

Research questions

1. Do newspapers cover negative and positive economic developments **symmetrically**?
2. Do agents' information and expectations react symmetrically to bad and good news about the economy?
3. Does consumption react symmetrically to bad and good news about the economy?

U-news indexes

Construct two monthly indexes of bad and good news about US **unemployment** using newspaper articles from *Dow Jones Factiva*

- ▶ Articles in *The New York Times*, *The Wall Street Journal*, *The Washington Post* from June 1980 to December 2019
- ▶ **U-news⁺**: number of articles in which “unemployment” appears close to word denoting **increase or high level**
- ▶ **U-news⁻**: number of articles in which “unemployment” appears close to word denoting **decrease or low level**

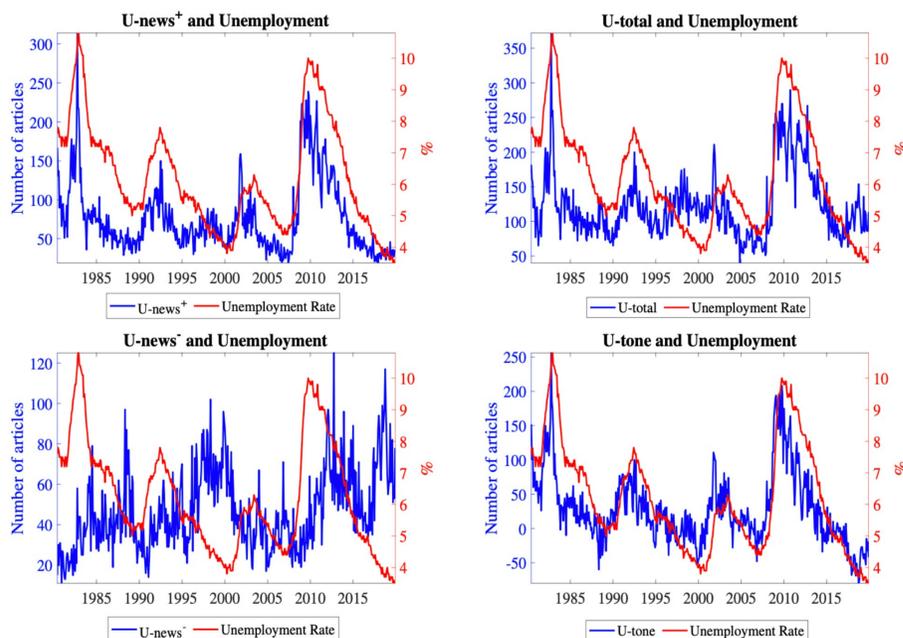
Using the indexes, we define **two measures of news coverage**:

1. **Tone**: prevailing tone of news on unemployment

$$\mathbf{U-Tone} = \mathbf{U-news}^+ - \mathbf{U-news}^-$$

2. **Total information**: overall media coverage of unemployment

$$\mathbf{U-Total} = \mathbf{U-news}^+ + \mathbf{U-news}^-$$



Nonlinear SVAR model

Explore potential asymmetries using a **Threshold SVAR**:

$$y_t = (1 - F(z_t)) [a + A(L)] y_{t-1} + F(z_t) [b + B(L)] y_{t-1} + \varepsilon_t$$

- ▶ $y_t = [\Delta U_t \text{ U-tone}_t]'$ where U_t is the unemployment rate

$$F(z_t) = \begin{cases} 0 & \text{if } \Delta U_{t-1} \leq 0 \\ 1 & \text{if } \Delta U_{t-1} > 0 \end{cases}$$

- ▶ $A(L)$ parameters when $\Delta U_{t-1} < 0$ and $B(L)$ when $\Delta U_{t-1} > 0$

