News consumption, political preferences, and accurate views on inflation

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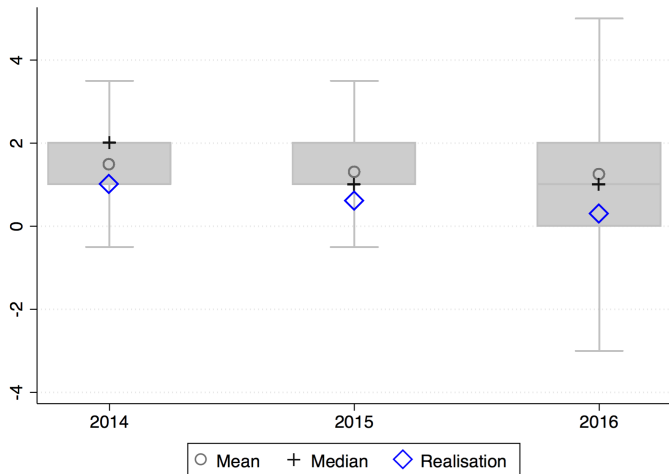
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Banco de España
9 October 2017

The usual disclaimers apply.

We study heterogeneity in views on inflation ...

News, Political
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Motivation

Method and Data

Results

Policy implications

Inflation perceptions for calendar years 2014 – 2016. Boxplots based on survey responses from members of the CentERpanel.

...where we focus on news consumption...

How often did you read about Dutch consumer prices in these newspapers or magazines in 2014/5/6?

▶ Algemeen Dagblad

▶ Elsevier

▶ Free newspaper (e.g. Metro)

▶ NRC Handelsblad

▶ Regional or local newspaper

▶ De Telegraaf

▶ Trouw

▶ De Volkskrant

...where we focus on news consumption...

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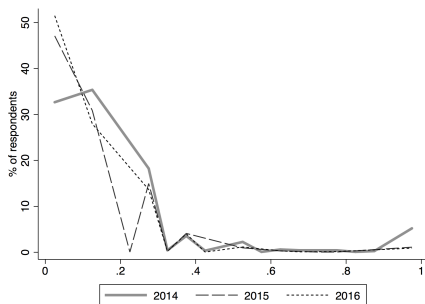
Results

Policy implications

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Fraction of sources used (very) frequently

... while taking political preferences into account

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	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	AD	Elsevier	Free Paper	NRC	Regional	Telegraaf	Trouw	Volkskrant
Liberal	0.10**	0.13***	0.05	0.19***	0.03	0.24***	-0.04	0.03
	(0.04)	(0.03)	(0.04)	(0.04)	(0.05)	(0.04)	(0.03)	(0.04)
Socialist	-0.02	-0.07***	0.15***	0.04	0.15***	-0.15***	0.02	0.20***
	(0.04)	(0.03)	(0.04)	(0.04)	(0.06)	(0.04)	(0.03)	(0.04)
Christian-democr.	0.06	0.06*	-0.00	-0.05	0.33***	0.05	0.09**	-0.18***
	(0.04)	(0.03)	(0.04)	(0.04)	(0.06)	(0.05)	(0.04)	(0.04)
Conservative	0.08*	0.09**	0.07	0.01	0.13**	0.11**	0.02	-0.03
	(0.05)	(0.04)	(0.05)	(0.05)	(0.07)	(0.05)	(0.03)	(0.04)
Progressive	0.01	-0.01	0.07*	0.22***	0.03	-0.06	0.13***	0.35***
	(0.04)	(0.03)	(0.04)	(0.04)	(0.06)	(0.04)	(0.03)	(0.04)
R2 overall	0.01	0.04	0.01	0.06	0.02	0.06	0.03	0.11
No. clusters	1459	1452	1455	1454	1474	1463	1450	1465
Observations	3503	3454	3490	3482	3588	3545	3455	3510

Coefficients and standard errors for random-effects panel regressions. Based on survey responses from members of the CentERpanel.

What we find

▶ accurate perceptions are an important determinant of
  accurate inflation expectations

What we find

▶ accurate perceptions are an important determinant of
   accurate inflation expectations

▶ more frequent newspaper usage does not necessarily
   reduce errors in inflation perceptions

What we think of these findings

- ▶ accurate perceptions are an important determinant of accurate inflation expectations ☺
- ▶ more frequent newspaper usage does not necessarily reduce errors in inflation perceptions ☹

Outline

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Related literature

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A long tradition of papers documenting that inflation
perceptions & inflation expectations vary across
sociodemographic dimension.

