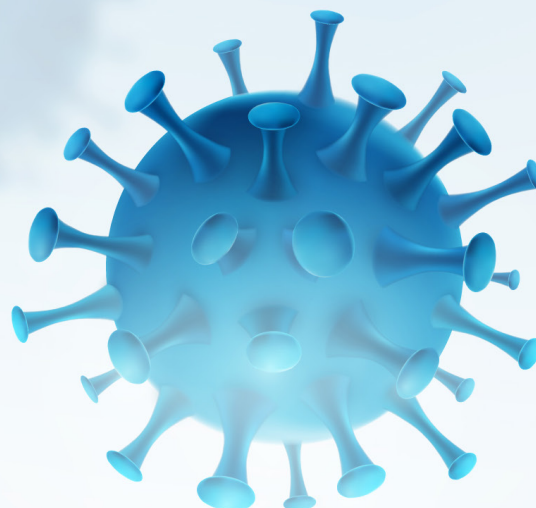


STORM WITHOUT END

The Economic and Fiscal Impact of COVID in Canada

CHAPTER 1

The Economic Impact of COVID-19 on Canada and the Provinces



Livio Di Matteo

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**Chapter 1: The Economic Impact of COVID-19
on Canada and the Provinces**

by Livio Di Matteo

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Executive Summary

The international economic and fiscal disruption and impact of the pandemic has been enormous. Canada and its provinces were not immune from the economic impact of the pandemic. According to the IMF, Canada in 2020 saw its estimated real GDP shrink 5.2% with revised projections of economic growth now at 4.6% in 2021, 3.9% in 2022 and 2.8% in 2023. The period spanning January 2020 to approximately January 2022 saw the most precipitous fall in economic activity since the Great Depression, raising the risk of deflation, a rapid rebound, and then more gradual economic progress that extended into early 2022. Since then, we have moved into a period of boom marked by excess demand, the lowest unemployment rate in nearly five decades, inflation, and now rising interest rates.

The first wave of the pandemic had the most severe economic impact given its novelty and the uncertainty about its consequences and spread, and assorted measures to contain the virus in the absence of either vaccines or immunity. There was a drop of 11% in real GDP in the second quarter of 2020 followed by rebounds of 9% and 2% in the third and fourth quarters of 2020 and of 1% in the first quarter of 2021. However, there was another decline in output of approximately 1% in the second quarter of 2021 as a result of another wave of COVID-19, but vaccine rollout during this period mitigated the drop. Recovery commenced in the third quarter of 2021, when real GDP finally surpassed the level set in the first quarter of 2020. But, by the fourth quarter of 2021, real GDP was only 2% higher than it had been two years earlier, a sign of substantial foregone output.

All provinces were affected by the virus and the measures instituted to manage it, though some weathered the storm better than others at certain points during the pandemic, depending in part on the size of the COVID-19 surge in each province and the economic effects of the restrictions imposed. For example, in 2020 the hardest hit economy was Alberta with an estimated 8% real GDP drop followed by Quebec and Newfoundland & Labrador, each falling by over 5%, then Ontario at about 5%. The Atlantic provinces and British Columbia, on the other hand, were hit less hard with real GDP drops of between 3% and 4%. The subsequent estimated real GDP rebound in 2021 was greatest in Quebec, British Columbia, and Ontario at over 6%, respectively, followed by Alberta, Saskatchewan, and New Brunswick at over 5%.

The correlations between infections and deaths from COVID-19 and GDP and employment performance do not appear as important as that between the length and intensity of restrictions and poorer economic performance—restrictions which in the end were

adopted mainly to conserve scarce hospital capacity. Ontario and Quebec, for example, implemented some of the most stringent pandemic responses, imposing lockdowns and other restrictions. Ontario was hard hit by drops in retail sales, particularly during the second and third pandemic waves. Alberta, on the other hand, instituted fewer restrictions but had much higher case counts overall, as well as the second highest employment growth of the ten provinces.

The largest drop in employment occurred in Quebec at approximately 19% by April of 2020. Next in terms of severity of the drop in employment was Nova Scotia (16.0%), British Columbia (15.4%), and Alberta (15.1%). The smallest employment drops were for Saskatchewan (13.0%), New Brunswick (13.4%), and Manitoba (13.8%). Prince Edward Island, Ontario, and Newfoundland & Labrador were mid-ranked at between 14.7% and 14.5%. Recovery in employment then began, though there were ebbs and flows in the process and even by January 2022 not all provinces had recovered to pre-pandemic levels.

Travel was particularly hard hit by the pandemic. The monthly total number of Canadians returning from abroad plunged from 2.84 million to 168,607 between March and April of 2020—a 94% drop—while the number of those returning from the United States fell from 1.90 million to 134,522—a 93% decrease. Canadian air carriers transported 28.4 million passengers in 2020, less than one third (30.2%) of the 94.1 million passengers carried in 2019. As well, operating revenue of Canadian air carriers in 2020 fell to less than half (41.4%) of the figure reported in 2019.

