

Reading China:

Predicting Policy Change with Machine Learning

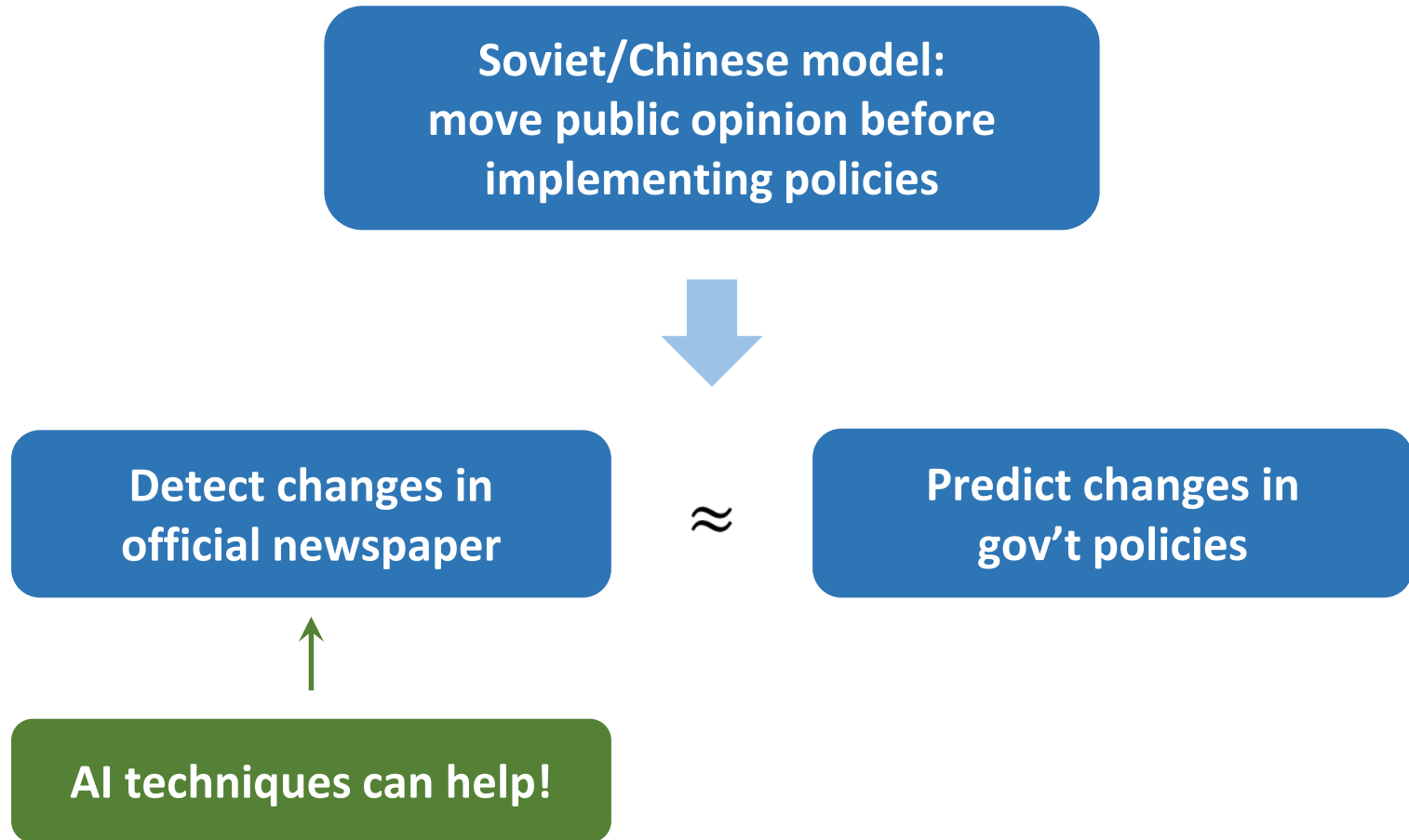
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NBER Economics of AI Conference (9/26/2019)

The views expressed here are the authors' and do not represent the views of Bates White, the Mercatus Center, or their other employees.

