Paul Krugman Denies Having Concurred With an Administration Forecast: A Note

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LINK TO ABSTRACT

My September 2012 article in *Econ Journal Watch* (Cushman 2012) began by chronicling a series of reports and blog entries:

1. The optimistic February 2009 forecast by the Council of Economic Advisers (2009);
2. Greg Mankiw's (2009a) skeptical blog entry about the forecast;
3. Brad DeLong's (2009) blog entry that scoffs at Mankiw and says that the CEA forecast "is certainly the way to bet";
4. Paul Krugman's (2009b) blog entry following up on those of Mankiw and DeLong;
5. A second blog entry by Mankiw (2009b), which interprets Krugman (2009b) as joining DeLong in concurring with the February CEA forecast and proposes to Krugman that they (Mankiw and Krugman) bet on the matter.

I interpreted Krugman (2009b) as Mankiw (2009b) did, and then put forward a hypothetical scenario: What if an econometrician had applied some standard forecasting procedures at the time of this exchange? I found that the hypothetical econometrician's results would have supported Mankiw's skepticism.

Immediately after my *EJW* paper appeared, Krugman responded in his blog (Krugman 2012) that concurrence with the CEA forecast had not been his position at all and that I must have had "the need to make stuff up." In this note I provide a reaction to Krugman. So the reader knows exactly what I am reacting to, here

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is the entire text of Krugman's blog entry of 24 September 2012 (hyperlinks as in original):

> I guess I should take it as a compliment that people who want to attack my record feel the need to make stuff up. Greg Mankiw posts the abstract of a piece claiming that Brad DeLong and I endorsed the early, optimistic Obama administration forecast for unemployment and growth. What? I was famously pessimistic at the time:
>
>> [David Sipress (2009) cartoon of a doomsaying Krugman on a street corner]
>
> And here's what I wrote [Krugman 2009a, January 10] when the forecast came out:
>
>> One more point: the estimate of what would happen to the economy in the absence of a stimulus plan seems kind of optimistic. The chart above has unemployment ex-stimulus peaking at 9 percent in the first quarter of 2010 and coming down through the year; the CBO estimates an average unemployment rate of 9 percent for 2010, so the Obama people are more optimistic than the CBO, and a lot more optimistic than I am.
>
> Brad tells me that the author of the piece also doesn't know what Okun's Law is.
> Better trolls, please.

Had Professor Krugman read just the first two pages of my paper, he would have learned that I was dealing with not the January CEA forecast and January blog entries by DeLong and Krugman, but rather the February 2009 CEA forecast and March blog entries. Krugman could then have commented on the apparent contradiction between his recovery-pessimistic entry of 10 January 2009 and his seemingly more recovery-optimistic entry of 3 March 2009.[2]

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2. The January forecast (Romer and Bernstein 2009) that Krugman referred to in January (Krugman 2009a) focused on labor market conditions and only briefly on real GDP itself. Krugman (2009a) included Romer and Bernstein's Figure 1. The figure shows estimated unemployment rates through the beginning of 2014 without and with the incoming administration's proposed recovery plan. The recovery-plan unemployment rates in Office of Management and Budget (2009), which lay behind the February 28 CEA (2009) report, are slightly less optimistic than the January recovery-plan unemployment rates in Romer and Bernstein (2009). Thus it is logically possible that Krugman could have thought the recovery plan too optimistic in January but not in late February. I think, however, that these unemployment-forecast revisions were too small to have been a factor behind Krugman's March 2009 blog entry.

In my *EJW* paper, I quoted parts of Krugman's 3 March 2009 blog entry, but, for as much clarity as possible, here I quote the entire entry (italics added for future reference; links as in original):

As Brad DeLong says, sigh. Greg Mankiw challenges the administration's prediction of relatively fast growth a few years from now on the basis that real GDP may have a unit root—that is, there's no tendency for bad years to be offset by good years later.

I always thought the unit root thing involved a bit of deliberate obtuseness—it involved pretending that you didn't know the difference between, say, low GDP growth due to a productivity slowdown like the one that happened from 1973 to 1995, on one side, and low GDP growth due to a severe recession. For one thing is very clear: variables that measure the use of resources, like unemployment or capacity utilization, do NOT have unit roots: *when unemployment is high, it tends to fall. And together with Okun's law, this says that yes, it is right to expect high growth in future if the economy is depressed now.*

But to invoke the unit root thing to disparage growth forecasts now involves more than a bit of deliberate obtuseness. How can you fail to acknowledge that there's huge slack capacity in the economy right now? *And yes, we can expect fast growth if and when that capacity comes back into use.*

With the words "As Brad DeLong says, sigh" and a link to DeLong (2009), Krugman opens the entry by aligning himself with the DeLong blog entry expressly supporting the Administration forecast. At two points in his entry, Krugman injects "yes." In both cases the "yes" is an affirmation of DeLong's outlook.

