Discussion of "The Long-Run Phillips Curve is ...a Curve" by Ascari, Bonomolo and Haque

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The views expressed in the paper are not necesessarily the views of Norges Bank

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The paper in a nutshell

- Bayesian VAR with stochastic trends
  - Piecewise linear (around an estimated threshold of 4 percent trend inflation)
  - Stochastic volatility
- Below the threshold: potential output is independent of trend inflation
- Above the threshold: Potential output is negatively related to trend inflation (about 1 for 1)
- Estimated New Keynesian model with time-varying trend inflation gives similar results

The paper in one figure

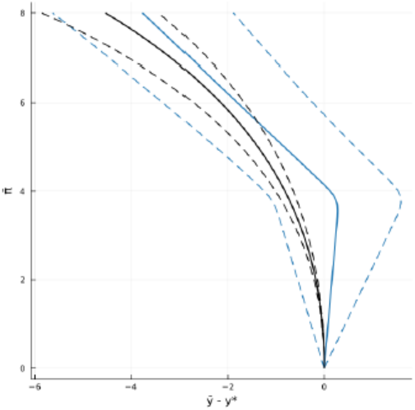


Figure 11: Long-run Phillips curve: median (continuous line) and 90% probability interval (dashed lines) - comparison between VAR (blue) and GNK (black) estimates.

Literature

- VAR with common trends (Villani, 2009): multivariate trend-cycle decomposition
- Del Negro, Giannone, Giannoni and Tambalotti (2017): estimate of r*
- Ascari and **Fosso** (2023): International component of trend inflation
- **Maffei-Faccioli** (2023): Super-hysteresis
- Bergholt, **Fosso** and Furlanetto (2023): gender convergence
- Bergholt, Furlanetto, **Maffei-Faccioli** and Pappa (2023): labor share dynamics in Europe
- Bianchi, Nicolo' and Song (2023): Phillips curve (short run)

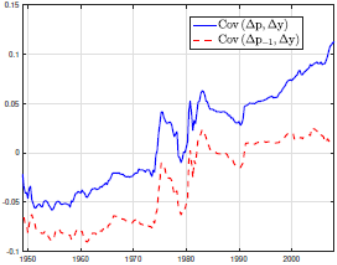
Contribution

- Clear methodological contribution in the estimation of the VAR
  - Non-linearity
  - Stochastic volatility
- Clear methodological contribution in the estimation of the GNK
  - Time-varying trend inflation that affects the steady state and the dynamics
  - Particle filter
- Very interesting economic question

Comment 1: one crucial episode?

- The period 1965-1985 is crucial to extract trends:

Figure 14: Evolution of the covariance between output and inflation over time.



- Was it a peculiar episode? What about the current episode?
- What about estimating a simple linear model until 1985 as a cross-check?

Comment 2: what is behind trend inflation?

- Monetary interpretation
  - In the GNK model it is a shock to the inflation target
  - The shock to trend growth leaves inflation unaffected

- But in the VAR?

THE MODEL FOR THE LONG RUN

$$\bar{y}_t = y_t^* + \delta(\bar{\pi}_t) \quad \text{the equilibrium level of output as function of inflation}$$

$$y_t^* = y_{t-1}^* + g_t + \eta_t^y$$

$$g_t = g_{t-1} + \eta_t^g$$

$$\delta(\bar{\pi}_t) : \delta(0) = 0$$

$$\bar{\pi}_t = \bar{\pi}_{t-1} + \eta_t^\pi \quad \text{trend inflation is random walk}$$

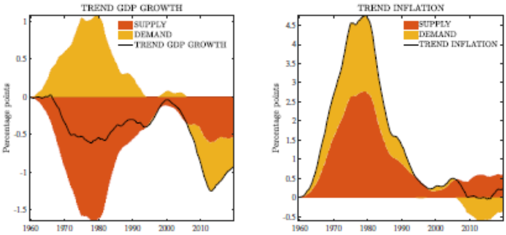
$$\bar{i}_t = \bar{\pi}_t + c g_t + z_t \quad \text{long-run Fisher equation}$$

$$z_t = z_{t-1} + \eta_t^z$$

Comment 2: what is behind trend inflation?

- International component, sectoral dynamics, labor supply factors, wage bargaining shocks
  - Some form of cointegration?
- Maffei-Faccioli (2023)

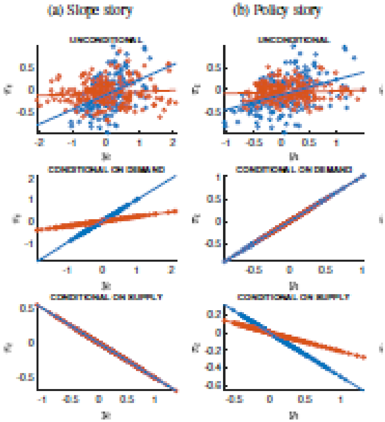
Figure 2: Estimated contribution of demand and supply to trend GDP growth and inflation



Note: The black line is the point-wise median estimate in percentage point deviations from initial conditions. The colored bars represent the point-wise median contribution of demand-side and supply-side factors.

Comment 3: what about conditioning on demand shocks?

- Bergholt, Furlanetto and Vaccaro Grange (2023)



- Should there be a conditioning step also to estimate the long-run slope? King and Watson (1994), Benati (2015)

Comment 4: policy implications and link with hysteresis

- Output gap is decomposed into a short-run output gap and a long-run output gap
  - Should policy care about the long-run output gap?
- Interesting analogy with models with hysteresis
  - Also induced by monetary shocks (Jorda, Singh and Taylor, 2023)
  - Demand shocks have long-run effects on a sample starting in 1983 but much less on a sample starting in 1949
  - Lepetit (2023)

Comment 5: non-linearity in the cyclical part

- Bianchi, Nicolo' and Song (2023) focus on the cyclical components in inflation and output
- Would it be possible to adapt your piece-wise linear framework to the cyclical block?
  - Benigno and Eggertson (2023), Harding, Lindé and Trabandt (2023)
- Potentially super interesting

Conclusion

- Very interesting paper!
- Clear contribution to the literature
- I learned a lot