THE OXFORD COVID-19 GOVERNMENT RESPONSE TRACKER (OXCGRT)

ECB workshop on high frequency data

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What is the Oxford COVID-19 Government Response Tracker (OxCGRT) for?

- Provides a systematic cross-national, cross-temporal measure of how government responses have evolved over the full period of the disease's spread.

- Public health experts are learning in real time what measures are more or less effective – need up-to-date, comparable, consistent data.

- Helps answer two critical research questions.
    - What effects do government responses have, How do effects vary across different populations, countries, and contexts?
    - What leads governments to adopt different policies?

Our approach (see www.bsg.ox.ac.uk/covidtracker)

- 18 indicators in closure and containment, health, and economic policy

- Recorded on ordinal scale to capture not just the presence but also the degree of response.

- 4 simple linear indices that are normalized to vary from 0 to 100.

- 190+ countries.

- Subnational coding for the US, Brazil, UK (and growing).

- The database is freely available online and updated continuously.

ID	Name	Type	Targeted/ General?
Containment and closure			
C1	School closing	Ordinal	Geographic
C2	Workplace closing	Ordinal	Geographic
C3	Cancel public events	Ordinal	Geographic
C4	Restrictions on gathering size	Ordinal	Geographic
C5	Close public transport	Ordinal	Geographic
C6	Stay at home requirements	Ordinal	Geographic
C7	Restrictions on internal movement	Ordinal	Geographic
C8	Restrictions on international travel	Ordinal	No
Economic response			
E1	Income support	Ordinal	Sectoral
E2	Debt/contract relief for households	Ordinal	No
E3	Fiscal measures	Numeric	No
E4	Giving international support	Numeric	No
Health systems			
H1	Public information campaign	Ordinal	Geographic
H2	Testing policy	Ordinal	No
H3	Contact tracing	Ordinal	No
H4	Emergency investment in healthcare	Numeric	No
H5	Investment in Covid-19 vaccines	Numeric	No
Miscellaneous			
M1	Other responses	Text	No

Our approach (see www.bsg.ox.ac.uk/covidtracker)

- **Citizen science**: Data is collected and reviewed in real time by a team that has comprised more than 400 volunteers from Oxford University and partners.


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Le Corre, Toby Phillips, Trevor Edobor, Twan van der Togt, Uttara Narayan, Veronique Gauthier, Will Marshall , William Dowling, William Hart, Yotam Vaknin, Yulia Taranova, Zara Raheem, Zilin Tu, Zoe Lin, Zoha Imran, Zunaira Mallick.
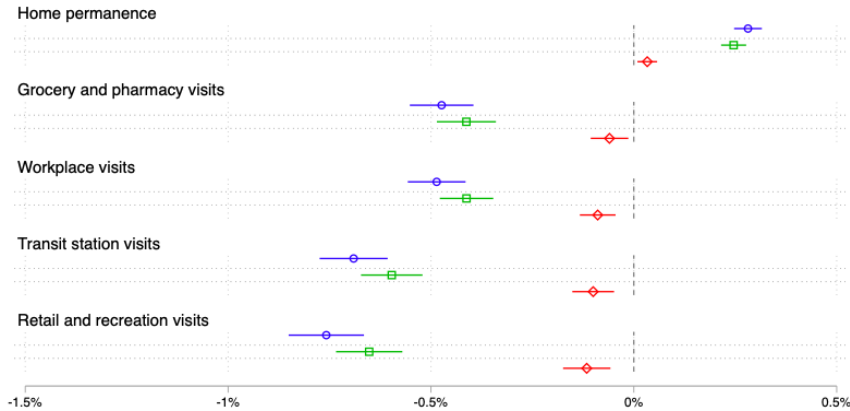
Patterns: a global response