In trying to put the pandemic behind us, it is not clear whether the federal and provincial governments have learned any clear lessons about how to deal with either a resurgence of COVID-19 or a new pandemic while minimizing disruption to the economy. At the same time, the experience of the pandemic appears to have underscored the ultimate resilience and adaptability of firms, workers, and consumers in the Canadian economy as they adapted to the challenges of a new economic environment.

Introduction

The last two years in Canada and internationally have been dominated by the seemingly endless storm of the COVID-19 pandemic and its impacts on health, mortality, public finances, and the economy.¹ As of mid-March 2022, the number of COVID-19 cases around the world was estimated at 475 million with 6.1 million deaths (Worldometer, 2022). In Canada, by the same date there had been 3.4 million cases and just over 37,000 deaths. Indeed, these may be underestimates given the recent statement by the World Health Organization (WHO) that the true toll—including what it defines as excess deaths—is closer to 15 million deaths (WHO, 2022).²

The economic and fiscal disruption and impact of the pandemic has been enormous. During the initial stages of the pandemic, there was uncertainty as to what pattern economic performance might take.³ Early on in 2022, according to the World Bank’s *Global Economic Prospects*, global real GDP growth in 2020 declined by 3.4% with the advanced economies shrinking by 4.6% and the emerging and developing economies contracting by 1.7% (World Bank, 2022). However, with the rollout of vaccines and increased knowledge about how to live with and effectively treat the virus, economies did rebound and global real GDP economic growth for 2021 is estimated at 5.5% and 4.1% for 2022.⁴ However, this has been accompanied by continued supply-chain disruptions, inflation, and large public-sector deficits.

Canada and its provinces were not immune from the economic impact of the pandemic. According to the International Monetary Fund (IMF), Canada in 2020 saw its estimated real GDP shrink 5.2% with growth projected to be 4.7% in 2021 and 4.1% in 2022 (IMF, 2022a). In the wake of the Russia-Ukraine War, the IMF’s April 2022 update of *World*

1. For overviews, see Di Matteo, 2021a.

2. According to the WHO, excess deaths or excess mortality is the difference between the number of deaths that have occurred and the number that would be expected in the absence of the pandemic based on data from earlier years. Excess mortality includes deaths associated with COVID-19 directly (due to the disease) or indirectly (due to the pandemic’s impact on health systems and society).

3. That is whether there would be a V-shaped or U-shaped recovery pattern to employment and output. It would appear to have been more of a K pattern, with diverging patterns for sectors and workers (Dalton, Groen, Lowenstein, Piccone, and Polikova, 2021).

4. It should be noted that in the wake of the Russia-Ukraine War the International Monetary Fund (IMF) has recently downgraded its forecast for global growth. The April 2022 update now projects global growth at 3.6% in 2022 and 2023 (IMF, 2022b).

Economic Outlook revised Canadian growth to 4.6% in 2021, 3.9% in 2022, and 2.8% in 2023 (IMF, 2022b). Like the rest of the world, lockdowns, quarantines, and travel restrictions have drastically affected sectors such as international travel, some labour-intensive personal services, food and accommodation, tourism, and arts and entertainment. In addition, the pandemic and the measures taken to manage it have significantly disrupted aspects of the global supply chain, particularly for manufactured goods. At the same time, Canada is a federation where health and the response to the pandemic fall largely within the purview of the provinces. As a result, one can expect there to be both similarities and differences in the economic impact of the pandemic across the provinces. Indeed, international studies have also documented regional differences in the impact of the pandemic both across and within countries (Gutiérrez, Inguanzo, and Orbe, 2021; Foerster, Garvey, and Sarte, 2021).

The remainder of this study will provide an overview of the pandemic's effect on the Canadian and provincial economies over the period spanning January 2020 to approximately January 2022. In brief, these two years saw the most precipitous fall in economic activity since the Great Depression, raising the risk of deflation, followed by a rapid rebound and then more gradual economic progress that extended into early 2022. While outside the period of this study, as we move into the spring and summer of 2022, the Canadian economy appears to be enjoying a continuing boom marked by excess demand, the lowest unemployment rate in nearly five decades, high inflation, and rising interest rates (Hughes, 2022). Below, we first provide a brief overview of the pandemic's impact and progress and evolution across Canada and its provinces; then an examination of the pandemic's effect on Canadian and provincial economic performance, focusing on basic indicators such as real GDP growth, employment, retail sales (including automotive sales), housing starts, and home prices.

