

# One Hundred and Thirty Years of Corporate Responsibility



Joel F. Houston\*, Sehoon Kim\*, Boyuan Li\*

\* University of Florida, Warrington College of Business  
Department of Finance, Insurance, and Real Estate

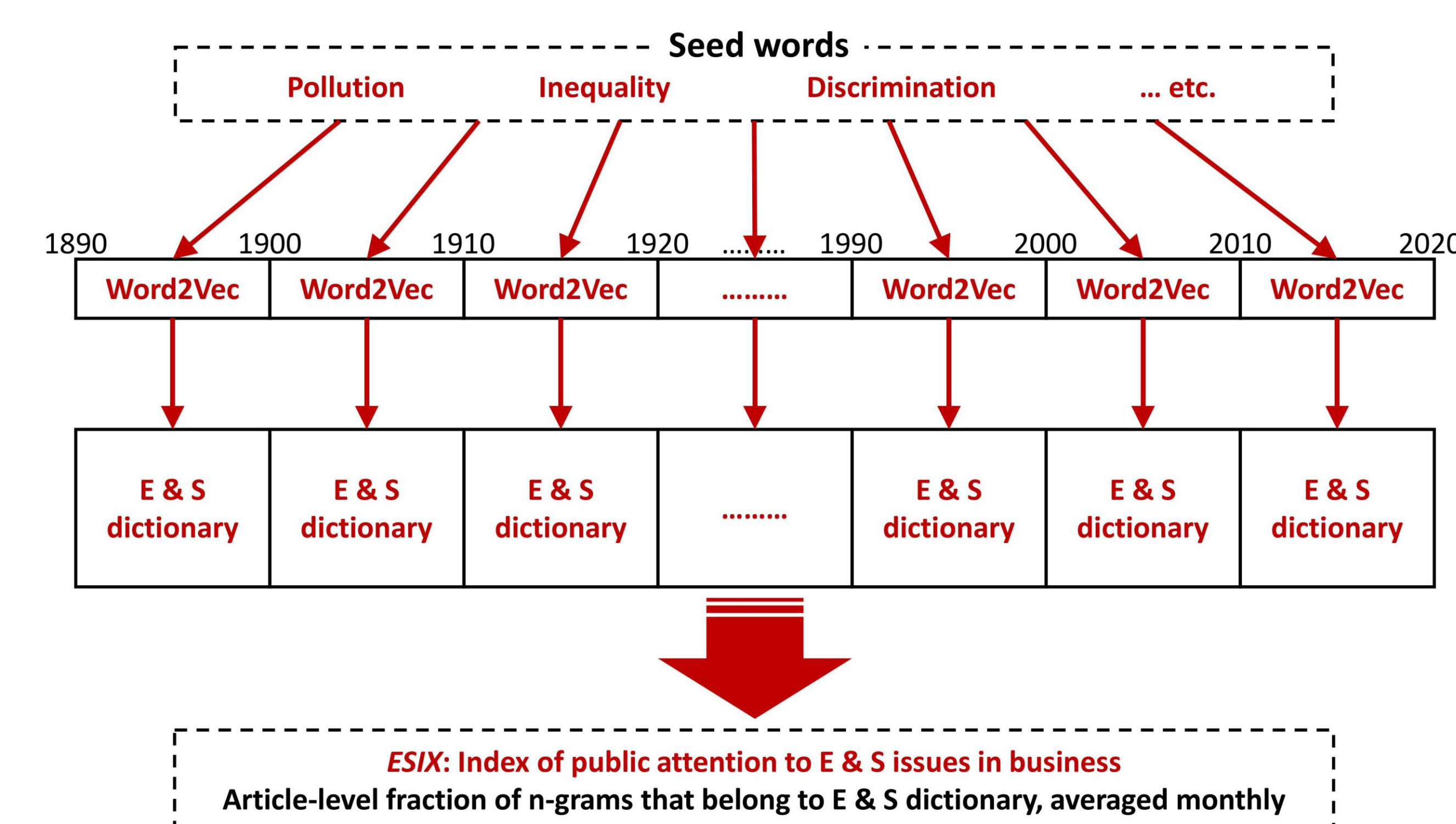
## Summary

- Develop a monthly time-series index (**ESIX**) covering **1899-2023** that measures public attention to environmental and social (E&S) issues related to business
  - Higher attention to social issues (**SIX**) during times of macroeconomic and social instability
  - Higher attention to environmental issues (**EIX**) during times of relative prosperity
- Positive exposure to such public attention associated with lower future stock returns
- Heightened E&S concerns ...
  - reduce** the level and efficiency of corporate investments in the **short-run** (i.e., 1-2 years out)
  - improve** both the level and efficiency of corporate investments in the **long-run** (i.e., up to 10 years out)

