How Increased Chinese Exports Drive Media Slant?

Evidence from U.S. Local Newspaper over 1998-2017

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Motivation

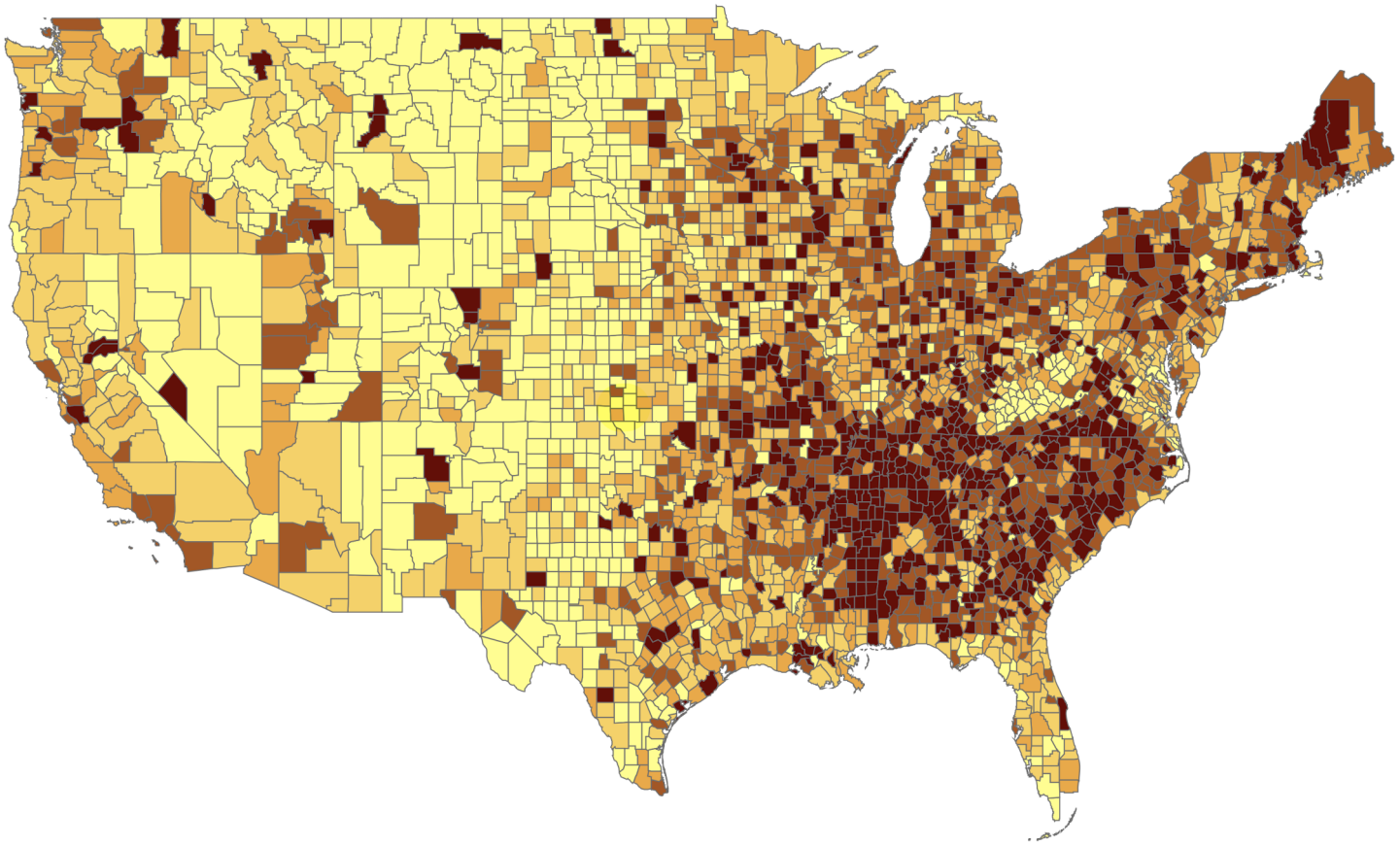


FIGURE 2. U.S. EXPOSURE TO CHINESE IMPORTS ACROSS COUNTIES FROM 1998 TO 2012

Motivation (cont.)

Despite the associated benefits, adverse effects emerge:

- surging U.S. manufacturing unemployment (Autor et al., 2013; Acemoglu et al., 2016)
- deterioration in public health (Autor et al., 2016; McManus and Schaur, 2016; Pierce and Schott, 2016)
- **"China bashing"**? (Ramirez and Rong, 2012)

Existing Studies

- A trade deficit shock leads to sharply-rising but slowing-dying "bad" news about China (Ramirz and Rong, 2012)
- Newspapers whose circulation counties face greater exposure to Chinese imports report more negative news about China, and are more likely to endorse Democrats. (Lu, Shao & Tao, 2018)

Contributions

- **New Data**: from 1998 up to 2017
- **New Method**: NLP-based sentiment analysis

  Previous Studies: Keyword extraction

  Keywords: human rights, Tibet, democracy, intellectual property, dalai lama and etc.

