Reading China: Predicting Policy Change with Machine Learning

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Propaganda has predictive value

Soviet/Chinese model: move public opinion before implementing policies

Detect changes in official newspaper

Predict changes in gov’t policies

AI techniques can help!
Policy Change Index (PCI) projects

Two PCI projects in the lineup:

1. **PCI-China**: quarterly index to predict Chinese policies (with trade-war implications);

2. **PCI-Crackdown**: daily index to predict China’s response to 2019 Hong Kong protests.

- And more future projects to come!
1. PCI-China
Policy Change Index (PCI) for China

Full text of the People’s Daily
(1946-present, two million articles)

PCI algorithm

Predictor of policy moves
(quarterly index update)
PCI-China algorithm

PCI-China: the difference in performance
PCI-China leads major policy moves
Understanding changes — 2018 Q1 uptick
Trade-war implications

• Two upticks in 2018 Q1 and 2019 Q1:
  • internally: strengthening party authority;
  • externally: nationalism and global leadership.

• Wall Street views in April: trade deal imminent.

• Our consistent prediction since January: curb your enthusiasm. *

* 2019 Q3 update coming soon!
2. PCI-Crackdown
Policy Change Index (PCI) for Crackdown

Protest-related People’s Daily articles

(400+ articles on Tiananmen & HK protests)

PCI algorithm

Predictor of potential crackdown

(daily index update)
PCI-Crackdown algorithm

Articles leading up to Tiananmen crackdown

Recent articles on HK protests

Train a date classifier

Calculate the “as-if” date

PCI-Crackdown: mapping current dates to Tiananmen timeline
PCI-Crackdown: 2019 Hong Kong protests
(Jun 09 – Sep 25, 2019)
Potential applications
Future PCI projects

• PCIs for other countries – North Korea, Cuba, ...

• PCI sub-indices:
  • By issue – trade policy sub-index, fiscal policy sub-index, ...
  • By country – China-US relations, China-EU relations, ...

• Mapping other timelines (e.g. China’s Taiwan policies).
“Commercial break”

- Website: policychangeindex.org
- Newsletter: mercatus.org/PCInewsletter
- Code: github.com/PSLmodels/PCI-China
github.com/PSLmodels/PCI-Crackdown