Propaganda has predictive value



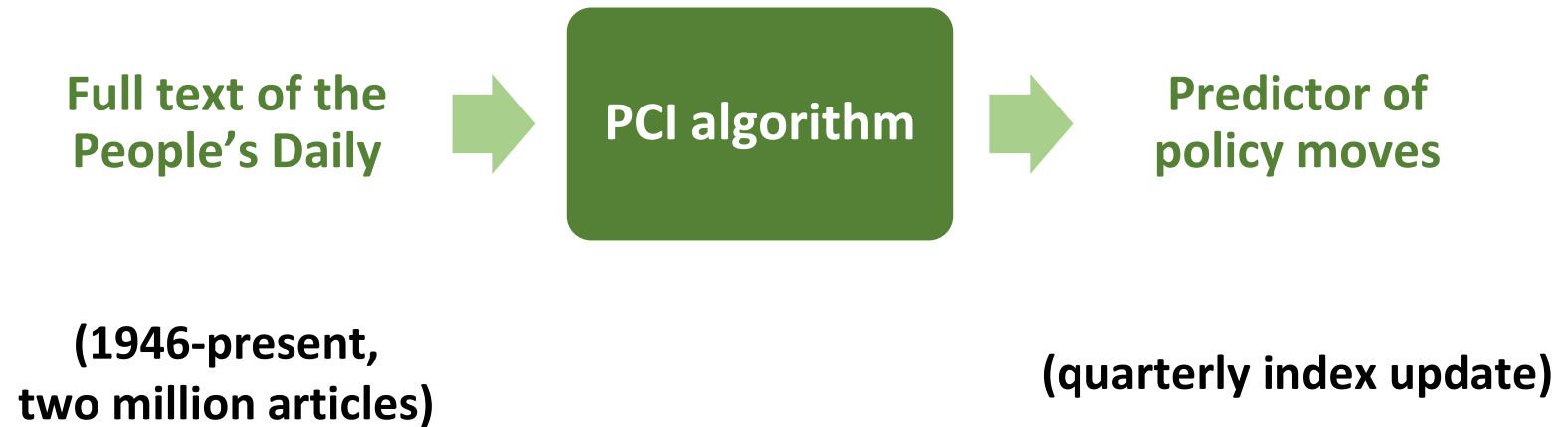
Policy Change Index (PCI) projects

Two PCI projects in the lineup:

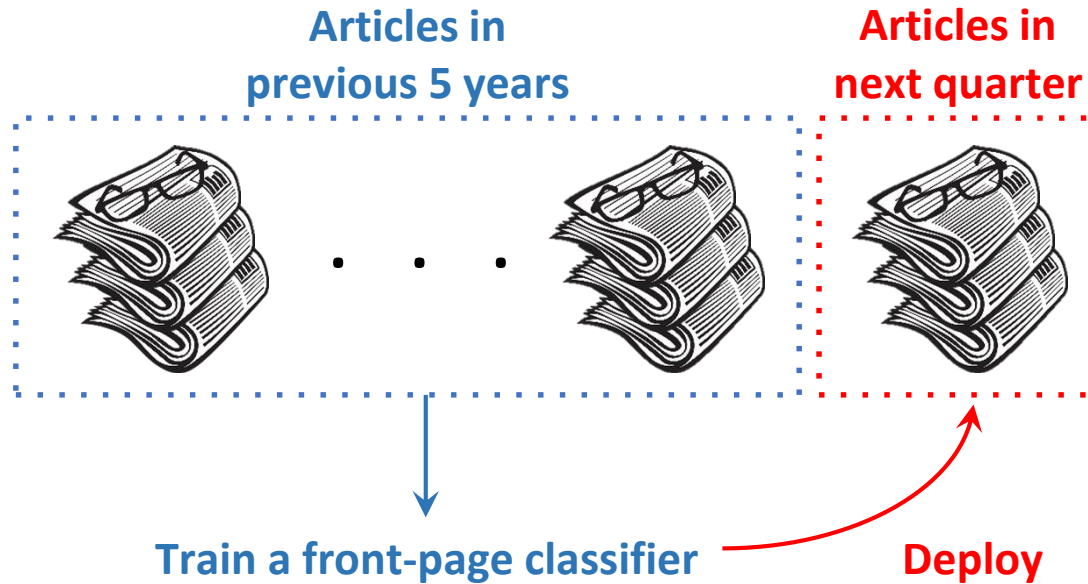
- 1. PCI-China:** quarterly index to predict Chinese policies (with trade-war implications);
 - 2. PCI-Crackdown:** daily index to predict China's response to 2019 Hong Kong protests.
- And more future projects to come!