As unemployment was high in early March 2009, it is further reasonable to infer Krugman's support of the CEA forecast from the italicized phrases in his second paragraph. They follow an emphatic statement that unemployment does not have a unit root, and they essentially restate the CEA's February 2009 argument: "But, a key fact is that recessions are followed by rebounds. Indeed, if periods of lower-than-normal growth were not followed by periods of higher-than-normal growth, the unemployment rate would never return to normal" (2).

Krugman concludes the blog entry with a somewhat ambiguous "if and when" statement.[3] If the "if" rules and not the "when," then Krugman's final

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3. For discussion of the ambiguity or undesirability of using "if and when," see Fowler (1908, part II, no. 42).

sentence means that unemployment might *not* fall back to normal, making the previous sentence about "huge slack" somewhat irrelevant and contradicting the previous paragraph.

I was not the only one to interpret Krugman (2009b) as concurring with the CEA. First there was, of course, Mankiw himself (2009b). Almost simultaneously, Econbrowser's Menzie Chinn (2009) referred readers to bloggers Stefan Karlsson (2009) and Tom Maguire (2009), who both did so. And there were Leigh Caldwell (2009), *New York Magazine*'s Dan Amira (2009), and, a few days later, the editors of the *Washington Times* (2009), followed by Bryan Caplan (2009)[4] and Steve Verdon (2009). As I noted in my article (Cushman 2012, 311), Krugman made no response to Mankiw, and he did not write about anyone having misinterpreted his blog entry that began, "As Brad DeLong says, sigh."

Krugman brings up Okun's Law near the end of his more recent (2012) blog entry, apparently to cast extra doubt on my article. As can be seen above, Okun's Law was central to Krugman's (2009b) discussion of the likelihood of recovery, which followed his approving reference to DeLong (2009). In that entry, DeLong had used Okun's Law (without explicitly naming it) as the basis of a forecasting model deployed to further his chastisement of Mankiw. But, as I will conclude by showing, the DeLong model's specification and empirical fit were inferior to, and the model has yielded poorer forecasts than, the vector-autoregression (VAR) model of the hypothetical econometrician in Cushman (2012)—a model that is also related to Okun's Law. And the DeLong model's forecasts fare even worse relative to the other forecasts made by the hypothetical econometrician.[5]

DeLong's (2009) model is a VAR set out in two graphs that contained unemployment and GDP growth data and corresponding regression lines.[6] DeLong did not lay out the corresponding equations, but they are:

$$y_t - y_{t-8} = a + c_8 un_{t-8} + \varepsilon_{1,t} \tag{1}$$
$$un_t - un_{t-8} = d + f_8 un_{t-8} + \varepsilon_{2,t} \tag{2}$$

where y = log of real GDP and un = the unemployment rate.

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4. The interpretation of Krugman (2009b) as effectively concurring with the CEA forecast was contested by a commenter on Caplan's blog entry (Charlie 2009).

5. The hypothetical econometrician produced his other forecasts with an autoregressive integrated moving-average (ARIMA) model, which is not related to Okun's Law as it depends only on past real GDP and not on past unemployment rates (Cushman 2012, 313).

6. The two graphs may no longer be available through DeLong's website, but they can be seen at the Internet Archive's copy of DeLong's entry (**link**).

Meanwhile, I derived a VAR that, after consolidating various terms and generalizing to account for the accompanying discussion of serial correlation (Cushman 2012, 318), becomes:

$$y_t - y_{t-1} = a + \sum_{i=1}^{k} b_i(y_{t-i} - y_{t-i-1}) + \sum_{i=1}^{k} c_i un_{t-i} + \varepsilon_{1,\,t} \qquad (3)$$

$$un_t = d + \sum_{i=1}^{k} e_i(y_{t-i} - y_{t-i-1}) + \sum_{i=1}^{k} f_i un_{t-i} + \varepsilon_{2,\,t} \qquad (4)$$

This VAR is a model of the relationship between economic growth and unemployment that allows various adjustment patterns through time. It is thus a dynamic Okun's Law model. (Like DeLong in his blog entry, I did not mention the connection to Okun's Law in my article.) I then estimated all the VARs defined by lag orders $k = 0$ to 4 for each variable in each equation, giving a total of 625 models. The models were used to generate forecasts that were averaged using AIC and BIC weights.

DeLong's VAR contains a longer lag (the eighth) than my own VARs, which might be good, but otherwise equations (1) and (2) impose odd restrictions compared with standard VARs such as my own. The first restriction is that responses to events less than eight quarters old are not estimated. The second is that responses to past fluctuations in real GDP are not estimated. The consequence of these omissions is that period-to-period persistence in real GDP and unemployment is unlikely to be effectively captured by the model. Thus, the model can be expected to underestimate persistence and, in response to a recession, to forecast a larger rebound than otherwise.[7] Another issue is that DeLong's regression estimates were computed using the data from the entire post-World War II period, and thus the estimates will be biased by the problem of structural instability in Okun's Law discussed by Edward Knotek (2007). In my article, I tried hard to select a start date for my estimation period that would avoid the problem.

