The Pass-through from Inflation Perceptions to Inflation Expectations

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Discussion by

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"SNB Research Conference"

September 29-30, 2023

Motivation

▶ Household inflation expectations important for monetary policy

▶ Documented characteristics of household inflation expectations
  - ▶ upward bias
  - ▶ higher disagreement and uncertainty than for professional forecasters

▶ Still lot to learn on *determinants* of hh expectations
  - ▶ Cognitive constraints:
    - signals observed in own environment (e.g. shopping experience)
  - ▶ Inflation perceptions correlated with short term inflation expectations
    - direction of causality unclear (Traut-Mattausch et al. 2004)

▶ New regular or ad hoc surveys, and new approaches allow for further analysis

The Paper in a Nutshell

Using the BOP-HH survey and a RCT experiment documents stylized facts about inflation perceptions:

- establish *causality* between perceptions and short term expectations
  positive and significant pass-through

- establish relation between perceptions and *long* term expectations
  pass-through lower than for short term expectations

- document *state dependence* in the degree of pass-through from perceptions to expectations
  pass-through higher in low inflation states

- understand *how* households form their perceptions about inflation
  rely on prices of frequently bought goods rather than media

- document and analyse *heterogeneity* in pass-through
  socioeconomic characteristics and individual uncertainty affect strength of pass-through

My Discussion

- Solid, innovative and relevant work

- Polished paper, ready to be submitted

- My discussion:
  - survey data
  - comments: survey questions/design
  - further analysis
  - minor comments

Survey Data

Overview of Inflation Expectations' Surveys

Survey	Country	Start date	Coverage	Perceptions	Frequency	Wording	Horizon
BOP-HH	Germany	Apr 2019	2000	Y	M	inflation	1, 5, 10
ECB-SCE	EA (6)	Jan 2020	10000	Y	M	prices	1, 3
MSC	US	Jan 1978	600	N	M	prices	1, 5
NY-SCE	US	June 2013	4500	N	M	inflation	1, 3, 5
CSCE	Canada	2014Q4	2000	Y	Q	inflation	1, 2, 5
CAMME	France	Jan 1987	1250	Y	M	prices	1
DNB HHS	Netherlands	1993	2000	N	A	prices	1
NBES	Norway	2002Q1	1000	Y	Q	prices	1, 2-3
SCTS	Sweden	Jan 1993	1500	Y	M	prices	1
BoE-IAS	UK	2001Q2	2200	Y	Q	prices	1,2,5

Table: BOP-HH: Bundesbank Online Panel Households; ECB-SCE: European Central Bank Survey of Consumer Expectations; MSC: Michigan Survey of Consumers, available at the annual frequency from 1946, quarterly frequency from 1961 and monthly from January 1978; NY-SCE: New York FED Survey of Consumer Expectations; CSCE: Canadian Survey of Consumer Expectations; CAMME: Monthly Consumer Confidence Survey; DNB HHS: Dutch National Bank Household Survey; NBES: Norges Bank Expectations Survey; SCTS: Swedish Consumer Tendency Survey; BoE-IAS: Bank of England Inflation Attitudes Survey.

Bundesbank Online Panel Household Survey

- **Online Survey**

  advantages: short field periods, data readily available, responses easily stored, easy to implement randomised control trials, larger geographical coverage, more truthful responses to sensitive questions

  disadvantages: inability to confirm implausible answers (e.g. amounts), respondents might access external information while they respond to the survey

  Selection bias:
  - to mitigate it initially recruit respondents offline
  - representative of the online population
  - implication: older female and low educated underrepresented in the BOP-HH

- **Panel Survey**

  advantages: revision of expectations
  possibility to study effect of learning on responses

  no revisions of previous responses in order to implement treatments and RCT

- **Wording**
  - "prices" familiar concept but lead to higher and more dispersed expectations (de Bruin et al. 2012)
  - "inflation" relevant for monetary policy but more abstract, decreases response rate

Comments

Pass-through from Inflation Perceptions to Expectations
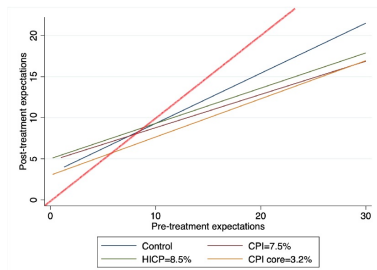
Pass-through is positive and significant, in line with other studies [0.525,0.831]

- ▶ Estimated *correlation* from other surveys
  - Sweden: 0.5 (Jonung 1981);
  - US: 0.5 (van der Klaauw et al.2008), 0.73 (Weber et al 2022), 0.78 (Cavallo et al 2017)

- ▶ How can selection bias change the results?
  - women and lower educated under-represented in survey →
  - expect a **higher** pass-through

- ▶ How does "panel conditioning" affect the results?
  - Kim and Binder (2023): estimated reduction by 2pc for hh in MSC
  - lower pass-through for respondents included in multiple waves →
  - expect a **higher** pass-through

