

Trade War Insights from News



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November 16th, 2018

Objective

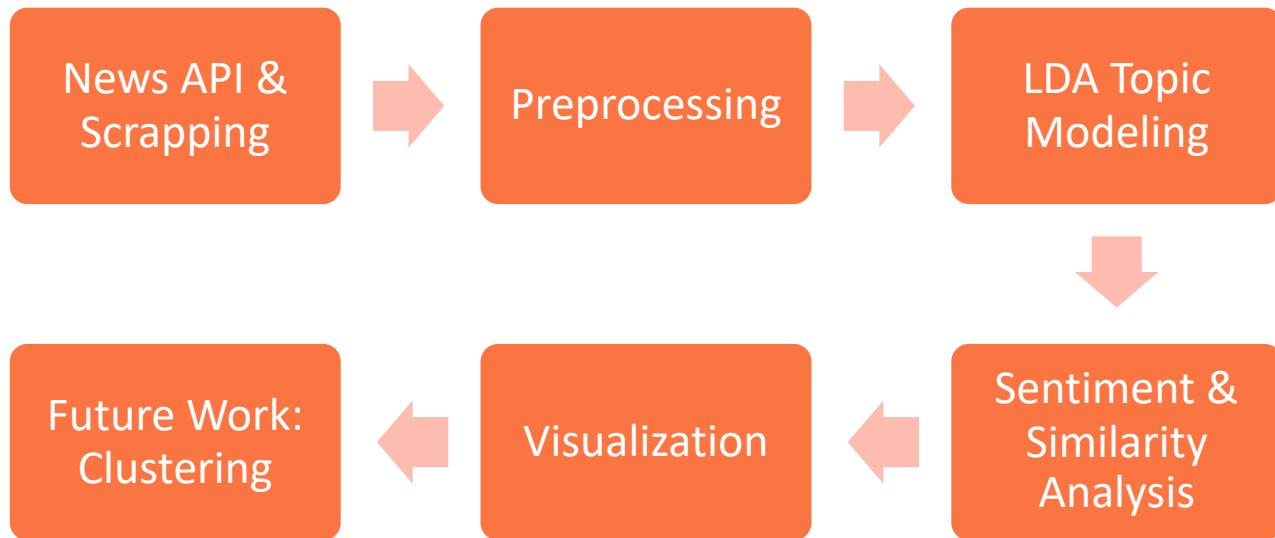


Wise Investment

Strategic Diplomacy



General Workflow



LDA Topic Modeling

Topics found:

Economy

Agriculture

Australia & New Zealand

Stock Market

Energy

Monetary & Indonesia

Taiwan Strait Defense

Thailand & Vietnam

Aircraft

Investment

Journalism

WTO

High Tech Company

Social Media

Luxury Goods

Automobile

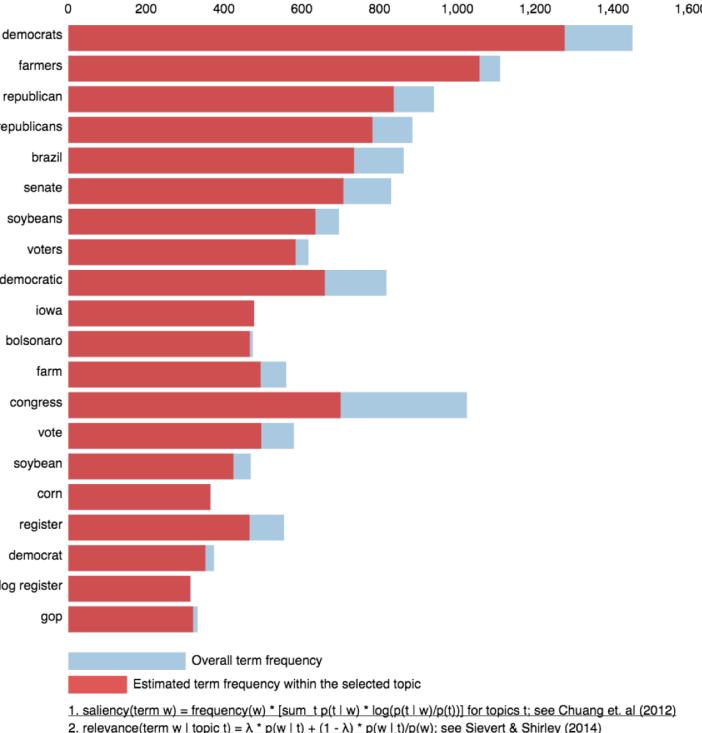
LDA Topic - Agriculture

Selected Topic: 2 [Previous Topic](#) [Next Topic](#) [Clear Topic](#)