1. PCI-China

Policy Change Index (PCI) for China

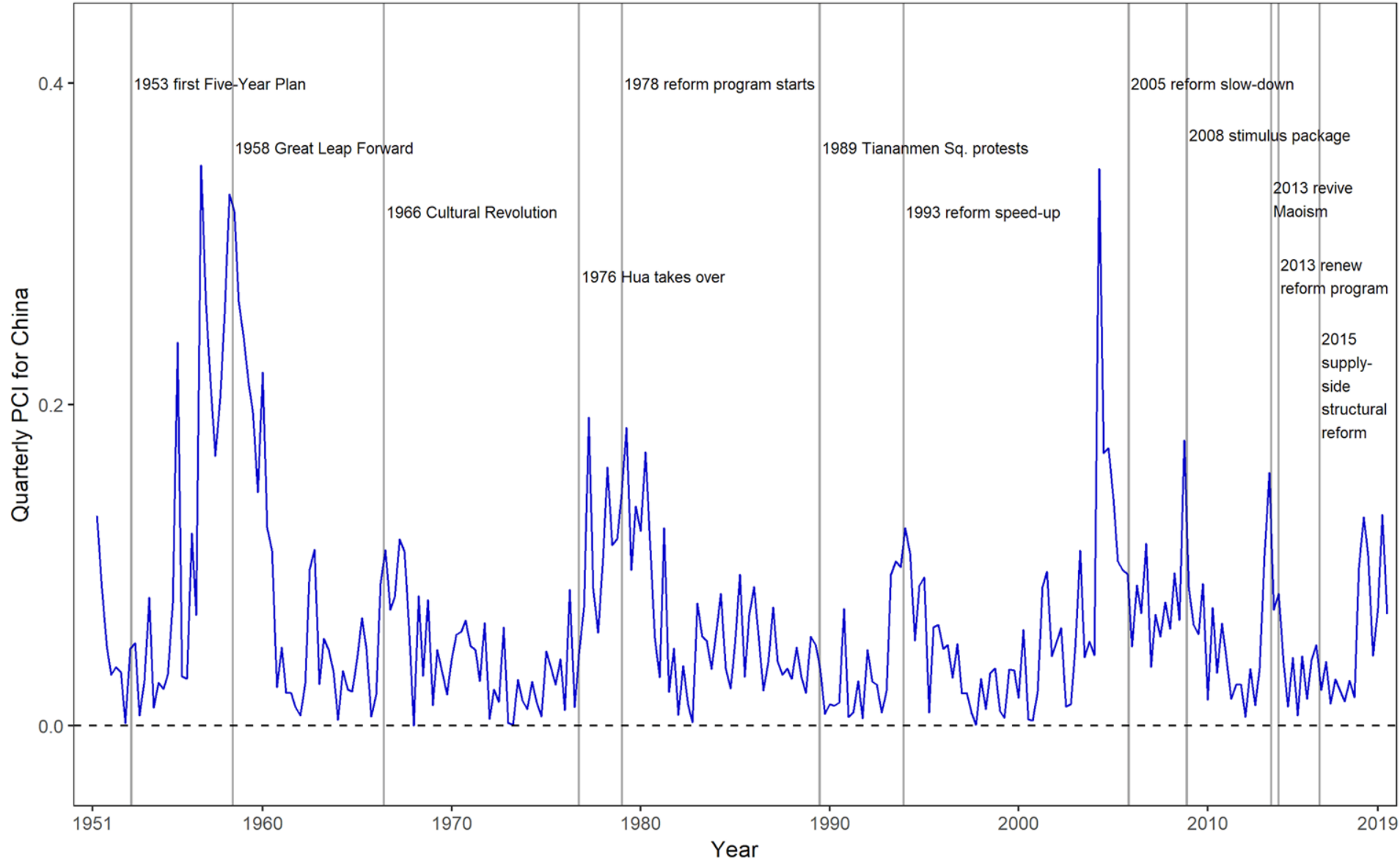


PCI-China algorithm

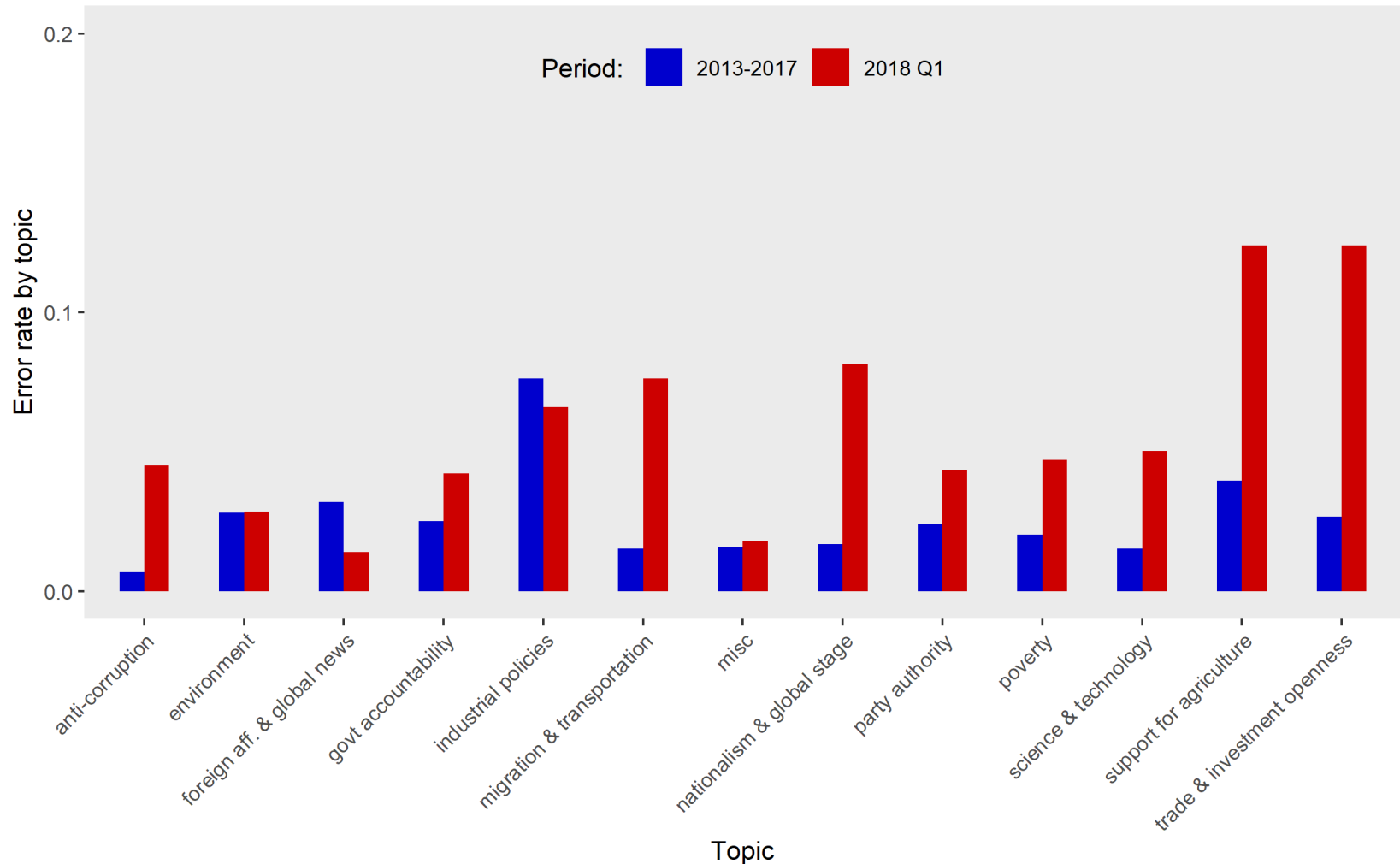


