

# Unit Cost Expectations and Uncertainty: Firm's Perspectives on Inflation

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35th SUERF Colloquium

***“Price stability is the state in which expected changes in the general price level do not effectively alter business or household decisions.”***

-Alan Greenspan, July 1996 FOMC Meeting



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- **Answer:** **Wrong question.**

September 11, 2015 12:59 pm

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Martin Sandbu



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People have no clue about inflation

**F**ar from rational expectations



Wonkblog

## People like puppies, and it's a big problem for the economy



By **Ylan Q. Mui** September 10 at 1:00 PM

- **Question:** Is there a measure of “price growth” that is both relevant to firms **and** statistically connected to actual measured inflation?

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- **Answer:** Yes - “price growth” associated with an aggregation of firm-specific unit cost growth.

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- In *Asking about Prices* (Blinder 1994): “This turned out to be a tricky question because the term marginal cost is not in the lexicon of most business people ... For the purposes of the survey, we translated “marginal cost” into “variable costs of producing additional units” .”

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- A non-trivial problem: How to approach asking firms about nominal marginal costs.
- In *Asking about Prices* (Blinder 1994): “This turned out to be a tricky question because the term marginal cost is not in the lexicon of most business people ... For the purposes of the survey, we translated “marginal cost” into “variable costs of producing additional units” .”
- At the formation of the survey in 2011, the Atlanta Fed engaged in many face-to-face interviews to better understand how c-suite execs would interpret variations around marginal costs and variable costs per unit. The outcome from these cognitive interviews was to ask about “unit costs” .

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- The survey has been fielded continuously since October 2011.
- The survey asks probability question about firm "unit cost" expectations (in a manner similar to the New York Fed's household survey).

# The core of the BIE survey

“Projecting ahead, to the best of your ability, please assign a percent likelihood to the following changes to UNIT COSTS over the next twelve months. (Values should sum to 100%.)”

Unit costs down (less than -1%)	<input type="text" value="0"/>	%
Unit costs about unchanged (-1% to 1%)	<input type="text" value="0"/>	%
Unit costs up somewhat (1.1% to 3%)	<input type="text" value="0"/>	%
Unit costs up significantly (3.1% to 5%)	<input type="text" value="0"/>	%
Unit costs up very significantly (more than 5%)	<input type="text" value="0"/>	%
Total	<input type="text" value="0"/>	%

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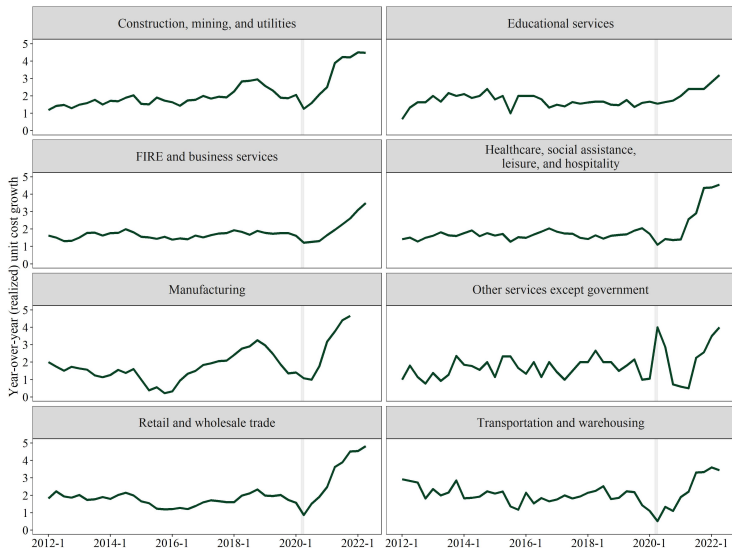
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- Firms' expectations are closely related to their outcomes.
- Fit the bimodal asymmetric power normal (BAPN) distribution to all histograms to capture the bimodality.

## We document 5 key findings:

- ① In aggregate, firms' unit cost realizations closely comove with U.S. inflation statistics.
- ② Once aggregated, firms' unit cost expectations move in step with those of professionals.
- ③ Up until the start of the pandemic inflation uncertainty was declining.
- ④ Policymakers' forecasts do little to alter firms' unit cost expectations.
- ⑤ At a firm level, unit costs are an important determinant of price setting behavior.