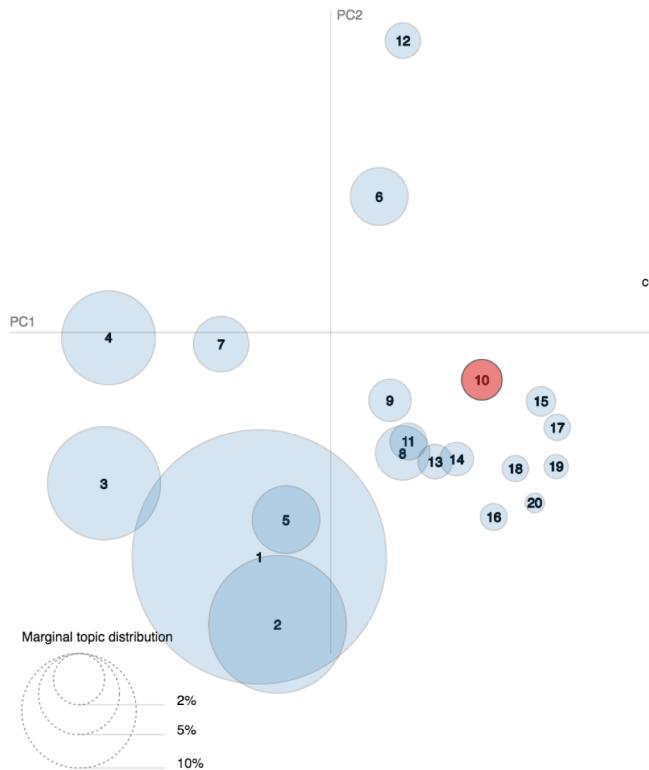
Slide to adjust relevance metric:(2) $\lambda = 0.4$

Top-20 Most Relevant Terms for Topic 2 (14.4% of tokens)

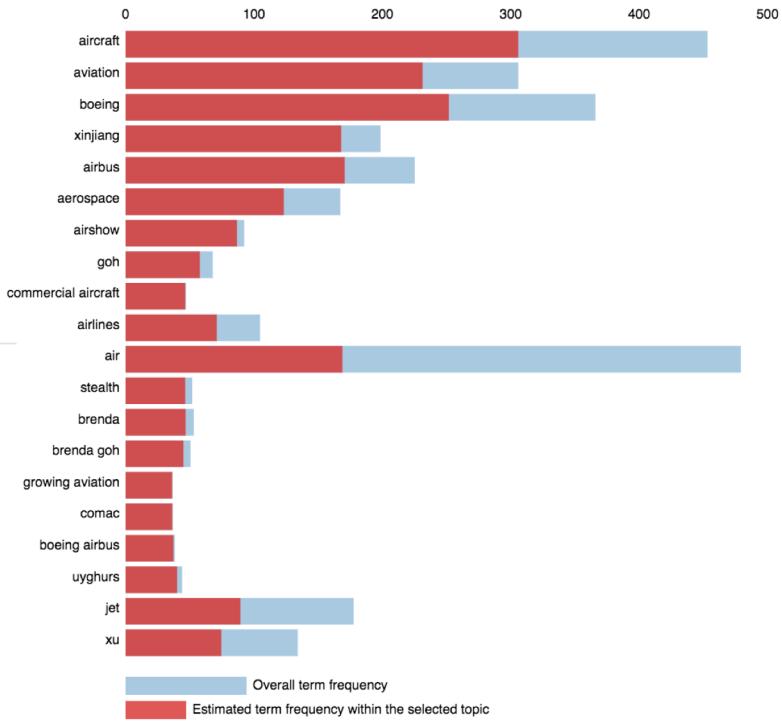


LDA Topic – Aircraft

Intertopic Distance Map (via multidimensional scaling)



Top-20 Most Relevant Terms for Topic 10 (1.3% of tokens)

