

# Monitoring Public Interest and Sentiment Toward Basic Income: Using Google and Twitter Data

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# Notes



Conditionally accepted in *Basic Income Studies*



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# This Study

- Goal: Monitoring public attention and sentiments toward Basic Income
- Data & Method
  - 1. Google Trends data, Rescaling using Pytrends
  - 2. Twitter data, Natural language processing (sentiment analysis)
- Application: 50 States and D.C. in the U.S.

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# Basic Income in the U.S.



# Why Important?



Politics of UBI: role of public attention and interest in policy-making processes



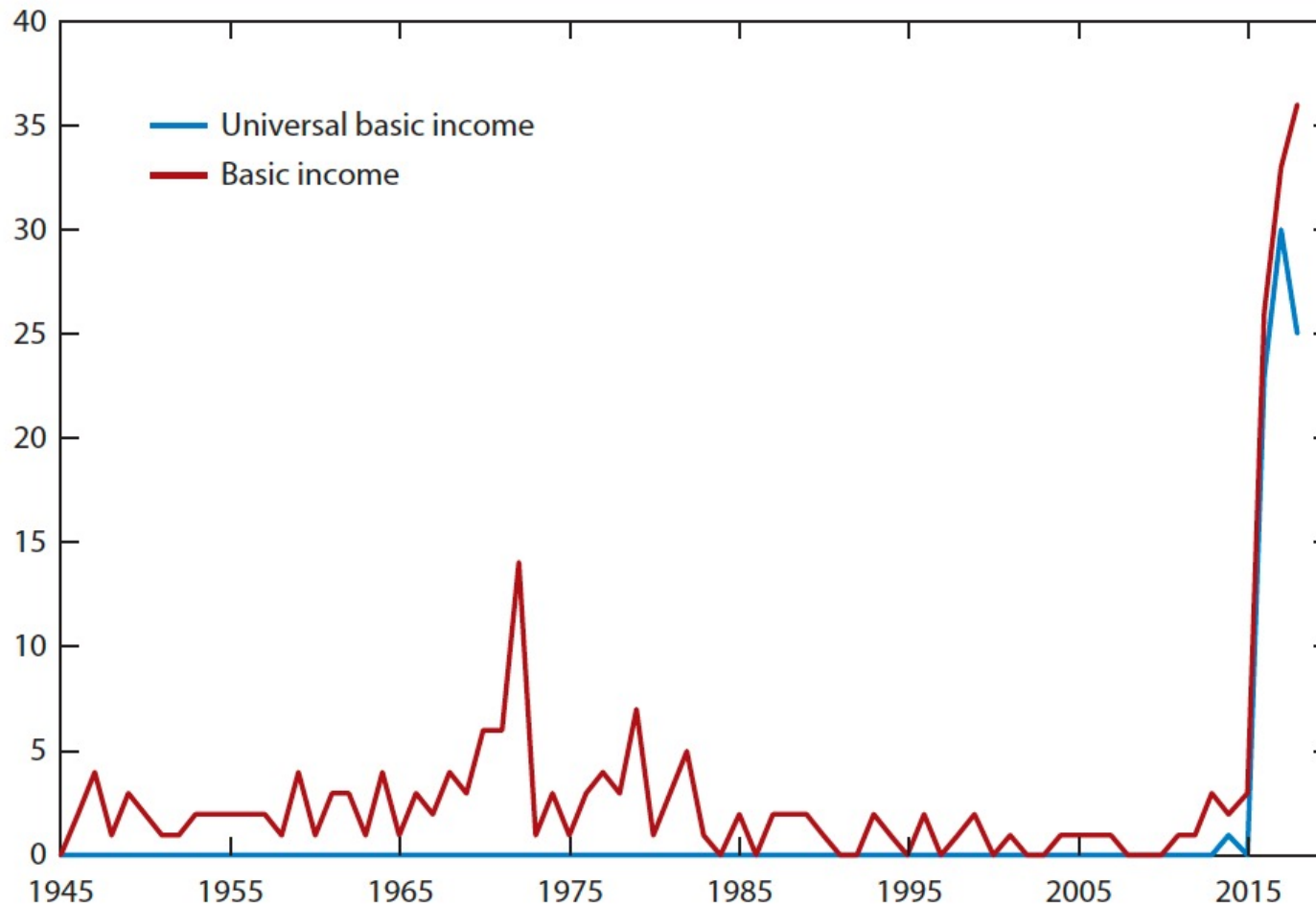
Issue-attention cycle & punctuated equilibrium



