Rational Inattention-driven Dispersion with Volatility Shocks

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Highlights

- The paper in a nutshell:
  - Proposes a dynamic model of costly info acquisition under RI.
  - Assumes target's realization *and* its sources of variation are unknown:

$$\min_{p_{it}} \ \gamma(p_{it} - \widehat{p}_t)^2, \qquad \text{where } \widehat{p}_t = \underbrace{\sigma_t}_{\text{Persistent}} \cdot \underbrace{\epsilon_t}_{\text{iid}}$$

  - *Goal:* rationalize micro-price statistics (cross-section and time-series).

- Key ingredients:
  1. *Dynamics:* firms form beliefs about a persistent process.
  2. *Heterogeneity:* info costs (the λ's) are dispersed across firms.

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Contributions

- Main contributions:
  - Persistence in beliefs + dispersed info costs $\Rightarrow$ Sluggish price adjustment.
  - Calibrated model can jointly rationalize (among others):
    1. Countercyclical price dispersion.
    2. Positive correlation of price dispersion and frequency of price changes.
  - No need to assume sticky prices (e.g. menu costs).

Open Questions

1. Comparison to menu cost models? (e.g. Midrigan ('11), Vavra ('13)).
   - Would be useful to know how the two classes of models compare beyond matching micro-pricing moments.
   - Real effects of monetary policy shocks? (no monetary non-neutrality, probably... but how much?)
2. Effects of *idiosyncratic* uncertainty? Two possibilities:
   - Make information costs time-varying $\rightarrow$ λ_{it}
   - Make i.i.d. shock idiosyncratic $\rightarrow$ ϵ_{it}.
3. Aggregate implications?
   - Firms take time to learn about (and from) their mistakes.
   - This will lead to output and welfare losses at the aggregate level.
4. Could firms' mistakes feed back into higher uncertainty?

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Suggestions

1. Menu Costs vs. Slow Learning under RI:
   - Could combine them into a unified framework.
   - Study which is quantitatively more important in booms vs. recessions.
2. Policy:
   - Effects of industrial policies on firm learning? (taxes, subsidies, etc.)
   - What are the effects of policies aimed at altering agents' perceptions/expectations?
3. Adding coordination / strategic complementarities?
   - For example a NK-type price-setting rule:

$$\widehat{p}_t = (1 - r)\sigma_t \epsilon_t + r\overline{p}_t, \qquad \overline{p}_t \equiv \tfrac{1}{N}\sum_{i=1}^{N} p_{it}$$

   where $r > 0$ (the degree of complementarity) measures real rigidities.

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Conclusion

- Nice paper!
- Proposes alternative mechanism for micro-price dynamics.
- My suggestions:
  - Providing more clear comparison with workhorse micro-pricing models.
  - Strengthening real part of the model.