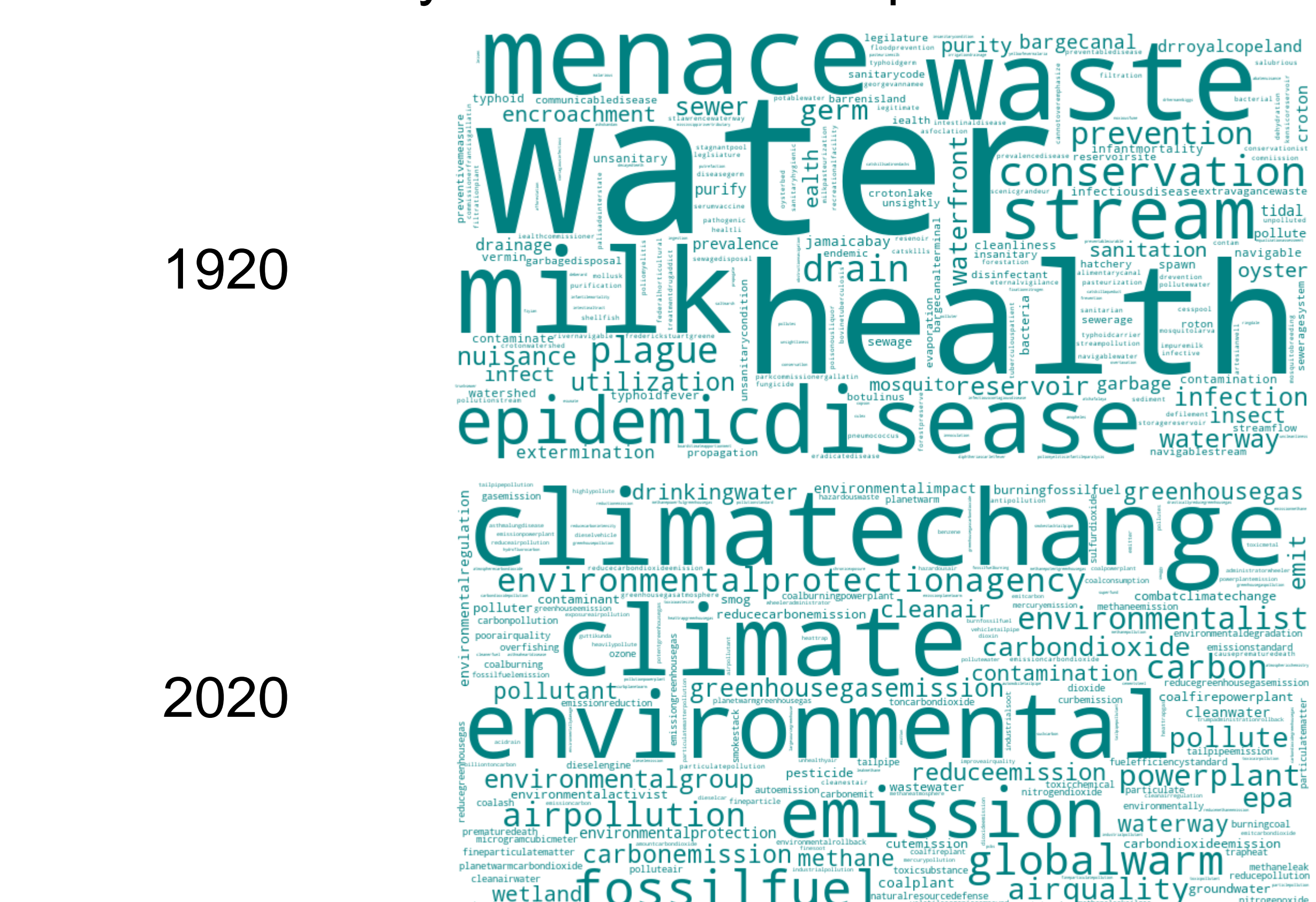
## Methodology

Apply NLP techniques that account for context evolution in historical news using ...