The idea of UBI undergone a couple of issue-attention cycles

# Media Attention

Annual Usage of the Terms “Universal Basic Income” and “Basic Income” in the New York Times (Source: Hoynes and Rothstein, 2019)



# American Hearts and Minds

- Occasional opinion polls
- Support for UBI: 26% to 72%, depending ...
  - Different population
  - Different wording
  - Different context
  - Different timing
- Support for UBI gradually increased from 43% in February 2019 (pre-pandemic) to 55% in August 2020 (post-pandemic)



# Limitations of Polls

- Fail to capture changes over time
- Longitudinal surveys infeasible
- Responses forced to answer
- Context-driven responses
- Limited sample size unable to identify subnational variations
- Impossible retrospectively to measure opinions or interests in the past

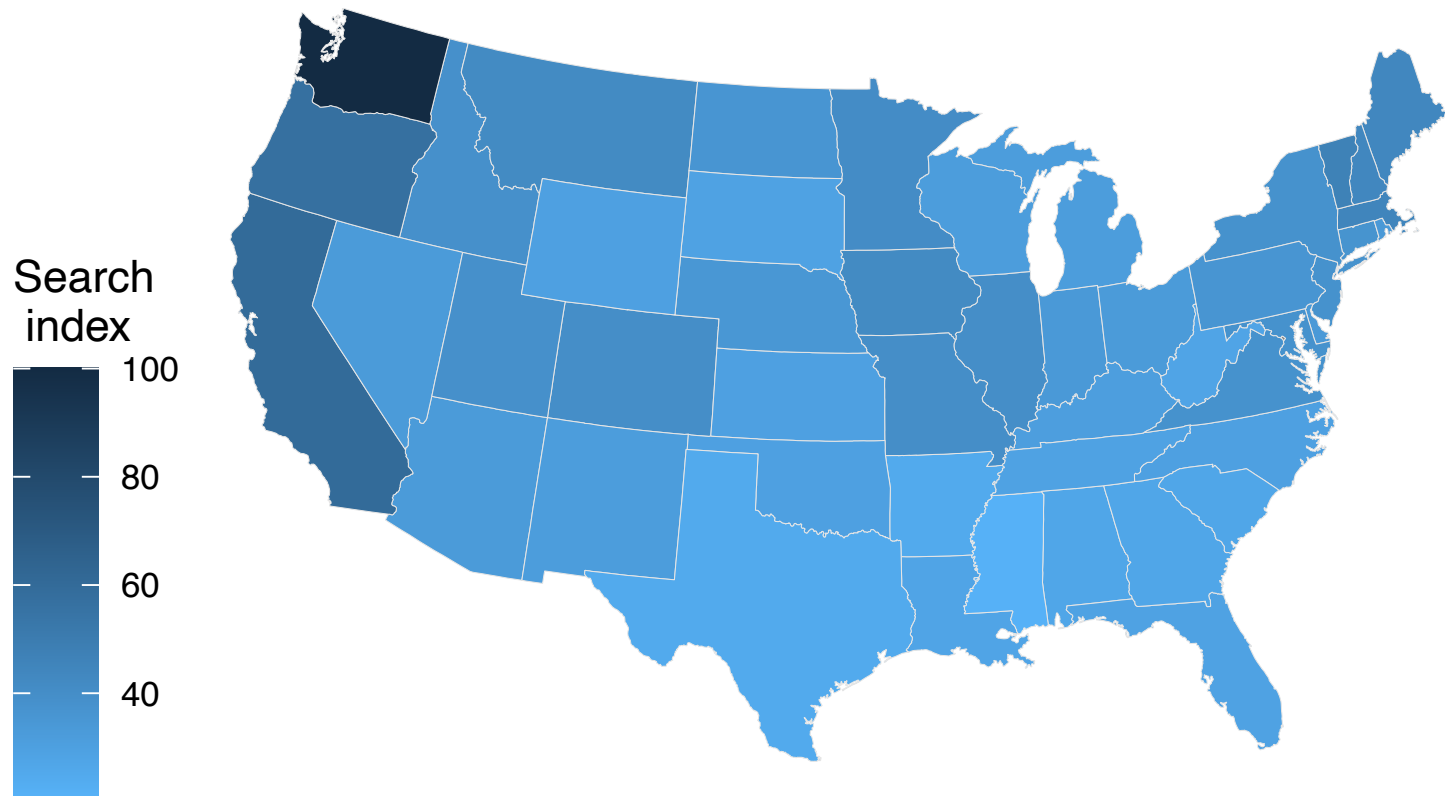
# Using Internet Data to Capture Public Interest in UBI

