

Memory and Beliefs: Evidence from the Field

Francesco D' Acunto, Michael Weber

Discussion by Luigi Paciello

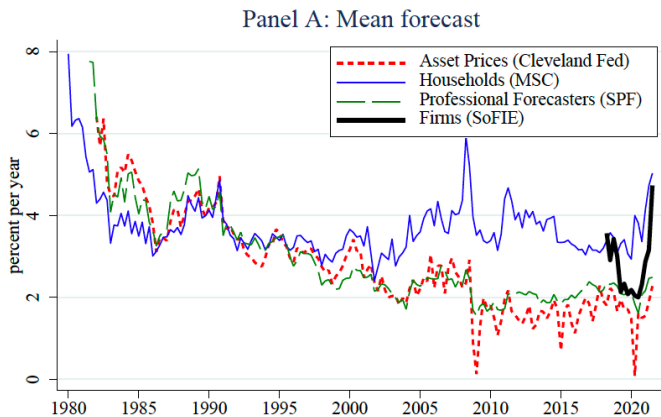
The plan of the discussion

- Review of the research agenda and main results
- Discussion I: a simple model
- Discussion II: price hunters vs frequent shoppers
- Discussion III: implications for policy

Disclaimer: This discussion is not based on reading the paper

Households are not better informed than firms on inflation

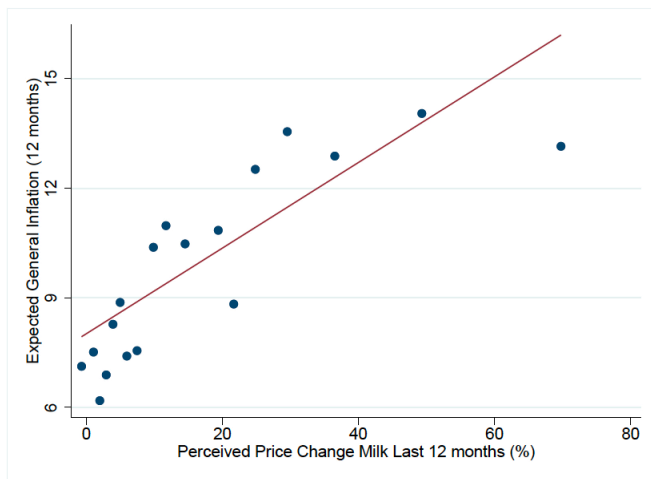
Figure 1. One-Year-Ahead Inflation Expectations for Different Agents.



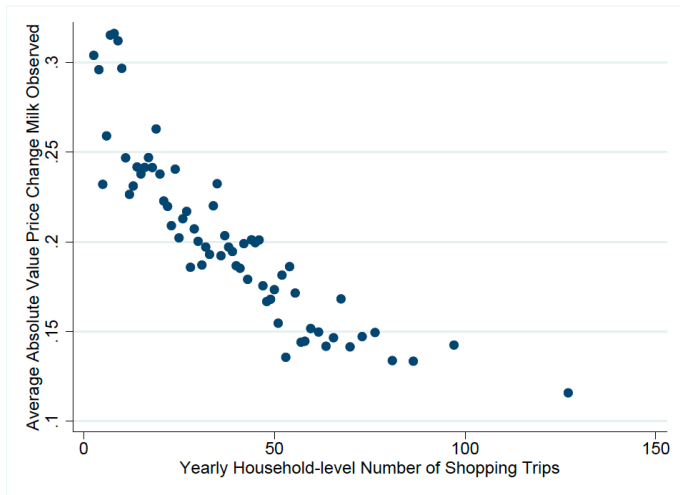
Source: Candia, Bernardo, Olivier Coibion, and Yuriy Gorodnichenko. The Inflation Expectations of US Firms: Evidence from a new survey. No. w28836. National Bureau of Economic Research, 2021.

This paper: what drives household expectations?