PCI-China: the difference in performance

PCI-China leads major policy moves



Understanding changes — 2018 Q1 uptick



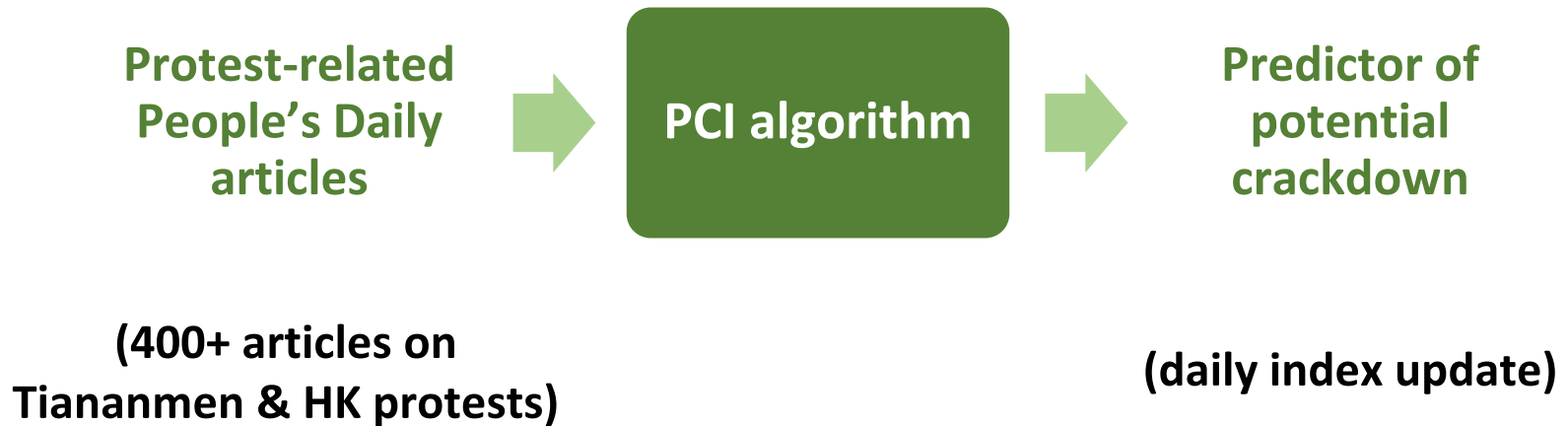
