

How does Consumption Respond to Inflation News?
Field Evidence from a Randomized Control Trial
and
Monetary Policy Announcements and Expectations:
Evidence from German Firms

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discussed by Michael Weber

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Big Picture

- Key variable for economic decisions: perceived real interest rate

$$r_t^i = i_t - \mathbb{E}_t^i \pi_{t+1}$$

- Conventional monetary policy
 - Anchor inflation expectations: π_{t+1}
 - Increase/ decrease nominal interest rate i_t
- Unconventional monetary policy
 - Forward guidance: manage inflation expectations π_{t+1}
- But also:
 - Consumption/ saving decisions
 - Wage bargaining
 - Price setting
 - Firm investment and hiring

Big Picture

- Rational expectations revolution:
 - Ignore expectations formation process
 - Infer expectations from model
- Evidence on deviations of full information rational expectations
Coibion & Gorodnichenko (2012,15)
- Expectations affect choice
Gennaioli & Shleifer (2018)
- Revival in research understanding expectations formation

Big Picture

- Expectations management as policy tool?
 - Especially during times of low interest rates?
- Traditionally, focus on professional forecasters and financial markets
- But we do not model forecasters
- Forecasters do not set prices, investment and consume
- Do firms and households update expectations to communication?
- Recent puzzles such as forward guidance puzzle

CGGR

- Study household inflation expectations
- Generate exogenous variation in expectations using info treatments
- *Causally* relate inflation expectations to spending decisions
- Find higher inflation expectations *lower* total spending
- Slightly positive effect for non-durables
- Large negative effect for durables
- Little heterogeneity by financial constraints and level-k thinking
- (Additional) solution to forward guidance puzzle?

EHM

- Study qualitative firm expectations using Ifo survey
- Exploit heterogeneity in timing of responses around ECB decisions
- Study price and production expectations
- Small shocks affect expectations in conventional way
- Large shocks do not affect expectations (information channel?)
- Unconventional policy measures no consistent effect on expectations

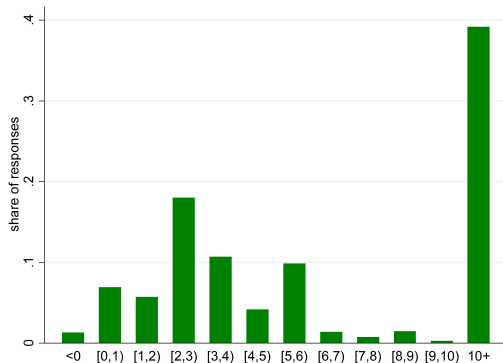
Context in the Literature

- Inflation expectations and spending
 - Bachmann, Berg, Sims (2015)
 - Burke & Ozdagli (2019)
 - D'Acunto, Hoang, Weber (2016)
 - Duca, Kenny, Reuter (2017)
 - Crump, Eusepi, Tambalotti, Topa (2019)
- Information treatments and expectations
 - Armona, Fuster, Zafar (2019)
 - Roth & Wohlfahrt (2019)
 - Coibion, Gorodnichenko, Weber (2019)
- Firm expectations
 - Coibion, Gorodnichenko, Kumar (2018)
 - Coibion, Gorodnichenko, Ropele (2019)

Inflation Expectations and other Expectations

- How do households form inflation expectations?
- Information about current perceived or future inflation?
- How do households interpret inflation news?
- Findings in paper suggest stagflationary view
- Individuals follow *good-bad heuristic*
Andre, Pizzinelli, Roth, Wohlfart (2019)

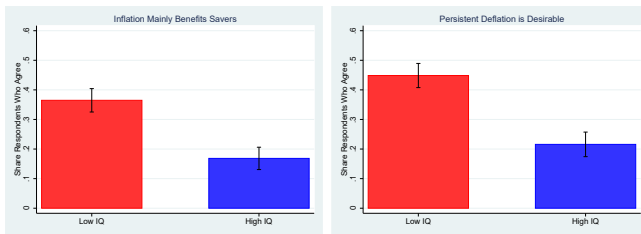
Fed Inflation Target



Coibion, Gorodnichenko, Weber: *Policy Communications and Households' Inflation Expectations*

- Only 50% think inflation target between 0% and 5%
- 40% thinks Fed has inflation target $\geq 10\%$
- Have to better which information individuals react to

Inflation and Economic Reasoning



Source: D'Acunto, Hoang, Paloviita, Weber (2019)

