

MOTIVATION: SOURCE OF INERTIA IN MACRO DATA

- ▶ Various frictions in perfect-information DSGE models may simply capture **sluggish adjustment of expectations**.
- ▶ E.g., Sims (1998,2003), Woodford (2002), Mankiw and Reis (2002), Maćkowiak and Wiederholt (2009,2015).
- ▶ **What is a good model of expectation formation?**

SUMMARY OF THIS PAPER: INTERESTING NEW FINDING

- ▶ Forecast revisions at the individual level are predictable.

$$x_{t+k,t}^i - x_{t+k,t-1}^i = (a - 1)x_{t+k,t-1}^i + \beta' Z_{t-1} + \varepsilon_t^i$$

$$x_{t+k,t}^i = ax_{t+k,t-1}^i + \beta' Z_{t-1} + \varepsilon_t^i$$

- ▶ $a \neq 1$, typically about 0.5
- ▶ some elements of $\beta \neq 0$ (info not acquired?).

Bayesian: forecasts $x_{t+k,\tau}^i$ are martingale in τ , i.e., $a = 1$,

Here: expectations too volatile.

COMMENT 1: IS THE DATASET SUITABLE?

Survey of Professional Forecasters:

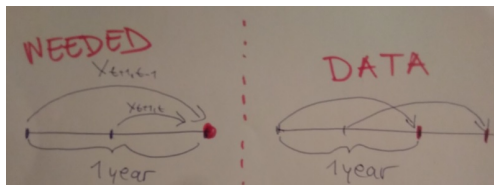
- ▶ Not ideal incentives to report beliefs truthfully - reports more volatile for contests (Ottaviani and Sørensen 2006)
- ▶ Exaggerated reports, private info 2.4x (Zitzewitz 2001)
- ▶ $a < 1$ could be an artefact of exaggeration. Useful for averages, not for individual reports (relative).

Household surveys are more valuable here.
(and more indicative of economic actions)

COMMENT 2: IS THE DATASET SUITABLE?

University of Michigan's survey of consumers:

- ▶ **Timing is off: revisions are NEVER observed**
- ▶ Households are sampled at most twice (6 months apart)
- ▶ Forecasts are always 12-months ahead - never two forecasts for the same horizon.

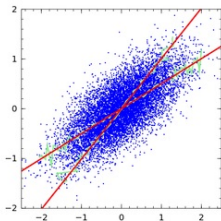


???

Perhaps try other surveys

COMMENTS 3 AND 4: ECONOMETRIC ISSUES

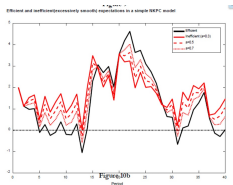
- ▶ **Small sample bias in dynamic panel models** - a downward $\sim 1/T \sim 1/2$ (Nickell 1981, Arellano and Bond 1991)
 - Michigan S.: seems impossible to jointly identify a and individual-specific fixed effect from two observations.
- ▶ **Measurement error, noisy reports: a biased towards zero** (see footnote 22), which could also explain why $a < 1$.
 - if noise in reporting \simeq variance of news: $a \simeq 0.5$



SMOOTH/PERSISTENT EXPECTATIONS

$$F_t \pi_{t+1} = a F_{t-1} \pi_{t+1} + \gamma \mu_t.$$

- ▶ **Parameters?** γ fixed, just scaling down:



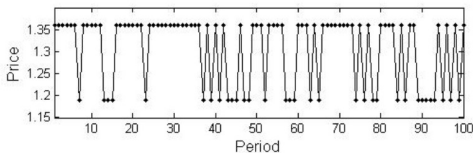
- ▶ **Wording:** under/over reaction (less weight on prior, negative correlation of error and revision)
- ▶ **Observationally equivalent** to averages in RI, SI?

USEFULNESS OF RI/SI

Empirical evidence

- ▶ **Expectation averages work** (Coibion, Gorodnichenko 2012): error predicted by past revision (+)
- ▶ **Inattention** (CG 2012, Fuster et al 2019) - weight on provided public info
- ▶ **Endogeneity of belief formation** (Bartos et al 2016, Cavallo, Cruces, Perez-Truglia 2016) - subject to policy

Micro (Matejka 2016) vs useful on macro (MW 2009, Reis 2006)



SUMMARY

- ▶ Very interesting paper (tackles rationality; not just RI, SI).
- ▶ Microdata!
- ▶ Some difficulties: $a \downarrow$
 - ▶ Suitability of SPF - exaggeration of reports
 - ▶ ... of Michigan S. - revisions never observed, small sample
 - ▶ Noisy reporting, attenuation bias
- ▶ Implications of the proposed model?
- ▶ Some of the conclusions seem too strong (yet).