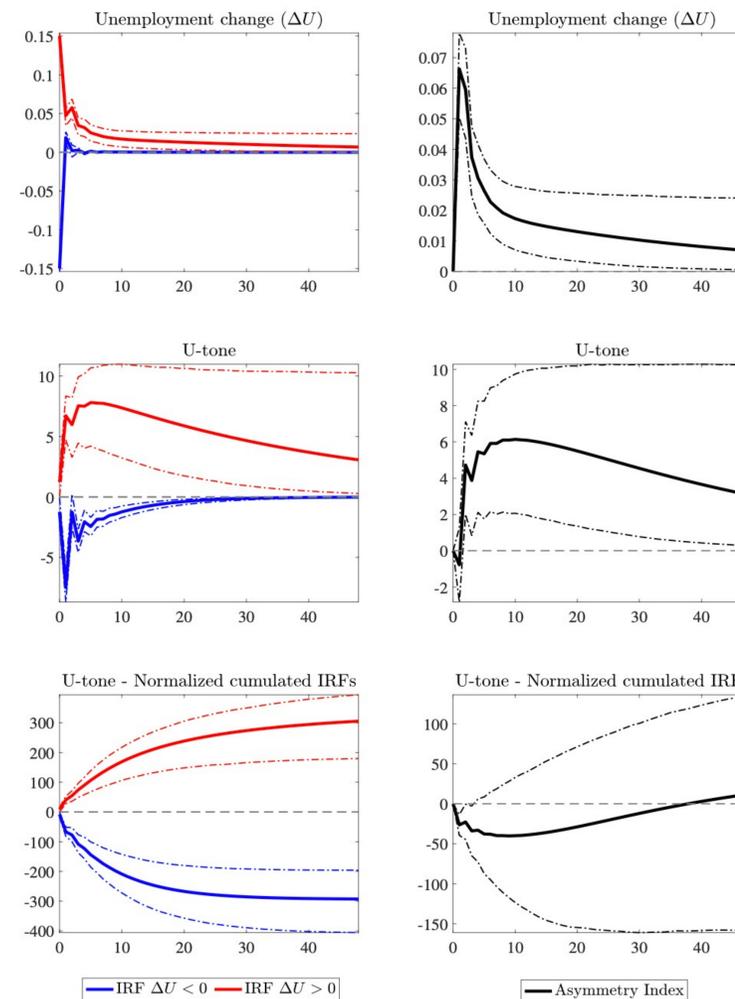
- ▶ $\varepsilon_t \sim WN(0, \Sigma)$

Test if increases and reductions in U_t induce asymmetric media coverage by studying IRFs to an orthogonal innovation in ΔU_t :

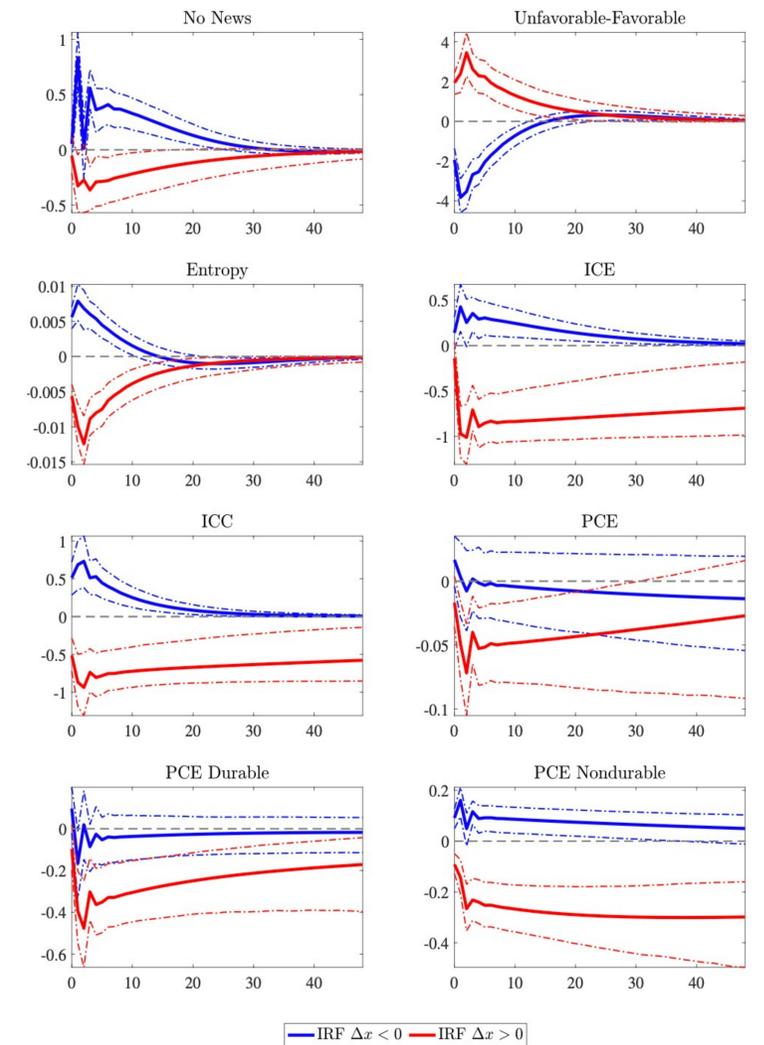
- ▶ Define $u_t = S^{-1}\varepsilon_t$. S is the Cholesky factor of Σ , i.e. $SS' = \Sigma$
- ▶ $u_{1,t}$ is the innovation in ΔU_t orthogonal to $u_{2,t}$

Novelty: the **sign** of $u_{1,t}$ defines the relevant state for the IRFs

- ▶ When $u_{1,t} > 0$, IRF is $\beta(L) = (I - B(L)L)^{-1}S$, $\beta_1(L)$
- ▶ When $u_{1,t} < 0$, IRF is $\alpha(L) = (I - A(L)L)^{-1}S$, $\alpha_1(L)$



The effects of bad and good news shocks



Conclusions

We study **asymmetries** in news coverage of economic events and in the effects of news on agents' information, expectations and consumption

- ▶ Construct two indicators of bad and good news about unemployment using three major US newspapers
- ▶ Use a Threshold SVAR model to show:
 1. No significant negativity bias in media coverage of economic events
 2. Bad news increase agents' information and agreement about future outcomes more than good news
 3. Agents' expectations react more to bad than to good news
 4. Consumption reacts to bad news but not to good news

Nicolò Maffei-Faccioli
Email: nicolo.maffei-faccioli@norges-bank.no
Website: <https://sites.google.com/view/nmfomics/home>

Disclaimer: This paper should not be reported as representing the views of Norges Bank. The views expressed are those of the authors and do not necessarily reflect those of the Norges Bank.