

# Information Channels of Monetary Policy and Inflation Expectations



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## Main contributions and results

- We investigate how the channels through which households receive information about the ECB's monetary policy relate to their inflation expectations and inflation uncertainty.
- 85% of households rely on classical media, while only 6% use social media. Most households (71%) rely on a single source of information.
- The probability that households use classical media increases with age, education and household income.
- Younger households are more likely to rely on social media.
- Women are less likely to be informed about monetary policy.
- Households relying on classical media have significantly lower inflation expectations, lower absolute forecast errors and are less uncertain about future inflation. Households using social media are significantly more uncertain.
- In response to an unexpected increase in the policy rate, more households increase rather than decrease their inflation expectations. Only households who rely on direct information channels of the ECB adjust inflation expectations downwards.

## Bundesbank Survey on Consumer Expectations

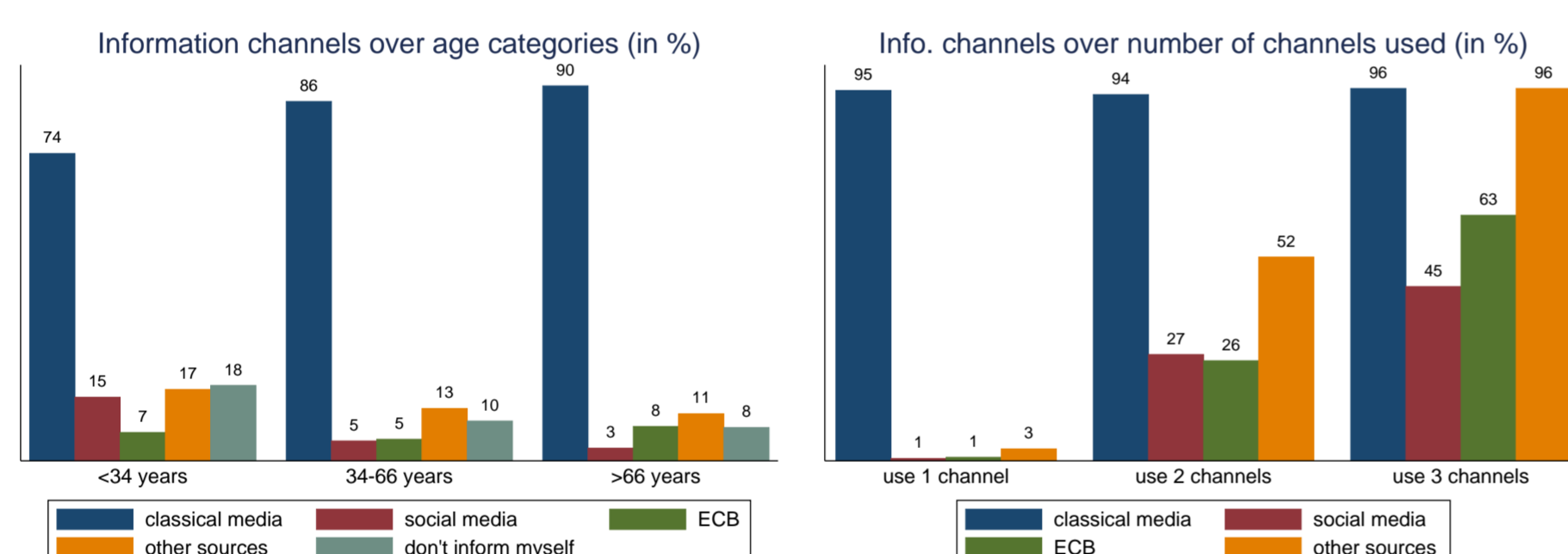
We use data from the Bundesbank pilot survey on consumer expectations. The pilot survey (initially) comprises three wave. We use data from the third wave which was conducted in June 2019.

## Monetary Policy Information Channels

Q:317: "Through which channels do you receive information about the monetary policy of the ECB?"

- classical media
- social media
- direct communication channels of the ECB
- other sources
- I do not inform myself

Information Channels					
Obs.	classical	social	ecb	other	no inform
2619	85%	6%	6%	13%	11%