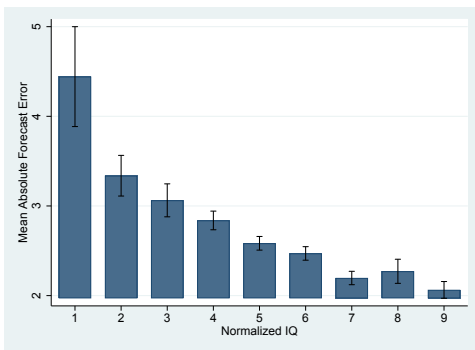
- Low-IQ participants more likely to think inflation benefits savers
- Low-IQ participants more likely to think persistent deflation desirable

Suggestion: Follow-up work to study how individuals interpret news

Level-k: Concept versus Modeling Device

- Increasing number of theory work with limited cognition
 - Finite planning horizons: Woodford (2018)
 - level-k thinking: Farhi & Werning (2018)
 - Behavioral New Keynesian agents: Gabaix (2019)

Does Cognition Matter for Expectations Formation?



- Men with low IQ: absolute forecast error for inflation of 4.5%
- Decreases monotonically with IQ
- Effect unrelated to income and education

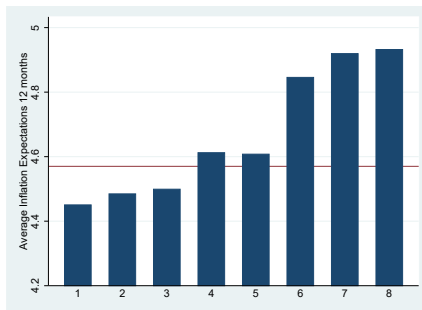
Suggestion: Follow-up work to understand why and how cognition matters

Survey Responses

- Dutch households well informed about inflation
- Sign of successful ECB communication?
- Treatment effects only mildly persistent
- Implications for optimal forward guidance communication?

Extreme Observations

- Huber regressions effectively delete extreme observations



Source: D'Acunto, Malmendier, Ospina, Weber (2019)

- Sort households into bins by household CPI from low to high
- High-low portfolio: difference in expected inflation of 0.5 percentage points
- Extreme observations possibly contain valuable information

Exogenous Timing of Responses?

- Authors exploit timing of response around policy decisions
- Do firms that submit early versus late differ on observables?
- Do firms that care about monetary news select into submitting late?
- Do you see persistent firm behavior: always late vs always early?

Predictability of Rate Change

- Many policy shocks small
- Due to increased transparency and openness of central banks
- If decision predictable, should we expect change in expectations?
- Relate to findings for households in Lamla & Vinogradov (2019)

Heterogeneity by Industry

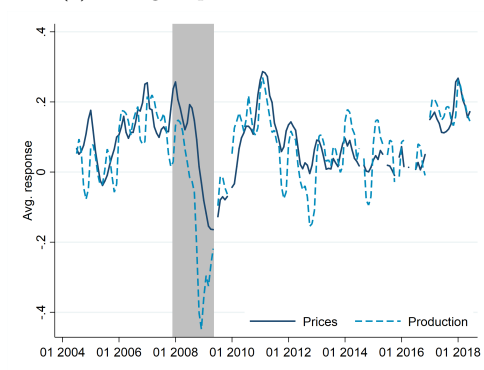
- Rational inattention suggest result dependent on incentives
- Do you see heterogeneity by industry?
- Are durable producing firms more responsive?
- Are more external-finance dependent firms more responsive?
- Are firms that have larger elasticities of demand more responsive?

Intensive and Extensive Margin of Adjustment

- Response to large shocks consistent with inattention and info effects
- Response to small shocks follows conventional wisdom
- Seems inconsistent at first...
- But might be driven by an extensive margin effect
- Few firms react to small shocks ...
- ... but the ones that do follow conventional wisdom

Qualitative Measures and Mean Reversion

(c) Average expectations within months



- High comovement in average response to price and output expectations
- Large degree of mean reversion month to month
- Due to qualitative answer: up-down-same?

Random Rants

- Always drop all months without any announcement
- Cluster standard errors at the month level by industry and month
- Gorodnichenko and Weber (2016): turning points special
- Directly relate policy shocks, expectations, and choice
- Qualitative measure & fix forecast horizon complicates interpretation

Conclusion

- Great papers everyone should read!
- Papers provide convincing new evidence for an important question
- Few minor quibbles to address empirically
- Mainly suggestions for follow-up work