

## Economic and Social Reports

# COVID-19 restrictions index update



by Jessica Dekker and Ryan Macdonald

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## Introduction

The onset of COVID-19 in March 2020 brought restrictions on personal activities and business activities across the country. The policies and mandates put in place to address the spread of COVID-19 were adapted as successive waves of the pandemic provided more data and insight on how the disease was affecting Canadian society. To help measure the stringency of the restrictions, the COVID-19 Restrictions Index was created at Statistics Canada to measure the strength of the public health measures on a provincial and territorial basis.<sup>1</sup> The index reports values between 0 and 100 for the stringency of COVID-19-related restrictions, with 0 being no restrictions and 100 representing the most stringent level for all restrictions. It was based on the Stringency Index developed by Oxford University but was modified to produce more Canada-centric measures. Key changes made to the index included adjusting thresholds for restrictions on gathering sizes to reflect the way restrictions were implemented in Canada, adding additional restriction variables related to business closures, and measuring the difference between restrictions on vaccinated and unvaccinated populations. These refinements allowed for a more nuanced tracking of the progression of COVID-19 restrictions in the provinces and territories over the past two years.

The first set of values for the restrictions index was published for the period from January 2020 to January 2022. It covered the first four waves and part of the fifth wave of the pandemic, with the fourth wave corresponding to the COVID-19 Delta variant in fall 2021. As the Delta wave was underway, a new variant of concern was detected in late November 2021. The B.1.1.529 (or Omicron) variant was identified as causing more infections and spreading faster throughout populations than previous variants. It eventually displaced Delta as the dominant variant and resulted in the fifth wave of COVID-19 and its related public health restrictions. With this publication, an updated set of estimates for the restriction index up to July 31, 2022, is made available.<sup>2</sup> It covers the remaining portion of the Omicron wave, as well as the period of reopening that took place over spring and summer 2022.

## Manitoba had the largest difference in restrictions between vaccinated and unvaccinated populations

Starting in the summer of 2021 and continuing through fall and winter, vaccine mandates, vaccine passports or differential restrictions based on vaccine status were introduced in many provinces and territories as a means to manage the spread of COVID-19 (Panel 1). These differential restrictions could take many forms and included vaccine requirements for travelling, attending education institutions, attending restaurants or events, participating in sports activities, or working. In some cases, vaccine passports or official documentation proving vaccinated status was used to verify the vaccine status of an individual.

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1. For more details, please see Clarke, Dekker, Habli, Macdonald and McCormack (2022).  
2. Please see Common Output Data Repository (CODR) Table 33-10-0496-01 (daily values) or CODR Table 33-10-0497-01 (monthly values).

The use of vaccine mandates, vaccine passports and vaccine-status-dependent restrictions was not a novel approach globally. Some countries in the European Union, such as Greece, Germany and Denmark, had implemented vaccine mandates since early spring 2021, while the United States and France implemented vaccine-status-dependent restrictions in different forms (Katz, Born, de Wit, et al.).

In Canada, Manitoba was the first province to implement vaccine-status-dependent restrictions (in summer 2021), and it recorded the largest difference in restriction stringency between vaccinated and unvaccinated people across all provinces and territories in November 2021 (see Panel 2). Restrictions for unvaccinated people were 31 percentage points stronger than for vaccinated people that month. This finding is largely attributable to how open the province was for those who were fully vaccinated, in combination with the use of vaccination status to limit personal social gatherings. Alberta, Saskatchewan and British Columbia shared similar public health mandates concerning the use of vaccine passports and tended to have less of a difference than other provinces between restrictions for vaccinated and unvaccinated people.

Quebec and Ontario had similar approaches to the application of vaccine passports and vaccine-status-dependent restrictions, but the stringency level for the vaccinated population in Ontario fell much lower in fall 2021 than it did in Quebec. This caused a greater difference between the two populations in Ontario, whereas Quebec's restrictions differed less throughout the fourth and fifth waves of the pandemic.

New Brunswick was the first Atlantic province to implement vaccine requirements and vaccine-passport-based verification. The remaining Atlantic provinces followed suit by introducing vaccination mandates to prevent the need for circuit breaker restrictions to limit the spread of COVID-19. Prince Edward Island introduced vaccination status as a condition of travel from provinces outside the Atlantic bubble. Many of the vaccine-related restrictions primarily affected households rather than businesses, and they did not lead to large increases in the overall values of the restrictions indexes. When the numerical estimates for the stringency of restrictions between the vaccinated and unvaccinated populations in the Atlantic provinces were examined, a maximum difference of 17 percentage points was recorded in December in New Brunswick.