Containment and Health Index
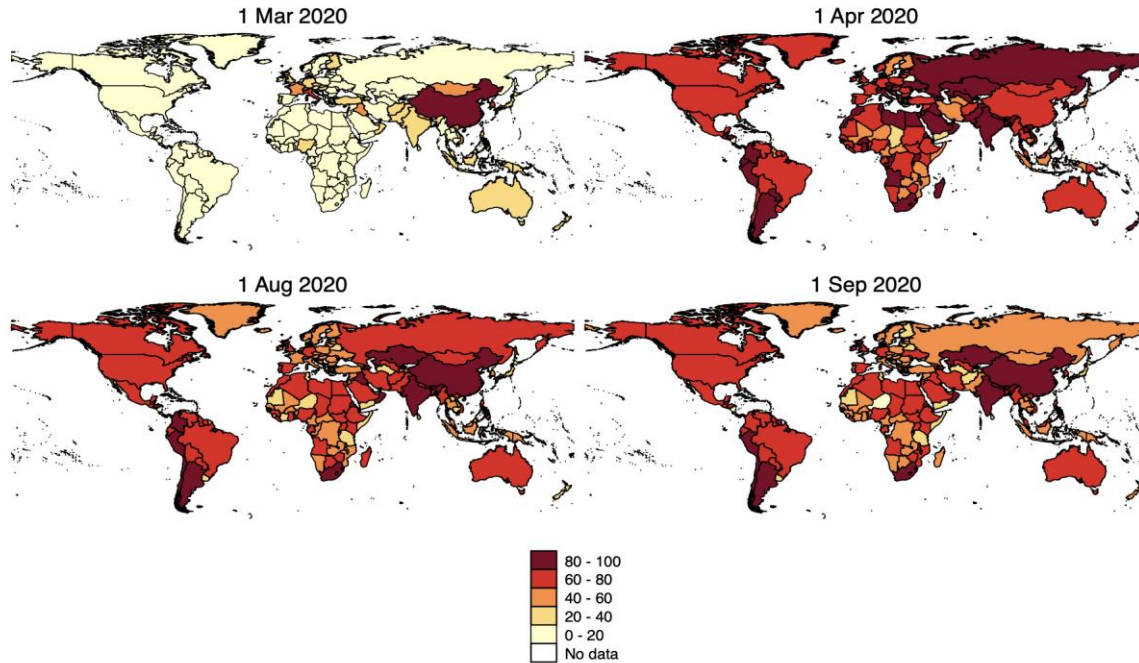
Patterns: initial herd behavior, shifting to differentiation
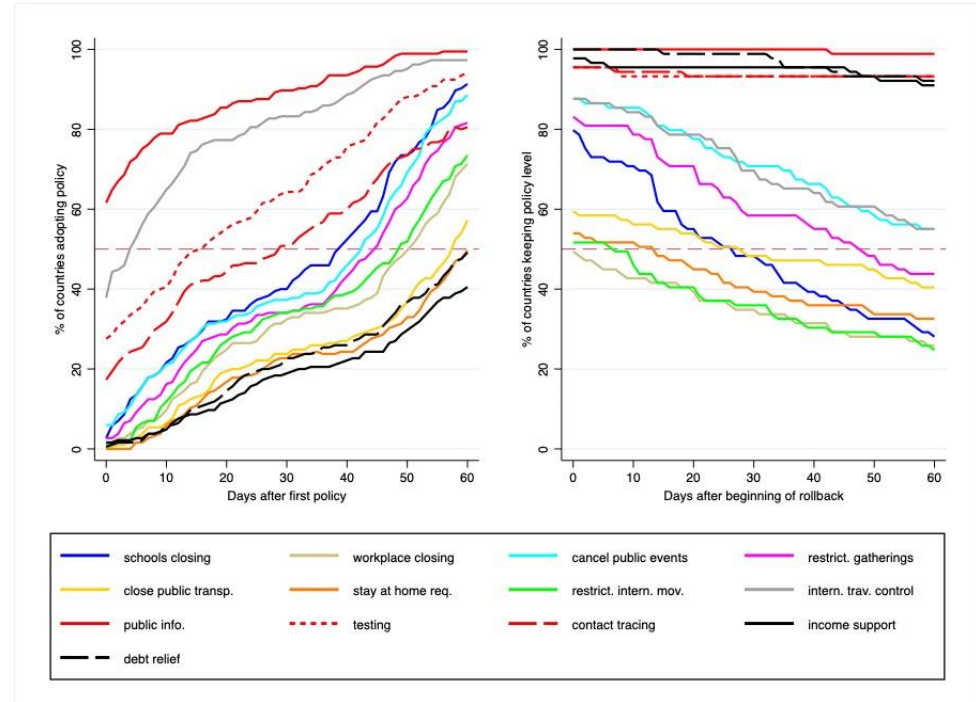