- A large volume of observations
- High frequencies
- Voluntary and self-motivated
- Instant access and real-time tracking

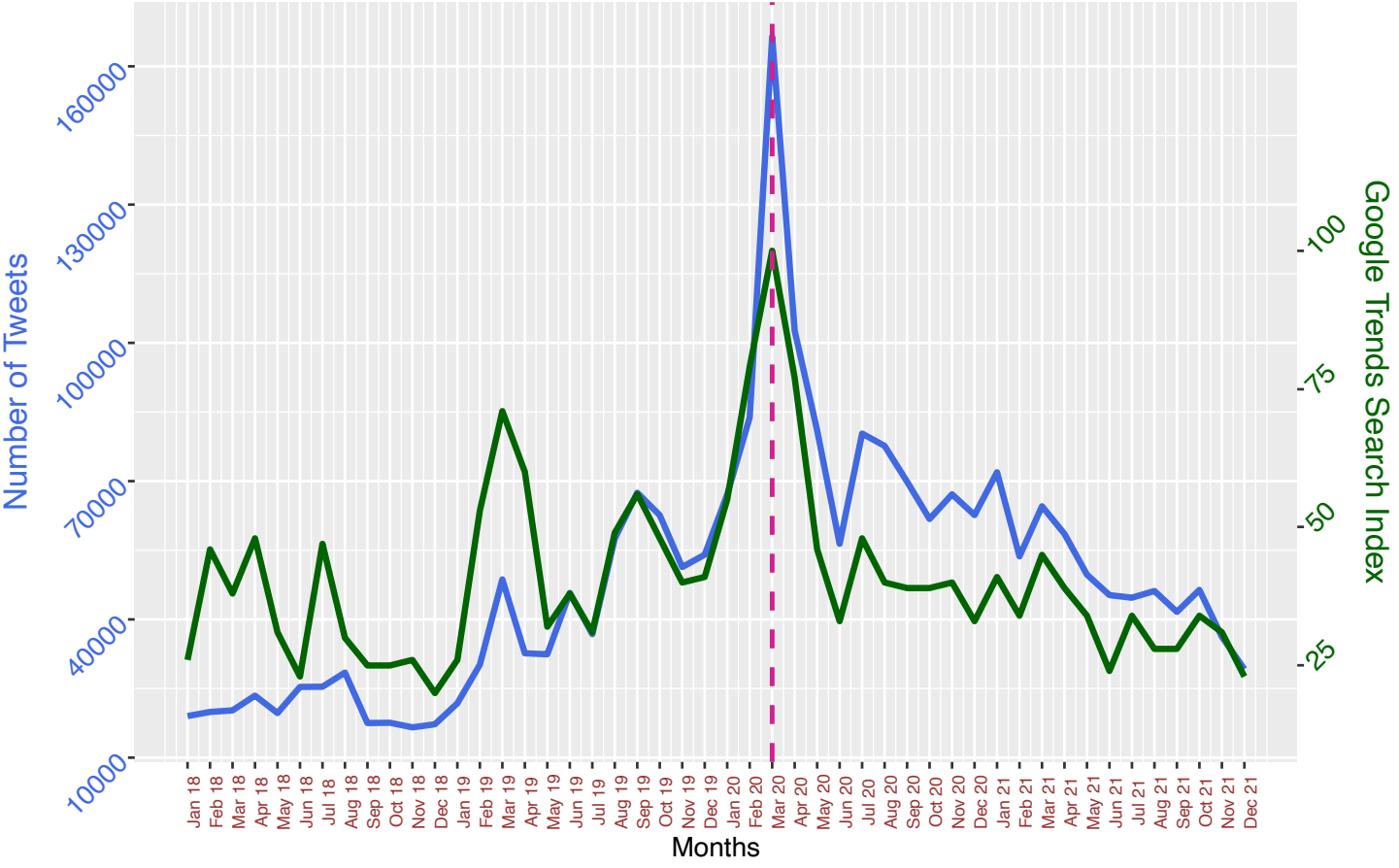
# Data Collection

- Monthly data from Google Trends and Twitter from **January 2018 to December 2021**
- **Google Trends data using PyTrends**