- dynamic word embeddings (Word2Vec models)
- over 130 years of news articles from NYT and WSJ

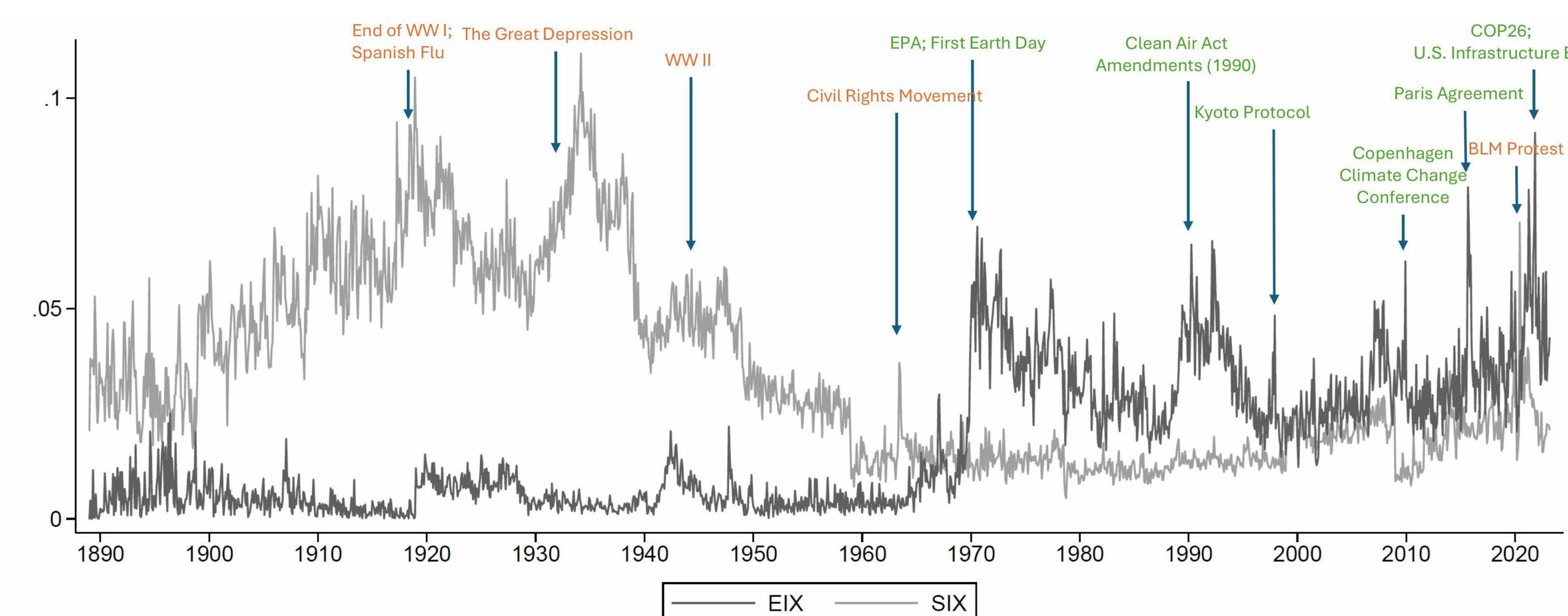


Evolution of keywords related to "pollution"