  Why self-contructed dictionary inaccurate?

  "China's Intellecutal Property Theft Must Stop", The New York Times

  Americans are wrong to paint China as an intellectual property thief, Financial Times

Specification

$$\Delta NegRatio_i = \alpha + \beta \Delta Import_i^C + \lambda \boldsymbol{X_i} + \epsilon_i \quad (1)$$

$\Delta NegRatio_i$: change in media slant against China by newspaper i over 1998-2017
$\Delta Import_i^C$: a newspaper-level measure of Chinese import competition, see below
$\boldsymbol{X_{it}}$: control variables for newspaper and its readership attributes

Data Sources

- U.S. newspaper county-level circulation: Alliance of Audited Media
- Newspaper text: Newslibrary
- 6-digit Harmonized System code 96: the U.N. Comtrade
- county-level industry and demographic structure: the U.S. Census Bureau

Trade Exposure at Newspaper Level

An approach adopted from Autor et al.(2003)

$$Import_{i,t} = \sum_{c} \frac{w_{c,i,t}}{w_{i,t}} \sum_{j} \frac{L_{c,j,t}}{L_{c,t}} \frac{M^{C}_{j,t}}{L_{j,t}} \tag{2}$$

$w_{c,i,t}$: weekly circulation of newspaper i in county c during time t
$w_{i,t}$: weekly circulation of newspaper i during time t
$L_{c,j,t}$: employment in industry j in county c during time t
$L_{c,t}$: employment in county c during time t
$L_{j,t}$: employment in industry j during time t
$M^{c}_{j,t}$: U.S. imports from China in industry j during time t

Sentiment Analysis: Media Slant

$$NegRatio_{i,t} = \frac{Neg_{i,t}}{China_{i,t}} \tag{3}$$

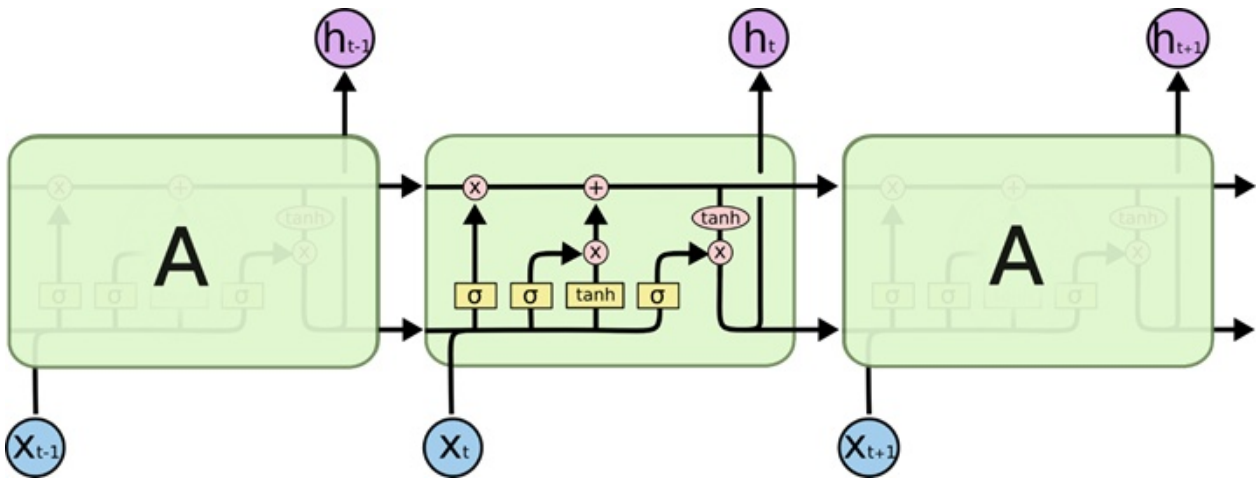
$Neg_{i,t}$: the number of negative reporting about China

$China_{i,t}$: the total number of reports about China

Sentiment Analysis: Media Slant (cont.)

How to analyze newspaper contents?

- Word Embedding: Google News Word2Vec
- Preprocessing
- LSTM Classifier



Estimation Strategy and Potential Results

- Baseline Model

$$\Delta NegRatio_i = \alpha + \beta \Delta Import_i^C + \lambda \boldsymbol{X_i} + \epsilon_i \tag{4}$$

- Possibly GMM
- Potential Results

  Increased U.S. trade deficit with China has induced more negative coverage of China; however the effect might be smaller than what previous researches estimated.