Discussion of "The Inflation Persistence Project"

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Intellectual currents of last decade

- Substantial research investigating the macroeconomic consequences of “nominal frictions” for
  - Workings of economy in response to monetary and other shocks
  - Design of policy rules
- Models emphasize microeconomic foundations; apply dynamic optimization approach to price and wage dynamics; and are designed to be “policy relevant.”

Models…

- Circa 1995, there were no small fully articulated models that could be used to study monetary policy;
- As we near 2005, there are a huge number, each emphasizing a different set of frictions. Examples:
  - Wage frictions versus price frictions
  - Taylor versus Calvo price dynamics
  - Time dependent versus state dependent price dynamics
- How are we going to “discipline frictions”?

Disciplining frictions: the IPN as a template

- If we build price stickiness into our models so as to match macro dynamics of inflation/real activity and if we think micro foundations are important, then we can discipline frictions
  - by looking into the actual process by which firms undertake pricing
    - Studies of price adjustment (cpi and ppi)
    - Studies of pricing process (surveys)
  - by looking into the dynamics of inflation
    - Across countries as in “persistence regressions”
    - Evaluating the predictions of structural models

Job of discussant

- Bob Hall's instruction: a discussant should place a paper in the "greater context of his own resarch". [Only partly kidding]
- I'll do some of that, by way of motivating why I am so keenly interested in the emerging results of the IPN
- More important: place the IPN in the greater context of your (the Euro System's) own research

A team approach to research

- Motivation and support from governing council (as we heard last night from Ottmar Issing)
  - Motivation: if inflation persistence is important for policy design, then we should try to measure it
  - Financial support: huge number of manhours and other budgetary itmes
  - Access support: requests to national statistical agencies (critical role for Eurosystem stimulating research activity – including information production -- in Europe)

Team Approach

- Senior research managers
- ECB staff
- Eurosystem staff
- “Academic” consultants (Gali, Cecchetii, Levin: note that two of these have worked (or are working) for FRS and made substantial research contributions)

- Nice balancing of coordination (for comparability), competition (by team members), and communication (within IPN and with others in this and prior meetings of IPN)

