

Discussion of
"The Structure of Economic
News"

by Bybee, Kelly, Manela, Xiu

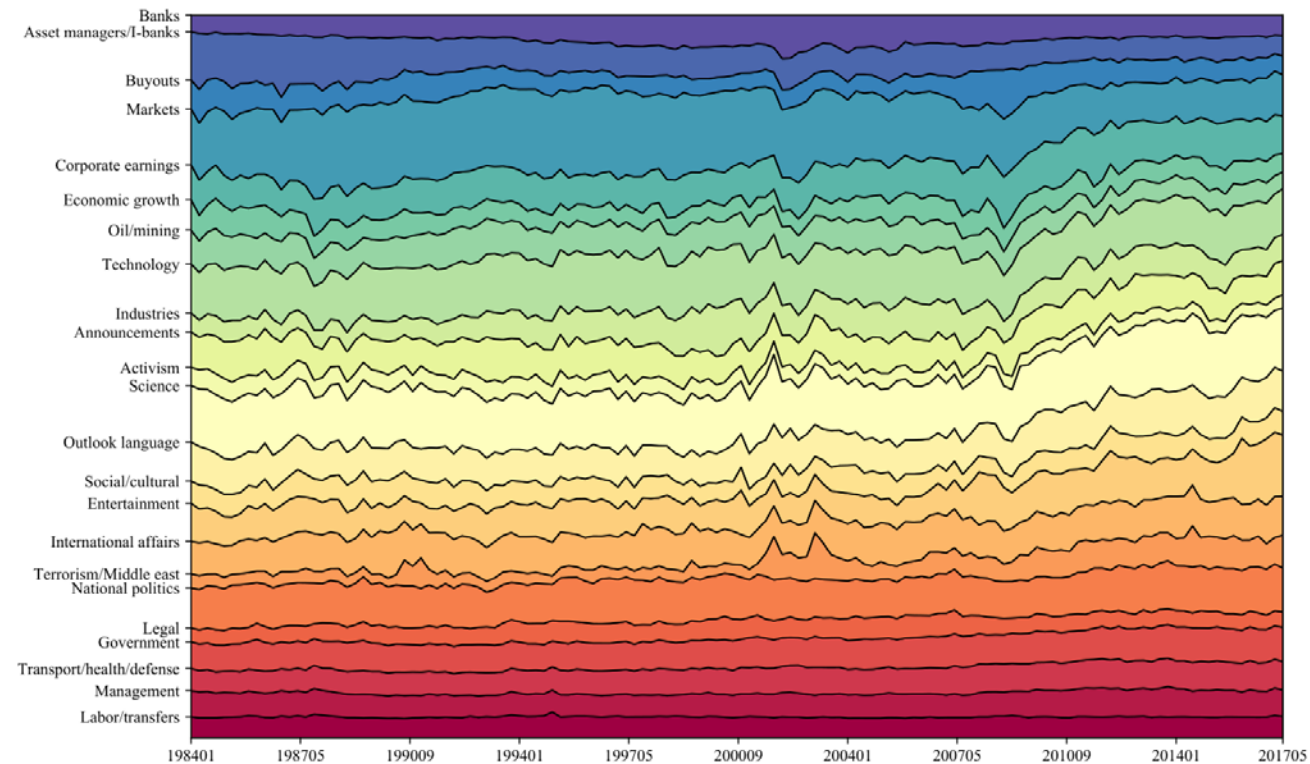
Vadim Elenev
Johns Hopkins Carey
WFA | June 2020

What this paper does

1. Reduce the corpus of *The Wall Street Journal* articles to a vector of topic attention weights observed at monthly frequency
"In September 2001, 4.5% of the WSJ's attention was devoted to the topic of terrorism."
2. Project Δ macro-financial measures onto Δ topic weights
 - Macro: IP, Employment
 - Asset prices: CDS spreads, stock returns, stock vol, industry portfolio vol
 - Corporate Finance: IPO volume, LBO volume, bankruptcy filings
3. Augment standard macro VAR with "recession" topic weight
4. Link changes in macro indicators to specific news articles e.g.
 - The Oct 1990 drop in IP growth largely explained by changes in "oil market" topic attention
 - What article that month was most heavily focused on oil?
"OPEC's Output May Forestall Energy Growth"

Reduce the corpus of *The Wall Street Journal* articles to a vector of topic attention weights observed at monthly frequency

