Tracing the Spread of Inflation Narratives: The Transmission of FOMC Communication to Household Expectations via the Media

Eleftherios Bethmage, Johannes Zahner

Motivation

FOMC Press Conference:

"Supply and demand imbalances related to the pandemic and [to] the reopening of the economy have continued to contribute to elevated levels of inflation. In particular, bottlenecks and supply constraints higher demand in the near term."
(December 15, 2021 – **14:00**)

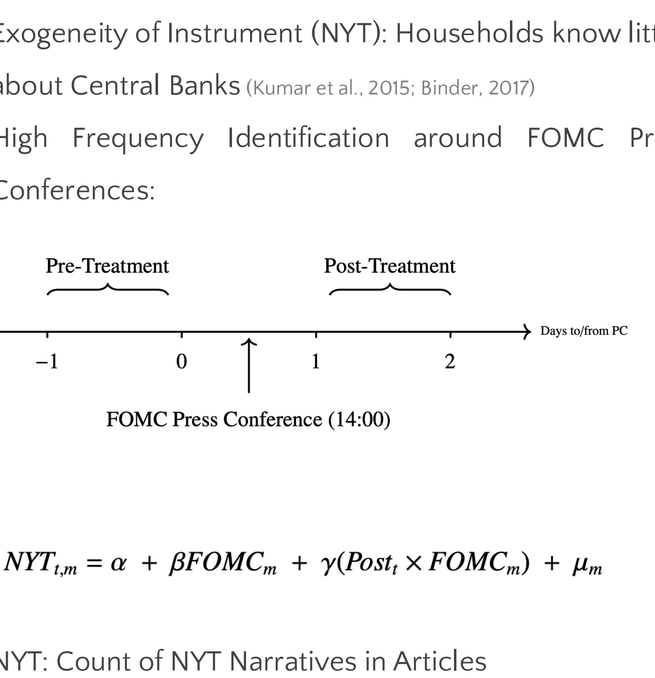
↓

New York Times:

"Inflation [...] is now soaring [...] The main trigger has been the jagged reawakening of economies that were largely shut down during the pandemic lockdowns during parts of 2020 and 2021. The surge in activity has caused supply-chain problems, hampered further by labor shortages [...]."
(December 15, 2021 — **17:55**)

↓

HH Inflation Expectations Updating

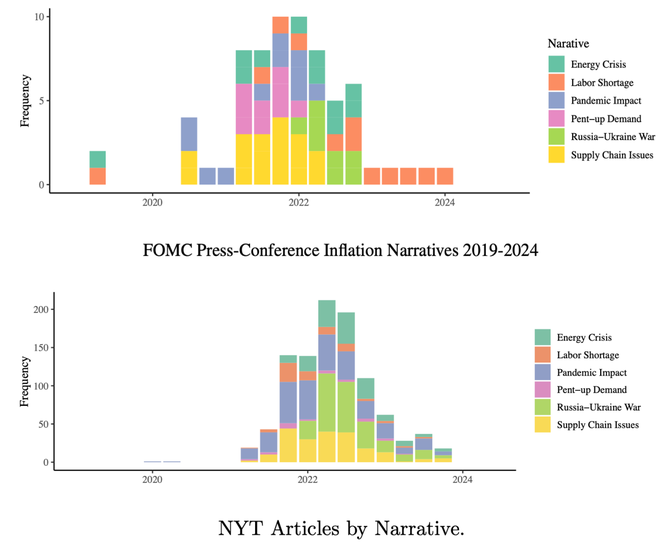


Contribution

Aim is to identify:

Central Bank → Media → Households

1. **New data**: Inflation narratives (2019–2024)
   - Hand-annotated FOMC press conference narratives
   - Universe of New York Times articles
2. **New method** to detect inflation narratives
   - State-of-the-art supervised fact-checking LLM (MiniCheck)
   - MiniCheck is designed to reduce hallucinations in LLM outputs.
3. **New measure**: Media-level hourly index of inflation narratives.
4. **New evidence** via high frequency (IV) identification:
   - FOMC → NYT: 1/4 additional NYT article
   - NYT → HH: +1.5pp in Mean Inflation Exp. and -10pp in Var(.)



NYT Articles by Narrative.

What is a Narrative?

Narratives are **causal stories** *"told with the intention to understand the world and to interpret some data, event or action"* (Roos, Reccius, 2024).

