

## SYNOPSIS

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# Review of “Risk of Openness Index: When do government responses need to be increased or maintained?”

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<https://www.bsg.ox.ac.uk/sites/default/files/2020-10/10-2020-Risk-of-Openness-Index-BSG-Research-Note.pdf>

## One-minute summary

- The **Risk of Openness Index (RoOI)**, previously [Lockdown Rollback Checklist](#),<sup>1</sup> is a dataset of risk ratings (risk of openness) that **relates to a country’s readiness for adopting an ‘open’ policy** (removal/reduction public health measures).
  - Risk of openness ranges from 0 to 1. Lower numbers for risk of openness are better, wherein authors have assigned 0.5 as the divide between low and high risk of openness.
  - The **RoOI provides a visual comparison between countries historically and in real-time** (see [GitHub data repository](#))<sup>2</sup> based on their past and current public health measures, capacity to control infection, and transmission rates.
- A [stringency index](#),<sup>3</sup> which is a **correlate of the extent of public health measures implemented** on the public and businesses that are fast to implement (e.g., stay at home, business closures), is plotted against risk of openness.
  - The stringency index varies between 0 to 100, wherein authors have assigned 50 as the divide between low and high stringency.
- **Canada is currently considered low risk of openness** (risk of openness < 0.5), **high stringency** (stringency > 50); data from: [https://github.com/OxCGRT/covid-policy-scratchpad/blob/master/risk\\_of\\_openness\\_index/data/input/OxCGRT\\_2020-10-21.csv](https://github.com/OxCGRT/covid-policy-scratchpad/blob/master/risk_of_openness_index/data/input/OxCGRT_2020-10-21.csv)<sup>4</sup> (plotted in Figure 1 below)
  - The risk of openness for Canada on October 20, 2020 was the highest it has been since mid-March 2020 when it was considered high risk of openness, yet is still considered to be low risk of openness (risk of openness: 0.46).
  - The stringency index of 60.65 is still below peaks that reached >70.00 in the period of April-June 2020 following peak risk of openness in March 2020.

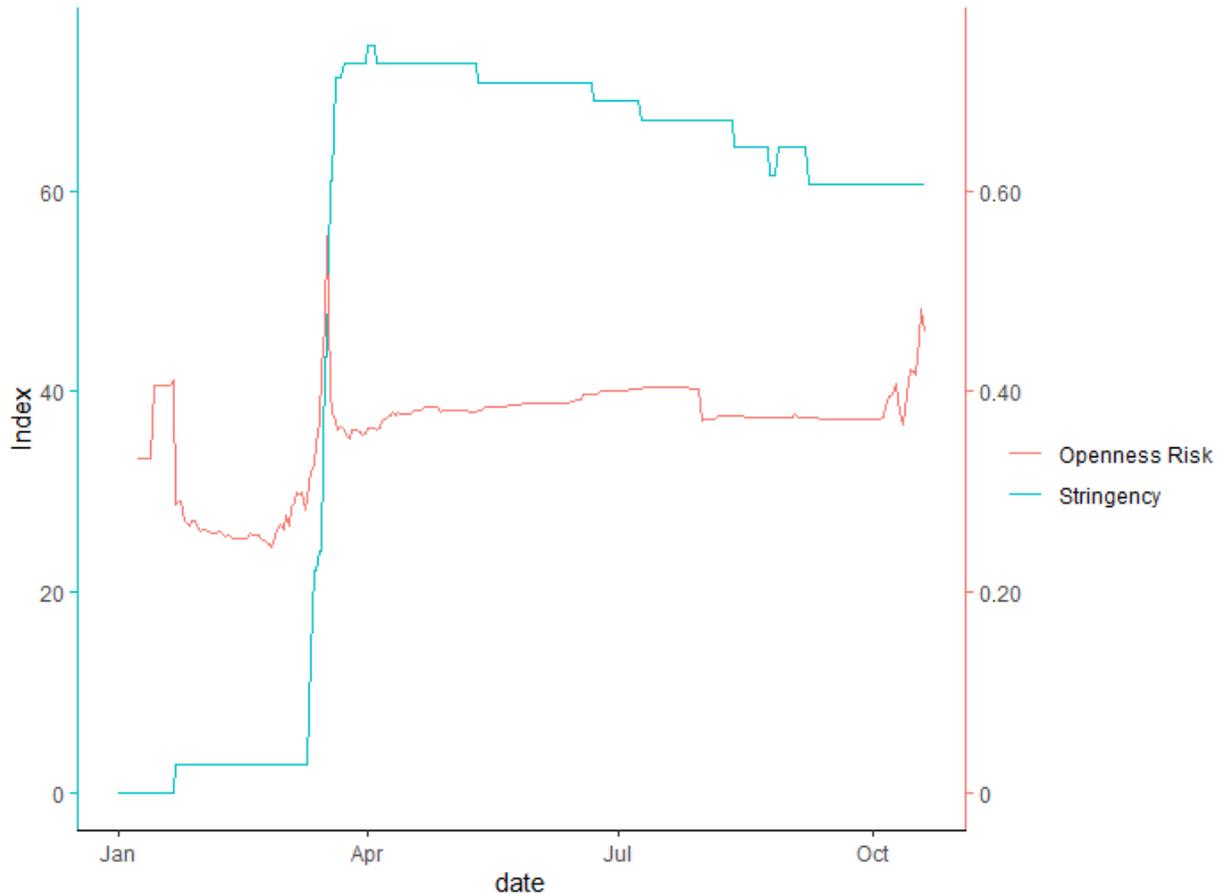


Figure 1. Risk of openness and stringency indices for Canada from January 1, 2020 to October 20, 2020.