  1. A national-level monthly time-series index
  2. State-level cross-sectional scores
- **Twitter data: 2.36 million original tweets**
  1. VADER algorithm: compound scores
  2. TextBlob algorithm: polarity scores

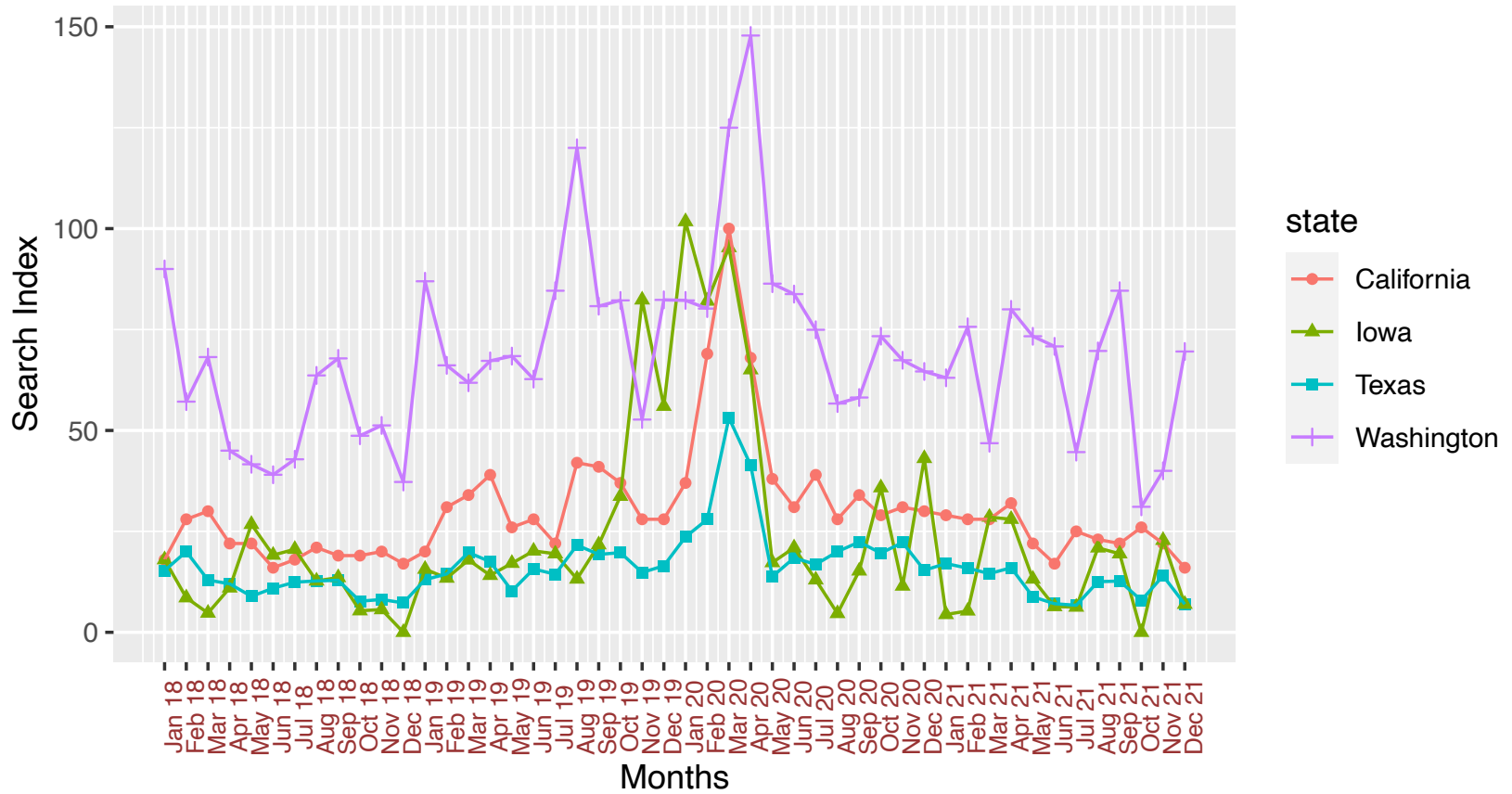
# 1. Google Searches (2018-2021)