Pass-through from Inflation Perceptions to Short Term Expectations: RCT

Pass-through is positive and significant, but lower than before treatment

- Four groups:
    - T0: control
    - T1: core inflation
    - T2: CPI
    - T3: HCPI

- Question on perceptions/expectations formulated differently post treatment - standard, but might affect the estimated pass-through

Suggestion: correct coefficient of the treated subjects

Pass-through from Perceptions to Long-Term Expectations

Pass-through is still positive and significant, but lower than for short term expectations

- ▶ Question from BOP-HH
  "What value do you think the rate of inflation or deflation will take on average over the next five years? Answer: [...] percent"

- ▶ Compare with NY-FED SCE or CSCE
  "Over the 12-month period between [Month, Year - 24 months from survey date] and [Month, Year - 36 months from survey date], I expect the rate of [inflation/deflation] to be [...] percent"

- ▶ Average yearly inflation over the next 5 years is different from yearly inflation rate in 5 years and less related to long run expectations

- ▶ In periods of inflation deviating from mean long run expectations measured as in BOP-HH exhibit higher persistence and higher covariance with perceptions → pass-through might be **lower** than estimated

How are Perceptions Formed?

RCT question: self-reported drivers of inflation perceptions

- ► Determinants of perceptions:
  - Development of fuel/food prices over the past 12 months
  - Media reports on the inflation rate
  - Development of the geopolitical situation over past 2 months, particularly the war in Ukraine

- ► Households might have heard price developments from news determinats should be "my own shopping experience of fuel/food items"
  → underestimate the importance of media

- ► Mixed results for media and CB communication affecting *expectations*:
  - positive: Lamla and Lein (2014), Dräger (2015), Granziera et al (2023), Coibion et al (2021)
  - no effect: Coibion et al (2020), Lamla and Vinogradov (2019)

Individual Uncertainty

In this paper: when inflation is high disagreement increases substantially while uncertainty only slightly

Previous papers find that uncertainty and disagreement are highly correlated (Brune de Bruin et al. 2009)

- ▶ Intervals for answer to probabilistic question have predetermined values and vary in length
  e.g. [0-2), [2,4),[4-8), [8-12), 12 or higher

- ▶ intervals too wide in a high inflation environment

- ▶ using median response to center intervals might give more accurate measure of uncertainty (Attanasio and Augsburg 2016)

- ▶ obtaining more accurate measure of uncertainty might strengthen the results that the more uncertain is the hh the higher is the pass-through

New Analysis

New Analysis: Disagreement

Substantial disagreement in hh inflation expectations (Mankiw et al., 2003; Coibion and Gorodnichenko, 2015; Giglio et al. 2021).

Disagreement attributed to:

- ▶ differences in information about the current state of the economy (Mankiw and Reis, 2002; Reis, 2006; Coibion and Gorodnichenko, 2012)

  → conditional on the same information set economic agents make homogeneous predictions

- ▶ heterogeneity in subjective models (Molavi, 2019; Angeletos et al. 2020).

  → disagreement in expectations even when all agents have same information about previous realizations of macroeconomic variables
  did

Suggestion: disentangle the two drivers of disagreement

Effects of Randomized Control Trial on Disagreement:

- ▶ did it decrease in perceptions?
- ▶ did it decrease in expectations?
- ▶ is it quantitatively significant?

New Analysis: Pass-through to Other Variables

Do inflation perceptions drive expectations about other key
macroeconomic variables?

- ▶ BOP-HH elicits expectations for several variables: house prices,
  rents, interest rates on mortgages and savings.
  No paper documenting pass-through from inflation perceptions to
  expectations for any of these variables

- ▶ What is the pass-through from inflation perceptions to wages?
  Wage expectations not currently covered in the survey; Maybe a
  new RCT?
  Jorda and Nechio (2023) highligth the role of inflation expectations
  on wage setting dynamics after the COVID-19 pandemic

Minor Comments

- ▶ Median instead of average of expectations: they might differ because of bunching of percentages
- ▶ How does trimming affect the results?
- ▶ Include a zip code or county dummy among controls: German households living in areas with higher local inflation during the hyperinflation of the 1920s expect higher inflation today (Braggion et al 2023)
- ▶ RTC experiment assumption: treated with T2 and T3 update their perceptions to actual numbers
  Might not be the case because:
  - ▶ respondents might not understand the concepts of core, CPI and HICP inflation
  - ▶ respondents might not fully trust information from statistical agencies (Cavallo at al 2017)

Summing Up

▶ A clear paper that asks a very topical question

▶ Very thoughtfully executed and a lot of data work

▶ New insights on **drivers of inflation perceptions and expectations**
  - empirical validation of noisy information models

▶ **Monetary policy implications** quite negative
  - shopping experience determines short and long term inflation expectations via perceptions
  - long term expectations not well anchored - households difficult to reach and affect via central bank communication or media
  - maybe central bank communication too complex?

▶ It was a pleasure to read it!

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