

# Summary of Business News and Business Cycles

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## 1) What are the research questions ?

- Whether and how business news topics (textual analysis) forecast economic activities?

## 2) Why are the research questions interesting?

- Economics central function: measure economy state and link to outcomes.
  - economy is a complex system.
  - ascertain the nature and evolution of economy state is difficult.
- Measure economic state via textual analysis of business news.
  - news text is a mirror of the prevailing economic issues.
  - little work has directly studied the structure of news.

## 3) What is the paper's contribution?

- Literature on economics that uses text as data.
  - Prior: LDA, article tags, counting key words...
  - This study: provide a complete solution for macroeconomic textual analysis.
- Literature on uses text data to forecast stock market returns.
  - Prior: news sentiment, news-implied volatility...
  - This study: topic models distill reliable market-timing signals from news.

## 4) What hypotheses are tested in the paper?

- Hypotheses
  - topical content of the WSJ news captures the state of the economy
  - news text conveys novel information beyond standard macroeconomic stats.
- Proof
  - “recession” and “oil market” topics negatively correlates with output growth,...
  - “recession” news has a stronger association with future output.

## 5) Sample

- All articles published in the WSJ from January 1984 through June 2017.

## 6) Dependent and independent variables

- 180 WSJ news topics.

## 7) Regression/prediction model specification:

- LDA topic model, oLDA: avoiding look-ahead bias.

## 8) What difficulties arise in drawing inferences from the empirical work?

- News headlines often capture the essence of the news topic, what are the benefits and necessity of using textual analysis rather than news headlines?

## 9) Describe at least one publishable and feasible extension of this research.

- Can we extract investor attention and experts' forecasts from news text and analyze their (different) impacts on the economy?