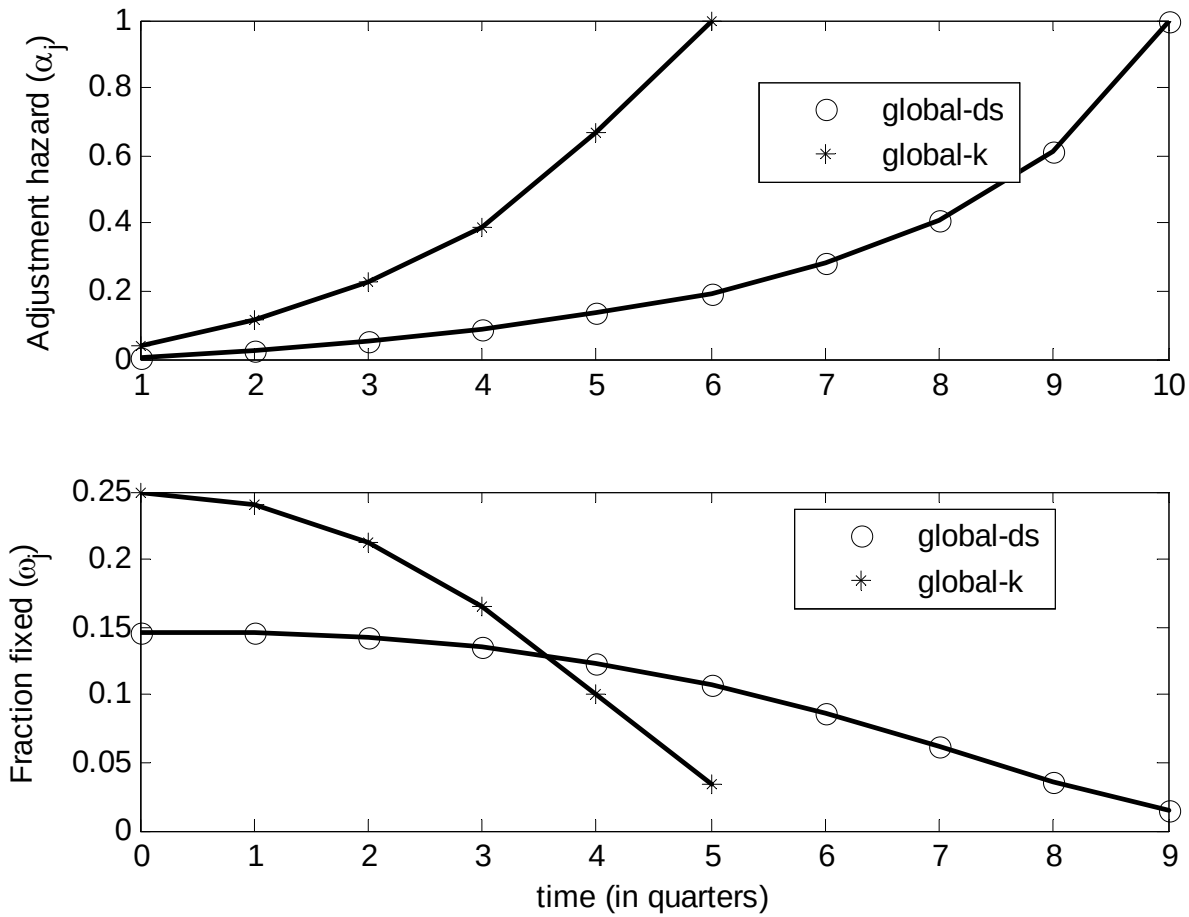
Why I am so interested in IPN

- My recent work has been on
  - Positive implications of macro models with pricing frictions, specifically SDP “menu cost” models
  - [DKW, DK 2004]
  - Optimal policy design under commitment in these models. [REStud 2003]
  - Understanding the suboptimal outcomes that can arise under discretion in even simplest TDP model [QJE2004].
- In this work, I have learned that details of pricing structure matters a great deal. Examples:
  - SDP can be very different than SDP
  - Hazard structure matters: welfare costs of inflation 3 times larger with Calvo rather than Taylor
  - Coordination failure under discretion seems less likely if “sticky plans” rather than “sticky prices”