## ESIX Measure

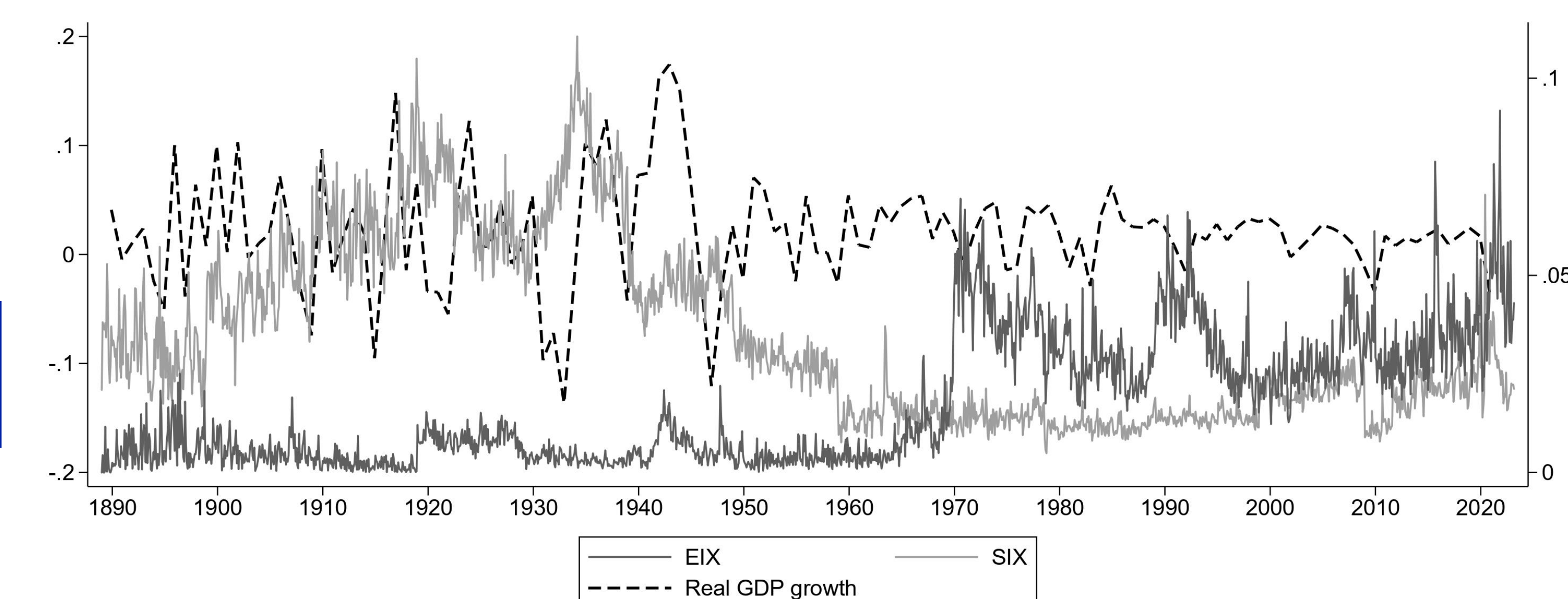
### EIX and SIX Over Time



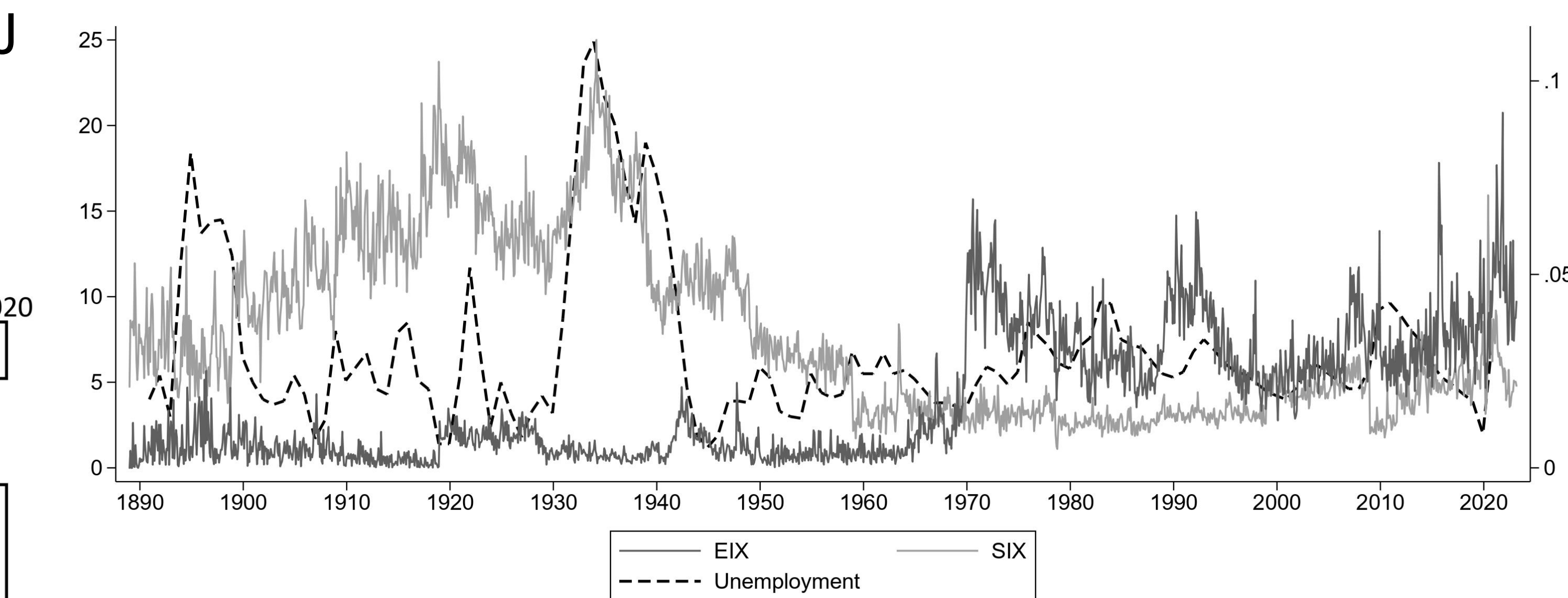
### EIX, SIX, and Macroeconomic Conditions