The territories did not use vaccine-status-specific restrictions as one of their key tools to manage the spread of COVID-19, and made limited use of vaccine-status-specific restrictions. Restrictions commonly used across the territories were general limits on domestic travel, limits on social gathering sizes or targeted circuit breaker restrictions in communities struggling with outbreaks.

Across the provinces, differences in restrictions for vaccinated and unvaccinated people were generally largest during the troughs between COVID-19 waves. This occurred as restrictions on vaccinated people fell relative to those on unvaccinated people during slack periods (Panel 2). During periods when COVID-19 waves were peaking, similar or identical sets of restrictions were implemented for vaccinated and unvaccinated people in many provinces. These measures removed differences between vaccinated and unvaccinated populations around January 2022 in Prince Edward Island, New Brunswick, Ontario and Quebec.

## Restrictions as a result of Omicron were not as stringent as in previous COVID-19 waves

With the arrival of the Omicron variant, almost all provinces and territories quickly reinstated restrictions for the whole population to limit the spread of the virus and prevent additional strain on the health care system. However, the increases in restrictions were not as large as those experienced during previous COVID-19 waves. In fact, in many provinces and territories, the indexes do not rise much beyond 50 (the halfway point) during the Omicron wave.

The most common change to restrictions across the provinces and territories was to delay the return of students to in-person schooling or to limit the size of social gatherings (Panel 3). The provinces and territories also implemented restrictions specific to their jurisdictions. Quebec briefly reintroduced a curfew to curb social gatherings, while Saskatchewan and Alberta had a less stringent approach to address the new variant as they began their reopening plans. The territories and Atlantic provinces quickly reacted with strict restrictions across all populations to halt the spread of COVID-19 in communities. Ontario also put stricter restrictions in place, with the closure of restaurants and gyms and limited social gatherings as the primary approach to lessen the caseload across the province.

## Omicron restrictions had a mild economic impact compared with those of previous COVID-19 waves

For the economy, the main industries affected by restrictions during the Omicron wave were those affected by capacity limits, such as restaurants, entertainment, retail trade or gyms. Retail businesses had capacity limits imposed on them but were not required to shut down as was the case in previous waves. Following brief openings in fall 2021, venues that allowed large social gatherings or gatherings from multiple households (such as arenas) were required to close, regardless of people's vaccination status. Similarly, in many provinces, gyms were closed or open with very limited capacity, and attendance was contingent on vaccination status.

