

July 23, 2009

Unemployment rate: Count me surprised

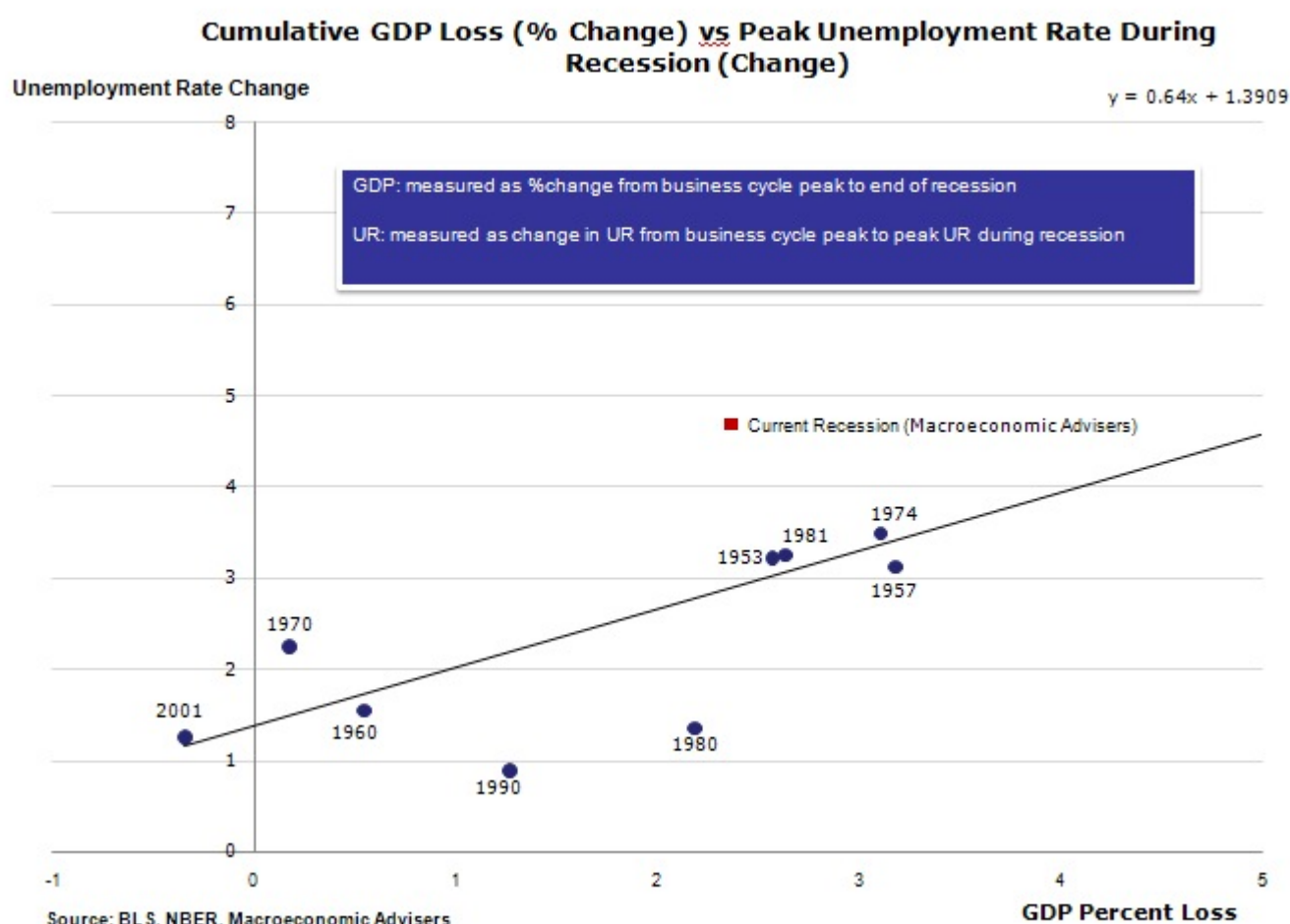
[Brad DeLong has taken a look](#) at the job market and is counting himself among the economists who admit that, "Well, I just got it wrong." According to DeLong:

"... the rise in the unemployment rate during a recession should be a fraction of the decline we see in GDP relative to trend. According to Okun's Law, the unexpected extra 1.2 percent decline in real GDP in 2009 should have been accompanied by a 0.5 or 0.6 percentage-point rise in the unemployment rate. Instead, we experienced a 1.5 percentage point rise in the unemployment rate. I confess this comes as a surprise to me, but it shouldn't. Because evidence has been mounting that Okun's Law is broken—especially with regard to the retention of workers in a downturn."

I share Professor DeLong's surprise at the unemployment rate's response to this recession. Though [I have never had a lot of faith in Okun's Law as a predictive device](#), I believe DeLong may be just a little too harsh on himself (and by extension, I guess, me) for not hitting the mark on unemployment prognostications. From what we know at the moment, the unemployment/GDP correlation is going to deviate from any other postwar experience by a fair margin. As noted [in today's Wall Street Journal](#):

"Breaking from historical patterns, the unemployment rate—currently at 9.5%— is one to 1.5 percentage points higher than would be expected under one economic rule of thumb, says Lawrence Summers, President Barack Obama's top economic adviser. Since the recession began in December 2007, the economy has lost 6.5 million jobs, 4.7% of total employment. The unemployment rate has jumped five percentage points, while the economy has contracted by roughly 2.5%."

