

"Estimation of Euro Area Output Gap Using the NAWM" by G. Coenen, F. Smets, and I. Vetlov

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The Output Gap: One Name, Many Concepts

- Deviation from "potential" output ("full utilization of resources")
- Deviation from a "statistical" trend (e.g. HP)
- Deviation from "natural" output (flexible prices + wages)
- Deviation from "efficient" output (flexible $p+w$, no real imperfections)

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- CSV's "flexible-price output gap": deviation from output under flexible $p+w$, no shocks to desired markups

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- Unconventional properties ! (e.g. dominated by fluctuations in "flex-price output" resulting from transitory technology shocks)
- Benchmark: "Trend output gap" (\equiv deviation from permanent component of technology). What is its rationale? Arbitrary choice of permanent shocks...

Output Gaps as Predictors of Inflation

- Nothing logically wrong with the exercise...
- But no obvious connection between inflation and CSV's "flexible-price output gap". Driving forces in the model's inflation equation:
 - inflation target
 - deviation of price markup from desired markup
 - neither is clearly connected with CSV output gap.
- Yet, relatively good performance of the CSV output gap...
 - What is the source?
 - Is the sign of the cross-correlation the "expected" one? Not so in the baseline NK model:

$$\pi_t = \beta E_t\{\pi_{t+1}\} + \kappa x_t$$

implying:

$$E_{t-1}\{\pi_t\} = \beta^{-1} \pi_{t-1} - (\kappa/\beta) x_{t-1}$$

Assessment of Simple Monetary Policy Rules

- CSV exercise: performance of Taylor-type rules using alternative measures of the output gap
 - in the rule
 - in the loss function
- What is the relevant welfare-based loss function?
 - possibly hard to derive
 - none of the functions used likely
- *Suggestion*: forget about loss function and implied optimizing simple rules. Instead:
 - report standard deviations of key variables of interest (including different output gaps) under a variety rules involving *observable* variables (e.g.: What is the effect on the output gap of a more or less aggressive responses to inflation?)
 - see how outcomes are affected if we allow the CB to respond to the model-based output gap

Overall Assessment

- Interesting exploration using the NAWM
- Important differences between "model-based" and "statistical" output gaps
- In my opinion: CSV focus on the "wrong" output gap
- Interesting line of research for the ECB: consequences of its inflation-based mandate on welfare-relevant output gap...