### Information Channels and Household Characteristics

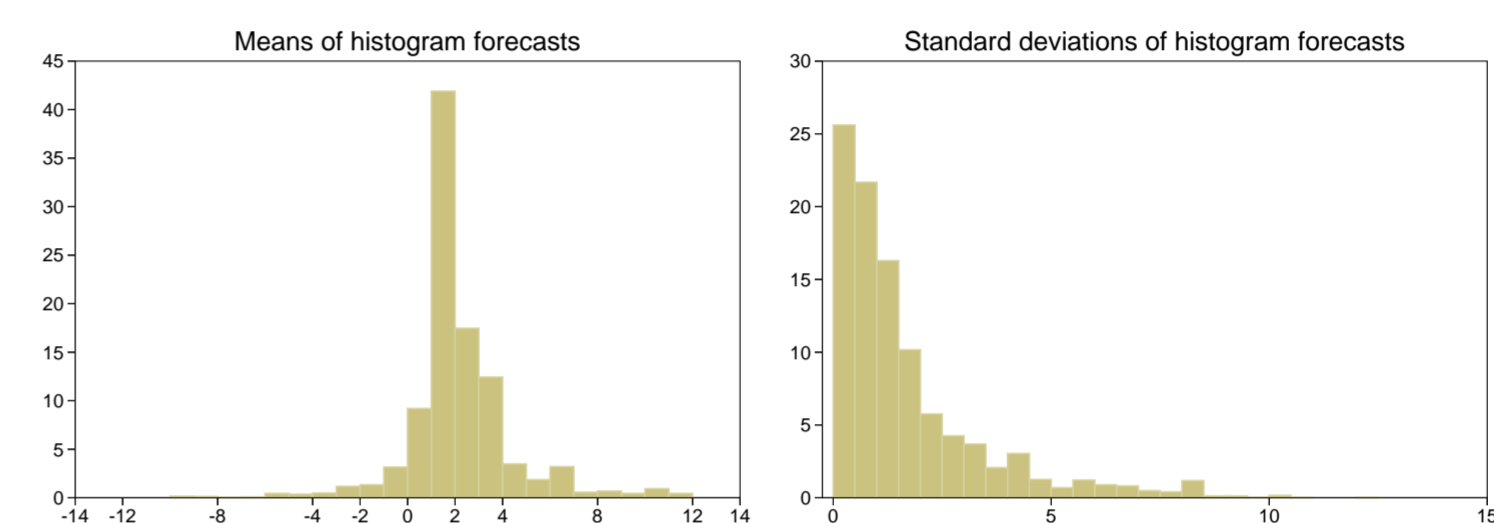
	classical	social	ecb	other	no inform
age	1.02*** (0.30)	-0.92*** (0.23)	-0.74*** (0.21)	-0.19 (0.27)	-0.69*** (0.27)
age <sup>2</sup>	-0.01** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.00 (0.00)	0.00* (0.00)
female	-6.90*** (1.54)	-0.41 (1.01)	-1.54 (1.00)	-5.18*** (1.39)	8.09*** (1.37)
ln(income)	7.10*** (1.86)	-1.54 (1.17)	1.66 (1.25)	-1.80 (1.61)	-4.84*** (1.63)
years of educ.	0.64*** (0.20)	-0.17 (0.14)	-0.04 (0.14)	0.51** (0.21)	-0.42** (0.17)
Constant	40.81*** (8.55)	34.10*** (6.32)	23.22*** (5.60)	19.06** (7.89)	39.36*** (7.43)
Observations	2,429	2,429	2,429	2,429	2,429
% correctly predicted	85.38	93.95	93.54	87.36	89.50

## Inflation Expectations and Uncertainty

The survey asks for a point prediction of the inflation rate over the previous/next 12 months (Q:005B,  $\pi_{t-12:t|t}^P$  and  $\pi_{t:t+12|t}^P$ ) and a corresponding histogram forecast over the next 12 months (Q:207). Based on the latter, we compute the mean,  $\pi_{t:t+12|t}^H$ , and the standard deviation,  $\sigma_{t:t+12|t}^H$ . The standard deviation serves as a measure of inflation uncertainty.

Inflation Expectations/Uncertainty				
	Obs.	Mean	Std. dev.	Min. Max.
$\pi_{t-12:t t}^P$	1533	4.01	10.13	-100 100
$\pi_{t:t+12 t}^P$	2634	3.29	6.95	-60 100
$\pi_{t:t+12 t}^H$	2492	2.02	2.56	-14 14
$\sigma_{t:t+12 t}^H$	2492	1.60	1.82	0 12.07

In the following, we focus on households with  $-12 \leq \pi_{t-12:t|t}^P \leq 12$  respectively  $-12 \leq \pi_{t:t+12|t}^P \leq 12$ . This range covers all closed bins of the histogram forecast.



Do information channels affect inflation expectations/uncertainty when controlling for household characteristics?

### Inflation Expectations/Uncertainty and Information Channels

	backward-looking		forward-looking		
	$\pi_{t-12:t t}^P$	$ \pi_{t-12:t t}^P - 1.3 $	$\pi_{t:t+12 t}^P$	$\pi_{t:t+12 t}^H$	$\sigma_{t:t+12 t}^H$
classical	-0.54*** (0.18)	-0.56*** (0.17)	-0.51*** (0.18)	-0.46** (0.22)	-0.33** (0.13)
social	0.15 (0.27)	0.15 (0.25)	0.28 (0.22)	0.23 (0.27)	0.54*** (0.20)
ecb	0.02 (0.24)	0.14 (0.21)	0.01 (0.19)	-0.06 (0.22)	0.08 (0.17)
other	-0.01 (0.14)	-0.09 (0.13)	0.08 (0.14)	0.06 (0.14)	-0.09 (0.11)
Constant	2.78*** (0.63)	1.79*** (0.59)	2.53*** (0.52)	1.77*** (0.58)	4.01*** (0.43)
Observations	1,311	1,311	2,311	2,318	2,318
$\bar{R}^2$	0.06	0.09	0.02	0.03	0.05

Findings for control variables:

- Inflation expectations increase with income and years of education and are significantly higher for women.
- Inflation uncertainty decreases with age, income and years of education and is significantly higher for women.

## Information Channels and Inflation Updating

Households are asked about how they would update their inflation expectations in response to an unexpected increase in the policy rate?

- weak treatment: increase of 0.25 percentage points (Q:311A)
- strong treatment: increase of 1.00 percentage points (Q:311B)

### Treatments and Inflation Update

	all	weak treatment	strong treatment
lower expected inflation	628 (24.08%)	296 (22.61%)	332 (25.56%)
same expected inflation	1209 (46.36%)	653 (49.89%)	556 (42.80%)
higher expected inflation	771 (29.56%)	360 (27.50%)	411 (31.64%)

### Regression of Inflation Update (lower/same/higher) on Information Channels

	all	weak treatment	strong treatment
classical	-0.02 (0.05)	-0.05 (0.06)	0.02 (0.07)
social	-0.01 (0.07)	0.03 (0.10)	-0.05 (0.10)
ecb	-0.13** (0.07)	-0.09 (0.09)	-0.18* (0.10)
other	0.07 (0.04)	0.11* (0.06)	0.03 (0.06)