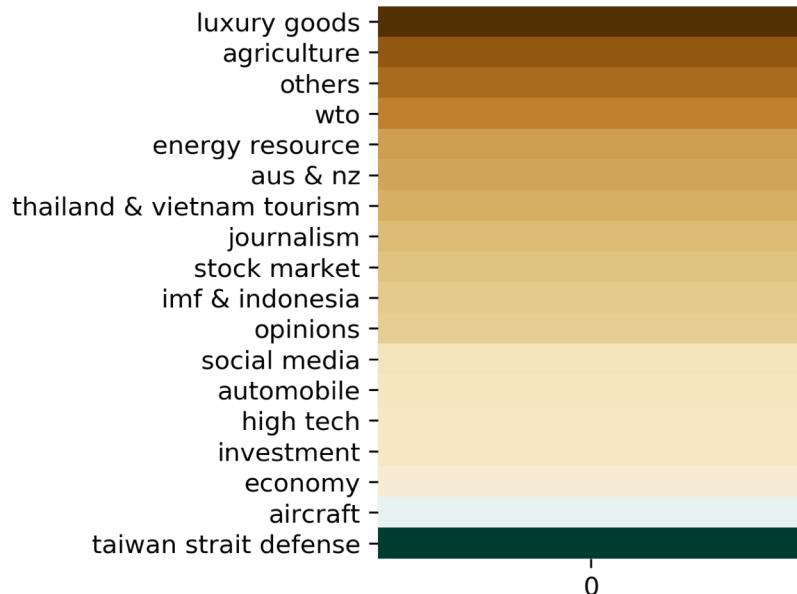


1. saliency(term w) = frequency(w) * [sum_t p(t | w) * log(p(t | w) / p(t))] for topics t; see Chuang et. al. (2012)

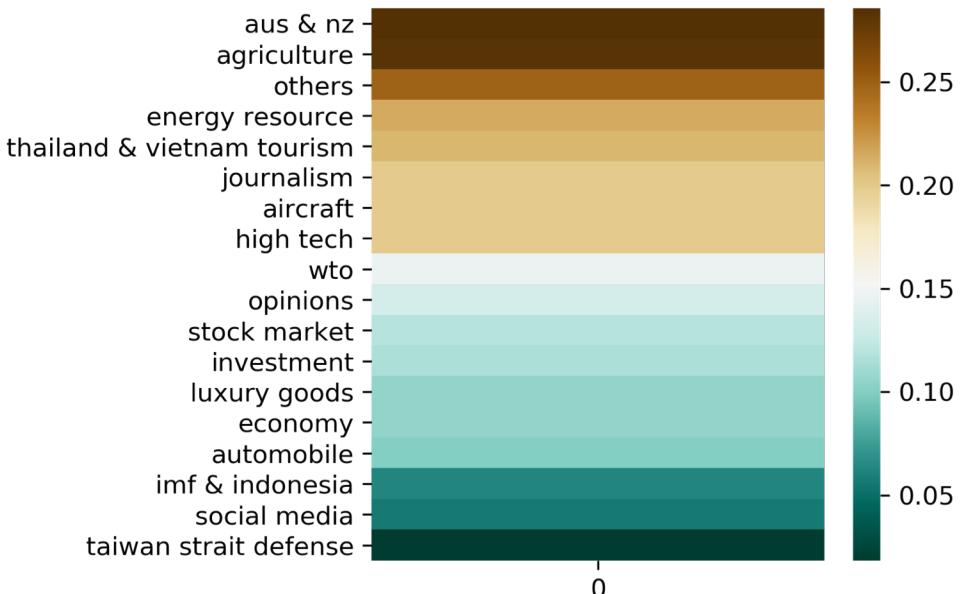
2. relevance(term w | topic t) = $\lambda * p(w | t) + (1 - \lambda) * p(w | t) / p(w)$; see Sievert & Shirley (2014)