Trade-war implications

- 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. *

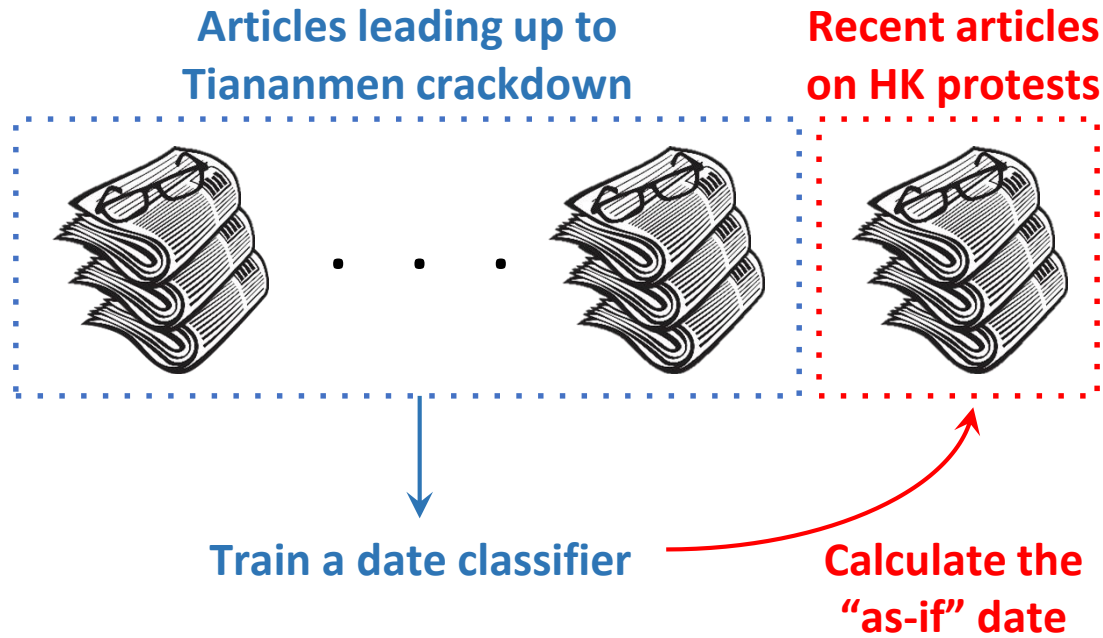
* 2019 Q3 update coming soon!