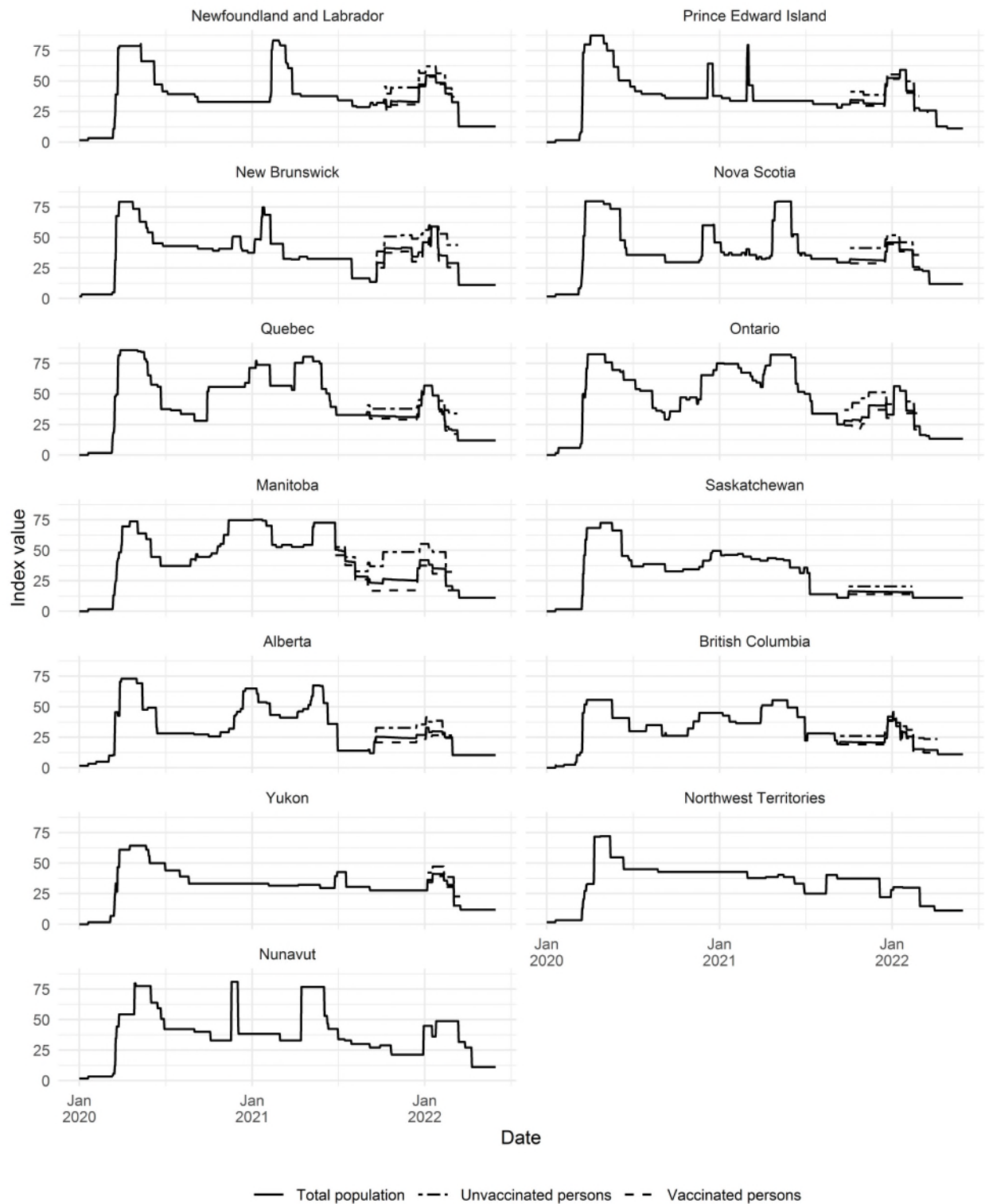
Statistical models for the effect of the restrictions on employment, retail sales and the number of active firms were published in March 2022.<sup>3</sup> The models reported the statistical correlation between changes in restrictions and changes in employment, retail sales and the number of active firms. The models included an effect for when restriction indexes rise above a threshold value of 47, because this point is where restrictions during previous waves became binding on activity.

When the estimated coefficients from the models are used to predict the effects from the Omicron wave, a retrenchment of employment in Newfoundland and Labrador, Prince Edward Island, Quebec, and Ontario similar to what occurred is predicted. These were the provinces with some of the largest increases in restrictions during the Omicron wave. For the other provinces and territories, the models do not indicate that changes in restrictions affected employment growth. Similarly, the models do not indicate contemporaneous changes for retail sales or the number of active firms when the COVID-19 Restrictions Index changed.