Experienced micro $\pi_j \implies$ Expected aggregate π



Driver of heterogeneous π_i experience: shopping frequency



Experienced π_i



Expected aggregate π

Heterog. experience: size

Large Price Changes and Inflation Expectations

| | Bottom Frequency CPI | | Intermediate Frequency CPI | | Top Frequency CPI | |
|---------------------|-------------------------|------------------|-------------------------------|-----------------|----------------------|------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Frequency CPI | 0.30** (0.15) | 0.32** (0.15) | 0.09 (0.28) | -0.01 (0.33) | 0.16** (0.08) | 0.20** (0.08) |
| Range Frequency CPI | [-0.117, -0.009] | | [-0.009, 0.028] | | [0.028, 0.231] | |
| Nobs | 19,706 | 18,568 | 19,707 | 18,903 | 19,713 | 18,749 |
| R ² | 0.0230 | 0.1002 | 0.0293 | 0.1038 | 0.0314 | 0.1122 |
| Demographics | | X | | X | | X |
| Expectations | | X | | X | | X |
| County FE | | X | | X | | X |

Standard errors in parentheses

Discussion I: A simple model of expectation formation

- Household j sees

$$\underbrace{\ln p_{it}}_{\text{milk}} = \underbrace{\ln P_t}_{\text{CPI}} + \underbrace{\epsilon_{it}}_{\text{idiosyncratic}}$$

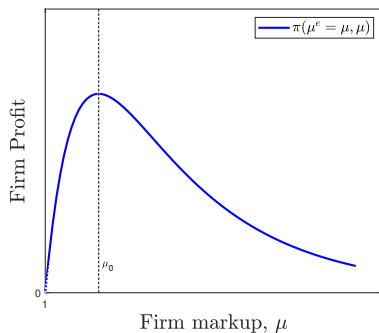
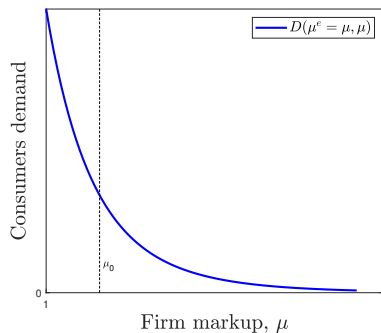
- $\ln P_t$ and ϵ_{it} independent Gaussian, unobserved
- Inflation perception:

$$E_j[\ln P_t | p_{it}] = \frac{\sigma_{p,j}^2}{\underbrace{\sigma_{p,j}^2 + \sigma_{\epsilon,j}^2}_{\omega_j}} \times \ln p_{it}$$

- Shopping frequency $\downarrow \implies \frac{\sigma_{p,j}}{\sigma_{\epsilon,j}} \uparrow \implies \omega_j \uparrow$

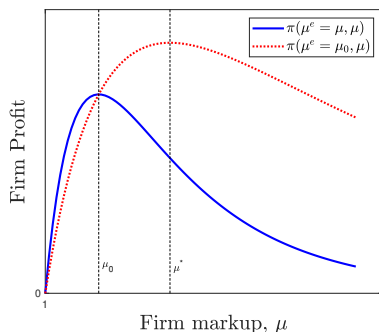
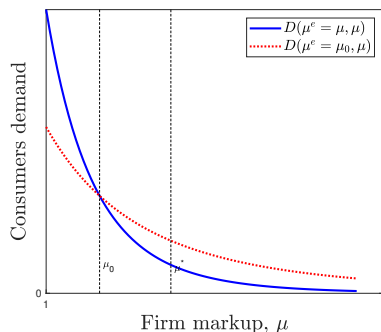
Larger experienced price changes \implies higher perceived salience of aggregate shocks relative to idiosyncratic ones?

Implications for firm pricing



Standard profit maximization: downward sloping demand in markup

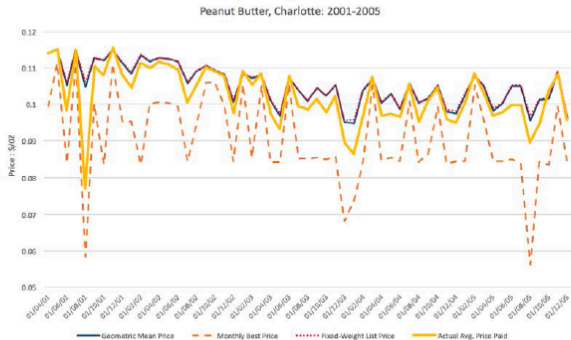
Implications for firm pricing



- Confusion reduces demand elasticity to idiosyncratic price variation and increases firm optimal markup.
- Prediction: less frequent shoppers pay higher markups?

