to the baby boom generation reaching retirement age in recent years.

Finally, the LTNE measure does not include new labor force entrants, as it only accounts for workers who have been employed at some point in the sample, missing, for example, young prime-age workers out of school. On one hand, young prime-age workers may be overrepresented among the long-term unemployed and missing them may be problematic. On the other hand, the trends associated with new labor force entry will affect the evolution of the employment rate without being reflected in the LTNE measure. For example, the upward trend in participation in the 1980s associated with the baby boomers reaching their prime age together with continuing labor force entry of women may have contributed to the recovery of the employment rate in the aftermath of the 1980s downturn, obscuring the comparison with the recent downturn.

A general point is that survey data provide us with valuable information on the reasons people find themselves in a given labor market state and these reasons may be highly informative of the structural versus cyclical forces behind changes in nonparticipation.

To sum up, if I had to summarize this paper's results in one sentence, that sentence would be "re-employment rates of long-term nonemployed workers do not look different enough across downturns to suppose that the Great Recession may have led to long-lasting declines in employment." To make the conclusions stronger than that, one would need to gain more confidence in what LTNE is actually measuring.

III. Monetary Policy Implications of Long-Term Unemployment and Nonparticipation

Let me now turn to the implications for monetary policy of persistent cyclical movements in either long-term unemployment or nonparticipation caused by a deep and prolonged downturn.

The key idea here is that the cyclical long-term unemployed and nonparticipants may not permanently exit the labor force (because they are still able and willing to work), broadly in line with the results in von Wachter's paper. At the same time, though, they may have less leverage on wage demands and less influence on inflation than other labor market participants (because they are less able, perhaps because of discrimination, or less willing, because of discouragement, to search and compete for jobs).

Consistent with this view, a number of studies have found evidence that wage growth and price inflation are little affected by the long-term unemployment rate and that wage and price Phillips curves are more stable if the short-term unemployment rate is used instead of the overall unemployment rate. This literature goes back in time for Europe where long-term unemployment has emerged since the 1980s and has recently also looked at the U.S.³ In the U.S., the hypothesis that long-term unemployed workers exert little pressure on the setting of wages and prices has recently been proposed as one of the reasons why conventional price and wage Phillips curves predicted lower price inflation (or higher deflation) and lower wage

growth than what has been observed during the Great Recession and its aftermath.⁴ While the evidence on long-term unemployment is not conclusive, other studies have recently started to investigate empirically whether measures of cyclical nonparticipation exert at all some influence on wages and prices.⁵ I will go back to this extremely recent literature in the last section of these remarks.

According to the idea above, there may then be a separation between: 1) the measure of employment slack that is relevant for assessing full employment; and 2) the measure of employment slack that is relevant for assessing wages and inflationary pressures, with the first measure typically encompassing the second measure. This point is made explicitly in a recent paper by Rudebusch and Williams (2014) focusing on long-term unemployment, and less explicitly, but with analogous underlying logic, in another recent paper by Erceg and Levin (2013) focusing on nonparticipation, and has interesting consequences for the effects and the conduct of monetary policy. Within a simple New Keynesian framework, this separation would imply that the measure of employment slack entering the central bank's objective function comprises the cyclical components of long-term unemployment and nonparticipation, while the measure of employment slack entering the Phillips curve does not, or does only partially.

The wedge that arises between the two measures of slack then generates monetary policy trade-offs that are absent in standard macroeconomics models because the cyclical components of the long-term unemployment and participation rates display inertial dynamics. Specifically, a deep and prolonged downturn increases the incidence of long-term unemployment; once individuals have become long-term unemployed their re-employment prospects worsen (because of reduced search intensity and discrimination) and long-term unemployment persists for some time despite improving overall labor market conditions. Similarly, a severe and persistent downturn causes a large cyclical inflow into nonparticipation; once individuals have early-retired, or taken disability insurance, their re-employment prospects worsen as the costs of re-entering the labor force are high and the cyclical drop in participation persists despite a recovery elsewhere.