Public discourse focuses more on *social* externalities than on *environmental* problems during periods of ...

- high volatility in real GDP growth

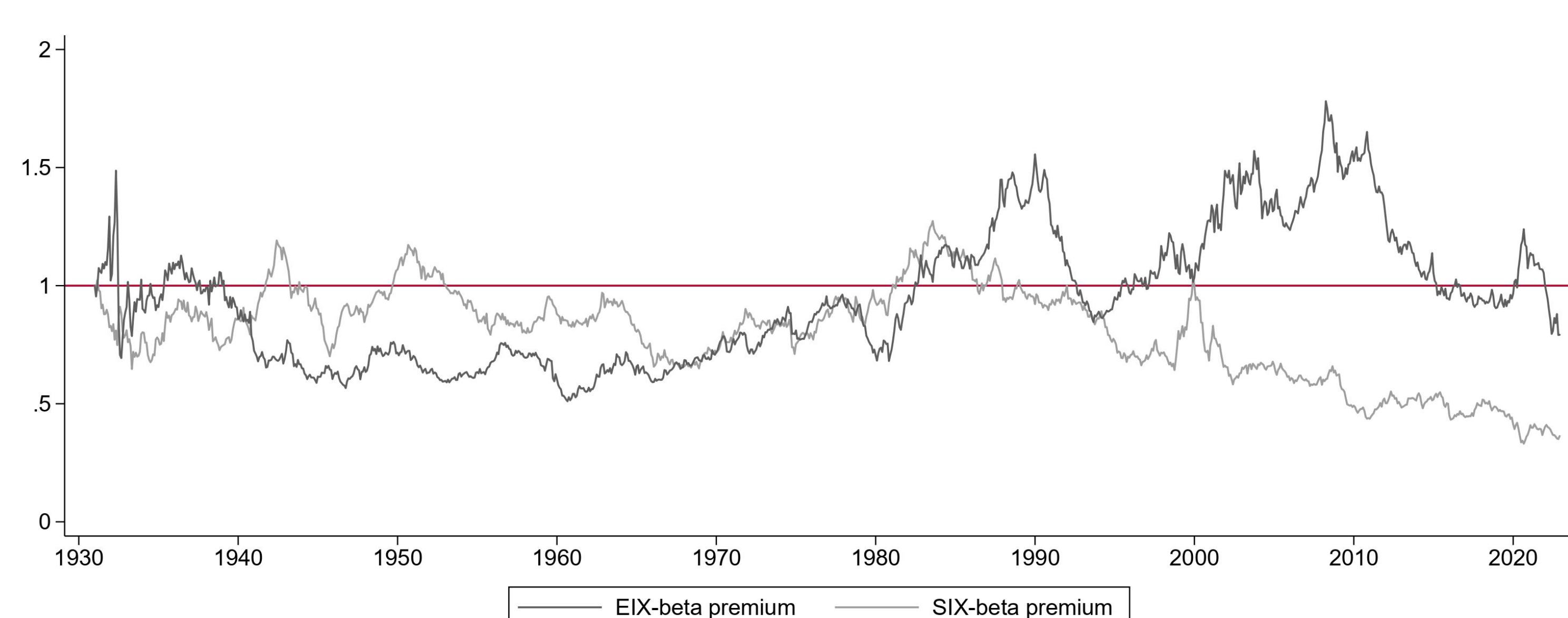


- high unemployment



## Asset Pricing

- Stocks that have tended to do well amid high ESIX do **not** earn higher future returns
- Cumulative return on high-low ESIX exposure portfolio, rebalanced each month –