Discussion II: observed vs paid prices

FIGURE 1. MONTHLY PEANUT BUTTER REGULAR PRICES, FIXED WEIGHT INDEX, VARIABLE WEIGHT INDEX, AND BEST PRICES.



Note: The figure shows a fixed weight aggregate of regular prices (defined in the text and produced using our modification of the [Kehoe and Midrigan \(2012\)](#) algorithm for detecting sales), a fixed weight aggregate of posted prices, unit values, and the monthly best price.

Source: Best Prices: Price Discrimination and Consumer Substitution Judith A. Chevalier and Anil K. Kashyap.

- Price hunters (frequent shoppers??) pay lower prices ✓
- But best price in the month more volatile than average
- Paid \neq observed for salience/memory?

Discussion III: implications for policy

Do learners from p_i like expansionary MP more or less?

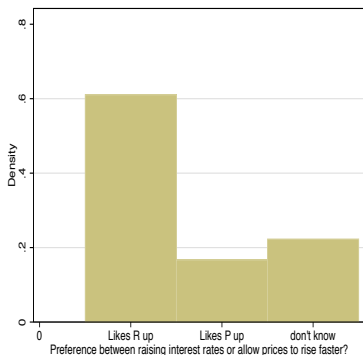
- Let's ask "them" (brits \neq americans)
- Rep. UK households 2003-2019 from the BoE's Survey

"If a choice had to be made either to raise interest rates to try to keep inflation down, or keep interest rates down and allow prices in the shops to rise faster, which would you prefer—interest rates to rise or prices to rise faster?"

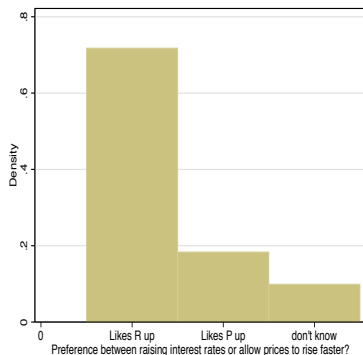
- Characterize UK households by:
 - Importance of shopping prices for π_j^e
 - recent shopping prices (<12 mo) vs older (up to 5 yrs)

Discussion II: implications for policy

Do you prefer $R \uparrow$ or $P \uparrow$? Role of learning from prices?



(a) Unconditional



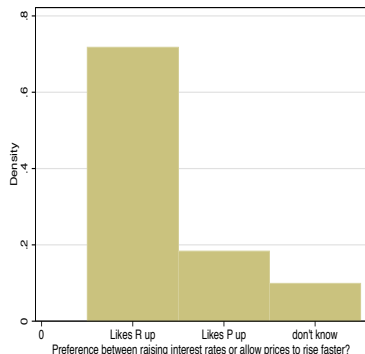
(b) Conditional on learning from p_i

Learning from prices: from 60 to 72% like $R \uparrow$

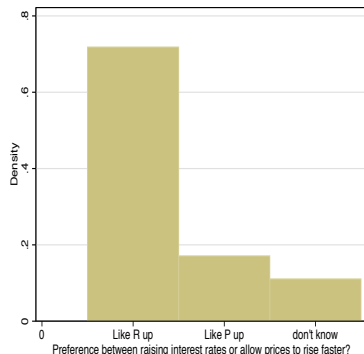
- Consistent with expectations of higher/more volatile inflation

Discussion II: implications for policy

Do you prefer $R \uparrow$ or $P \uparrow$? Learning from recent vs old prices



(c) Learning from $p_i \leq 12mo$



(d) Learning from $p_i > 12mo$

Learning from older prices: no much difference in MP preference

Conclusions

- Very interesting paper shedding more light on household π^e
- Looking forward to implications for macro modeling and policy
- Thank you