Figure 5: News Attention Across Metatopics

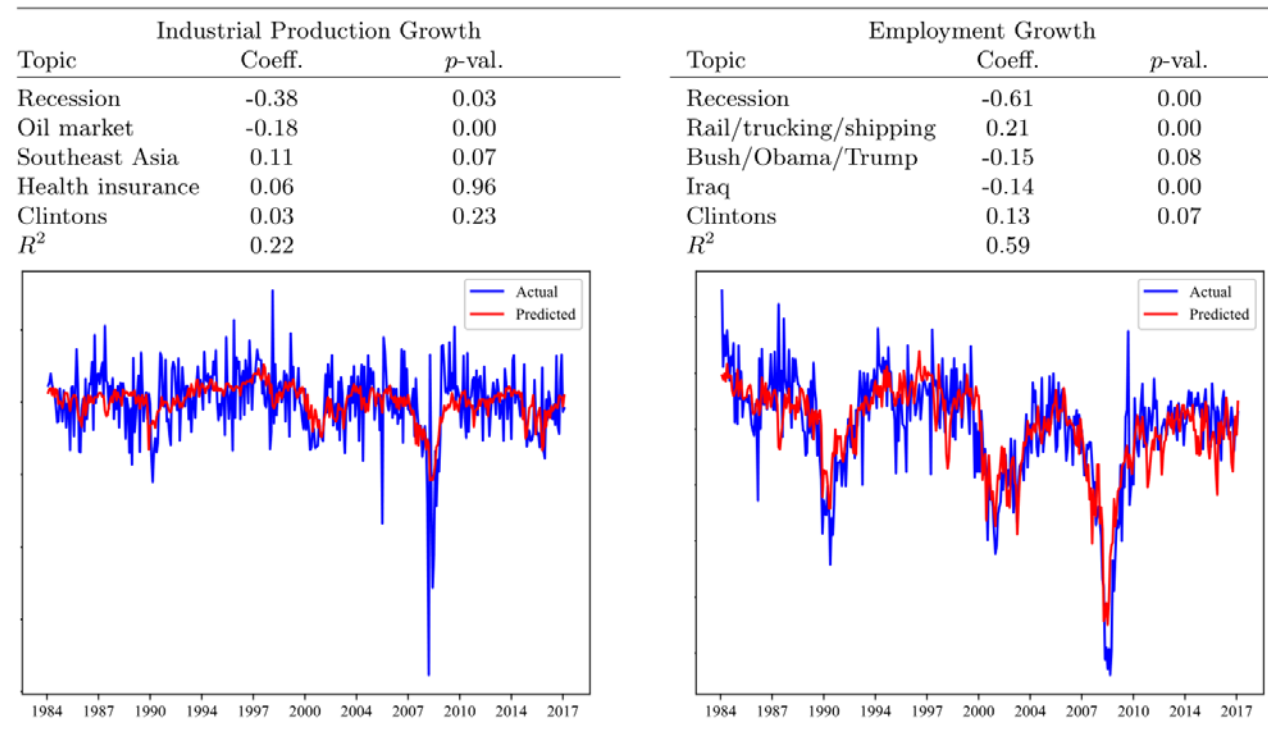


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Project Δ macro-financial measures onto Δ topic weights

Table 1: Reconstructing Macroeconomic Time Series



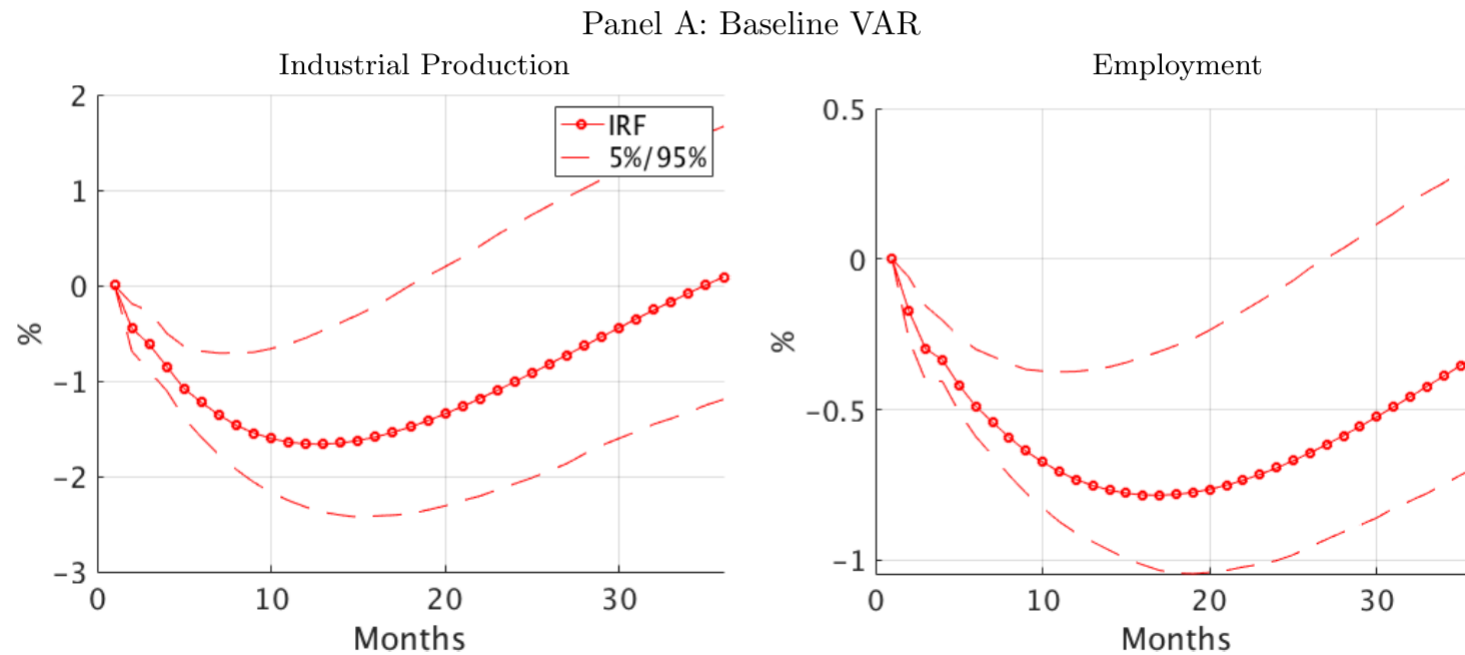
Note. Five-regressor lasso regression estimates and fits with p -values are adjusted for post-selection inference.