But let's find out exactly how the DeLong VAR would have performed, compared with my own VAR approach, had it been estimated in March 2009 by the hypothetical econometrician I posited in my article. I'll use both DeLong's full, post-war estimation period of 1950:1–2008:4 and the one in my article of 1986:3–2008:4.[8] The first key finding is that the DeLong model's AIC and BIC

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7. The presence of overlapping data in DeLong's equations means their residuals will also contain moving-average serial correlation, MA(8) in this case.

8. In conducting this new analysis, I again used TSP 5.1; code to create the graph (Figure 1) and compute the AIC and BIC values (footnote 9) is available via econjwatch.org (**link**).

values are both far larger (meaning the model is far less preferred) than the AIC and BIC values for any of the more than 600 Cushman VARs, regardless of sample period.[9] According to these criteria, the DeLong specification is extraordinarily poor as a dynamic Okun's Law model. This could have easily been detected in 2009.

Let's move on to forecasts. They are given in Figure 1. The DeLong model forecasts for the two estimation starting dates are given by turquoise green line labeled "DeLong '50 start" and the olive green "DeLong '86 start." Figure 1 also shows the forecasted DeLong long-run trend lines. For comparison, Figure 1 also includes some results from Figures 1 and 2 in Cushman (2012): the hypothetical econometrician's forecasts (VAR and ARIMA, including the long-run trend forecasts for 2014), the CEA forecast, and recent actual real GDP values.[10]

Figure 1. Forecasts and other values

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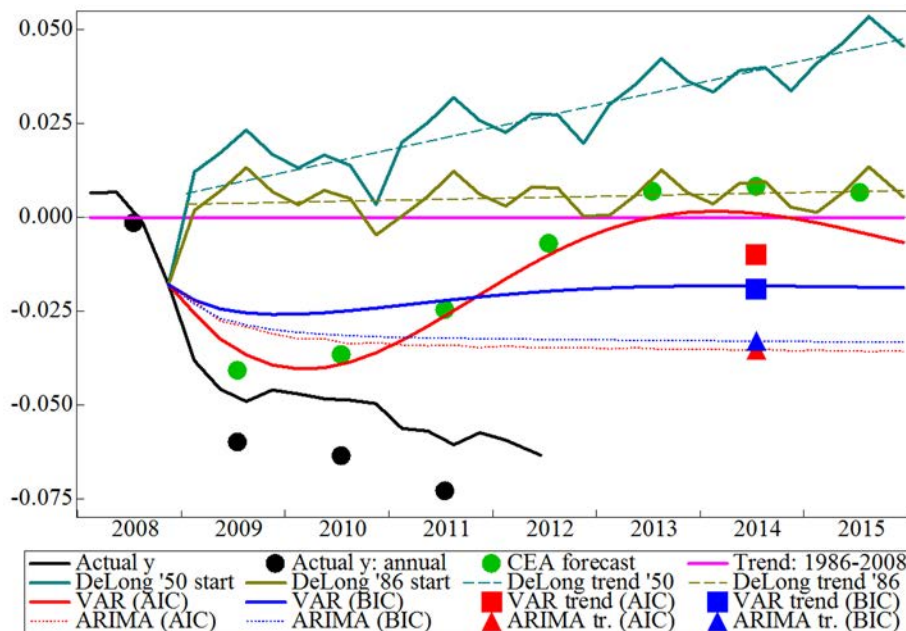
9. To give the reader an idea of the magnitudes involved, here are the results for 1986:3–2008:4 estimation period: The DeLong model AIC value is −833.5 whereas the Cushman AIC values range from −1295.1 to −954.4 over 623 models. The DeLong model BIC value is −823.5 whereas the Cushman BIC values range from −1289.1 to −961.0.

10. In Cushman (2012, 323), I explain the discrepancy between the quarterly and annual actual real GDP values in the graph.

In contrast to my hypothetical econometrician's forecasts, the DeLong model forecasts show immediate and complete rebounds from the recession conditions at the end of 2008. For 2013 (the bet year proposed by Mankiw), the "DeLong '86 start" forecast is in very close agreement with the CEA forecast. And the "DeLong '50 start" forecast from the full, postwar estimation period that DeLong used is even more optimistic, reflecting its higher long-run growth rate. This is certainly consistent with DeLong's belief that the CEA forecast was "certainly the way to bet" (2009). Finally, comparison with the now-known, post-2008 real GDP values shows that the hypothetical econometrician's forecasts in Cushman (2012), while insufficiently pessimistic, would have proven more accurate than the DeLong model forecasts.

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