- The high level summaries provided by the RoOI of policies, practices, and current transmission dynamics indicate that **many countries are becoming more ‘open’ despite present risks associated with an ‘open’ policy.**

## Additional information

- The RoOI is developed based on World Health Organization (WHO)’s [six-domain risk assessment framework](#)<sup>5</sup> for adjusting public health and social measures in the context of COVID-19; **the index is limited to addressing four of the six domains** (one, two, five and six):
  1. COVID-19 transmission is controlled.
  2. Sufficient public health workforce and health system capacities are in place.
  3. Outbreak risks in high-vulnerability settings are minimized.
  4. Preventive measures are established in workplaces.
  5. Risk of exporting and importing cases from communities with high risks of transmission is managed.

6. Communities are fully engaged.
- Data to inform the domains are retrieved from various sources.
    - Domain 1: Epidemiological data from [European Centre for Disease Control](#)<sup>6</sup> and the [Johns Hopkins University](#).<sup>7</sup>
    - Domain 2: Testing data from [Oxford COVID-19 Government Response Tracker](#) (OxCGRT)<sup>8</sup>, and [Our World in Data](#).<sup>9</sup>
    - Domain 5: Management of importations from OxCGRT.
    - Domain 6: Policies and real-world data on mobility from OxCGRT, [Apple](#),<sup>10</sup> and [Google](#).<sup>11</sup>
  - The OxCGRT collects data on [18 indicators](#):<sup>12</sup> nine related to containment and closure policies (C), four related to economic policies (E), and six health system policies (H). An extra miscellaneous policies indicator (M) captures policies that fall outside the prespecified policies C, E and H.
  - The stringency index consists of the eight containment and closure policies as well as one indicator of health system policies:
    1. C1: Closures of schools and universities.
    2. C2: Closures of workplaces.
    3. C3: Cancellations of public events.
    4. C4: Limitations on private gatherings.
    5. C5: Closures of public transport.
    6. C6: Orders to shelter-in-place.
    7. C7: Restrictions on internal movement between cities/regions.
    8. C8: Restrictions on international travel.
    9. H1: Presence of public information campaigns.
  - **An endemic factor** is a measure that accounts for the total number of new cases per million population of a given country; the resulting value is used as a lower limit on the possible risk of openness score that a country may receive.
  - The ratings for domains one, two, five and six as well as the endemic factor, stringency index, and RoOI for Canada on 2020-10-20 (raw data found [here](#)<sup>4</sup>) was:
    - cases controlled: 1 (domain 1)
    - test and trace: 0.25 (domain 2)
    - management of imported cases: 0 (domain 5)
    - community understanding: 0.23 (domain 6)
    - stringency index: 60.65
    - endemic factor: 0.14
    - risk of openness: 0.46

## PHO reviewer's comments

- The authors acknowledge, among other [data quality limitations](#),<sup>13</sup> that **the index cannot account for implementation fidelity and is not using data as detailed as would be required to fulfill the WHO recommendations**. Further, the index only attempts to measure 4 of 6 WHO risk assessment framework domains, rendering it of limited utility in reflecting the WHO approach to COVID-19 risk assessment for public health and social measures. Notably, one excluded domain relates to disease control in vulnerable populations. Given the disproportionate impact of the COVID-19 pandemic on vulnerable populations worldwide, this is an important gap.
- The **relative effectiveness of a given public health measure on its own or in combination are currently not known** and this is not taken into account in the RoOI calculation. Currently, each indicator has a single rating that is normalized to a value between 0 and 1 which is then compiled as a simple average of all the indicators used to report a given index. This approach may not show important nuances when comparing data between countries and makes assumptions about the relative importance of each indicator.
- Further, the **inequities between population groups in benefitting from public health measures are not captured in the RoOI**, whereas there are known inequities during the pandemic demonstrated for testing, infection rates, and severe outcomes from COVID-19 infection that may be increased with adopting an 'open' policy. For example, community engagement is only described in the form of information-sharing rather than a process that establishes collaboration, partnerships, decision-making and power-sharing that takes into consideration the historical, political, social, and economic conditions influencing impacted communities.
- It is not clear what effect on the reported measures that a provincial/territorial assessment versus the provided national assessment would have on the results for Canada as many policies and practices are regional (provincial/territorial and municipal) rather than national (aside from international border control). While often very similar measures are in place, per capita rates can differ widely between each province and territory.
  - The authors report in their [codebook](#)<sup>14</sup> tracking provincial/territorial and municipal changes and announcements in public health measures of some countries, but at this time does not appear to include Canada in the [explicit list](#)<sup>14</sup> of OxCGRT data with subnational-level data, but [other sources](#)<sup>15</sup> do indicate provincial and territorial data for Canada is being tracked. Where regional data are available, the index treats limited geographical application of measures as lower stringency than nation-wide measures.
- The **authors note the RoOI and stringency index**, particularly where a country has high risk of openness and low stringency, **could be used as a starting point for considering policy decisions**. However, caution should be taken in determining appropriate action based solely on the arbitrary distinction between high and low risk of openness and stringency at a given point in time without considering implementation fidelity (i.e., effectively implementing less measures versus poorly implementing more measures) and the direction and rate of change of the risk of openness. Also, it may be more appropriate to describe Canada's current risk of openness and stringency indices as 'moderate'.

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