Discussion of "Trend Inflation, Taylor Principle and Indeterminacy" by Guido Ascari and Tiziano Ropele

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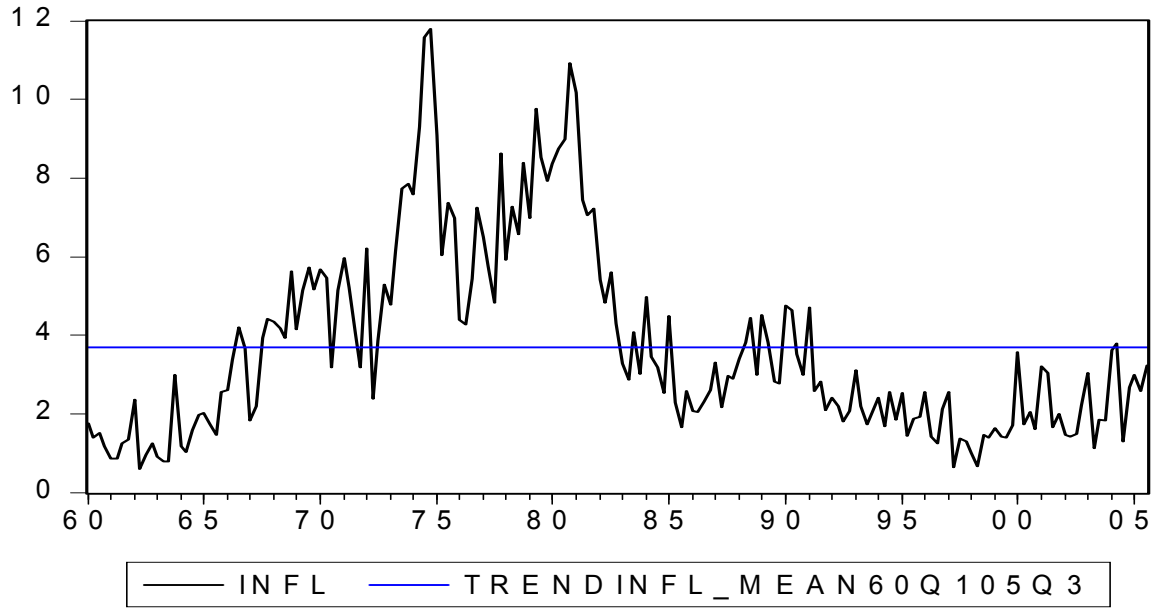
Is trend inflation a feature of the real world?



Inflation vs. trend inflation: U.S. data, 1966Q1-2005Q3

Trend inflation ...

- Typically neglected in our analysis (Woodford, 2003). Standard assumption: Zero trend inflation ... at odds with the data!

- This paper: What happens if we log-linearize around a generic trend inflation? Quite a lot!

New Keynesian Phillips curves

$$\pi_t = \beta \pi_{t+1} + \lambda \left(\pi^{SS} \right) mc_t \equiv STDPC$$

$$\pi_t = STDPC + \lambda \left(\pi^{SS} \right) \frac{(1-\pi^{SS})(1-\sigma_c)}{[1-\alpha\beta(\pi^{SS})^{\theta}]} Y_t + \lambda \left(\pi^{SS} \right) \frac{(\pi^{SS}-1)}{[1-\alpha\beta(\pi^{SS})^{\theta}]} \psi_t$$

- Richer structure (i.e. Y_t, ψ_t), different inflation dynamics. In particular, ψ_t: present discounted value of future marginal costs.

- Inefficiency loss: on aggregate, $Y_t = \frac{N_t}{s_t}, s_t > 1$ (price dispersion) when trend inflation is positive!

Guido and Tiziano's investigation

- Determinacy/indeterminacy frontier.
- Impulse responses to policy shock.
- Taylor curves.

Findings

- Trend inflation affects the determinacy region (via the slope of the long-run Phillips curve): **Policy implication:** $\phi_Y = 0$ (to avoid indeterminacy). Quite robust finding! (to less-than-full indexation, policy inertia, different policy rules ...)

- Influences the model dynamics ... potentially important for understanding the effects of a supply shock.

- Society worse-off in presence of trend inflation (LRI may be of help, PI not!), trend inflation renders the stabilization of the economy more complicated.