Consequently, the central bank cannot stabilize both measures of employment gap at the same time, that is, it cannot simultaneously stabilize inflation and employment. In such cases, the central bank will have to balance deviations of inflation and employment from their respective targets for some time. In particular, when the measure of slack that is relevant for the employment mandate is temporarily larger than the measure relevant for the price stability mandate—a plausible description of the current labor market state in the U.S.—optimal policy implies that inflation should overshoot the target for some time. This closes the employment gap relevant for the employment mandate more quickly.

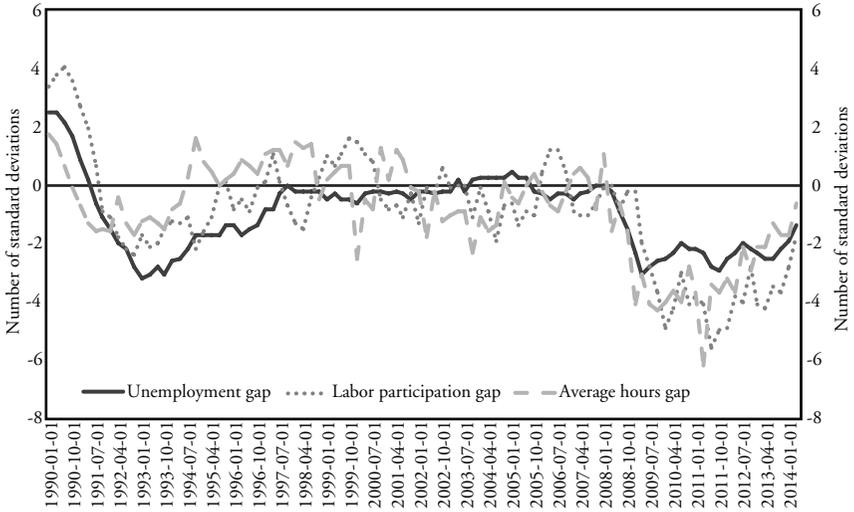
IV. Open Questions and Avenues for Future Research

Under deep and prolonged downturns, there are good reasons to consider broader measures of labor underutilization than just the unemployment rate to assess the state of the labor market. As illustrated by Chair Yellen in her remarks at this symposium, the Fed has fully embraced this approach. In a similar vein, the Bank of England decomposes a full-time equivalent employment gap into an unemployment gap (which can be further decomposed into a short- and long-term unemployment gaps), a participation gap and an average hours gap. The latter captures employed workers who would like to work more hours, for example part-time workers who would like a full-time job. This is shown in Chart 6 that reproduces Chart 3.12 from the Bank of England Inflation Report, August 2014. The chart shows that all components have contributed to employment slack since 2008.

Broadly speaking, this decomposition aims at capturing similar information as the one contained in the U6 labor underutilization measure published by the BLS for the U.S., counting unemployed, plus marginally attached persons, plus employed part-time for economic reasons, as a percent of the effective civilian labor force. Chart 7 shows that all components of U6 have raised significantly relative to their pre-recession level and have not yet fully recovered.

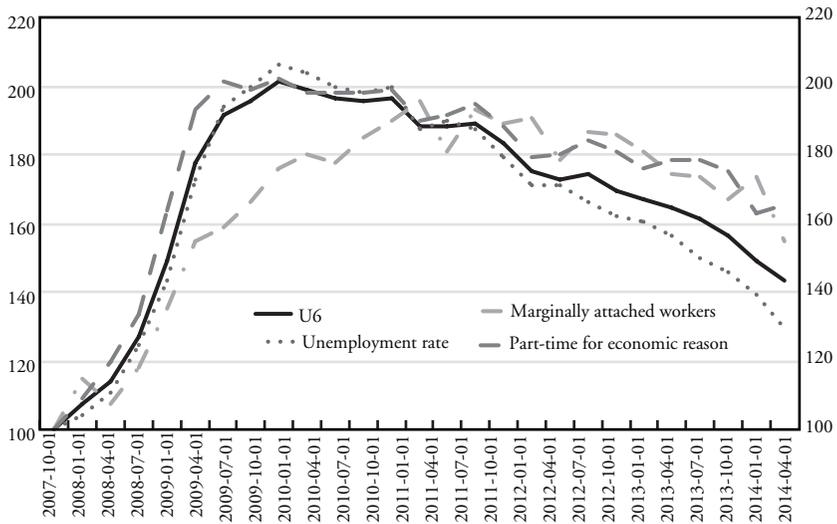
The next relevant question for monetary policy is then the extent to which the different components of the employment gap exert pressures on wages and prices. While an emergent body of research studies empirically the relative impact of long-term and short-term