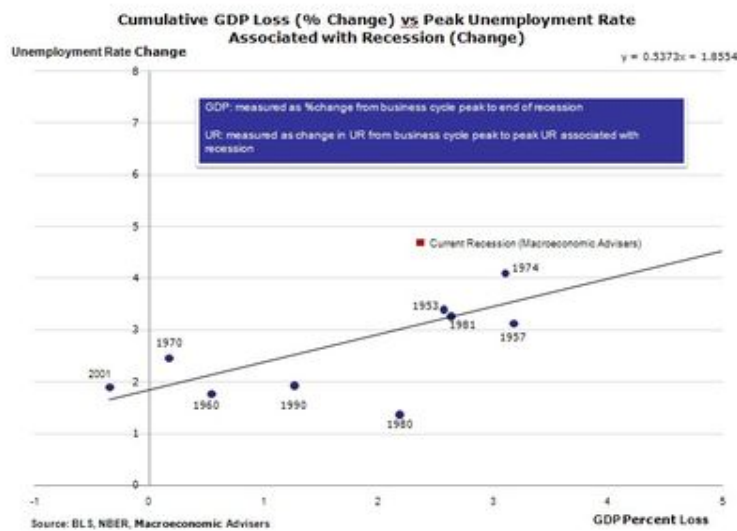
Below is a chart that illustrates the point. It plots the peak change in the unemployment rate during recessions (which has always been the unemployment rate change from the beginning to the end of the end of the recession) against the cumulative percent loss in GDP in those recessions. (In the chart, the blue dots represent the experience in each postwar recession. The red square represents the current downturn, making the assumption that GDP growth in the second quarter will be -0.5 percent and the recession will end sometime in the third quarter. For the sake of the exercise, I pulled these figures from [Macroeconomic Advisers](#), the forecasting group run by former Federal Reserve Gov. Larry Meyer.)



The line in the graph above represent the simple statistical estimate of the relationship between changes in the unemployment rate and the cumulative GDP loss during each recession. Using this estimated Okun's Law, you would have guessed that the

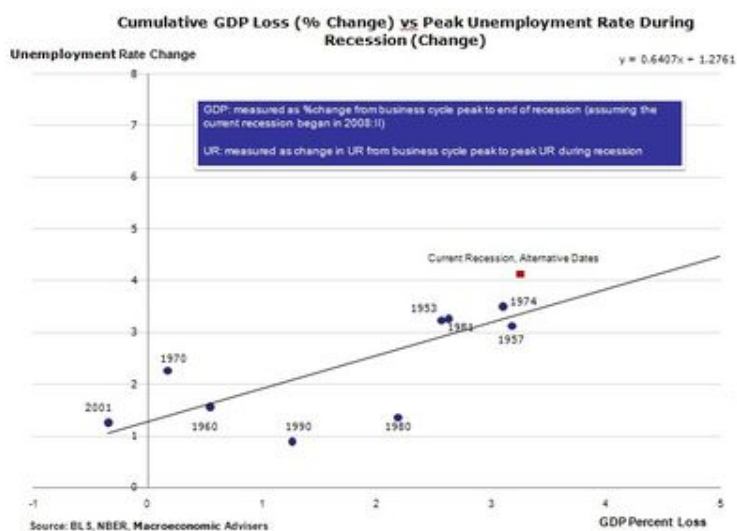
unemployment rate would have risen by about 2 percentage points. In other words, the best guess for the unemployment rate would be in the neighborhood of 7 percent, not 9.5 percent.

There are a couple of caveats to this analysis, of course. One is that, as is often noted, unemployment is a lagging indicator, so the peak in the unemployment rate can come *after* the recession ends. This caveat changes the picture somewhat (and misaligns the unemployment and GDP data), but not by a lot.



The second caveat is that there may eventually be revisions to GDP that make the recession look deeper than it appears at the moment, which would move the current episode closer to historic norms. On the other hand, the charts above assume that the unemployment rate will peak at 9.5 percent, which is not a certainty at the moment. ([The "central tendency" projections published by the Federal Open Market Committee](#) suggest that the rate will peak in the 9.9 to 10 percent range.)

Setting aside the possibility of any substantial revision in the data, perhaps one of the questions in the end will be whether [the National Bureau of Economic Research Business Cycle Dating Committee](#) was somewhat overaggressive in choosing December 2007 as the beginning of the recession. Though currently measured GDP growth was negative (barely) in the fourth quarter of 2007, GDP did not turn persistently negative until the third quarter of 2008. If we were to assume that the business cycle peak was actually in the second quarter of 2008, the picture would look like this:



With this alternative timing for the recession, the Okun's Law miss on the unemployment rate projection would have still been to the downside, but the error is quite a bit less dramatic than you get with the official recession dating.

In any event, I'm quite sympathetic to DeLong's theme that the dynamics of U.S. labor markets coming out of recessions appear to have changed starting with the 1990–91 economic contraction. And it might be hard for many people to argue with DeLong's point that the U.S. economy is likely headed toward another so-called "jobless recovery." But until more facts are in and we're able to look back on what transpired, I think we still, at this point, must reasonably count the current run-up in the unemployment rate as a puzzle.

Update: Casey Mulligan (University of Chicago) writes:

There are a host of public policies that discourage the earning of income, and do so more than they did before the recession. IMO, that's why Okun's law is broken.

[More at his blog.](#)

By [David Altig](#), senior vice president and research director at the Atlanta Fed

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