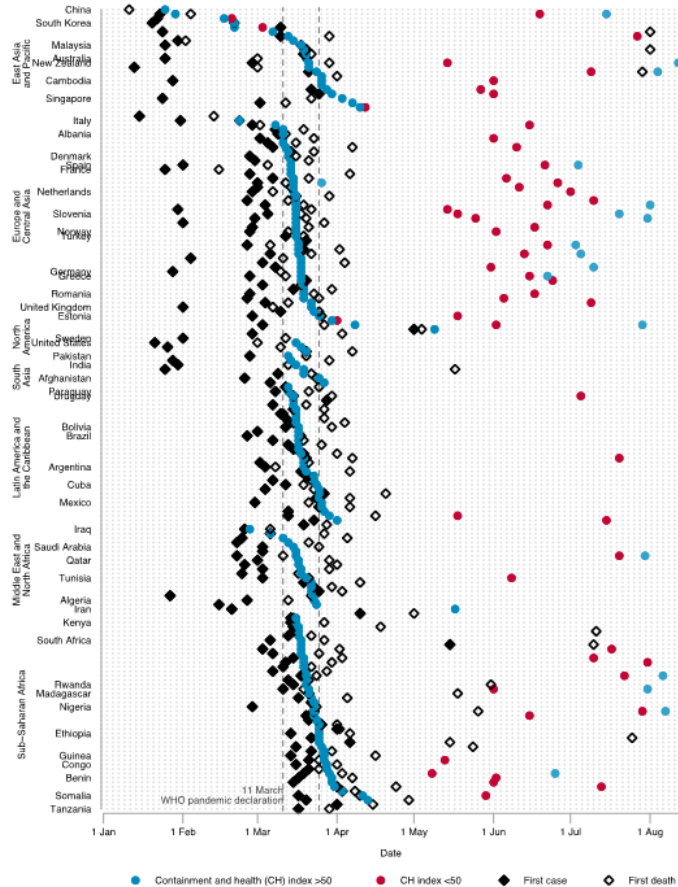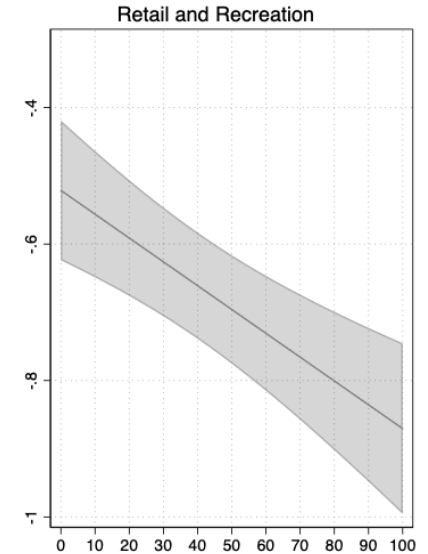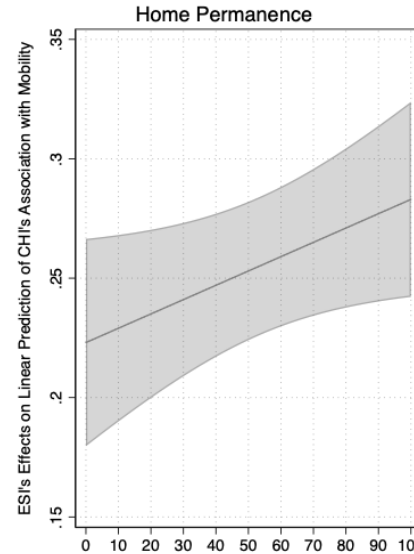
Patterns: associations with mobility