Examples:

- ▶ Jonung (AER, 1981)
- ▶ Souleles (JMCB, 2004)
- ▶ Malmendier and Nagel (QJE, 2016)

Main research question

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Is media information helpful in formulating views on prices?

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Is media information helpful in formulating views on prices?

Idea sounds intuitive, but evidence so far not conclusive:

- ▶ "Not really"
  Pfajfar and Santoro (JMCB, 2013), Van der Cruijsen et
  al. (IJCB, 2015).
- ▶ "Under some conditions"
  Lamla and Lein (JEBO, 2014), Dräger (SJE, 2015),
  Lamla and Maag (JMCB, 2012).

Related discussion

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Could central bank communication help?

Related discussion

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Could central bank communication help?

Some supporting evidence, mainly cross-section based.

- ▶ Hayo and Neuenkirch (2015)
- ▶ Van der Cruijsen et al. (IJCB, 2015)
- ▶ Dräger et al. (EER, 2016)

Relevance for monetary policy

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- ▶ Monetary policy operates through expectations (Woodford, 2001).
- ▶ Households as relevant actors (Blinder et al., JEL 2008).
- ▶ Central banks' increased use of communication (Blinder et al., Economic Policy 2017).

Important to account for news selection

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Evidence that people select news sources that cater to their opinions:

- Mullainathan and Shleifer (AER, 2005)
- Gentzkow and Shapiro (JPE, 2006).
- Gentzkow et al. (AER, 2014).

Method and Data

Research design

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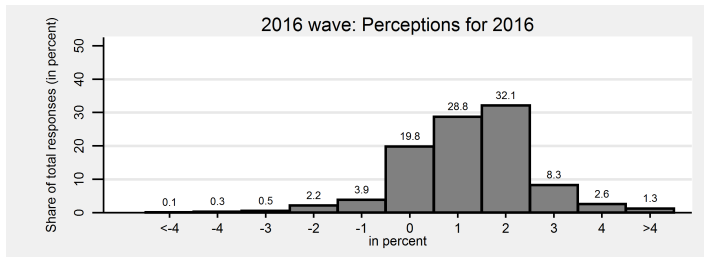
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- Three internet-based survey among 2,500 Dutch households
- Members of CentERpanel (Tilburg University)
- December of years 2014, 2015, and 2016
- Questions on
  - inflation perceptions
  - inflation expectations
  - newspaper usage
  - political preferences
- Control variables from DNB Household Survey

Question on inflation perceptions

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*With what percentage have Dutch consumer prices
approximately changed in 2016 compared to 2015?*

2016 wave: Perceptions for 2016

Question on inflation expectations

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With what percentage will Dutch consumer prices approximately change in 2017 compared to 2016?
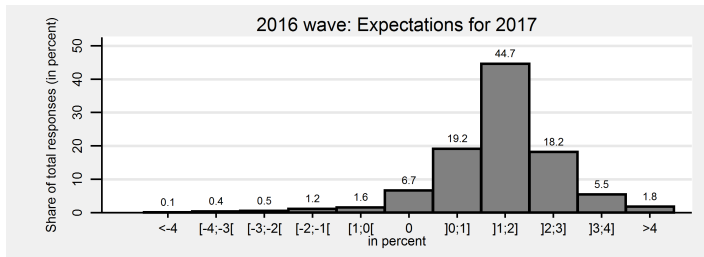
2016 wave: Expectations for 2017

Question on newspaper usage

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How often did you read about Dutch consumer prices in these newspapers or magazines in 2014/5/6?