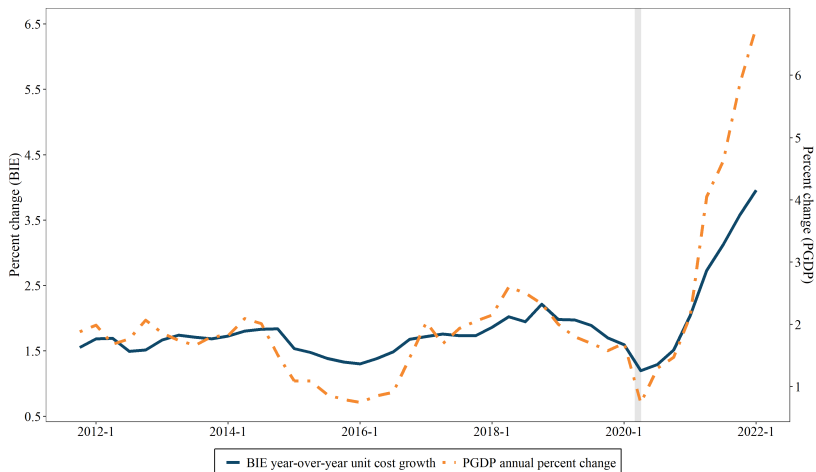
# The BIE is capturing unique information from firms

## Sectoral-level Realized Unit Cost Growth (year-over-year)



# Movements in firms' unit cost perceptions mirror changes in actual inflation.

## Firms' Realized Unit Cost Growth vs Actual Inflation (GDP Deflator)

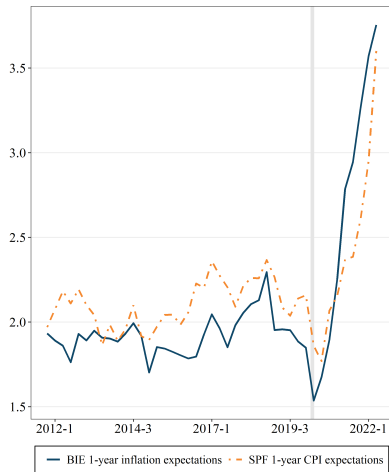
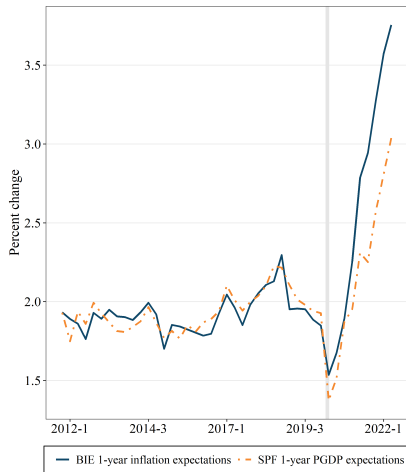


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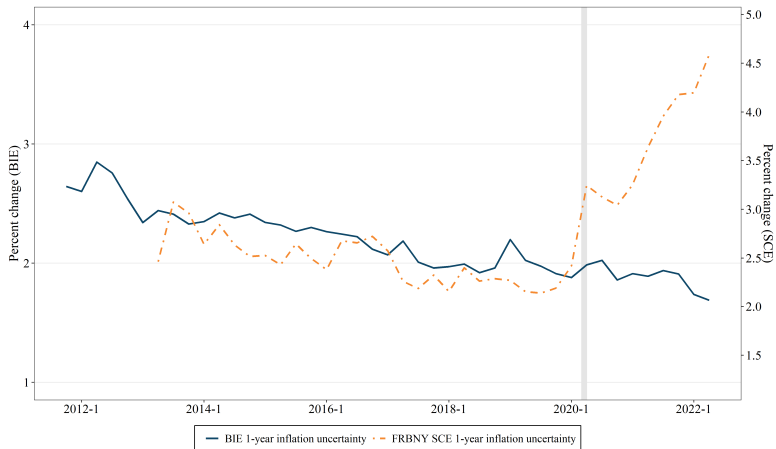
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# Measures of Inflation Uncertainty



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- ③ Up until the start of the pandemic inflation uncertainty was declining.
- ④ Using randomized controlled trials, we find that policymakers' forecasts do little to alter firms' unit cost expectations.
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- **Short answer:** Firms (and potentially households) put very little weight on understanding/tracking official measures of aggregate inflation (GDP Price Index, CPI, PCE, etc) during normal times.

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- **Long(er) answer:** Due to the lack of relevance that firms place on aggregate inflation, eliciting inflation expectations requires a different lens. In the case of firms, that lens is unit costs (i.e. own-firm nominal marginal costs). By aggregating across firm-specific unit cost growth, we uncover a relevant proxy for their inflation expectations. Unit cost expectations are durable across all environments (high and low inflation), while in “normal times” when inflation is low, firm managers use this information for their pricing and business decisions.

# Influence of CPI on Business Decisions