Topic Sentiment Analysis

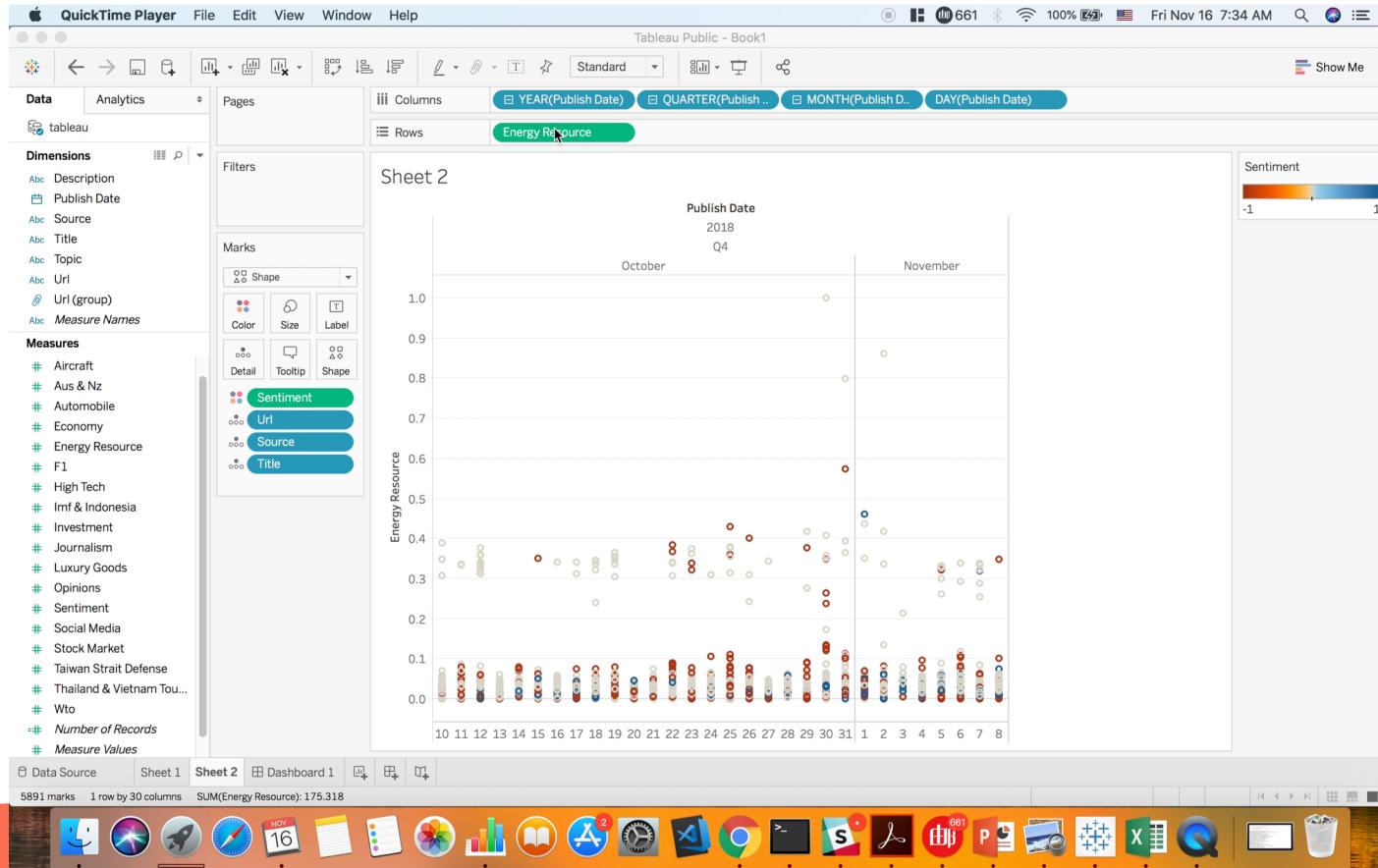
Average Negative Polarity of Articles



Percentage of Negative Articles



Similarity Analysis – Interactive Dashboard



Future Work

- Use better news API if funded to do so
- Refine LDA to make topics more generalizable
- Choose typical article based on its content
- Find some intriguing clusters in Tableau
- Build a recommendation system upon users' query