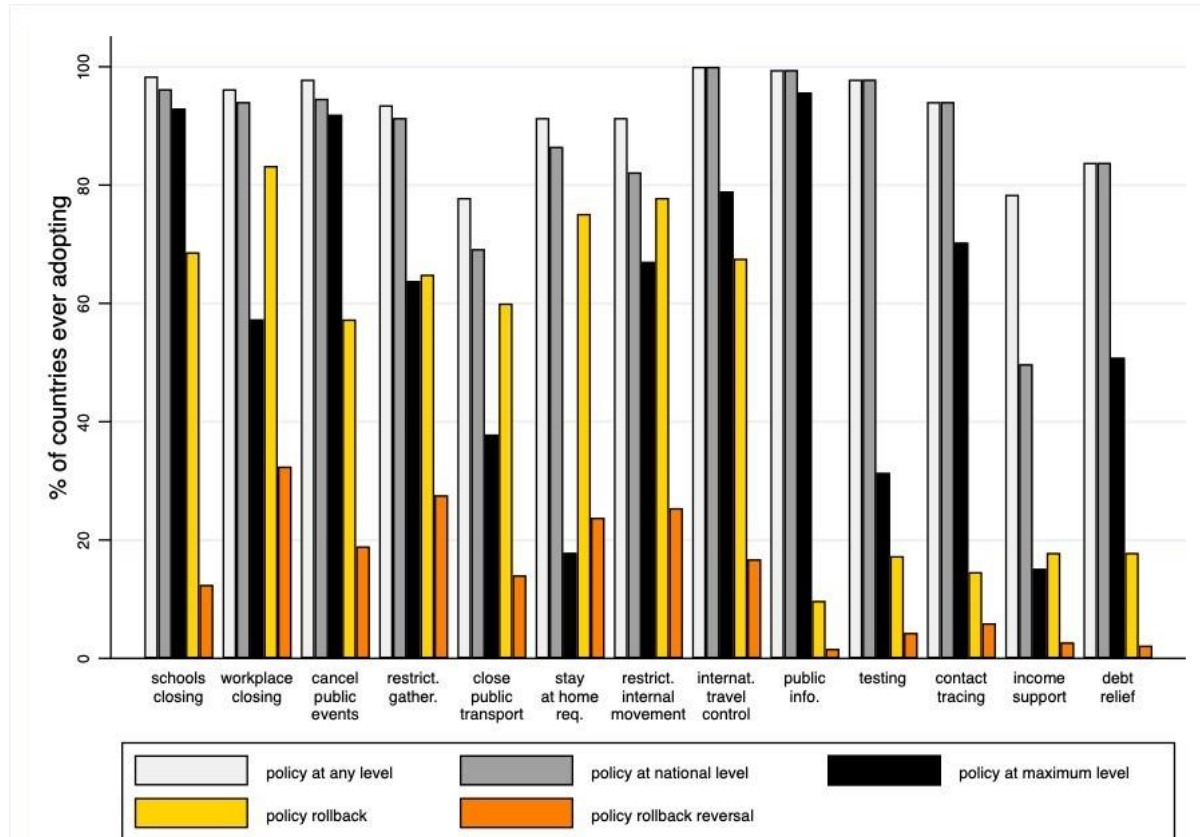Mobility change associated with a one-unit increase in each OxCGRT index