Question on newspaper usage

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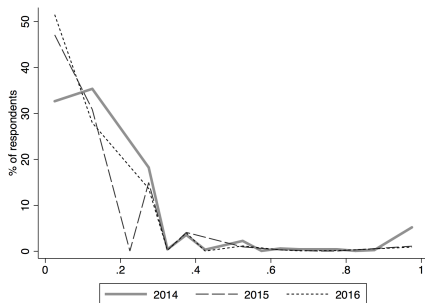
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these newspapers or magazines in 2014/5/6?*

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  (e.g. Metro)
- ▶ NRC Handelsblad
- ▶ Regional or local
  newspaper
- ▶ De Telegraaf
- ▶ Trouw
- ▶ De Volkskrant

Fraction of sources used (very) frequently, as in Blinder and
Krueger (BPEA, 2004)

Question on political preferences

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Would you use one of the following terms to describe your political preferences? (it is possible to give more than one answer)

Question on political preferences

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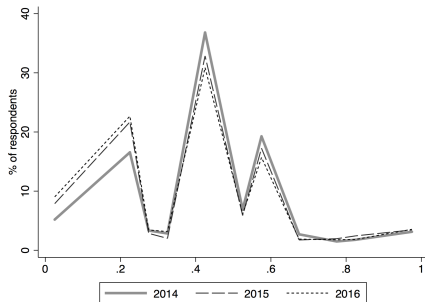
*Would you use one of the following terms to describe your
political preferences? (it is possible to give more than one
answer)*

- ▶ Liberal
- ▶ Socialist
- ▶ Christian-
  Democratic
- ▶ Conservative
- ▶ Progressive

Fraction of views held, as in Blinder and Krueger (BPEA, 2004)

Three modes of analysis

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1. panel regressions (with lots of controls)
2. IV approach (political pref's as instruments)
3. matching estimator (entropy balancing)

Results

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I: Panel regressions

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$$|\pi_{it}^p - \pi_t| = \boldsymbol{x}'_{it}\boldsymbol{\beta} + \gamma_t + \alpha + u_i + \epsilon_{it} \qquad (1)$$

- π^p inflation perceptions
- π_t is realised inflation
- $\boldsymbol{x}$ has
  - newspaper usage
  - political preferences
  - demographic covariates

Regression set-up (cont)

For accuracy of expectations, similar panel models — but
with added term for accuracy of perceptions.

We confirm importance of sociodemographics

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	(1) Perceptions	(2) Expectations
Male	-0.04	0.10***
	(0.04)	(0.03)
Age: 16 - 34	0.01	-0.08
	(0.07)	(0.06)
Age: 50 - 64	0.00	0.02
	(0.05)	(0.04)
Age: 65+	0.03	-0.09
	(0.07)	(0.06)
University degree	-0.24***	-0.08**
	(0.04)	(0.04)
Income: 0 - 30K	0.05	-0.07*
	(0.04)	(0.04)
Income: over 50K	-0.02	-0.06
	(0.04)	(0.04)
Income: NA	0.09**	-0.08**
	(0.05)	(0.04)
Homeowner	-0.23***	-0.07*
	(0.05)	(0.04)
Has children	-0.03	-0.09**
	(0.05)	(0.04)
R2 overall	0.05	0.34
No. clusters	1631	1533
Observations	4972	3077

Selected coefficients and s.e.'s for two random-effects panel models. */**/*** denotes 10%/5%/1% significance.

- ▶ Smaller errors for those with MA degree
- ▶ Smaller errors for homeowners
- ▶ Smaller expectations errors for those with children
- ▶ Larger expectation errors for men

Accuracy of perceptions

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	(1) News	(2) Political	(3) Combined	(4) Groups
Intensity of newspaper usage	0.19**		0.21**	
	(0.08)		(0.08)	
Broadness of political views		-0.13*	-0.13*	
		(0.07)	(0.07)	
Intensity: low				0.09***
				(0.03)
Intensity: high				0.09
				(0.09)
Broadness: low				-0.09
				(0.07)
Broadness: high				-0.09
				(0.07)
R2 overall	0.05	0.04	0.05	0.05
No. clusters	1614	1560	1541	1541
Observations	4571	4541	4190	4190

Selected coefficients and standard errors for random–effects panel models that also include sociodemo-
graphic covariates. */**/*** denotes significance at the 10%/5%/1% level.

Accuracy of expectations

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	(1) News	(2) Political	(3) Combined	(4) Groups
Accuracy of inflation perceptions	0.55***	0.50***	0.53***	0.52***
	(0.02)	(0.02)	(0.02)	(0.02)
Intensity of newspaper usage	0.05		0.01	
	(0.08)		(0.08)	
Broadness of political views		-0.03	-0.01	
		(0.07)	(0.07)	
Intensity: low				0.02
				(0.03)
Intensity: high				0.06
				(0.08)
Broadness: low				-0.07
				(0.06)
Broadness: high				-0.05
				(0.07)
R2 overall	0.36	0.32	0.33	0.33
No. clusters	1482	1460	1405	1405
Observations	2720	2846	2528	2528

Selected coefficients and standard errors for random-effects panel models that also include sociodemo-
graphic covariates. */**/*** denotes significance at the 10%/5%/1% level.