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Augment standard macro VAR with "recession" topic weight

Figure 10: VAR Responses to Recession News Attention Shock



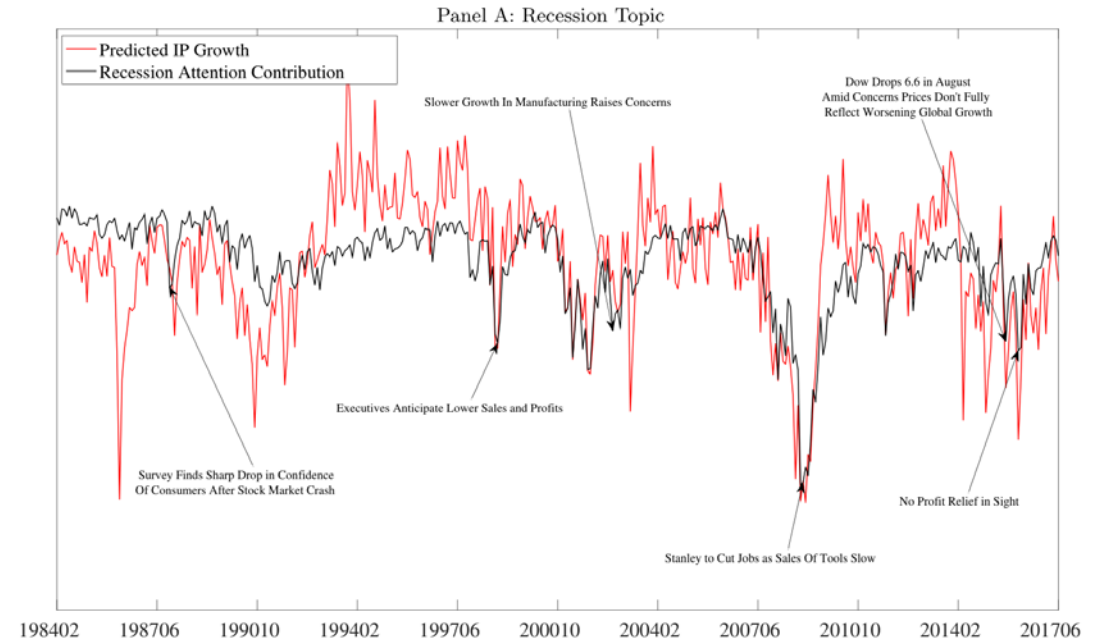
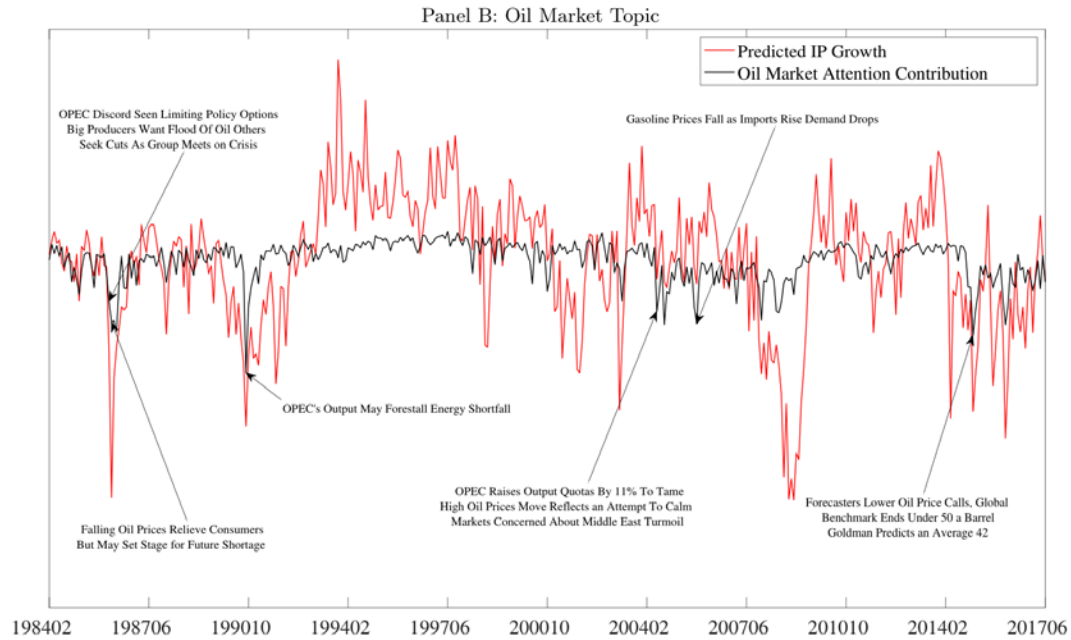
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Really cool!