- ○ Government Response Index (GRI)
- □ Containment and Health Index (CHI)
- ◇ Economic Support Index (ESI)

Baseline period 3 Jan - 6 Feb
Change calculated for 15 Feb - 27 Aug

Patterns: All policies are widely observed, but not with the same duration and degree

Patterns: Risk of openness

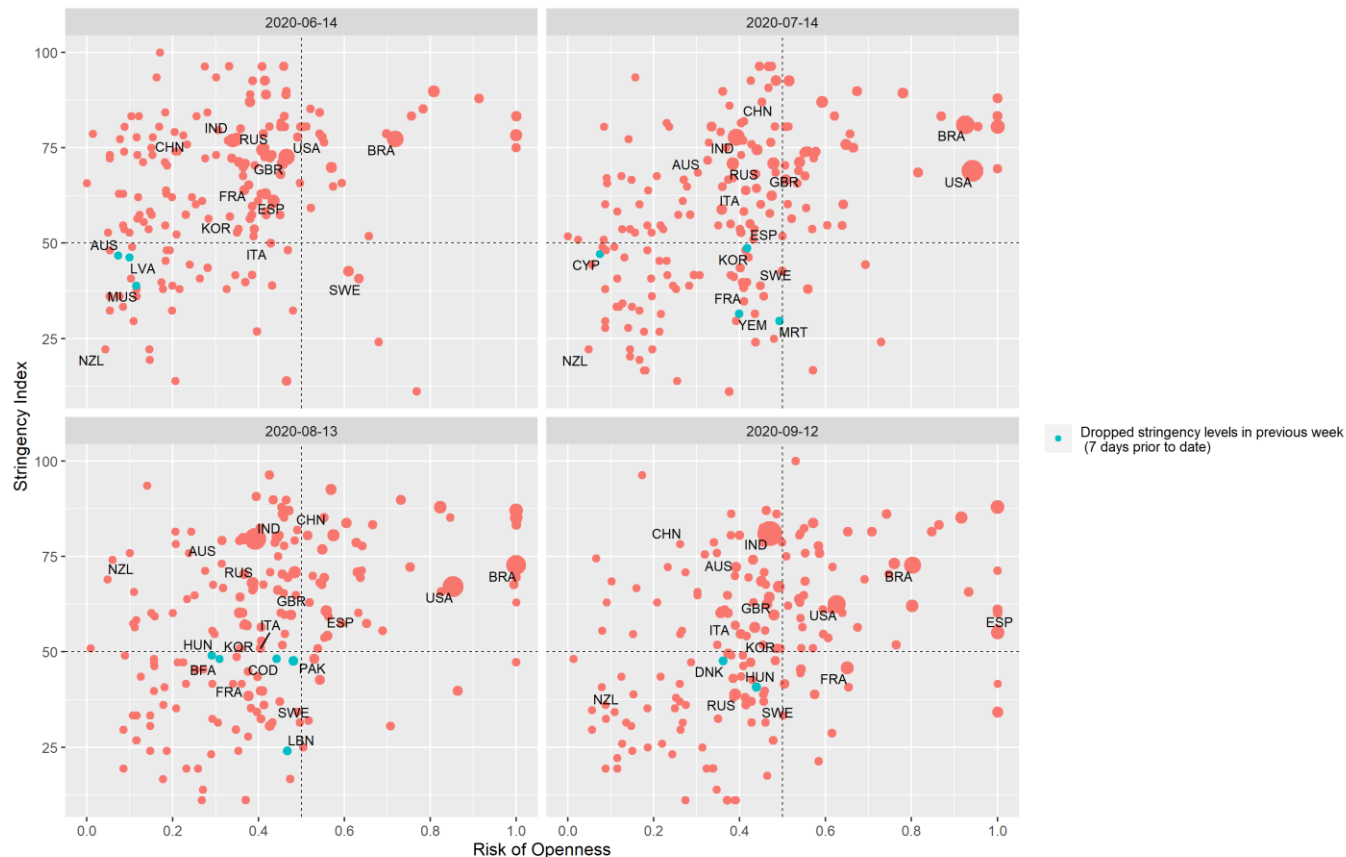Source: Oxford COVID-19 Government Response Tracker. More at https://github.com/OxCGRT/covid-policy-tracker or bsg.ox.ac.uk/covidtracker

