Discussion of "The Pass-Through of Inflation Expectations into Prices and Wages: Evidence from an RCT Survey"

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Summary and main contributions

Studies passthrough of inflation expectations to prices and wages by Swiss firms

Runs RCT with information treatment end 2022-beginning 2023

Examines price and wage response to changes in expectations a different horizons, and interaction with firms' price-setting practices

Finds:

- Higher passthrough (0.45) for inflation expectations at 6m

- Firms updating on a state-dependent basis react less

Concludes:

- Central banks should anchor short-term inflation expectations

Information treatments

Treatment 1 (T1): "Energy price inflation for consumers in Switzerland has risen from its average of 0% over the ten years before the Covid pandemic to 26% in October 2022."

Treatment 2 (T2): "The Swiss National Bank has achieved its inflation target of 0-2% on average over the past 20 years. During this period, the consumer price inflation rate was 0.4% on average. The Swiss National Bank's (SNB) mandate is to ensure price stability, while taking account of economic developments. The SNB defines price stability as a rise in the Swiss consumer price index of less than 2% per year."

Literature on firms' inflation expectations passthrough

From Bandera, Barnes, Chavaz, Tenreyro and von dem Berge. (2023)

Table 3: Randomised Control Trial studies examining the impact of an exogenous shock to firm inflation expectations

| Study	Country / Period	Approach to identify shock	Impact of exogenously higher inflation expectations on				
			Own prices (1yr ahead)	Aggregate prices	Wages	Employment	Investment
Coibion, Gorodnichenko and Kumar (2018)	New Zealand, 2013	One group given Reserve Bank of New Zealand inflation target	No change	-	No change	Significantly higher	Significantly higher
Coibion, Gorodnichenko and Ropele, (2018)	Italy, 2013-18	One group given latest CPI release.	Limited increase	-	-	Significantly lower	Significantly lower
Rosolia, Banca d'Italia (2021)	Italy, 2013-18		No change	Increase	No change	No change	No change
Savignac et al, (2021)	France, 2020-21	One group given latest inflation release.	No change	Increase	No change	-	-

Recent theoretical Literature

Werning (2022): theoretically predicts that inflation expectations
at shorter horizons matter most and that firms updating on a
state-dependent basis have lower passthrough

Background

Consumer Price Index

Percentage change with respect to the same month last year
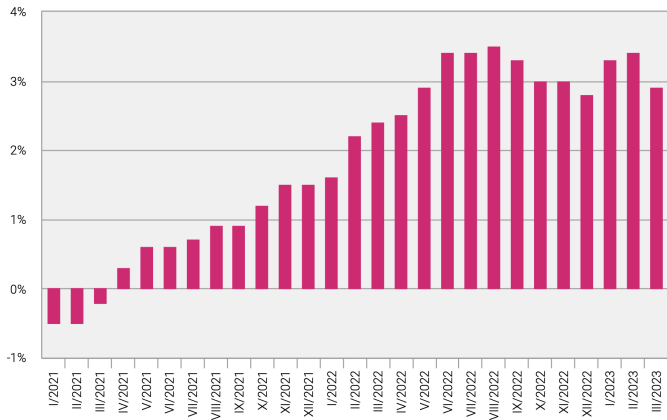
Source: FSO – Consumer Price Index (CPI)   © FSO 2023

Comments

First paper to empirically study passthrough of inflation expectations at different time horizons and by price updating modality (time v. state dependent)

Studies both price and wage passthrough

Price results appear aligned with predictions in Werning (2022):

✓ Higher passthrough for shorter horizon expectations
✓ Passthrough depends on updating modality
✓ Passthrough for time-dependent firms 0.88
    (theory: between 1/2 and 1)
✓ Passthrough for state-dependent firms 0.33
    (theory: below 1/2 and possibly inaction regions)

Power of treatment/1

Table 2

	Mean				Median				SD			
	all	T1	T2	C	all	T1	T2	C	all	T1	T2	C
Wages next year (5.)	2.6	2.5	2.7	2.6	2.5	2.5	2.5	2.5	2.2	1.7	3.1	1.6
Prices next year (13.)	3.5	3.4	3.6	3.4	2.8	3.0	2.5	2.0	6.2	4.6	6.1	7.7
Inflation exp. 6m (14.)	3.0	3.0	2.9	3.2	3.0	2.9	3.0	3.0	3.6	2.8	1.8	5.4
Inflation exp. 1y (15.)	3.1	3.0	3.0	3.2	2.5	2.5	2.5	2.5	3.9	3.6	2.2	5.5
Inflation exp. 5y (16.)	3.2	3.1	3.2	3.3	2.0	2.0	2.0	2.0	4.6	3.9	3.8	6.0
Update wages next year (18a.)	2.4	2.6	2.4	2.3	2.2	2.5	2.2	2.2	2.4	2.9	2.6	1.4
Update prices next year (18b.)	3.4	3.3	3.5	3.4	2.5	3.0	2.0	2.0	6.0	4.4	5.7	7.8
Update inflation exp. 6m (18c.)	2.9	3.0	2.6	3.0	2.7	3.0	2.5	3.0	3.6	2.9	1.7	5.3
Update inflation exp. 1y (18d.)	2.9	3.1	2.7	3.1	2.4	2.5	2.0	2.5	4.0	3.8	2.1	5.4
Update inflation exp. 5y (18e.)	3.1	3.2	2.8	3.2	2.0	2.0	2.0	2.0	4.4	3.7	3.3	6.0