# 2. Google Searches (2018-2021)



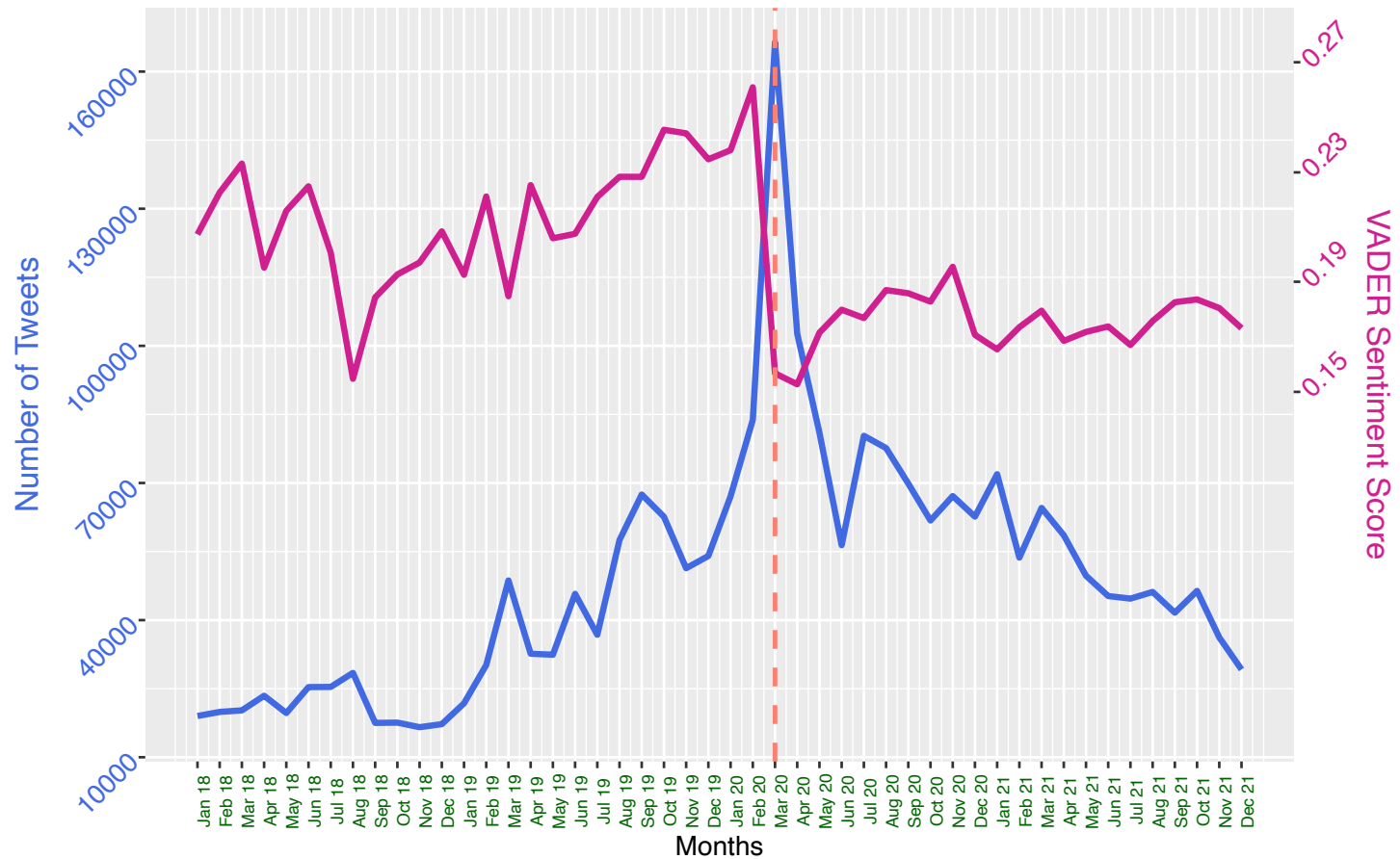
# 3. Rescaled Google Trends Indices



# Pandemic Effect & National Momentum

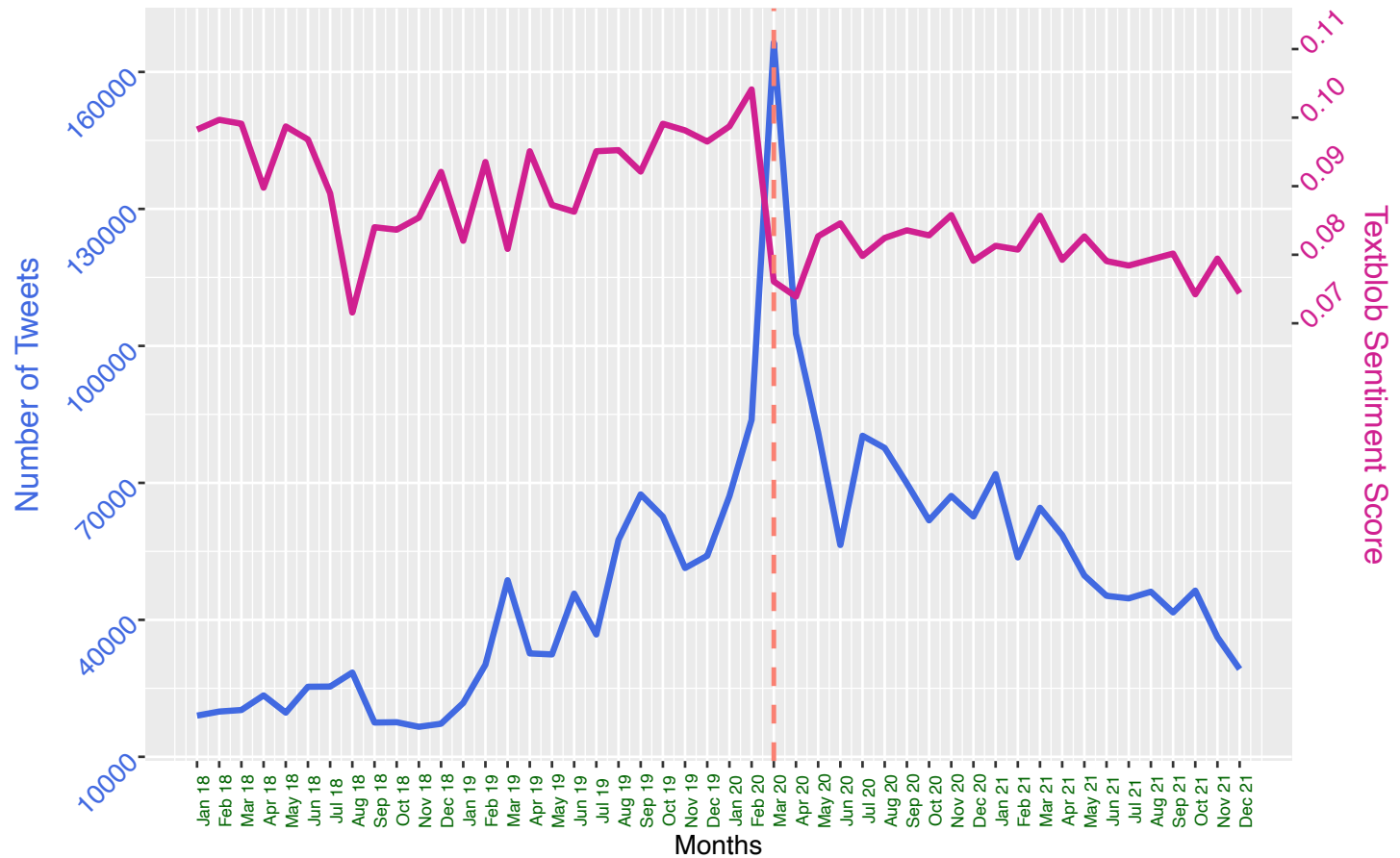
- Impacts of Yang's presidential in blue states
- Pandemic as a central driver in increased interest
  - National momentum
  - Similar patterns across states

