

Discussion of Blanchard, Cerutti, and Summers, “Inflation and Activity”

Laurence Ball*

Johns Hopkins University

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*Sandeep Mazumder collaborated on the empirical work that I report.

Hysteresis

- Provocative yet sensible and balanced analysis. More research needed.
- When researchers look for evidence of hysteresis, they over-achieve: measured effects are so strong they are hard to believe (super-hysteresis).
- A shred of a rationale for super-hysteresis: a recession reduces formation of new firms, which introduce new technologies (Haltiwanger et al., 2013).
- Policy implication: success at hitting an inflation target is consistent with poor economic performance, *even in the long run*. Monetary policy with a single mandate is badly flawed.

Inflation and Unemployment

- Provocative but less sensible analysis.
- Reality check:

What would happen to unemployment and inflation if the ECB suddenly raised its interest-rate target by 300 basis points?

What would happen to unemployment and inflation if the ECB reduced its target by 300 basis points?

It may be difficult to control inflation, but the reason is the zero bound on interest rates, not a breakdown of the Phillips curve.

A simple empirical exercise

Estimate a Phillips curve:

$$\pi = \pi^e + \alpha x + \varepsilon, \quad \text{where}$$

π is core inflation, measured by the weighted median of industry price changes (Cleveland Fed and Andrieu et al. 2013)

π^e is long-term expectations of forecasters

x is activity: a four-quarter average of either the output gap or the unemployment gap (deviation from HP filter with smoothing parameter 16,000)

Estimate with quarterly data, US 1985-2014 and Euro area 1999-2014

Results: a clear tradeoff between inflation and activity, and no obvious signs of instability in the relationship

Table 1: Phillips Curves

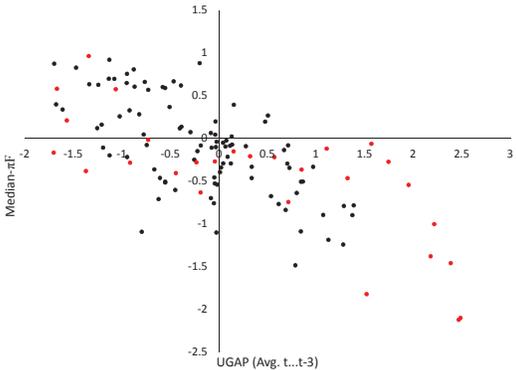
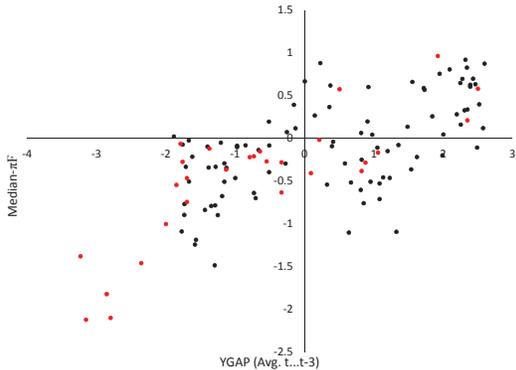
U.S., 1985Q1-2014Q4	
(1) $\pi_t = \pi_t^F + \alpha \frac{1}{4}(\tilde{y}_t + \tilde{y}_{t-1} + \tilde{y}_{t-2} + \tilde{y}_{t-3}) + \epsilon_t$	
α	0.265 (0.058)
\overline{R}^2	0.704
(2) $\pi_t = \pi_t^F + \alpha \frac{1}{4}(\tilde{u}_t + \tilde{u}_{t-1} + \tilde{u}_{t-2} + \tilde{u}_{t-3}) + \epsilon_t$	
α	-0.452 (0.084)
\overline{R}^2	0.732
Euro Area, 1999Q1-2014Q4	
(1) $\pi_t = \pi_t^F + \alpha \frac{1}{4}(\tilde{y}_t + \tilde{y}_{t-1} + \tilde{y}_{t-2} + \tilde{y}_{t-3}) + \epsilon_t$	
α	0.278 (0.046)
\overline{R}^2	0.494
(2) $\pi_t = \pi_t^F + \alpha \frac{1}{4}(\tilde{u}_t + \tilde{u}_{t-1} + \tilde{u}_{t-2} + \tilde{u}_{t-3}) + \epsilon_t$	
α	-0.553 (0.103)
\overline{R}^2	0.367

Note: OLS with robust (HAC) standard errors is used (standard errors in parentheses).