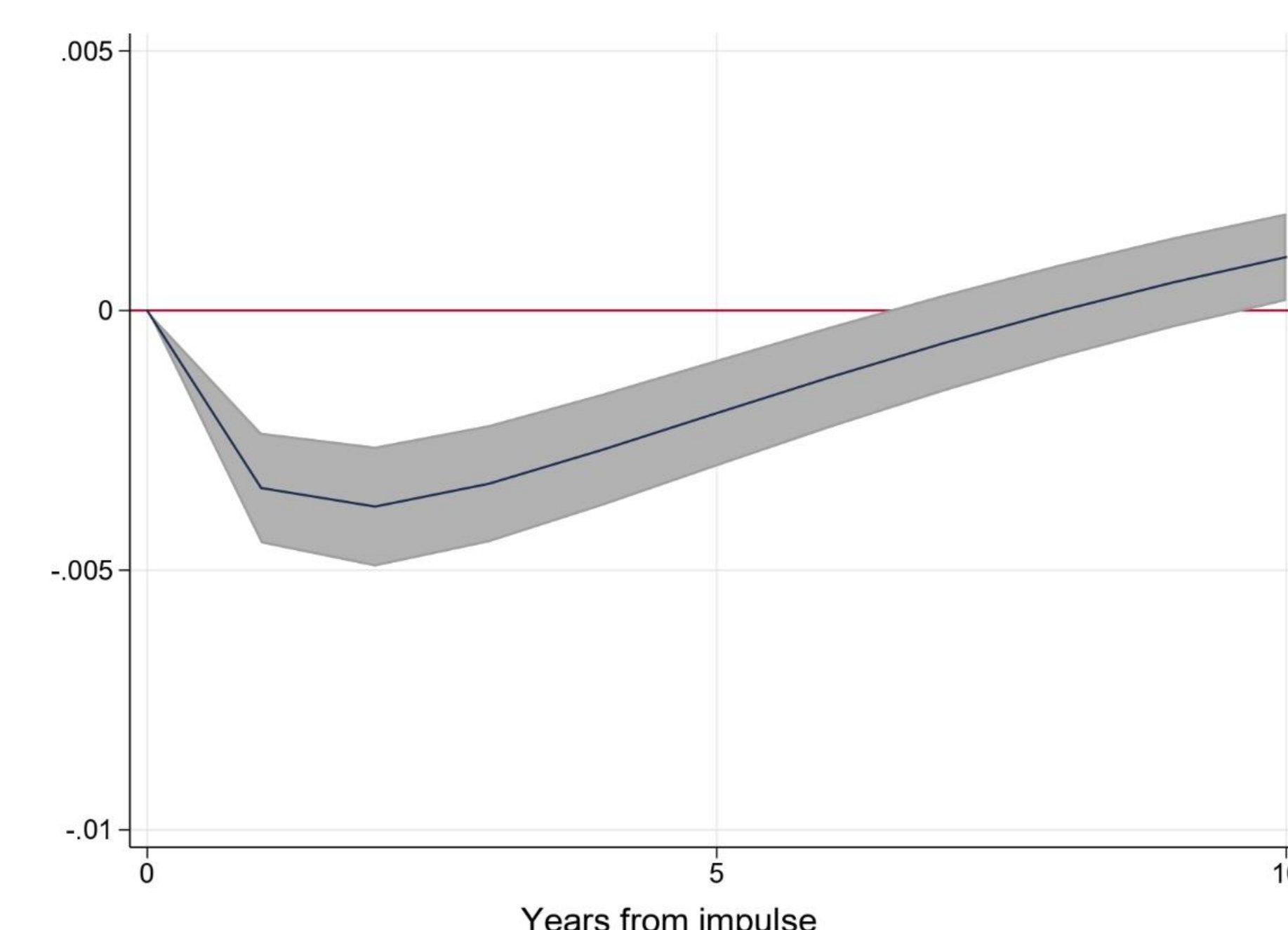


## Corporate Investment

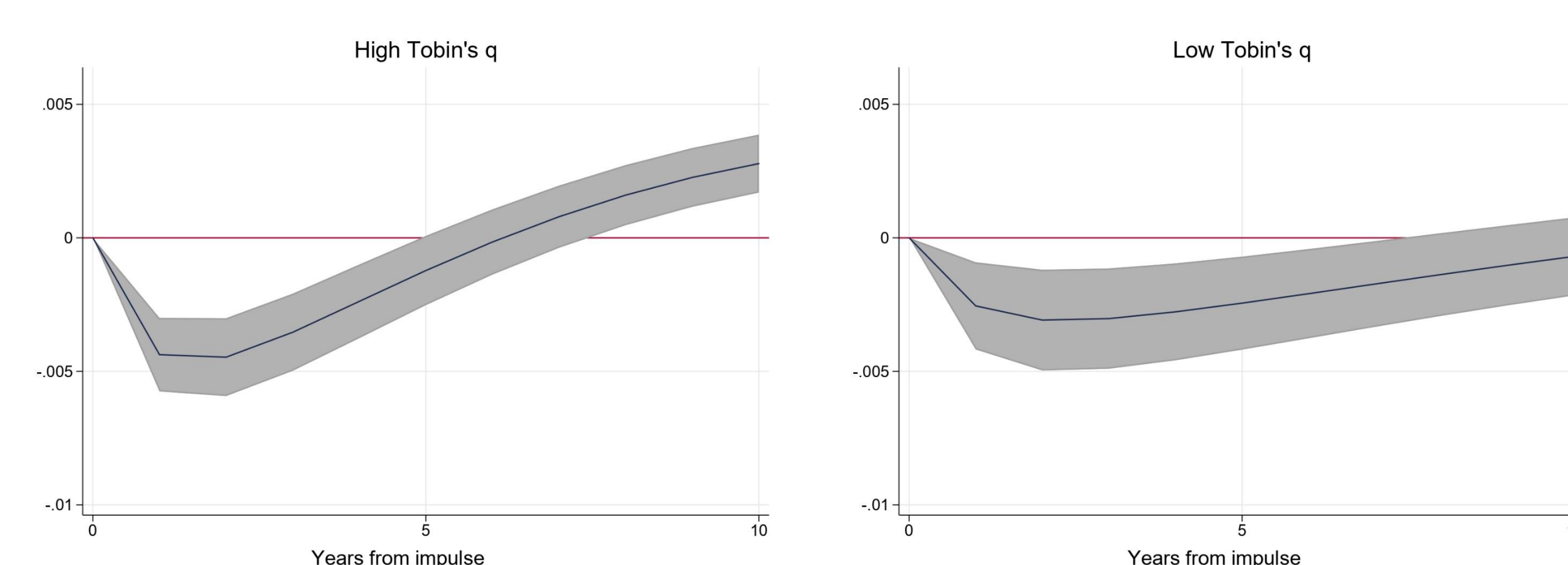
### Panel VAR Analysis

With a one-unit shock to ESIX,

- level of investment initially declines, but ultimately improves in the long-run



- efficiency of investment initially declines, but ultimately recovers/improves in the long-run



## Conclusion

New long-sample insights on public attention to E&S issues surrounding business

- NLP applied to historical news text dating back to 1890s
- Closely related to socioeconomic stability
- Limited ability of markets to price long-run real effects of public interest in E&S issues on firms

Questions or comments? Let's get in touch!  
Email: [boyuan.li@warrington.ufl.edu](mailto:boyuan.li@warrington.ufl.edu)