Statement A:	**Statement B**:
In today's policy brief, the Governor will discuss recent trends in inflation and the tight labor market.	*The recently tight labor market raised wages and, in turn, pushed up consumer price inflation.*
Labor Market Inflation	Labor Market → Inflation

Our focus: **Backward-looking** narratives that offer an **explanation for the recent rise in the inflation rate** *a la Andre et al., (2024)*

Narratives in this paper: (i) Supply Chain Issues, (ii) Labor Shortage, (iii) Pandemic Impact, (iv) Energy Crisis, (v) Pent-up Demand, (vi) Russia-Ukraine War,

How to identify a Narrative?

We compare predictive power on a hand-labeled FOMC dataset across multiple methods:

	Acc.	Sens.	Prec.	F-Score
Unsupervised				
LDA (25 Topics)	0.98	0.09	1.00	0.16
LDA (50 Topics)	0.98	0.09	1.00	0.16
relatio (25 narratives)	0.98	0.03	1.00	0.06
relatio (50 narratives)	0.98	0.06	0.80	0.11
Supervised				
ChatGPT	0.96	0.25	0.17	0.20
MiniCheck (50% Thresh.)	0.99	0.87	0.77	0.81
MiniCheck (90% Thresh.)	0.99	0.38	0.87	0.53

Only models that test *causal entailment* (MiniCheck) reliably recover inflation narratives; topic models and ChatGPT fail to identify directionality.

Estimation and Identification

- Event-study IV:
  FOMC → New York Times → HH Expectations
- Exogeneity of Instrument (NYT): Households know little about Central Banks (Kumar et al., 2015; Binder, 2017)
- High Frequency Identification around FOMC Press Conferences:

$$NYT_{t,m} = \alpha + \beta FOMC_m + \gamma(Post_t \times FOMC_m) + \mu_m$$

- NYT: Count of NYT Narratives in Articles
- FOMC: Narratives in FOMC PC Statements
- Inflation Expectations: NY Fed SCE
- Controls: #'Inflation' Terms, MP Shocks, TV-News Reporting, ...

Main Results

Central bank narratives move household inflation expectations — through the media.

1. Stage: One FOMC narrative → additional ¼ NYT inflation narrative article.
2. Stage: One FOMC narrative
   - Increases Inflation Expectations by ~1.7pp
   - Decreases within-respondent dispersion by 10pp

Back-on-the-envelope: One add. FOMC narrative increases Infl. Exp. by $\approx 0.45pp$

	Dependent variable:		
	NYT	π^e_t	$Var(\pi^e_t)$
	(1)	(2)	(3)
FOMC × *Post*	0.28***		
	(0.09)		
NŶT		1.67**	−9.99***
		(0.71)	(3.70)
Observations	420	420	420
First-stage *FOMC* × *Post*	–	0.27***	0.27***
First-stage F-statistic	–	10.17	10.17
Wu–Hausman (p-value)	–	0.000	0.000
Event FE	X	X	X
PC Day Excluded	–	X	X

More on the First Stage:

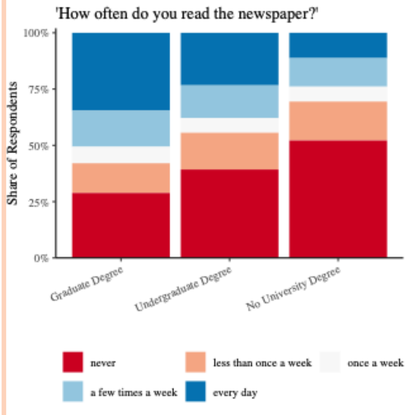
1. Effect remains on *intra-day* estimation
2. Effect is robust to alternative identification (DiD)
3. Effect differs across narratives:

	Dependent variable: New York Times Article Count$_t$						
	All Narratives	Supply Chain	Labor Shortage	Pandemic Impact	Energy Crisis	Pent-up Demand	Russia-Ukraine War
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
FOMC × Post$_t$	0.28***	0.36	0.41**	0.08	−0.05	0.30**	0.72***
	(0.09)	(0.21)	(0.18)	(0.22)	(0.25)	(0.14)	(0.21)
Observations	492	82	82	82	82	82	82
Adjusted R^2	0.30	0.31	0.18	0.32	0.16	0.04	0.53

More on the Second Stage:

Narrative-induced NYT coverage shifts HH inflation expectations ***most*** for high educated, financial literate, high income, ...

Example:



	Dependent variable: π^e_t			
	Baseline	High School / College	Bachelor / Master	PhD or more
	(1)	(2)	(3)	(4)
NYT	1.57***	−1.50	2.29***	2.95***
	(0.58)	(1.33)	(0.65)	(1.07)
Event FE	X	X	X	X
PC Day excluded	X	X	X	X
Observations	12,984	4,938	7,212	798

Note: *p<0.1; **p<0.05; ***p<0.01

GOETHE UNIVERSITÄT FRANKFURT AM MAIN