Chart 6
Components of Labor Market Slack, U.K. 1990:Q1-2014:Q2



Source: Bank of England Inflation Report (2014).

Chart 7
U6 and Components, Relative to Peak, 2007:Q4-2014:Q2



Source: Bureau of Labor Statistics.

unemployment on wages and inflation, yet with unsettled results as noted previously in these comments, there is limited or no work evaluating empirically the effects of different categories of nonparticipation, for example discouraged workers, or the effects of part-time workers, on wage and price inflation.⁶

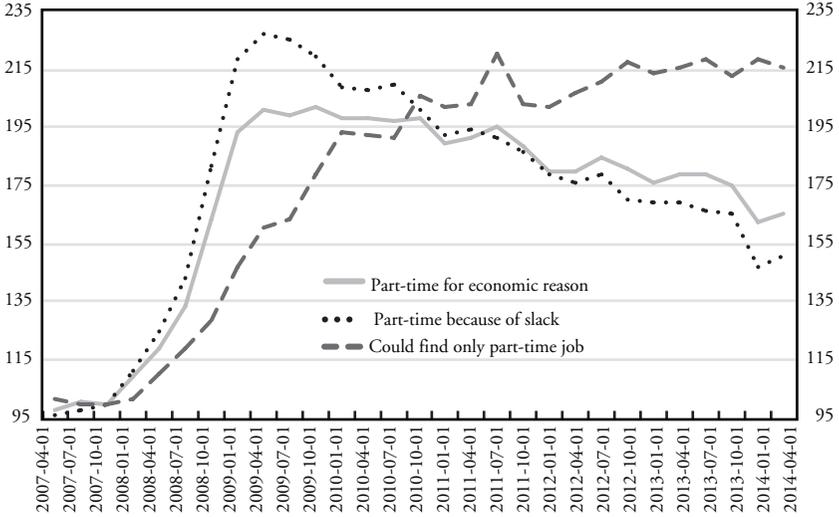
Alongside, efforts should be directed to understanding the mechanisms behind these different effects. One may ask, for example, if the pressure that part-time workers exert on wages depends on the reason they enter and exit part time.⁷ If a worker is employed part time because of slack or business conditions that have induced her employer to downgrade her workweek, she is likely to move back to a full-time workweek within the same firm, at the same hourly wage. In this case, she may exert little downward pressure on wages. If instead she works part time because she could not find a full-time job, she more likely will search for a full-time job at a different firm, and her influence on wages may be more significant. Chart 8 shows that the share of part-time workers in the labor force because of slack is gradually moving back toward its pre-recession level, while the share of workers who could only find part-time jobs remains elevated.

In similar ways as employed workers part time may exert pressures on wages, employed workers searching on-the-job may also do. While there are no direct measures of on-the-job search, one plausible assumption is that on-the-job search is pro-cyclical. A slack labor market makes it harder for employed workers to find jobs during recessions, reducing the attractiveness of on-the-job search.⁸ Pro-cyclical search while employed may contribute to explain pro-cyclical quits, with quits largely associated with job-to-job transitions.

The quit rate has gained much attention in both recent theoretical and empirical research and is among the labor market indicators that policymakers, including the Fed, have been looking at more carefully. Chart 9 shows that the quit rate has decreased from a pre-recession level of above 2 percent to below 1.5 percent and has not yet recovered to its pre-recession level according to the latest JOLTS estimates.