Patterns: Risk of openness


Bubble Size reflects number of new cases
Source: Oxford COVID-19 Government Response Tracker. More at https://github.com/OxCGRT/covid-policy-tracker or bsg.ox.ac.uk/covidtracker

Strengths and limitations

- Ordinal scale provides more comparability than binary measures, but groups responses into general buckets

- Less granularity for large, heterogenous jurisdictions (captures dominant tendency), importance of sub-national measures

- Time-series format facilitates analysis

- Up-to-date, but lag in revision
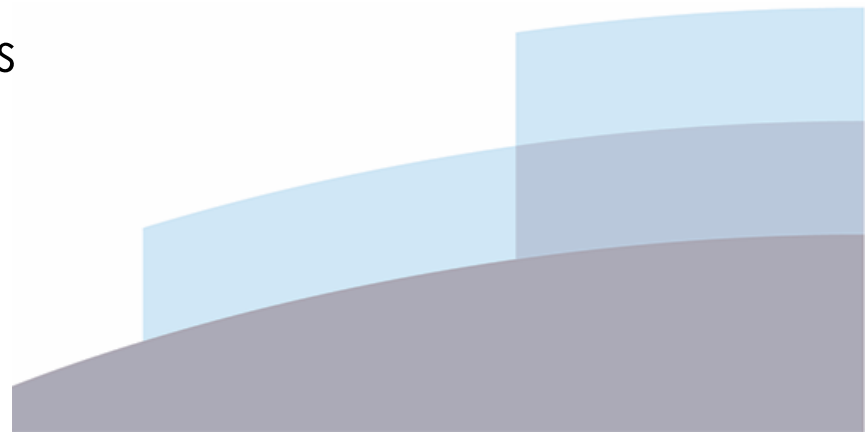
Strengths and limitations

- Human judgement > automation

- Linear indices provide simple summaries of patterns, but should be tailored for analytic purposes

- Does not measure implementation or compliance
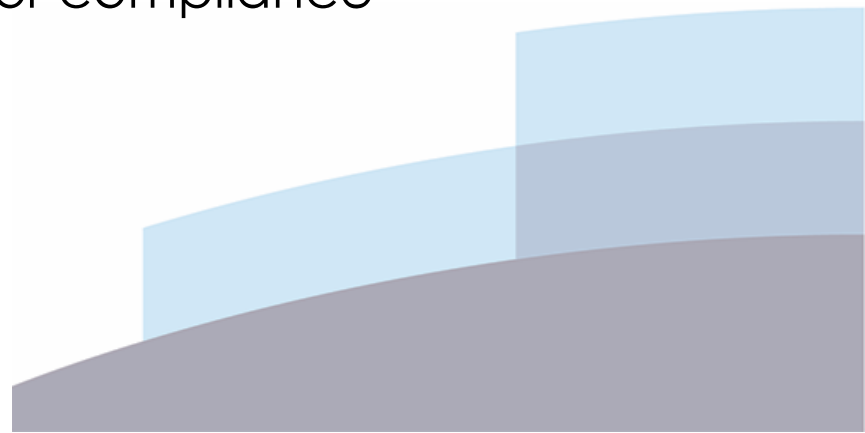
Future directions

- "Building the airplane as we fly it"

- Plans:
  - New indicators
  - More subnational jurisdictions
  - Linking to behavior with survey data
  - Qualitative deep-dives (e.g. Regional reports and US schools reports)

- To learn more:
  - Project summary: www.bsg.ox.ac.uk/covidtracker
  - Interactive visualization from OWID: https://ourworldindata.org/policy-responses-covid
  - Video: https://vimeo.com/463163595
  - Data and outputs on GitHub: https://github.com/OxCGRT
  - Always seeking collaborators and contributors!