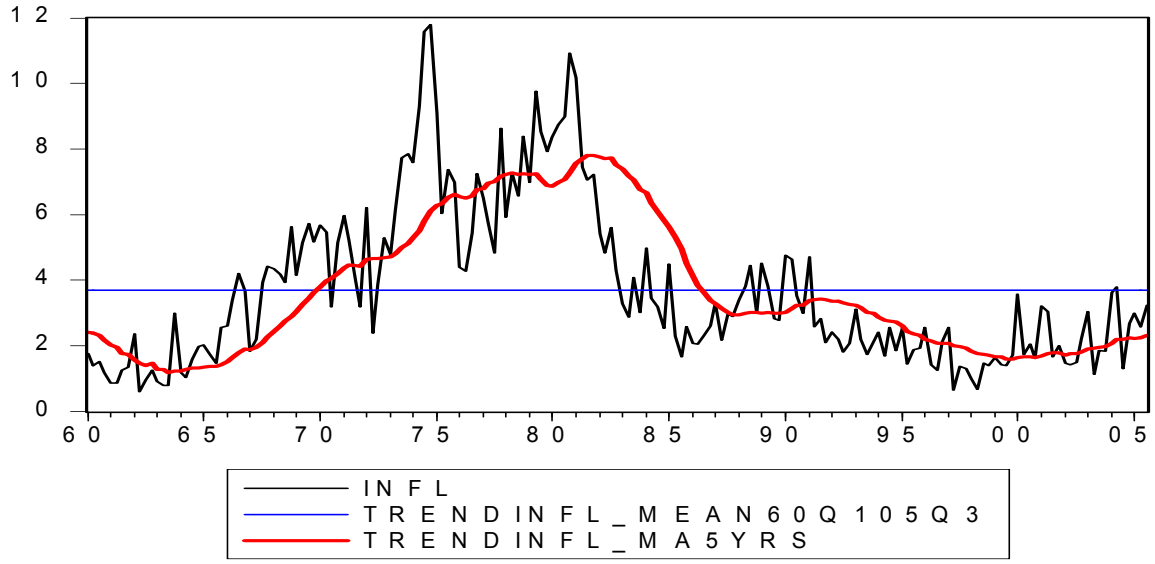
My reaction

- Nice paper! Trend inflation belongs to the real world, and this paper shows us that the standard (mis)specification may be misleading!

- Corroborates other findings in the literature on, say, the fragility of the standard Taylor principle and the conclusions drawn with the (once?) workhorse 3-equation new Keynesian model.

- A couple of comments and quibbles ...

Trend inflation: Constant in the data?



Inflation vs. trend inflation: 1966Q1-2005Q3

Evidence of time-varying trend inflation: Cogley and Sbordone (2005).

Time-varying trend inflation: Implications

- Exogenous process, say $\pi_t^{SS} = (1-\rho)\pi^{SS} + \rho\pi_{t-1}^{SS} + \varepsilon_t^{\pi^{SS}}, \varepsilon_t^{\pi^{SS}} \sim d(0, \sigma_\varepsilon^2)$: Some volatility is missing in the paper!

- Stochastic, time-varying Taylor principle?

- Conditional-impulse response analysis?

- Volatilities of the Taylor curve: Enhanced?

Time-varying trend inflation: Implications (cont'd)

May trend inflation be endogenous? Time-varying inflation target of the Central Bank [Ireland, (2006)]?

- Optimal trend inflation rate?

- If so, "endogenous" Taylor principle?

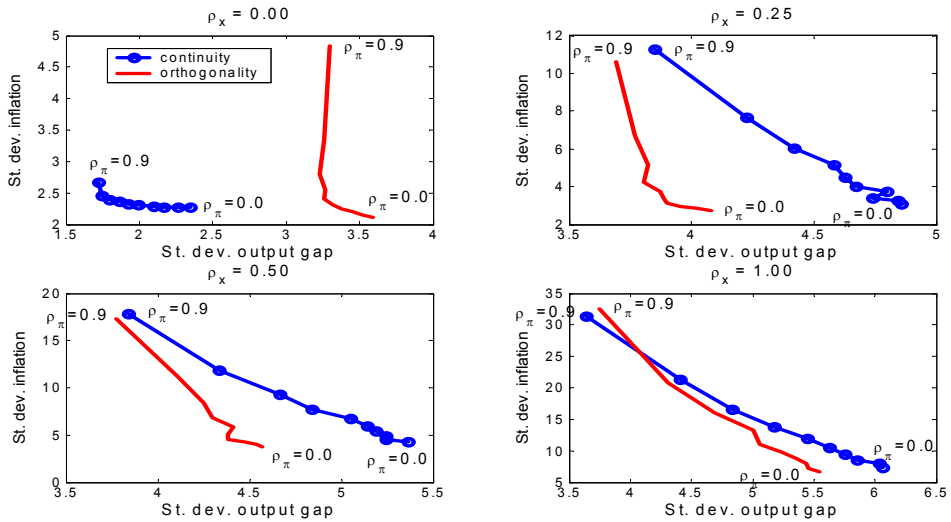
Determinacy and the zero-reaction to the output gap

Policy conclusion that corroborates the indications coming from other authors on the basis of different set-ups (e.g. Bullard and Mitra, learning), but you may also find "counterexamples" in the literature!

- Zanetti (2006, JMCB forth): labor market frictions in an otherwise standard NK model call for indeterminacy unless MP reacts to business cycle fluctuations and/or average inflation (btw, you may want to try avg inflation as an additional policy rule).

- Weder (2006, JMCB forth): real market imperfections such as production externalities may call for output gap targeting to get rid of sunspot equilibria.

Taylor curve: Why not to try investigating the indeterminacy territory? Weird things happen ...



Taylor curves under indeterminacy

Passive monetary policy + Trend inflation: Why not to merge the two?