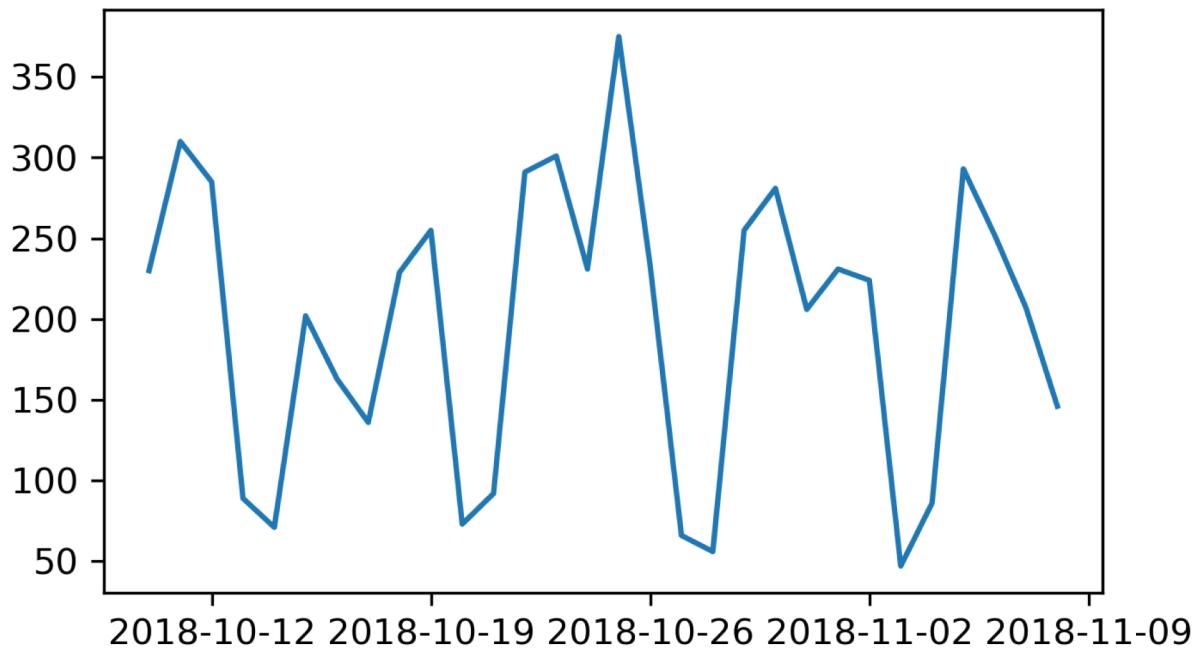
Thank you

Email: liuriguang@126.com

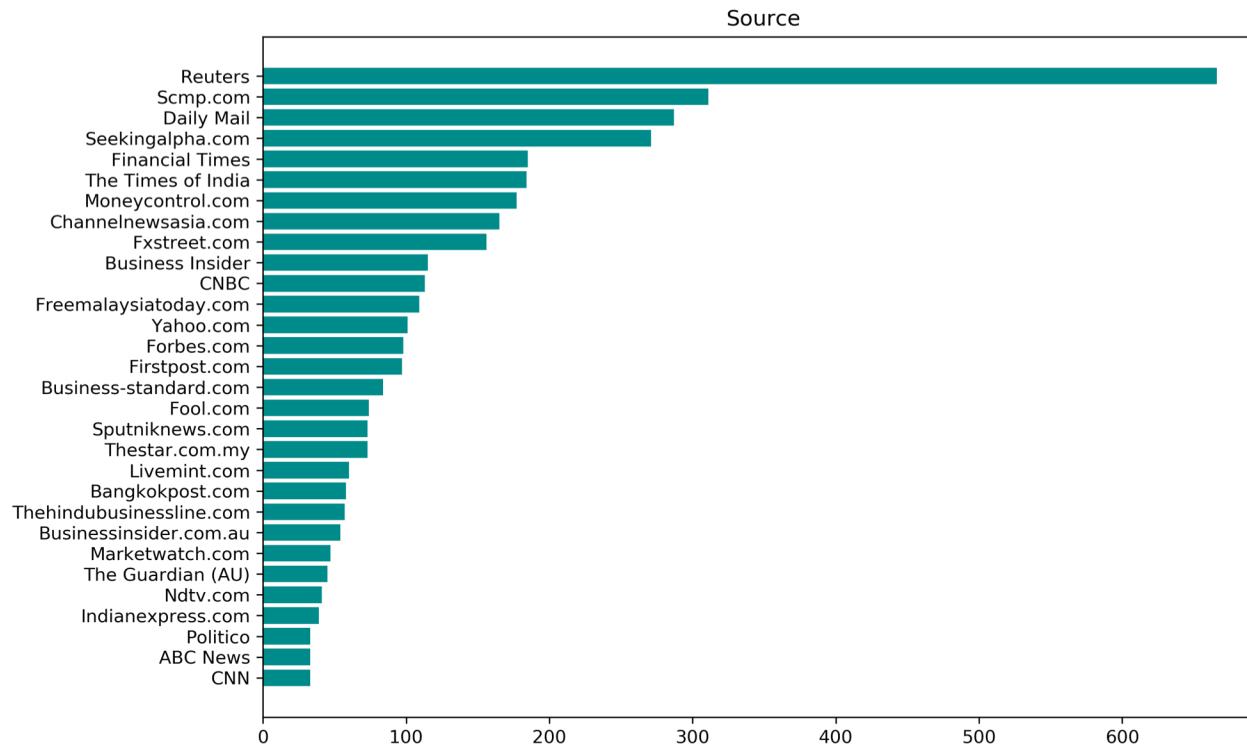
Linkedin: linkedin.com/in/leo2506

Github: [leo2506](https://github.com/leo2506)

