Nils Gottfries and Johan Söderberg: “Do Sticky Prices Make Sense?”

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Objective of paper

- Launch a fundamental attack on recent (big) wave of “New Keynesian” DSGE models used for monetary policy evaluation
- These models purport to be microfounded, but they are not
- Culprit: Models postulate nominal stickiness, they don’t show it to be an optimal choice — say, due to menu costs
- Are the New-Keynesian literature really New Keynesian? (Mankiw, 1985; Akelof and Yellen, 1985 are seemingly long forgotten.)
Modelling approach

- Set up example of standard model with Taylor-staggered nominal wages and prices
- Show how a good macroeconomic calibration may disguise a horrible micro-economic performance in the standard model
- Offer a theoretical alternative that performs well both in terms of macroeconomic dynamics and microeconomic implications
Results (I)

- Standard model must have both nominal wage and price rigidity to perform reasonable in aggregate calibrations
  - If “only” price rigidity, real wages fluctuate too much and hours worked fluctuate more than output
  - (cf. CEE (2005, JPE): "(T)he model with only nominal wage rigidities does almost as well as the estimated model (...) with only nominal price rigidities, the model performs very poorly."

- With staggered producer prices by imperfectly competitive firms, and staggered nominal wages set by households offering specific labor services, aggregate output and real wages respond “nicely” to monetary shock

- Disaggregated, the responses are unreasonable:
  - An aggregate output expansion “hides” disaggregated expansions and contractions (large relative price effects)
  - Those not allowed to adjust due to the price rigidity assumption, suffer large losses that no reasonable menu costs can rationalize (in particular wage setters)
Results (II)

- **Picture of the year:**
  Cohorts’ prices *and* outputs after a money shock:

The left-hand-side image is what you normally see; the right-hand-side image is always suppressed.
An alternative to standard model is offered

Model deviations:

- “Deep habits” in consumer preferences (reducing short-run elasticity of relative demand)
- Efficiency wage effects and ranking effects in labor market (cf. Eriksson and Gottfries, 2005) => consumers are off the labor supply curve (and little impact of unemployment on real wages)
- These features maintain reasonable aggregate dynamics, but avoid wild dispersions at micro-economic level
- Price and wage rigidity is not nearly as costly as in standard model => menu costs could support them as Nash equilibrium
Right-hand side of “Picture of the year” should be text-book standard
It is well known, but never seen, and thereby not given much thought
For descriptive aggregate analysis it may not matter?
For normative analyses of monetary policymaking it is all that matters!
It is exactly this dispersion that gives a welfare rationale for almost exclusive focus on price stability in recent literature
Right-hand side of “Picture of the year” shows that this has ultra-thin micro foundations
Comments (II)

- Why look at Taylor contracts rather than Calvo contracts?
  - “From the perspective of microeconomic realism, however, we view Taylor contracts as the more natural way of modeling price stickiness” (p. 4, Fn. 1)
  - Why is a probability of being stuck with your previous price equal to 0 or 1 more “natural” than being stuck with probability $0 < \alpha < 1$?

- More generally, is stickiness micro founded when one imposes the Taylor structure?
  - Shouldn’t $N$ be an endogenous and optimally set variable?
  - Why can’t you set a sequence of prices (a la Fischer contracts)?
  - So is model extension not subject to some of the fundamental critique that the standard model is?
Given Taylor framework, paper evaluates losses of nominal rigidity

Slightly difficult to compare across models

- In standard models it is in terms of firms' initial revenue (price rigidity), and consumers' disutility measured in consumption equivalents (wage rigidity)
- In model extension it in terms of discounted profit stream (price and wage rigidity)
- Is comparison straightforward? Figure 10 shows 0.15-0.2 percent maximum loss of not changing price/wages; Figure 5 shows 0.15 percent maximum loss of not changing prices
- Different payoff spaces; different strategy spaces
Figure 9 shows big dispersion of mark-ups (even though “markups do not move much during the adjustment”).

- Welfare implications still that price stability aimed at stabilizing the mark-up is all that should matter for monetary policy? I.e., inflation stability?

- Unemployment is voluntary in extended model? (“Voluntary quits are large enough so there are no layoffs”)

- All live together and take care of each other in one big household; no consumption differences between employed and unemployed

  - Are these features of realism? Are they micro founded? (One would think that fluctuations are quite costless here.)

- Generally; where do microfoundations end, and assumptions about institutional features take over? Hard issue!
Related literature

On micro-founded nominal rigidities and macroeconomic policy:


Stochastic dynamic menu-cost models resulting in “(S,s)-price rules”:

- The price is fixed inside a band (cf. Caplin and Leahy, 1991)
- Resulting price rigidity causes output fluctuations

Stabilization policies may be destabilising as they widen the “zone of inaction” (risk is reduced, increasing the option value of not changing prices) — equilibrium output fluctuations increase
Concluding comments

- Admirable example of how to write a paper
  - Dissect overlooked aspect of existing literature
  - Demonstrate convincingly the deep flaws
  - Offer a better alternative

- A few reservations on offered alternative could be made though, but this is a very first draft

- Powerful, productively provocative, and promising paper!