

# Inflation Expectations

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# Outline



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# Motivation

- Inflation expectations play a key role in the monetary transmission mechanism
- A central bank is more likely to be successful in achieving low and stable inflation if it can anchor economic agents' long-term inflation expectations close to its inflation objective (Bernanke et al. 2001).
- DAcunto et al. (2019) find that households overweight frequently observed prices (e.g. food prices) when forming inflation expectations
- Most studies on the informational effect focus on advanced economies, but this paper is one of the first of its kind to explore these effects in an emerging economy like Armenia.

# Understanding the nature of economic agents' inflation expectations (perceptions) and how they are formed:

- How does communication influence inflation and what information can help people form better inflation expectations?
- What role do the prices of frequently purchased items play in shaping individuals' perceptions and expectations of inflation?
- Does the "4%" expression itself significantly influence respondents' perceptions and expectations, or do they focus more on the overall content of the provided information?

# Data and Survey Design

- A randomized control trial conducted on a representative sample of the Armenian population.
- 1200 responses in the control group and about 800 responses in each of three treatments collected in March and April 2024.
- Respondents are randomly assigned to either a control group or one of the three treatment groups.

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## *Treatments*

- Treatment 1 – providing information about actual inflation rate
- Treatment 2 – providing information about the CBA inflation target (4%)
- Treatment 3 – a statement containing the expression "4%" yet its context is unrelated to inflation (to check priming effect)

# Descriptive Statistics

VARIABLES	Descriptive Statistics				
	Obs	Mean	Std. Dev.	Min	Max
<b>Control</b>					
Perceptions	932	14.3	16.7	-10	50
Expectations	601	12.1	15.9	-3	55.5
<b>Treatment 1</b>					
Perceptions	586	12.5	15.2	-10	50
Expectations	420	9.6	14.2	-3	55.5
<b>Treatment 2</b>					
Perceptions	552	11.4	16.1	-10	50
Expectations	371	9.1	14.1	-3	55.5
<b>Treatment 3</b>					
Perceptions	604	14.8	17.5	-10	50
Expectations	386	12.4	16.1	-3	55.5

Perception shows the average inflation perceptions, and expectation shows the average inflation expectations.

# Methodology

## *The Information Effect*

$$\pi_i = \alpha + \beta \text{info}_i + \gamma X_i + \epsilon_i$$

$\pi_i$  : the respondent's answer about perception of inflation over the previous 12 months or their inflation expectation for the next 12 months

$\text{info}_i$ : a dummy variable indicating whether the respondent was provided by the information about the current inflation rate inflation target or the statement for checking the priming effect

$X_i$ : demographics such as age and gender of the respondent education employment size of the household household's income etc.

## *Marker Products*

$$\pi\_dir_i = \alpha + \beta \text{ind\_inflation}_i + \gamma X_i + \epsilon_i$$

$\pi\_dir_i$ : a dummy variable indicating whether a respondent perceived the overall price level for goods and services to have "increased" over the past 12 months as opposed to "decreased"

$\text{ind\_inflation}_i$  : the inflation rate calculated for the respondent based on the products they reported experiencing significant price changes



# Information Effect – Perceptions

VARIABLES	Dependent Variable: Inflation Perceptions					
	Actual Rate		Inflation Target		Priming Effect	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment 1	-1.470*	-1.512**				
	(0.764)	(0.753)				
Treatment 2			-1.887**	-2.076**		
			(0.820)	(0.820)		
Treatment 3					0.300	0.311
					(0.844)	(0.841)
Controllong	No	Yes	No	Yes	No	Yes
Demographics						
Observations	1,227	1,227	1,168	1,168	1,210	1,210
R-squared	0.003	0.049	0.004	0.048	0.000	0.043

Robust standard errors in parentheses

\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Demographic controls include age, gender, household income, education, region and employment.

# Information Effect – Expectations

VARIABLES	Dependent Variable: Inflation Expectations								
	Actual Rate			Inflation Target			Priming Effect		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treatment 1	-2.891*** (0.900)	-2.853*** (0.902)	-2.120*** (0.746)						
Treatment 2				-2.111** (0.958)	-2.184** (0.975)	-0.580 (0.827)			
Treatment 3							0.358 (1.022)	0.720 (1.048)	0.211 (0.787)
Inflation Perceptions			0.548*** (0.041)			0.547*** (0.043)			0.604*** (0.038)
Controlling Demographics	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Observations	711	711	711	669	669	669	667	667	667
R-squared	0.014	0.070	0.387	0.007	0.076	0.376	0.000	0.050	0.436

Robust standard errors in parentheses

\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Demographic controls include age, gender, household income, education, region and employment.

# Marker Products

	Inflation Perceptions		Inflation Expectations	
	(1)	(2)	(3)	(4)
Individual Inflation	1.087*** (0.016)	1.115*** (0.021)	1.004 (0.009)	1.004 (0.011)
Constant	12.13*** (2.669)	12.063 * (17.270)	6.018*** (1.003)	10.152* (14.516)
Controlling for demographics	No	Yes	No	Yes
Observations	442	442	265	265

Standard errors in parentheses

\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Demographic controls include age, gender, household income, education, region and employment.

Thank you

# Appendix

# Perception to Expectation

	Inflation Expectation	
	(1)	(2)
Inflation Perception	0.600*** (0.038)	0.604*** (0.038)
Controls for demographics	No	Yes
Observations	667	667
R-squared	0.405	0.436

Robust standard errors in parentheses

\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Demographic controls include age gender household income education region and employment.

- A strong relationship between respondents’ perceptions about inflation over the past 12 months and respondents’ short - term expectations about future inflation.

# Marker Products: Respondents' Perceptions of the Most Significant Price Changes by Product