# 4. Sentiment Analysis (VADER)





# 4. Sentiment Analysis (TextBlob)



# Sentiment Analysis: Interpretation

- Contrasting Findings: Differences from Nettle et al. (2021) study.
- Pandemic's Dual Effect
- Public engagement & negativity

# Limitations



Representativeness



Descriptive only



Aggregate only



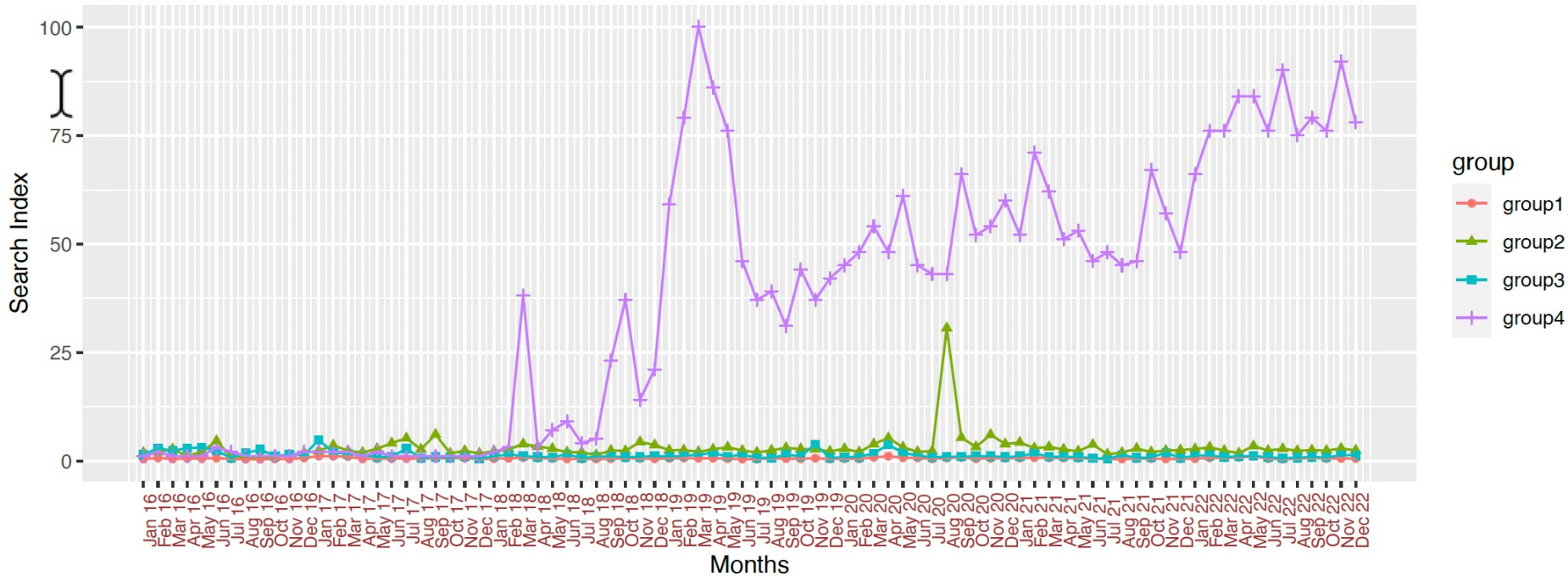
Unavailable location of Tweets

# Conclusion

- Implications for political strategies: National political mobilization to have a national impact
- Internet data, PyTrends, and Natural Language Processing expand the toolkit to feel the public interest and sentiment in addition to survey studies.
- Applicable to other areas; our current project on European counties