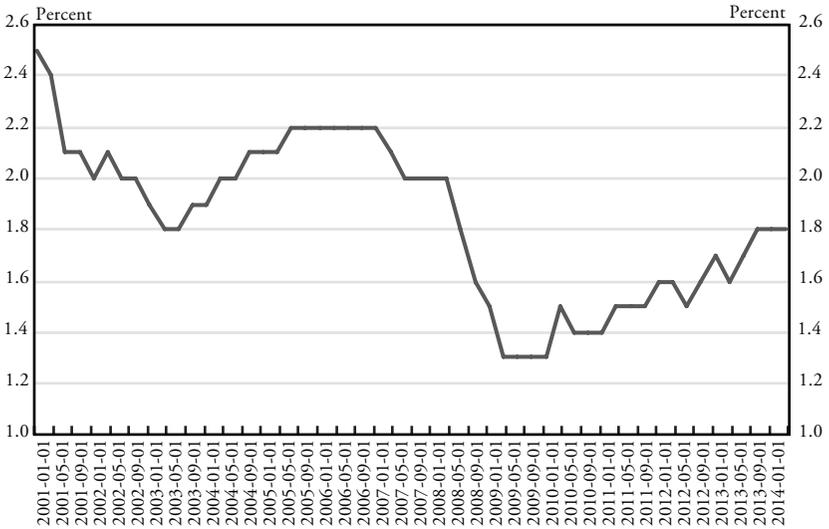
Whether on-the-job search puts upward or downward pressures on wages is, however, not clear. Workers searching on-the-job raise the

Chart 8
Part-Time for Economic Reason, Relative to Peak
2007:Q2-2014:Q2



Source: Bureau of Labor Statistics.

Chart 9
Quits Rate, 2001:Q1-2014:Q2



Source: Bureau of Labor Statistics.

pool of potential candidates available for job openings, thus exerting downward pressures on wages. At the same time, on-the-job search may induce firms to compete for workers, putting upward pressure on wages. Finally, on-the-job search may allow workers to move to better quality matches raising in this case a broader measure of full employment that also captures the efficient matching of workers and firms.

Endnotes

¹See Krueger and Mueller (2011) for evidence on search intensity and Ghayad (2013) and Kroft, Lange and Notowidigdo (2012) for evidence on discrimination.

²Fujita (2014) calculates from CPS data that the probabilities of rejoining the labor force for retired and disabled individuals are positive but small, around 2-2.5 percent. Further, the rules of pension payments in case of re-entry are often complicated, giving a reason why large re-employment of early-retired workers is unlikely. At the same time, early retirement will cause a lower inflow into retirement when the labor market recovers than what would have been predicted by the age structure of the population. The Social Security Disability Insurance program is often criticized for providing incentives to remain out of the labor force permanently. However, individuals who went on disability because of the severity of the Great Recession may face different incentives.

³Llaudes (2005) estimated Phillips curves for 19 OECD countries and found that long-term unemployment is less significant as a determinant of price and wage inflation than short-term unemployment in many of those countries.

⁴For the U.S., see recent work in Stock (2011); Gordon (2013); Krueger, Cramer and Cho (2014); the Council of Economic Advisers (2014a); Watson (2014) and Rudebusch and Williams (2014).

⁵Kiley (2014) and Smith (2014) use cross-city and cross-state variations to show that short- and long-term unemployment exert comparable pressure on price and wage inflation. They argue it may be hard to statistically distinguish separate effects of short- and long-term unemployment using aggregate data because in the U.S. these two measures have evolved closely together in the last few decades before the Great Recession.

⁶A few recent analyses in that direction are Blanchflower and Posen (2014) and Smith (2014). A result that seems to emerge from these analyses is that nonparticipants (especially discouraged workers) also exert some pressure on wages and prices. Smith (2014) further shows that part-time workers for economic reasons exert downward pressures on wage growth. See also Altig and Higgins (2014) on part-time workers for economic reasons.

⁷In the Current Population Survey, persons at work part-time for “economic reasons” are further classified as either part time because of “slack work or business conditions” or part time because they “could only find part-time work.”

⁸See Barlevy (2005) and Gertler, Huckfeldt and Trigari (2014).

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