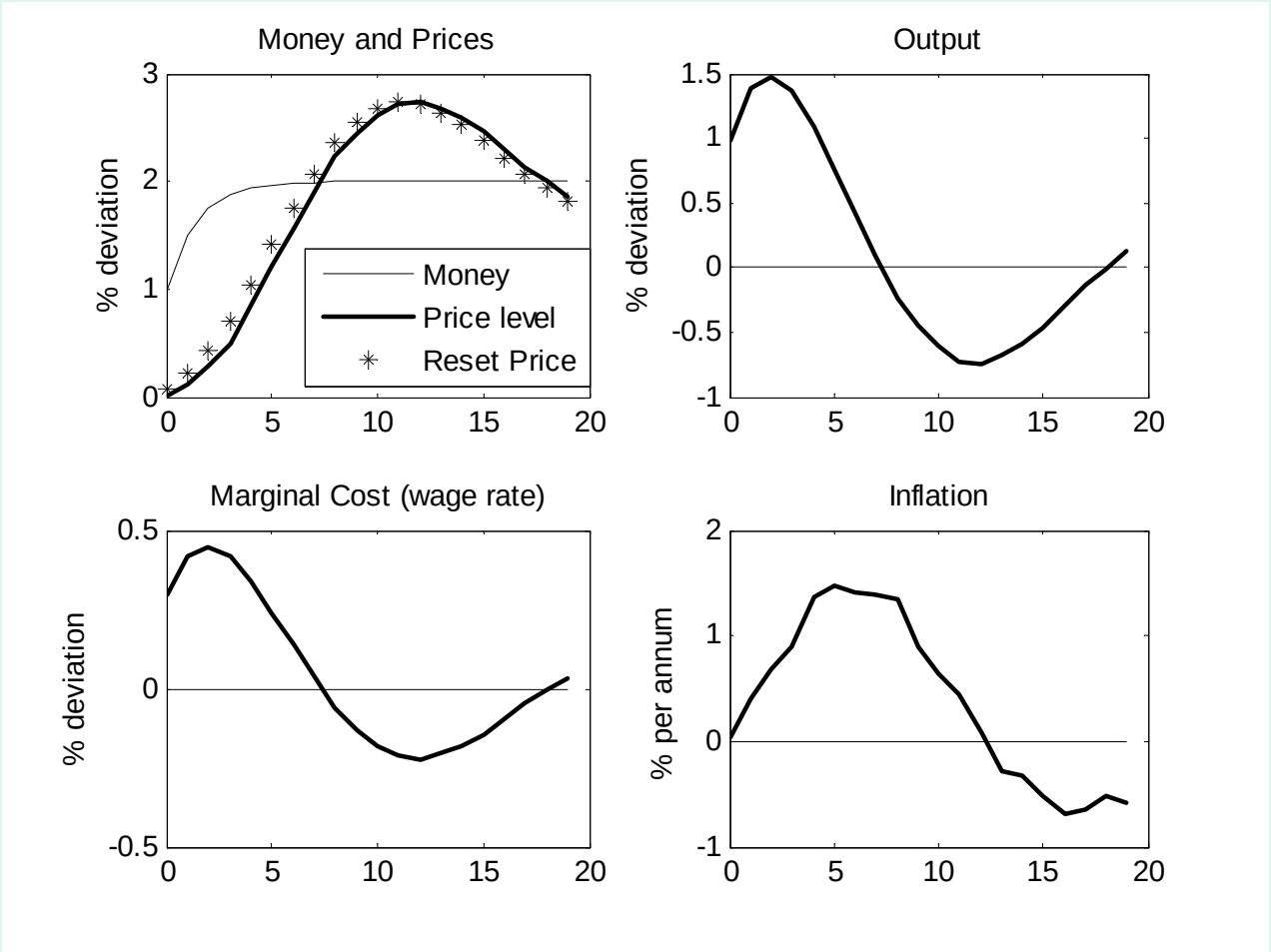
Research on SDP

- Want to show you some work (joint with M Dotsey) that illustrates why I am so interested in IPN and its microdata collection.

Steady-state price adjustment frequency under modest inflation (w/Dotsey 2004): Focus on line with boxes. This looks like Europe to me in terms of lower panel



Implications for dynamics



Compare to Christiano material we just saw

From Christiano-Eichenbaum-Evans (JPE, 2005)

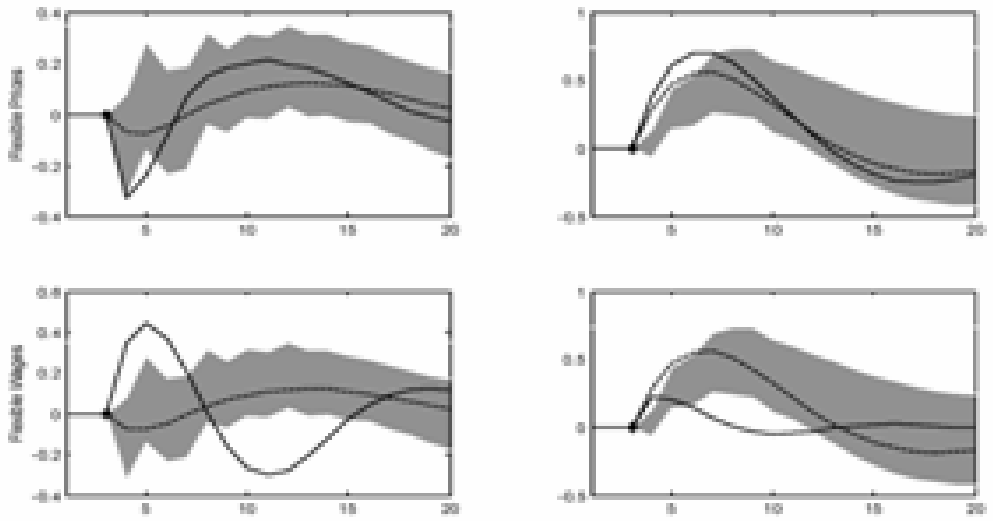
Response to Expansionary Monetary Policy Shock

