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

- 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

\[
\bar{y}_t = y^*_t + \delta(\bar{\pi}_t) \quad \text{the equilibrium level of output as function of inflation}
\]
\[
y^*_t = y^*_{t-1} + g_t + \eta^y_t
\]
\[
g_t = g_{t-1} + \eta^g_t
\]
\[
\delta(\bar{\pi}_t) : \delta(0) = 0
\]

\[
\bar{\pi}_t = \bar{\pi}_{t-1} + \eta^\pi_t \quad \text{trend inflation is random walk}
\]

\[
\bar{i}_t = \bar{\pi}_t + cg_t + z_t \quad \text{long-run Fisher equation}
\]
\[
z_t = z_{t-1} + \eta^z_t
\]
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)
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