A (simple) justification for Carney’s “7% unemployment rate threshold”

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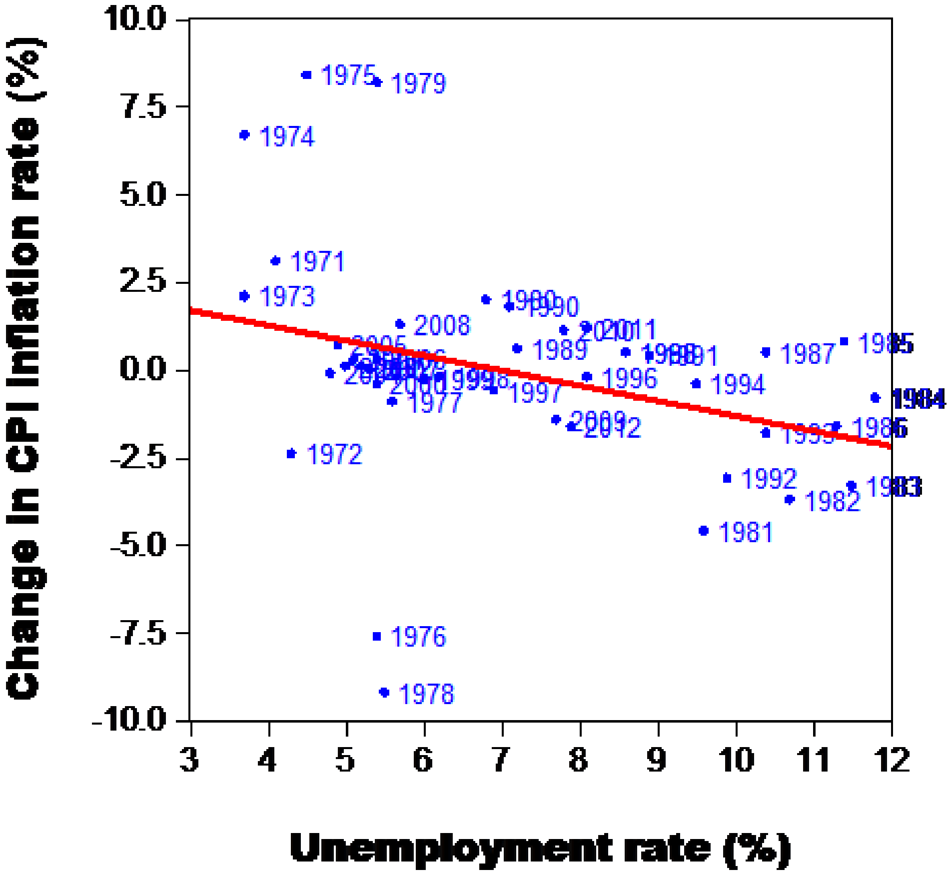
Looking at the change in the UK inflation rate against the UK unemployment rate over the 1971-2012 period, **Costas Milas** *examines the implications of the Bank of England’s forward guidance and why the 7% threshold was chosen. The empirical results offer support to the recent decision by Mark Carney and his MPC colleagues.*

> *Historical inflation and unemployment rates confirm that inflationary pressures rise dramatically when unemployment falls below the 7% threshold.*

In early August, newly appointed Bank of England Governor Mark Carney and his Monetary Policy Committee (MPC) colleagues announced that monetary stimulus (in the form of a low policy interest rate and/or Quantitative Easing injections) will remain in place (at least) until the UK unemployment rate drops from the current 7.8% level to 7%. This, as long as inflation and/or inflation expectations do not “take off”. Why did the Bank of England Governor choose the 7% “threshold” and what are (if any) the implications of such a decision for UK inflation?

To answer these questions I rely on historical UK inflation and unemployment rate data. Figure 1 plots, using annual data, the change in the UK inflation rate against the UK unemployment rate over the 1971-2012 period. Notice that I have super-imposed a simple linear regression line which suggests that high inflation is associated with low unemployment (and vice versa).

Figure 1: Change in the UK inflation rate against the UK unemployment rate, 1971-2012



This trade-off between inflation and unemployment rates is known as the Phillips curve. Arguably, the model is too simple to capture the (complex) relationship between inflation and unemployment. Before dealing with this issue, however, I note that the historical average of the UK unemployment rate is 7.2% (its median is 6.85%). In other words, the 7% “threshold” chosen by Mark Carney and his MPC colleagues is pretty consistent with what UK economic history (over the last 40 years or so) suggests.

MPC policy-makers (seem to) worry that inflation pressures “take off” when the unemployment rate falls below the “7% threshold”. To test this hypothesis, I rely on a regime-switching backward-looking Phillips Curve which allows for the impact of unemployment on inflation to vary depending on whether the unemployment rate is higher or lower than the 7% threshold (for those interested in the technical model, I estimate an inflation equation where inflation depends on an intercept term, lagged inflation, and lagged unemployment with the latter changing impact above or below 7%). The empirical results offer support to the recent decision by Mark Carney and his MPC colleagues. To summarise:

Above the 7% unemployment rate threshold, a drop in the unemployment rate from its current 7.8% level to 7.3% puts a very gentle upward pressure on inflation by (only) 14 basis points (that is, inflation increases from its current 2.8% level to 2.94%).

On the other hand, the impact turns quite dramatic once unemployment falls below the 7% threshold (in which case the economy shows signs of significant “over-heating”). In this case, a drop in the unemployment rate from 7% to 6.5% puts a dramatic pressure on inflation as the latter shoots up by a full percentage point.

All the above offer overwhelming support to the decision by Mark Carney and his MPC colleagues to “watch out” for the 7% unemployment rate threshold. Needless to say, a sceptical reader might question the 7% threshold on the grounds that it has been an arbitrary choice. After all, Ben Bernanke and his Federal Reserve colleagues have chosen to provide further monetary stimulus until the US unemployment rate drops to 6.5%. To deal with this point, I allow the data to decide. That is, I allow for the threshold to be jointly estimated with the impact of unemployment on inflation. Doing so delivers an unemployment rate threshold of 6.8% which is pretty consistent (both numerically and statistically) with the 7% threshold.

Note: This article gives the views of the author, and not the position of the British Politics and Policy blog, nor of the London School of Economics. Please read our comments policy before posting.

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