Individual outlets and preferences

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	(1) Perceptions	(2) Expectations
Newspaper_A	0.02	0.02
	(0.02)	(0.02)
Newspaper_B	0.02	0.01
	(0.03)	(0.02)
Newspaper_C	-0.06***	-0.00
	(0.02)	(0.02)
Newspaper_D	-0.02	-0.04*
	(0.03)	(0.02)
Newspaper_E	0.03	0.05***
	(0.02)	(0.02)
Newspaper_F	0.02	-0.03*
	(0.02)	(0.02)
Newspaper_G	0.01	-0.01
	(0.02)	(0.02)
Newspaper_Regional	0.04***	-0.01
	(0.01)	(0.01)
Liberal	-0.04	0.00
	(0.04)	(0.04)
Socialist	-0.05	0.06*
	(0.04)	(0.04)
Christian-democr.	-0.07	-0.05
	(0.04)	(0.04)
Conservative	-0.10**	-0.04
	(0.05)	(0.05)
Progressive	-0.05	-0.08**
	(0.04)	(0.04)
R2 overall	0.06	0.34
No. clusters	1341	1159
Observations	3073	1863

Selected coefficients and standard errors for two random-effects panel models. */**/*** denotes 10%/5%/1% significance.

► Limited effects.

► Smaller perception errors: Paper C.

► Larger perception errors: Regional

► Larger expectation errors: Paper E.

► Smaller errors for conservatives and progressives.

II: Instrumental variables approach

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	(1) Perceptions	(2) Expectations
Newspaper A	-0.04	-0.08
	(0.07)	(0.06)
Newspaper B	-0.21	-0.16
	(0.24)	(0.18)
Newspaper C	-0.17	-0.21*
	(0.14)	(0.13)
Newspaper D	-0.23	-0.22
	(0.15)	(0.14)
Newspaper E	-0.34	-0.13
	(0.30)	(0.25)
Newspaper F	-0.35*	0.11
	(0.21)	(0.20)
Newspaper G	-0.04	0.02
	(0.07)	(0.06)
Newspaper Regional	-0.34*	0.09
	(0.19)	(0.18)

*/**/*** denotes 10%/5%/1% significance.

- ▶ Estimates for 2nd stage.
- ▶ Readership is instrumented using political preferences.
- ▶ Negative signs …
- ▶ but mostly insignificant

III: Matching estimator

	(1)	(2)
	Perceptions	Expectations
Newspaper A	0.15**	0.10
	(0.06)	(0.06)
Newspaper B	0.00	0.10
	(0.09)	(0.09)
Newspaper C	-0.06	-0.04
	(0.06)	(0.06)
Newspaper D	0.06	-0.07
	(0.09)	(0.09)
Newspaper E	0.15**	0.25***
	(0.06)	(0.07)
Newspaper F	0.07	0.07
	(0.06)	(0.07)
Newspaper G	0.05	-0.01
	(0.06)	(0.07)
Newspaper Regional	0.13**	0.05
	(0.04)	(0.05)

*/**/*** denotes 10%/5%/1% significance.

- ▶ Treatment defined as 'frequent readership'
- ▶ Entropy balancing (Hainmueller, 2012).
- ▶ If anything, larger errors.

Summarizing

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- ▶ Most robust factor for accuracy of expectations: Accuracy of perceptions.
- ▶ No broad-based evidence that higher intensity of media usage leads to more realistic views on inflation.
- ▶ These findings on media usage are in line with Pfajfar and Santoro (2013) and Van der Cruijsen et al. (2015).

Policy implications

Policy implications

1. Our results suggest that monetary policy authorities could benefit from targeting their communication efforts towards inflation perceptions.

2. Important for monetary policy to be aware of the media channel in managing households' inflation expectations.

3. Central banks could still gain further on this aspect by utilising the media channel more effectively – but this may not be trivial.