

Discussion of "Productivity Shocks and Optimal Monetary  
Policy in a Unionized Labor Market Economy" by Fabrizio  
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## Context

- Standard NK DSGE model a la King (2000), Woodford (2003): RBC model with i) Monopolistic competition, ii) Sticky prices, iii) Taylor rule (cashless economy): *Lack of a fundamental trade-off between inflation and output stabilization.*
- 'Divine Coincidence' (Blanchard and Galí (forth)):  $y_t^{Eff} - y_t^f = \delta$

## Implications of the 'Divine Coincidence'

- Stabilization of the output level  $y_t$  around the Natural output  $y_t^f \Rightarrow$  Stabilization around the Efficient output  $y_t^{Eff}$  ... No inflation-output volatility trade-off!
- Tech shock  $a_t$ : SIT as optimal policy, because it implies both the stabilization of the *output gap*  $y_t - y_t^f$  and the stabilization of the *welfare relevant output gap*  $y_t - y_t^{Eff}$ .
- Goes against common wisdom, i.e. supply shocks (tech, oil) must imply a trade-off!

## Fixes in the literature

- Distortionary shocks (e.g. Clarida et al (1999), Smets and Wouters (2003)): Appended, trigger the trade-off, but divine coincidence still there when thinking of oil or tech shocks!
- Staggered wage and price setting (EHL (2000)): Divine coincidence does apply *neither* wrt price inflation *nor* wrt wage inflation, but it still holds wrt a *weighted average* of wage and price inflation (weaker form). SOT is a good idea.

## Fixes in the literature (cont'd)

- Blanchard and Galì: Real wage (exogenous) persistence imposed to the framework. Divine coincidence disappears, role of oil shocks as explanat variable in the NKPC whose business cycle driver is the unemployment rate.
- Mattesini and Rossi (this paper): Market with unions. Divine coincidence disappears, tech shock as explanat variable in the NKPC.

## Mattesini and Rossi: Features

- Combines model with monopolistic competition and nominal price rigidities with real labor market frictions.
- Preferences: Multiplicative in consumption and labor.
- Labor market: Fully unionized labor mkt.
- Persistent reservation wage (exogenous process).

## Findings

- Show that the 'Divine coincidence' collapses, tech shocks (and reservation wage shocks) in the NKPC.
- Optimal reaction to tech shock (policy rate down), to reserv wage shock (policy rate up), to fluctuations of the natural interest rate (depends on  $\rho_a, \rho_\omega$ ).
- Unemployment more volatile than the real wages, matches the stylized fact.
- Welfare analysis: Comparisons. Simple Taylor rule may replicate well the performance of the optimal discr. mon policy.

## My comments

- Nice paper! It fills an important gap on the role of tech shocks in optimal monetary policy.
- Somewhat more sophisticated than BG (or at least complementary).
- SIT / SOT not optimal!
- A couple of quibbles before opening the discussion ...

## Welfare evaluation

- Paper against strict targeting policies ... welfare evaluations needed!
- Get your welfare indicator, and compare SIT / SOT and optimal inflation targeting (commit vs discretion vs Taylor rule): How costly?
- Relate the welfare analysis to the tech shock persistence, i.e. how do results depend on  $\rho_a$ ?

## Optimal simple rules

- Computation of the simple rule that implements the optimal policy under discretion: Interesting idea ...
- ... why not to do that under commitment, as well? (After all, it is a rule.)
- How do the optimal weights compare to those estimated in the literature for, say, the ECB? (Castelnuovo (2006))

## Covariances in the model

- Unemployment rate more volatile than the real wage ... nice! But what about the rest? Output, inflation, interest rate: How do they behave?
- Lubik and Krause (forth): NK model with frictions on the labor mkt (search and matching) *and* real wage rigidities matches well the labor market correlations, but have troubles in replicating the remaining volatilities.
- A VCV matrix of the actual vs. simulated data might be informative, also to show the shortcomings!

## Simple rules and the Taylor principle

- Standard NK model: TPrinciple is (approx)  $\phi_\pi > \tilde{\phi}_\pi \approx 1$  ...
- ... but this is in fact a model-dependent principle! E.g. Zanetti (forth): labor market frictions (Nash bargaining over wages and employment) in an otherwise standard NK model call for indeterminacy unless MP reacts to business cycle fluctuations and/or average inflation.
- Simple rule like  $i_t = \phi_\pi \pi_t + \phi_x x_t$  (in fact you may play with forward looking inflation, average inflation, unemployment): Why not to check the value of  $\tilde{\phi}_\pi^{MR}$  (and the role of the business cycle variable)?

## Role of the process for the reservation wage in your story?

- Exogenous process:  $\omega_t^r = \rho_\omega \omega_{t-1}^r + \hat{\omega}_t^r$ .
- Why AR(1) and not random walk, or constant? Justify this on the basis of labor literature, empirical fit, or drop it!
- The most interesting results hold also in presence of a fixed reservation wage.

## Comparison with the rest of the literature

- Others have tried to fix the problem.
- Pros and cons wrt BG? Probably complementary ... worth spending a few words.