2. PCI-Crackdown

Policy Change Index (PCI) for Crackdown



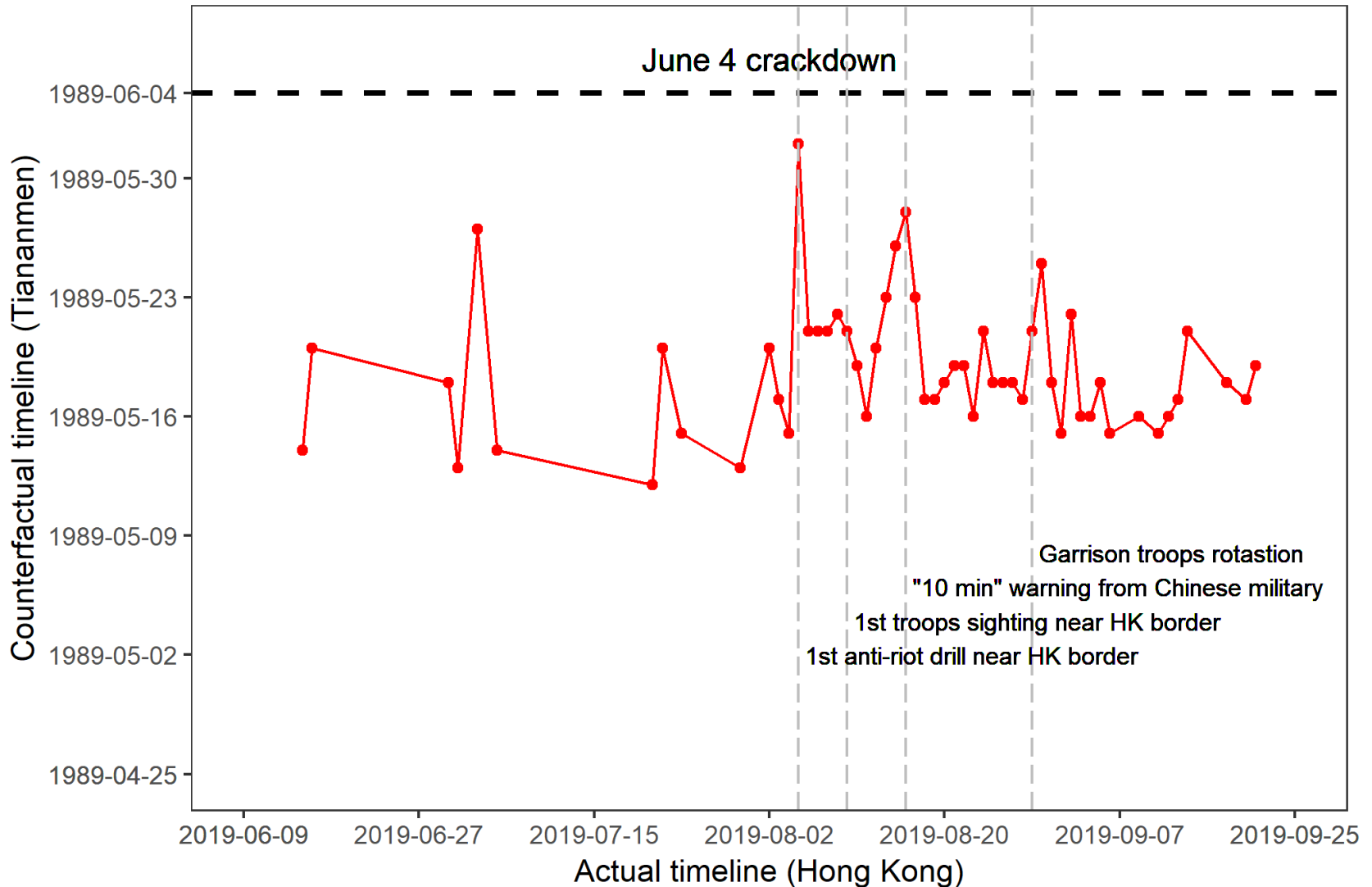
PCI-Crackdown algorithm



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