Appendix – Time Plot of Daily News Throughput



Appendix – Popular News Sources



Appendix – U.S. Census Bureau Data

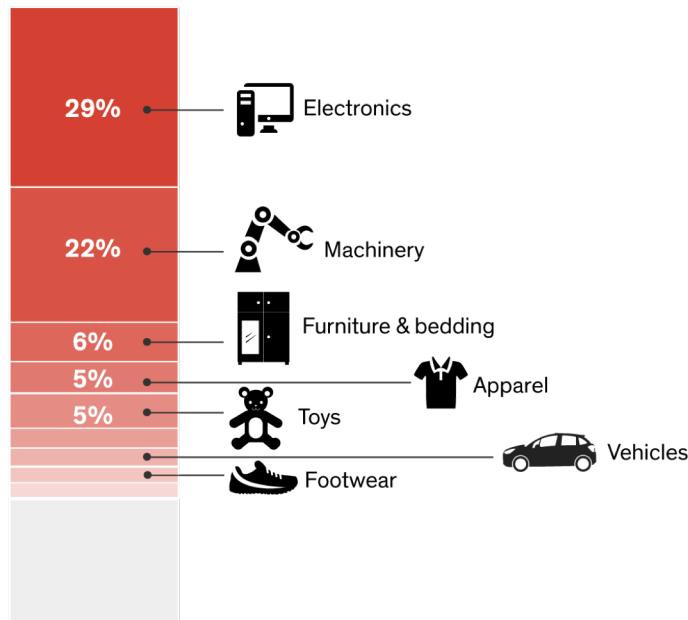
New tariffs will impact a smaller percentage
of U.S. imports than Chinese imports



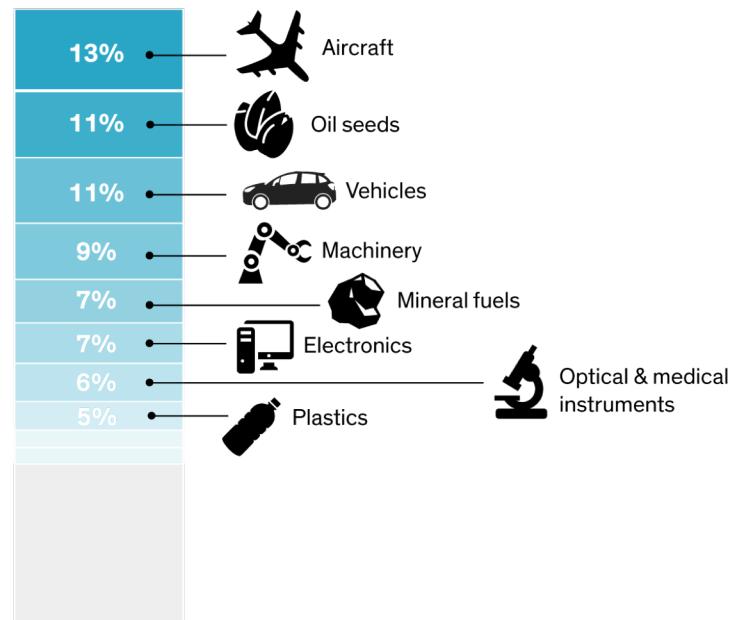
Data: U.S. Census Bureau

Appendix – U.S. International Trade Commission Data

The U.S. imports these products from China



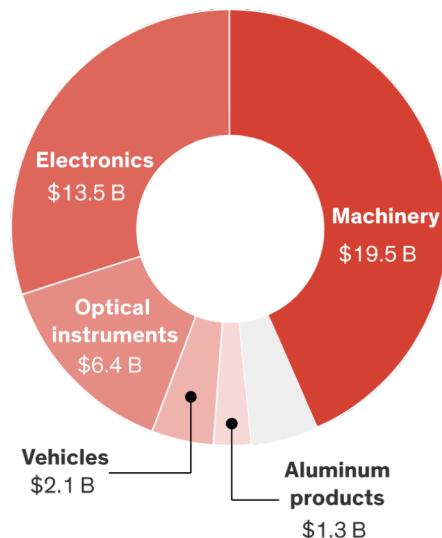
China imports these products from the U.S.