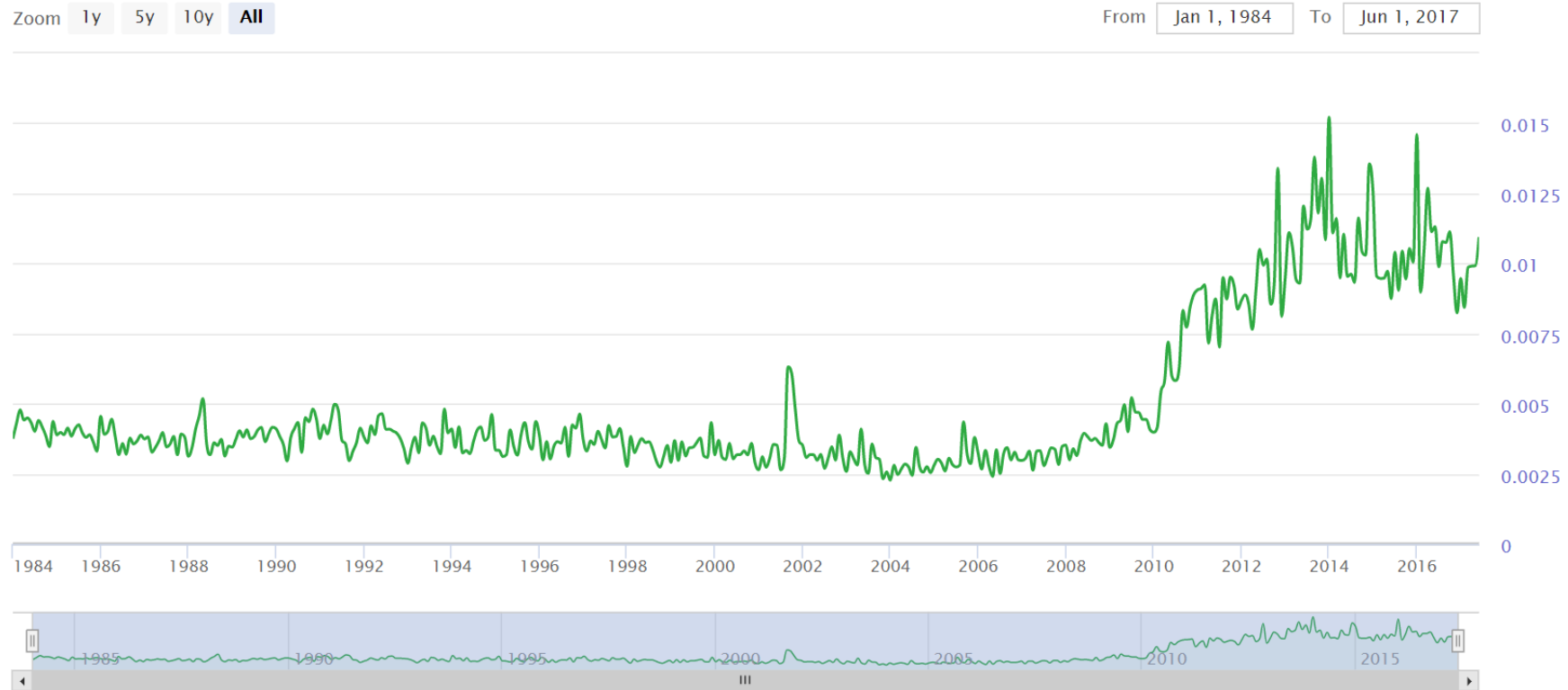
Link changes in macro indicators to specific news articles



Comment 1: WSJ as a measure of economy's state

- *WSJ Articles* = $f(\text{state of the economy})$
- This paper: $\widehat{\text{state of the economy}} = \hat{f}^{-1}(\text{WSJ Articles})$
- What do we know about f ?
 - It is time-varying
 - It is the outcome of some optimization problem (editorial discretion)
- As an approximation, the paper abstracts away from this.
- Does it matter?

1(a): "NY politics" attention increases 2x-4x in the 2010s relative to prior period



NY politics

What can the econometrician learn from this about the importance of NY politics to the economy?


Because f changed

Wall Street Journal Launches "Greater New York"

New Daily, Stand-Alone Section Provides New Voice and Insight for New Yorkers

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April 26, 2010 07:00 ET | Source: Dow Jones & Company

 photo-release

NEW YORK, April 26, 2010 (GLOBE NEWSWIRE) -- The Wall Street Journal has launched "Greater New York" – a stand-alone section dedicated to coverage of and commentary on the New York City metropolitan area. The new section includes coverage of local real estate, city and state politics, crime and courts, education, health, arts and culture, sports and more. Greater New York complements the Journal's peerless national and global coverage, creating a complete newspaper to serve readers in its single largest market.

Beginning today, Greater New York will appear six days per week as a stand-alone, full color section in all print editions of the Journal in the New York metropolitan area, including parts of Long Island, Connecticut and New Jersey. Led by a dedicated editorial team, Greater New York also offers continuously updated content and online-only features on WSJ.com (<http://wsj.com/ny>).

"Our section is about New York for New Yorkers. Greater New York provides us with the ability to better serve our existing readers, and for new readers, it provides an entry point to discover our much more comprehensive newspaper," said Robert Thomson, editor-in-chief, Dow Jones & Company, and managing editor, The Wall Street Journal. "As others have retreated, we have been investing in content – there has never been a larger market for high quality news and analysis, and the greatest market of all is New York."


Profile

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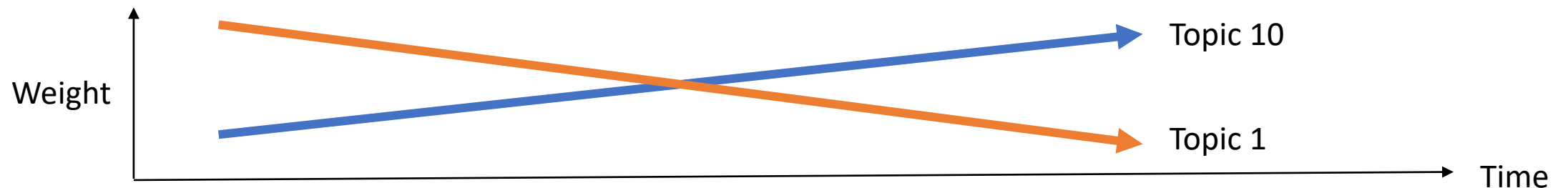
<http://www.dowjones.com>

