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

Public interests in Universal Basic Income measured by Google Searches: Jan 2018 − Dec 2021
2. Google Searches (2018-2021)
3. Rescaled Google Trends Indices

Rescaled Longitudinal Searches for Universal Basic Income
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
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
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Twitter sentiment toward UBI in Europe via TextBlob