Appendix – U.S. and China Export Amount Data

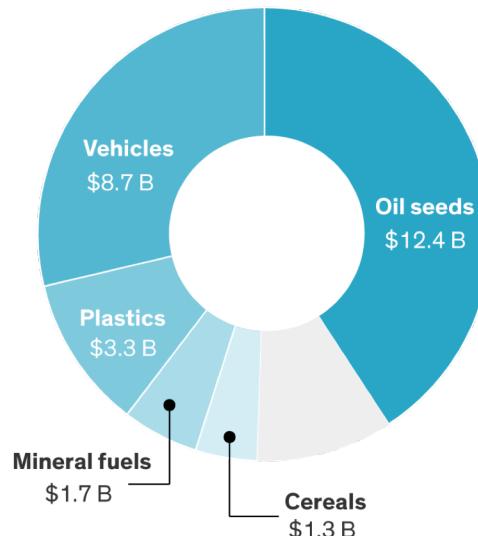
The 1300 Chinese products targeted by the Trump administration

Value of Imports from China, 2017*



The 106 U.S. products targeted by the Chinese government

Value of Exports to China, 2017*



Data: Office of United States Trade Representative

Data: Ministry of Commerce of China

Other targeted goods

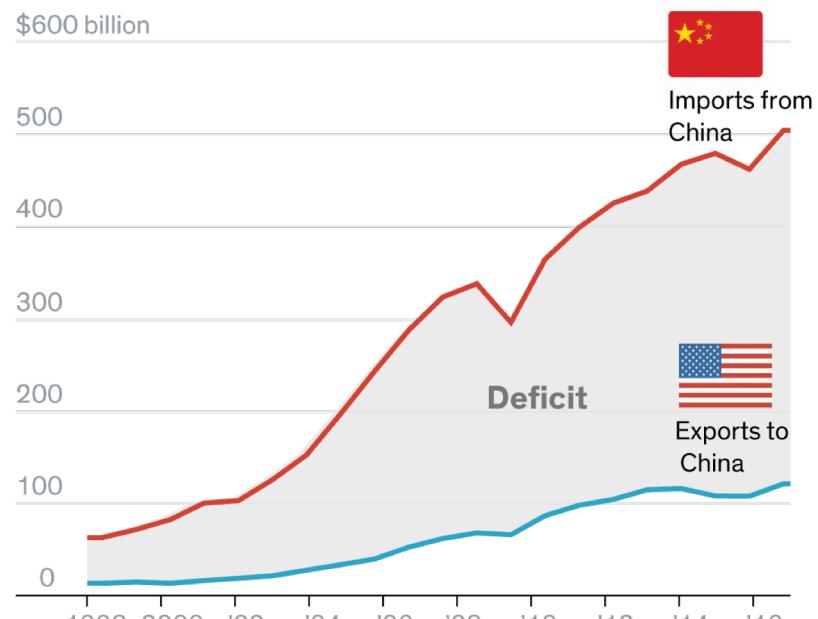
- Pharmaceutical products
- Aircraft
- Furniture & bedding
- Articles of iron or steel
- Railway locomotives
- Organic chemicals
- Iron & steel
- Rubber articles
- Arms & ammunition
- Ships
- Articles of base metal
- Inorganic chemicals
- Chemical products
- Clocks & watches

Other targeted goods

- Chemical products
- Cotton
- Soap
- Tobacco
- Albuminoidal substances
- Organic chemicals
- Residues & waste
- Preparations of vegetables
- Rubber articles
- Beverages
- Vegetable products
- Photographic goods
- Milling industry products
- Aircraft

Appendix – Trade Gap

The widening trade gap



Data: United States International Trade Commission

Appendix – Companies Could Suffers from Trade War



The tariffs just announced would hit only a few Boeing aircraft, but the company could be hurt by a broader trade war.



Caterpillar's fate hinges on products like steel and agricultural goods, both of which would be impacted by tariffs.

Automobiles are one of the industries that China plans to hit with tariffs.



China is both a hub for iPhone production and a growing consumer base for Apple.