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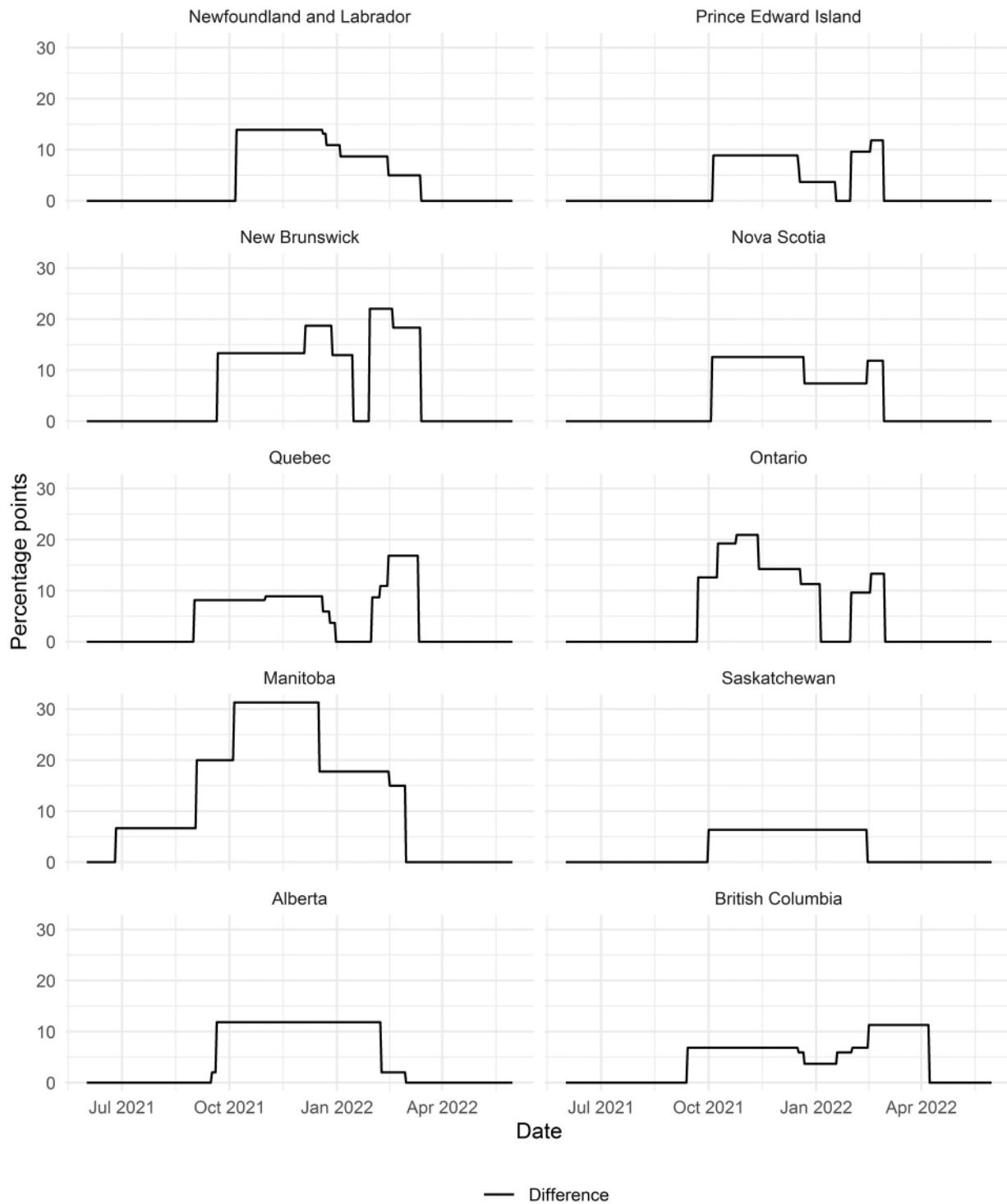
3. Please see Clarke, Dekker, Habli, Macdonald and McCormack (2022).

Panel 1: Restriction indexes; daily frequency



Source: CODR table 33-10-0496-01

Panel 2 : Difference between restrictions for vaccinated and unvaccinated persons



Source: CODR table 33-10-0496-01

Panel 3: Stringency by restriction type and geography



Source: CODR table 33-10-0496-01



Overall, the economic impacts of the Omicron wave were not as negative as those from earlier waves. The rise in restrictions during the Omicron wave was not as large as that in previous waves of the pandemic. And, in provinces and territories where the increases crossed the threshold at which restrictions become binding, the size of the increase beyond the threshold was small. Moreover, Omicron was a less lethal strain of COVID-19, and one that occurred after businesses, governments and households had undertaken considerable adaptations to the disease. Businesses and governments invested in physically distanced workplaces and remote work technologies, and a large portion of the population had received vaccines. All of these factors suggest a smaller effect from restrictions on economic variables during the Omicron wave.

## Concluding remarks

In mid-February 2022, provinces and territories started initiating multistage reopening plans following the peak of the Omicron wave. Saskatchewan and Alberta took an accelerated approach and started from a more open position, because their restrictions were less stringent throughout the fifth wave. Other provinces, such as Manitoba and Quebec, began removing restrictions following protests across the country. The process for lifting restrictions tended to be multistaged and included eliminating the use of vaccination passports and vaccine-specific restrictions; allowing restaurants, clubs and bars to reopen; and eventually removing personal gathering limits. Further, mask mandates in many provinces and territories were gradually removed in a majority of settings, including—most recently—public transit. Federally mandated vaccination policies for public servants and Crown agencies were some of the last to be transitioned out at the beginning of summer 2022.

Despite the lower restriction levels, COVID-19 continues to circulate in Canada, and public health officials have continued to issue warnings and encourage booster vaccinations.<sup>4</sup> The public has, nevertheless, shown an appetite for a return to more normal living conditions, with events (such as school graduations, weddings and long-delayed remembrance services<sup>5</sup>) taking place and a demand for air travel exceeding supply.

## Authors

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4. Please see Public Health Agency of Canada (2022).

5. Please see CBC/Radio-Canada (2022).

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