Dashed Line - Estimated DSGE Model

Solid Line - Perturbed Model

Inflation

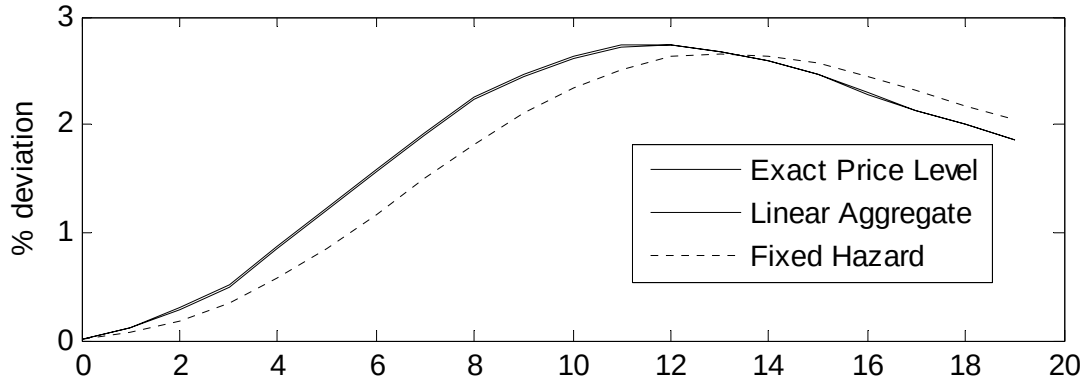
Output

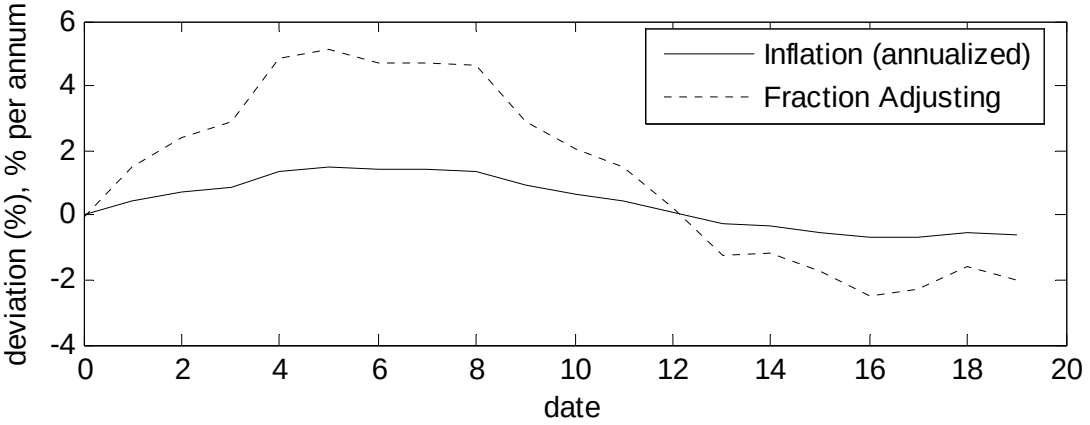


Most sticky price models cannot produce this inflation delay (as stressed by Mankiw-Reiss):
Why is DK-SDP so different from other models?

- Shape of “lag weights”
- Larger number of states (SDP means carry fractions of firms with past prices as part of endogenous state vector)
- Price adjustment timing is endogenous: it is optimal to adjust when relative price is badly out of line with optimal decision. The more the price level moves up, the higher the likelihood that a given firm will find it optimal to adjust

Adjustment timing: clustering of price adjustments





Challenges to my research raised by IPN and related BK work

- Significant heterogeneity across sectors in frequency of adjustment: “no representative product” (thesis work under way at BU);
- Significant micro level heterogeneity leading to lots of price decreases while there is also positive inflation on average (DKW2005)
- Work to match
  - Micro estimates of hazards (do do this right for DKW model need firm level output, employment, and data)
  - Macro estimates of adjustment rates (contrast last figure): Are the DK responses of adjustment rates too volatile

Bottom line

- Lucas: “Beware of theorists bringing free parameters.
- IPN provides basic micro and macro facts that will
  - discipline work on nominal frictions;
  - stimulate new work on mechanisms
- Example of latter: German evidence on price adjustment and wage changes

Greater context of your own research

- Large-scale projects like this have the prospect of changing the way macroeconomists think about important topics.
- How to continue the work of IPN?
  - Eurosystem can play a key role in
    - Integrating existing information
    - Designing new information sources.
  - Fascinating integration of “inflation expectations data”; survey of pricing practices;
  - Linked micro data sets on prices, wages, output, labor, materials