Contact Data

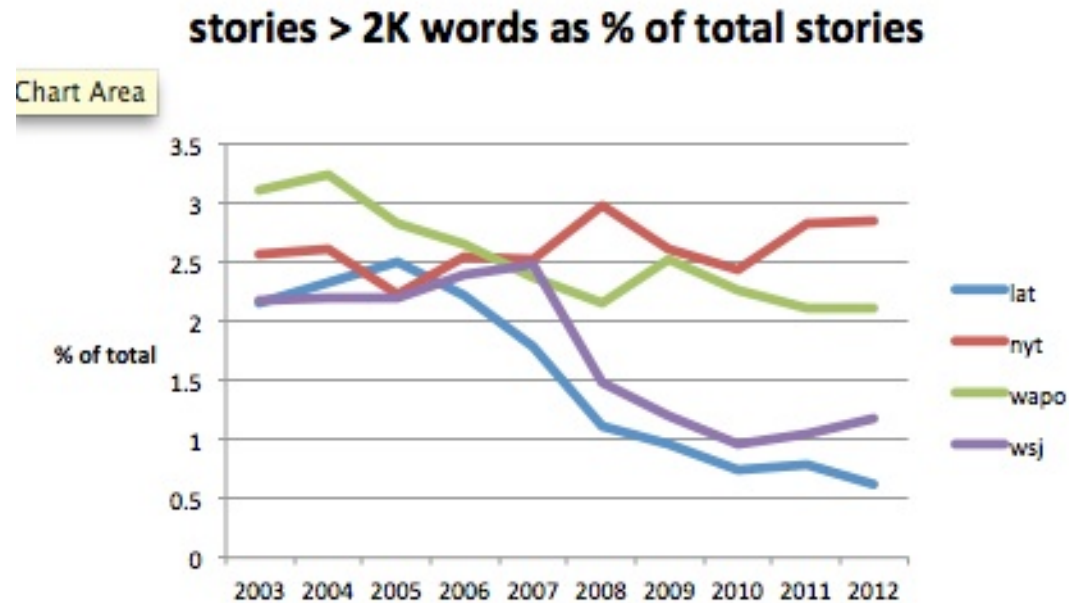
Dow Jones & Company
Media contacts:

1(b): Granularity and editorial models

- Imagine a simple world: there are only 10 equally important topics and 2 publications
- *The Atlantic* is a long-form magazine, focusing on 2 topics per issue:
 - Vector: [0.5, 0.5, 0, 0, 0, 0, 0, 0, 0, 0]
- *Reuters* is a newswire, covering everything in short bulletins:
 - Vector: [0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1, 0.1]
- After losing market share to *Reuters*, *The Atlantic* slowly increases number and diversity of articles, shrinking their length.



The BuzzFeed Effect?

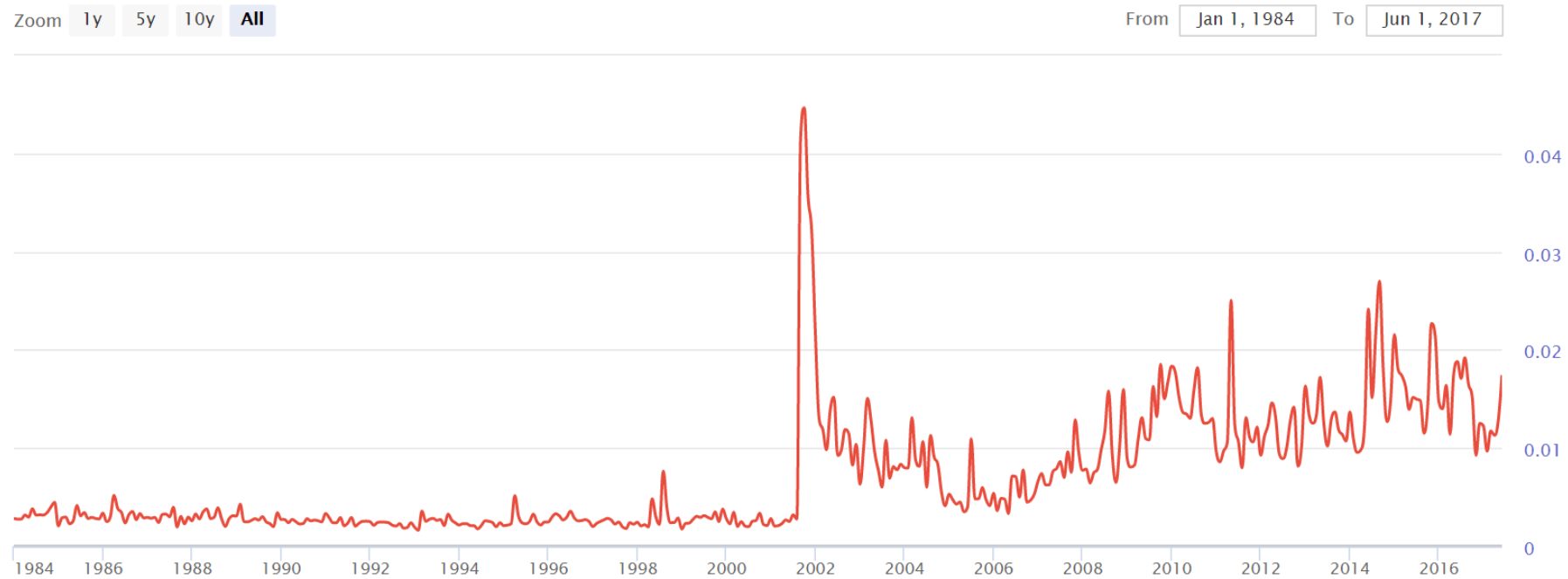


- Granularity due to long-form articles can introduce both bias and excessive volatility
 - E.g. Some topics lend itself more to long-form investigative pieces
- *WSJ* share of such articles fell by more than 50% in less than a decade
- BTW: this didn't happen at the *NYT*

Source: https://archives.cjr.org/the_audit/major_papers_longform_meltdown.php

1(c): Dynamics of what readers care about...