Figure 1: Scatterplots of $\pi - \pi^F$ vs. activity variable (red points show 2007- data)

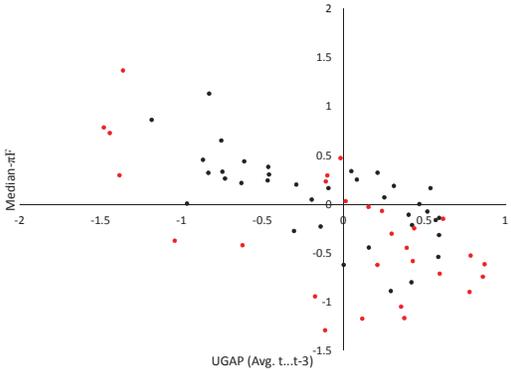
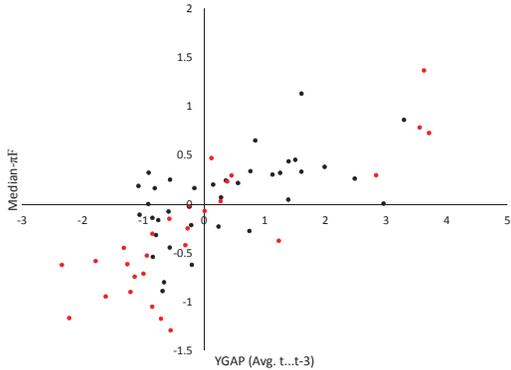
(a) U.S., Output Gap

(b) U.S., Unemployment Gap



(c) Euro Area, Output Gap

(d) Euro Area, Unemployment Gap



Comparison of these results to BCS Table 6

95% confidence intervals for absolute value of unemployment coefficient, 2014
(coefficient estimate +/- two standard deviations, bounded at zero)

Simple specification

U.S. [0.28, 0.62]

Euro area [0.35, 0.76]

BCS specification

U.S. [0, 0.72]

Germany [0, 0.53]

France [0, 1.49]

Italy [0, 1.14]

Portugal [0, 2.04]

Why are my estimates more precise than those of BCS?

One fixed parameter vs. four time-varying parameters. Not surprising that the ultra-flexibility of the BCS specification makes it difficult to estimate the unemployment coefficient.

There is no anomaly in the simple unemployment-inflation relationship to motivate the complex specification.

Constructive suggestions for BCS:

See what happens if impose a constant unemployment coefficient since 2000, or since 1993, and test that restriction.

Assume the unemployment coefficient is a function of trend inflation rather than varying freely. Both theory and past empirical work suggest this specification.

Measuring core inflation

In the simple Phillips curve specification, core inflation is measured by the weighted median of industry price changes.

Results are somewhat (not drastically) weaker if core inflation is measured by CPI excluding food and energy.

The weighted median is a better measure of core inflation...

Figure 2: Euro Area CPIX vs. Median CPI Inflation, 1999-2014



Policy Conclusions

(1) We should *not* worry about central banks' ability to control inflation in the medium run (except at the zero bound on interest rates). No real evidence that the activity/inflation relationship has weakened since the early 1990s, when inflation targeting was introduced.

(2) We *should* worry about this viewpoint:

“We have delivered price stability over the first twelve years of the euro -- impeccably! Impeccably! I would very much like to hear congratulations...”

Jean-Claude Trichet, 2011

With hysteresis, a single mandate for price stability may produce large, permanent losses of output and employment.