# Longitudinal public attention to UBI across Europe

Rescaled Longitudinal Searches for Universal Basic Income



## Latent Groups using Group-Based Trajectory Modelling

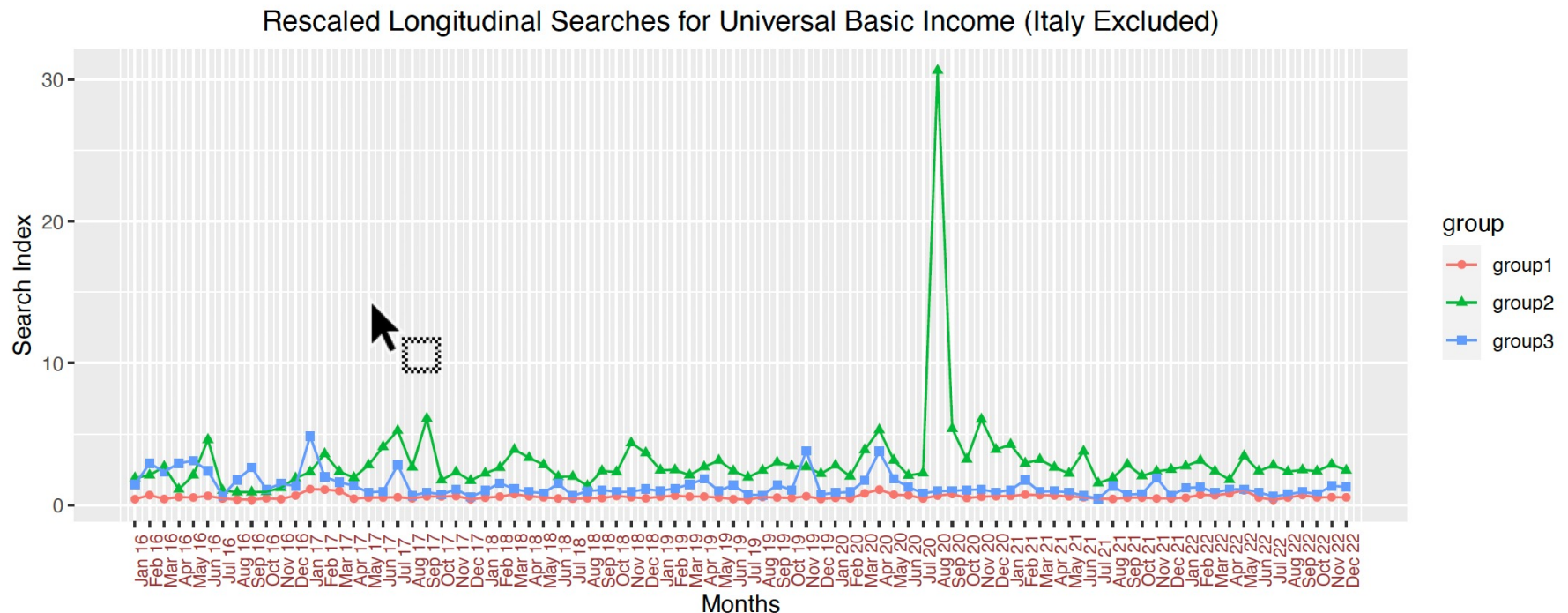
Group 1: Austria, France, Germany, Ireland, Poland, Romania, Russia, Switzerland

Group 2: Belgium, Denmark, Finland, Netherlands, Norway, Sweden

Group 3: Czechia, Greece, Iceland, Portugal, Spain, UK, Ukraine

Group 4: Italy

# Longitudinal public attention to UBI across Europe



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# Twitter sentiment toward UBI in Europe via TextBlob