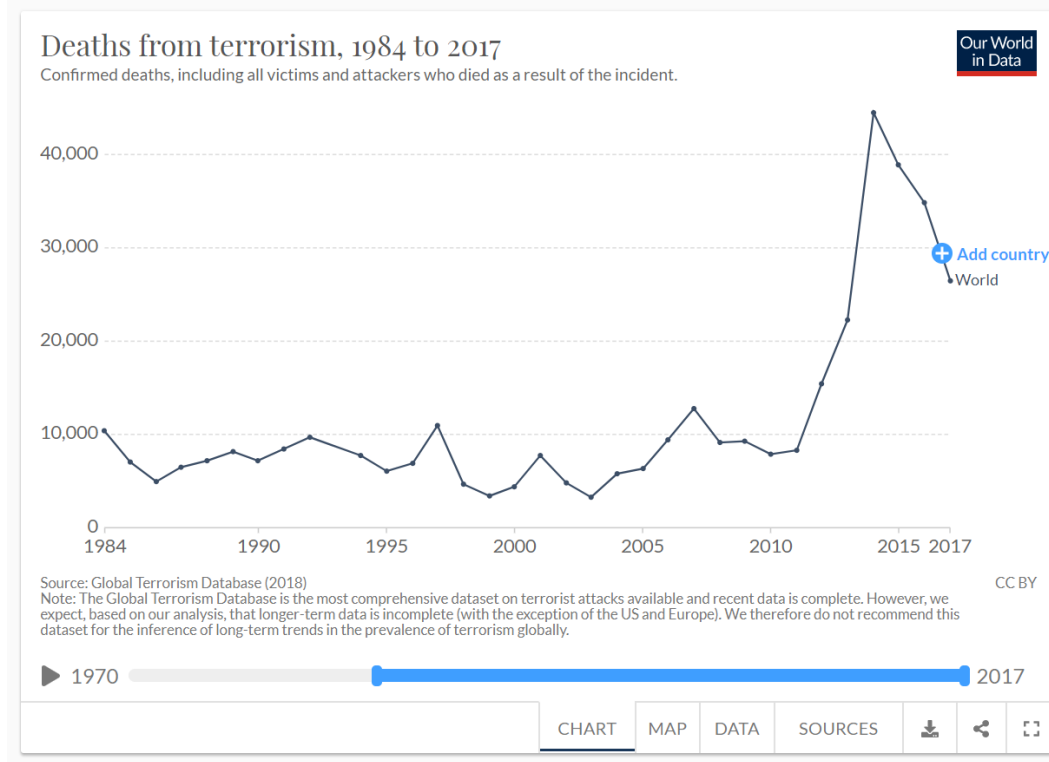
Example in the paper: "Terrorism" topic attention weight low, spikes around 9/11, elevated since



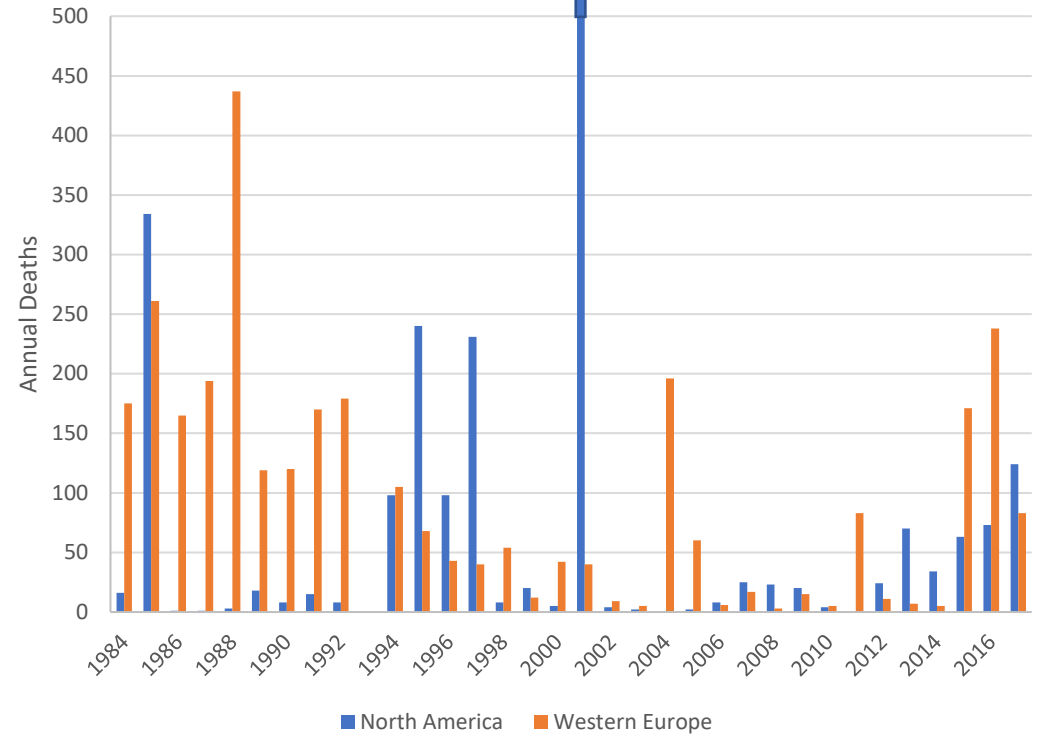
If the econometrician had no other terrorism-related observables, what could she learn from this?

