The Phillips Curve under State-Dependent Pricing by H. Bakhshi, H. Khan and B. Rudolf

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Most empirical studies...

$$\pi_t = \gamma_f E_t \pi_{t+1} + \gamma_b \pi_{t-1} + \lambda mc_t \quad (1)$$

- find a significant backward-looking component
- focus on samples that span different policy regimes

Q: where does the backward-looking component come from?

Exogenous sources of inflation inertia

- rule of thumb price setters
- indexation
- staggered contracts

the frequency of price adjustment is exogenous
the frequency of price adjustment is time-dependent

Endogenous sources of inflation inertia

- state dependent pricing - through trend inflation
- indeterminacy - through movements in the interest rate

the frequency of price adjustment is endogenous
the frequency of price adjustment depends on monetary policy

Main features of the SDP model

- firms face stochastic price adjustment costs
- conditional on a draw, firms choose whether to change prices based on the state of the economy
- positive trend inflation makes the adjustment probability depending on the time elapsed since last adjustment

Results

- closed form solution for the Phillips curve under state-dependent pricing (SDP)
- endogenous backward-looking term in the Phillips curve
- Phillips curve coefficients vary with the trend inflation

Implications

- frequency of price adjustment is not a primitive parameter
- Phillips curve relationship is less structural than current generation DSGE models implicitly assume

hybrid new-Keynesian Phillips curve estimates over samples that span different policy regimes are difficult to interpret

In my view...

- interesting and enjoyable paper
- two main comments and one suggestion

Inflation inertia: VARs evidence

Inflation inertia is high when trend inflation is high

- Cogley and Sargent (2002 and 2005)
- Canova and Gambetti (2005)

Inflation inertia: more structural evidence

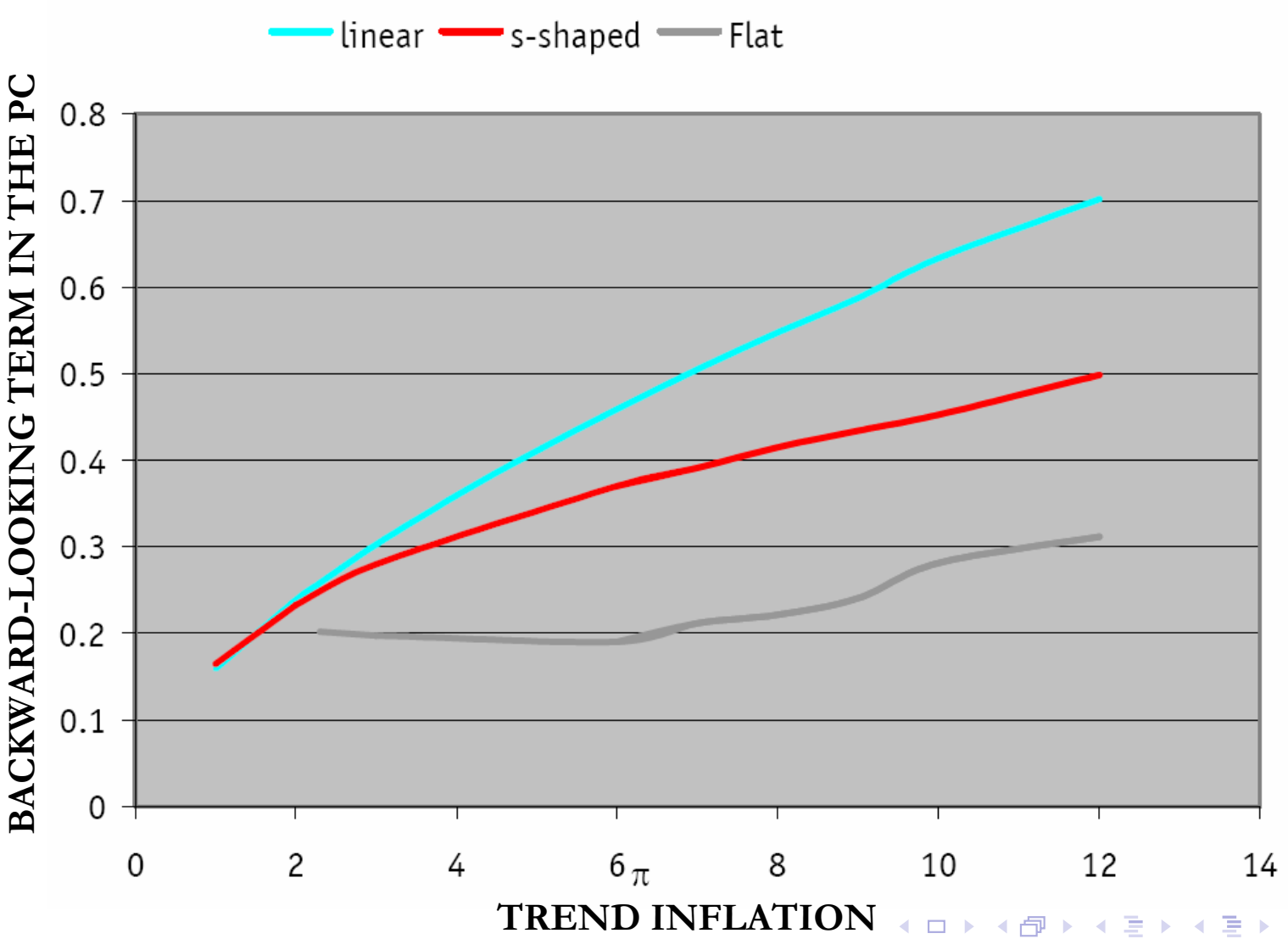
Backward-looking term in the Phillips curve is insignificant when shifts in monetary policy are accounted for

- Coenen and Levin (2005); Benati (2006)
- Cogley and Sbordone (2005)
- Lubik and Schorfheide (2004)

The ideal model

- should produce a positive relationship between trend inflation and the backward-looking term in the PC
- this relationship cannot be structural in the sense of Lucas

The Phillips curve under state dependent pricing



The Lucas critique

if the frequency of price adjustment is not policy invariant, then:

- monetary policy generates inflation inertia
- estimates of current generation DSGE models are unstable

Challenges for future research

- assessing the stability of DSGE models
- modeling the link monetary policy –> price setting
- estimating DSGE models with time-varying policy rule

Monetary policy and multiple equilibria

- state-dependent pricing enlarges the indeterminacy region (Dotsey and King, 2005)
- trend inflation enlarges the indeterminacy region (Ascari and Ropele, 2006)

what are the conditions for a unique RE equilibrium?

- derive the analytical expression for the Taylor principle as a function of both adjustment probabilities and trend inflation

Conclusions

- nice and stimulating paper
- it cautions on the interpretation of TDP model estimates that neglect monetary policy shifts

what more I'd like to see about the SDP model:

- implications of different policy regimes for inflation inertia
- implications of different policy regimes for the PC slope
- conditions on interest rate rules for a unique RE equilibrium