Macroeconomic Expectations of Households and Firms

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The Role of Expectations for Household Decisions...

- Key variable for economic decisions: perceived real interest rate

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

- Most households’ choices depend on inflation expectations
  - Consumption/saving choices (D’Acunto, Hoang, and Weber, 2018)
  - Mortgage Uptaking, Type (Malmendier and Nagel, 2015)
  - Stock Market Participation (Das, Kuhnen, and Nagel, 2019)
  - Wage bargaining

- Normal times: \( \Delta i_t \rightarrow \Delta r_t \) if expectations anchored

- Especially important when nominal rates low!
  (Coibion, Gorodnichenko, Kumar, and Pedemonte, 2018)
  - Policy needs to manage households’ expectations
  - Examples: Unconventional Fiscal Policy, Forward Guidance
BUT Households have dispersed knowledge...


- Expectations react to info and determine consumption choices
Within-Household Inflation Expectations: Gender Gap

![Graph showing gender differences in inflation expectations]


- Women have (more) positively biased inflation expectations
Why Are Women (More) Biased? They Do the Groceries!


- Large difference in inflation expectations by gender within household
- Unconditional difference driven by differences in grocery shopping
Shopping is the Most Important Source of Information


- Most relevant sources of information when we asked their inflation expectations
- Own (and family) shopping much more common than media, other sources
Sort households into bins by grocery price changes

- High-low portfolio: difference in expected inflation of 0.5 percentage points
- Economically sizeable given inflation target of 2%
- Higher weight on positive prices changes of frequently purchased goods

Men and Women often Think about Individual Goods


- Individuals often focus on price changes if specific items
- Inflationary impulse in narrow categories can result in spike in inflation expectations
Forecast Accuracy and Expectations


- IQ data for all men in Finland from military
- Men with low IQ: absolute forecast error for inflation of 4.5%
- Decreases monotonically with IQ
- Effect unrelated to income and education
Simple Policies vs Complex Policies


- Pre-announced VAT increase (left): inflation expectations AND spending react
- Fwd guidance announcements (right): nothing moves
- Both policies theoretically operate through identical channel: Euler equation
How Much will Policies Benefit Households?


- Target Communication: specifies aims of policy
- Instrument communication: details implemented measures
- Households higher level of trust in CB for target than instrument communication
Policy Medium Matters

\[ E_{i}^{post} \pi - E_{i}^{pre} \pi = a + b \times \text{Treatment}_i + \beta X_i + \text{error}_i \]

<table>
<thead>
<tr>
<th></th>
<th>Coibion, Gorodnichenko, Weber, JPE (2022): &quot;Monetary Policy Communication and Households’ Inflation Expectations&quot;</th>
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</thead>
<tbody>
<tr>
<td>Population growth  (-0.224)</td>
<td>-0.271 **  (0.116)  (0.120)</td>
</tr>
<tr>
<td>Past inflation  (-1.170***)</td>
<td>-1.241***  (0.114)  (0.120)</td>
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<tr>
<td>Inflation Target  (-1.087***)</td>
<td>-1.130***  (0.113)  (0.120)</td>
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<tr>
<td>Fed inflation forecast  (-1.166***)</td>
<td>-1.240***  (0.113)  (0.120)</td>
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<tr>
<td>FOMC statement  (-1.284***)</td>
<td>-1.298***  (0.113)  (0.119)</td>
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<tr>
<td>USA today coverage  (-0.469***)</td>
<td>-0.555***  (0.116)  (0.121)</td>
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<tr>
<td>Unemployment  (-0.348***)</td>
<td>-0.352***  (0.115)  (0.121)</td>
</tr>
<tr>
<td>Gas Price  1.490***</td>
<td>1.420***   (0.125)  (0.130)</td>
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<tr>
<th>Controls for demographics</th>
<th>No</th>
<th>Yes</th>
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<tbody>
<tr>
<td>Nobs</td>
<td>19,654</td>
<td>17,979</td>
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* Print media less effective because less trustworthy in US
Policy Sender Matters

Show survey participants identical forecasts for inflation and unemployment.

Vary picture of policy maker attached to forecasts
- Mary Daly (white), Raphael Bostic (black), Thomas Barkin (white)

Female and Black survey participants . . .
- More likely to react to forecasts
- Less distrustful

. . . when observe forecast with Daly and Bostic rather than Barkin

“Diverse Policy Committees Can Reach Underrepresented Groups”
Central banks aim for stable long-term inflation expectations

Short-term expectations might temporarily move due to shocks

Households with high trust should have well anchored long-term expectations

When households revise short-term expectations, so they so for long-term as well
Firms and Households Form Expectations Alike


- Limited evidence for firms suggest general biases of HH also prevalent for firms
Recent Reviews of This Literature

- “What Do the Data Tell Us About Inflation Expectations?”
  D’Acunto, Malmendier, Weber, Handbook of Subjective Expectations (forthcoming)

- “The Subjective Inflation Expectations of Households and Firms: Measurement, Determinants, and Implications”

- “The Expected, Perceived, and Realized Inflation of U.S. Households before and during the COVID19 Pandemic”
Take Aways

- Households focus on specific goods to form expectations
- Spike in inflation in narrow categories $\rightarrow$ in spike in expectations
- Larger weight on positive price changes
  - $E\pi$ will stay elevated even if $\pi$ comes down
- Messaging by Central Bank important
  - Message, medium, and sender matter