May vary differently than actual events

Whole world

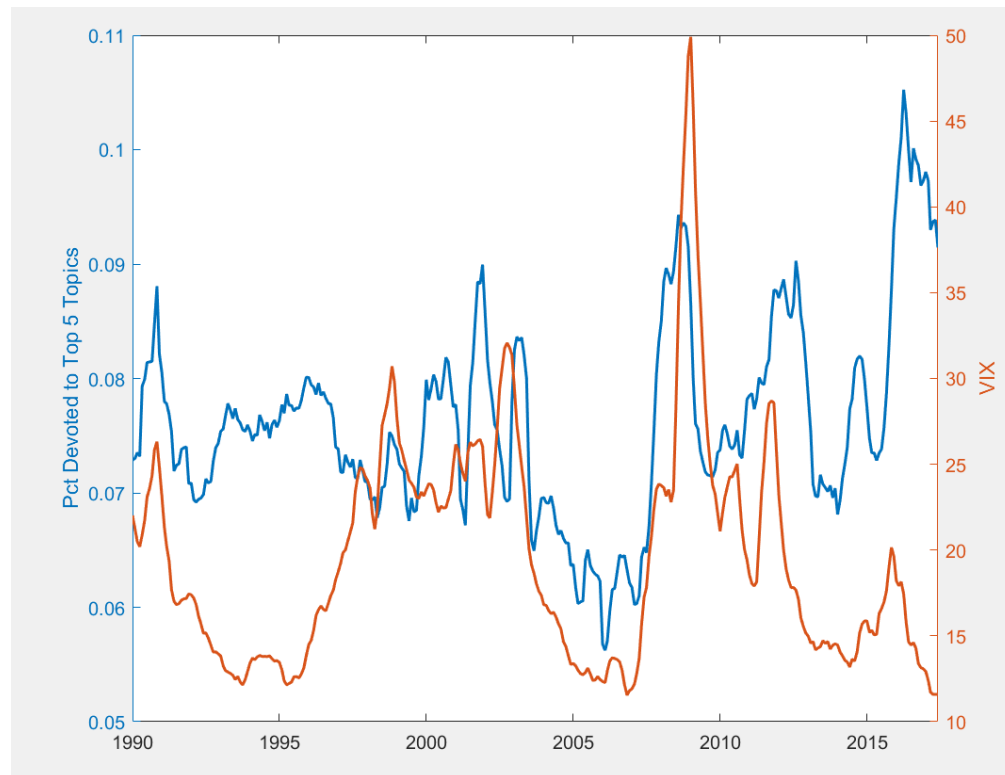


"Western world" (WS. readers' focus?)



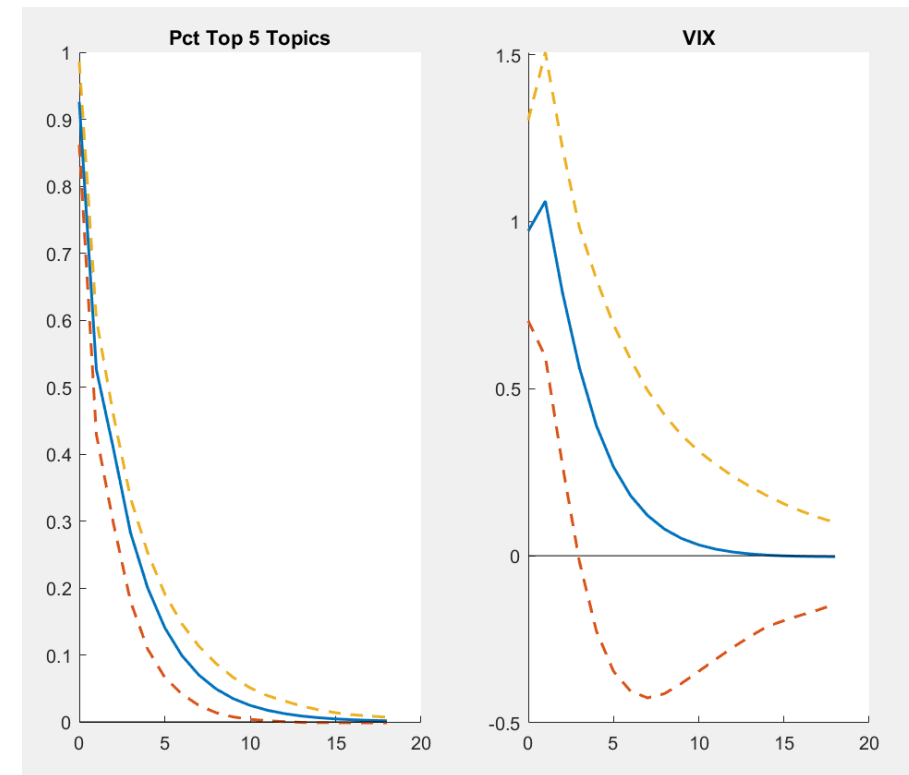
Comment 2: What can we learn from attention concentration irrespective of specific topics?