✓ Mean inflation exp. 6m: Pre T1 = 3.0pc. Post T1=3.0pc

Power of treatment/2

Table 3 – Average information treatment effects

| Dependent Variables: | dWages | dPrices | dInfl. 6m | dInfl. 1y | dInfl. 5y |
Model:	(1)	(2)	(3)	(4)	(5)
Variables					
T1	0.28*	-0.05	0.10	0.13*	0.13
	(0.14)	(0.13)	(0.09)	(0.07)	(0.11)
T2	-0.09	-0.07	-0.18**	-0.22***	-0.28***
	(0.18)	(0.17)	(0.07)	(0.06)	(0.10)
Fixed-effects					
sector_1d	Yes	Yes	Yes	Yes	Yes
Fit statistics					
Observations	1,258	1,017	1,176	1,166	1,166
R^2	0.01537	0.00772	0.01721	0.02889	0.01970
Within R^2	0.00375	0.00018	0.01196	0.02432	0.01108

✓ Insignificant or (nearly insig.) ATE on wages and prices
✓ Insignificant or (nearly insig.) effect of T1 on inflation exp.

Power of treatment/3

Effects of treatments on both dependent and independent variables seem to be quite small on average (Table 2) and insignificant on inflation expectations for T1 (Table 3)

- The coefficient of interest in the regression is roughly Δp on $\Delta \mathbb{E}(\pi)$, so $\rightarrow 0/0$

- Can we scale up the estimates?

- Is passthrough non-linear? What about inaction regions?

- 26pc is a big increase (2pc in CPI space?); but causes little change in prices or expectations.

Nature of inflation in T1: Not IW's dream (all else equal)

Treatment 1: "Energy price inflation for consumers in Switzerland has risen from its average of 0% over the ten years before the Covid pandemic to 26% in October 2022."

Energy price shocks might be interpreted as a real supply shock, leading to a different response (stagflationary v. expansive view)

- E.g., An increase in inflation exp caused by imported energy price increases is different from, say, an increase in inflation exp caused by the discovery of oil in the country (opposite real income effects)

From figure 4, raw materials and other input prices are deemed more important than (expected) inflation by firms for price setting

- Explore more whether firms are thinking about demand-driven inflation or a real input cost shock; e.g., do energy-intensive firms react more to T1?

IW's dream, all else equal

- "Between dates X and Y, inflation will most likely be Z"

- "Professional forecasters / central bank / etc project inflation to be X in the next 6m/1y/5y"

- Closer to questions in recent RCT (Coibion et al., Hajdini et al.)

Horizon of inflation expectations

Passthrough declines as the expectation horizon lengthens (Tab 4)

Result obtained from running separate regressions for each expectation horizon. But, ideally, one would want to test $\beta_1 > \beta_2 > \beta_3$ in regression:

$$\text{dPrices}_i = \alpha + \beta_1 \text{dInfl.6m}_i + \beta_2 \text{dInfl.1y}_i + \beta_3 \text{dInfl.5y}_i + \gamma X_i + \epsilon_i$$

Horse race amongst expectation horizons

Dependent Variables:	dPrices	dWages
Model:	(1)	(2)
Variables		
dInflation 6m	0.10	0.02
	(0.13)	(0.15)
dInflation 1y	0.34**	0.19*
	(0.20)	(0.16)
dInflation 5y	0.07	0.21**
	(0.06)	(0.10)
Fixed-effects		
Sector FE	Yes	Yes
Fit statistics		
Observations	899	1,179
R^2	0.07	0.05
Within R^2	0.08	0.05

Heteroskedasticity-robust standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Price modality

-Time-dependent firms frontload expectations more than state-dependent ones

-But in the face of large shocks, big switch from time-dependent pricing to state-dependent pricing - or more flexible pricing (Cavallo and Lippi, 2023)

Policy Implication

Paper recommends "anchoring short-term expectations." But why or how would one do that?

- Swiss inflation overshot to just above 3pc; but median long-term expectations remained at 2.0pc. Consistent with optimal policy outcomes in the face of a sharp tradeoff-inducing shock (and with flexible-inflation targeting regimes embedded in remits). Efficient relative price adjustment after sectoral shocks calls for temporary inflation overshoot (Guerrieri et al 2023)

- Given lags in transmission, monetary policy can affect inflation at roughly $\geqslant 1.5$ year horizon. Trying to twist short-term expectations or imply monetary policy can do more than it actually can, would be misleading. Income policies? Price guarantees?

- Probably better for CBs to focus on feasible policy horizon and embrace flexibility of remit to manage short-term tradeoffs

Summary

- Very nice paper, addressing an important academic and policy
question

- Circumvents usual limitations of data and scarcity of natural
experiments

- Perhaps should reconsider policy implications - the line between
influencing and misleading people forming expectations at short
horizons is dangerously blurry. Focus of central banks should be on
the medium term - the horizon over which monetary policy can
impact inflation. They should not promise/commit to the infeasible