Attention to Top 5 Topics vs. VIX



[-3,+3] Monthly Moving Average

Increase in attention concentration associated with increase in VIX



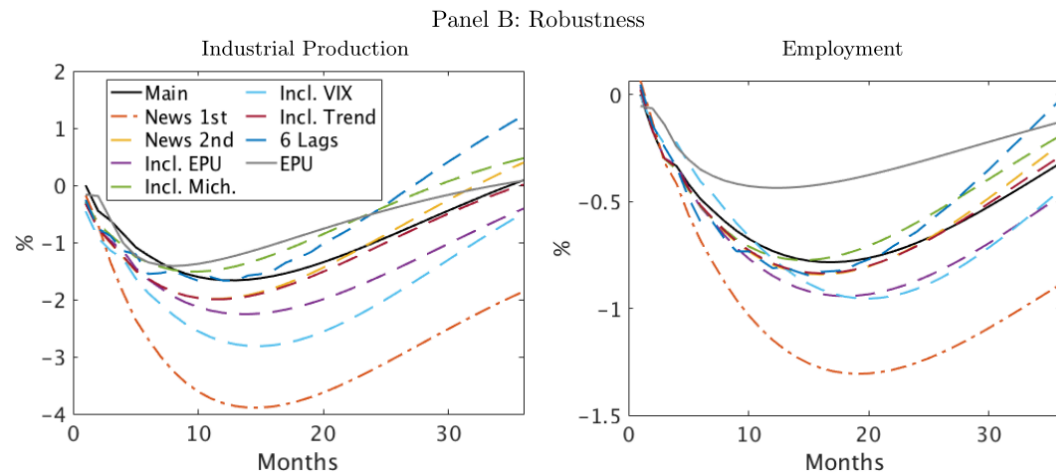
VAR(2) IRF of 1 sd shock to top 5

Conclusion

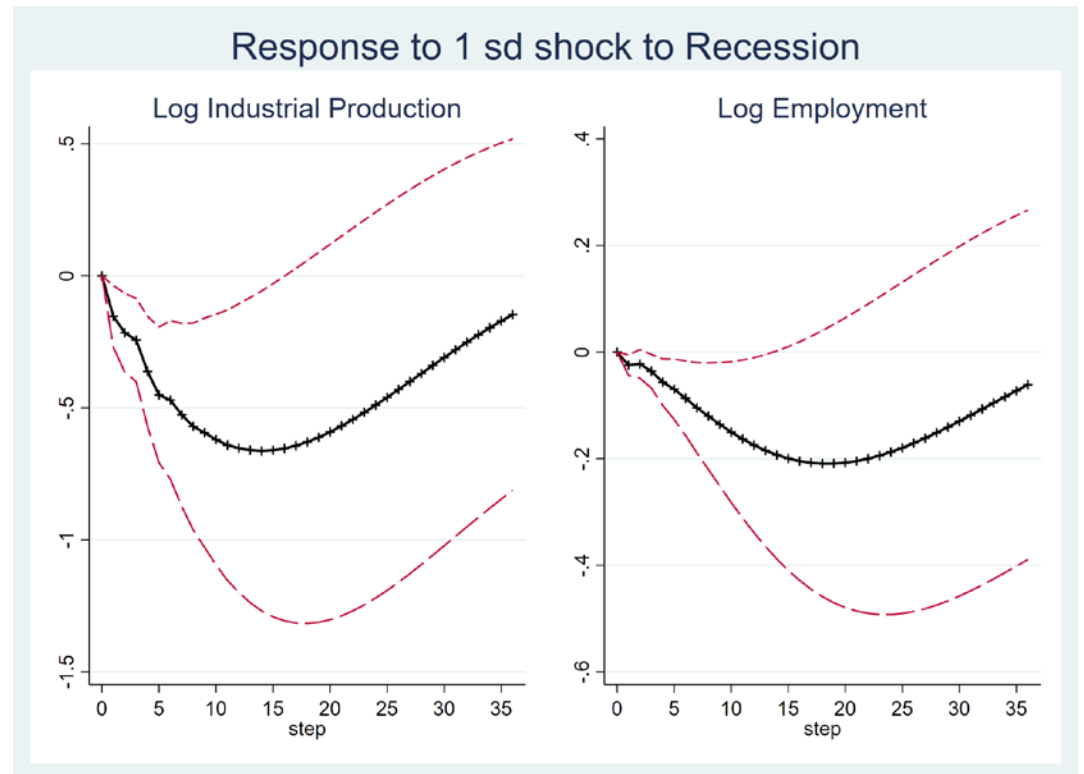
- Method for summarizing all news articles over a time period as "topic attention weights"
 - Topics are informative about the state of the economy beyond standard measures
 - Allow for "narrative extraction" – contemporaneous news accounts most associated with a change in a particular macro variable
- Really enjoyed the paper and learned a lot!
- Incredibly useful tool both for market participants and researchers!
 - E.g. Narrative-based VAR identification can now be based on a comprehensive set of narratives, rather than a few chosen by the econometrician
- But the WSJ is not a statistical filter. It's an economic agent whose behavior changes over time.
 - Do more out of sample, compare sub-sample estimates, etc.

Comment 2: the VAR result is even more robust than it looks!

Robustness from the paper



+ Philly Fed leading index & credit spread



Some fun political nuggets 1

Zoom 1y 5y 10y All

From Jan 1, 1984 To Jun 1, 2017