The Pandemic in Canada

The timeline of the COVID-19 pandemic starts with the reports of undiagnosed pneumonia in Wuhan, China just before the start of the 2020 New Year celebrations followed by confirmation of human-to-human transmission in late January 2020 and the World Health Organization (WHO) declaring a global health emergency on January 30. By the middle of February 2020, the virus was spreading rapidly around the world, with a global shutdown in March as the pandemic surged and cases overwhelmed hospitals in many countries. In Canada, both the federal and provincial governments responded by instituting emergency measures consisting of lockdowns and assorted restrictions to control spread of the virus in the absence of vaccines as well as programs of financial assistance to help workers and businesses cope with the health and economic consequences. Ultimately, the pandemic was brought under control through immunization programs as effective vaccines became available.⁵

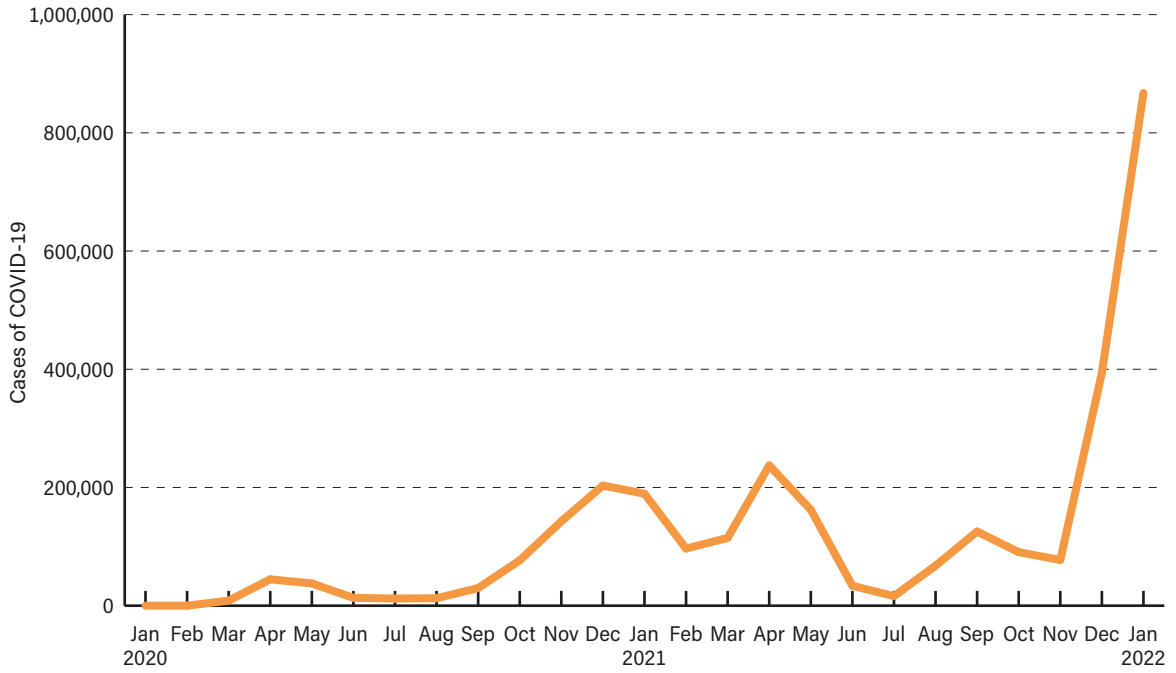
Cases in Canada

The course and distribution of pandemic cases in Canada and the provinces is illustrated in figures 1A to 1C. The start of the pandemic in Canada begins with the first cases in late January of 2020 and the pandemic then proceeds in five waves based on the virus variant dominating each succeeding wave (**figure 1A**): Alpha peaking in April of 2020, Beta peaking in December of 2020, Gamma peaking in April of 2021, Delta peaking in September of 2021, and Omicron, which continued in winter of 2022 and is still ongoing. As of the end of January 2022, Canada had officially seen 3,053,637 COVID-19 cases. **Figure 1B** provides the monthly cases for each province. Note that the provincial wave patterns parallel the national totals. Ontario saw the most cases in total by January 2022 at 1,033,294 cases, followed by Quebec at 861,891, and then Alberta at 493,973.

Figure 1C shows distribution by province during the pandemic: the largest proportion of cases were in Ontario, which accounted for 34% of the national total, followed by Quebec at 28%, Alberta at 16% of cases, British Columbia at 11%, and then Saskatchewan and Manitoba at approximately 4% each. The four Atlantic provinces together accounted for 3% of all cases. Based on Canada's population distribution, Quebec, Alberta, and Saskatchewan were affected proportionately more by COVID-19 cases, given their national population shares of 23%, 11%, and 3%, respectively, while Ontario (39%) and Atlantic Canada (6%) were affected proportionately less.

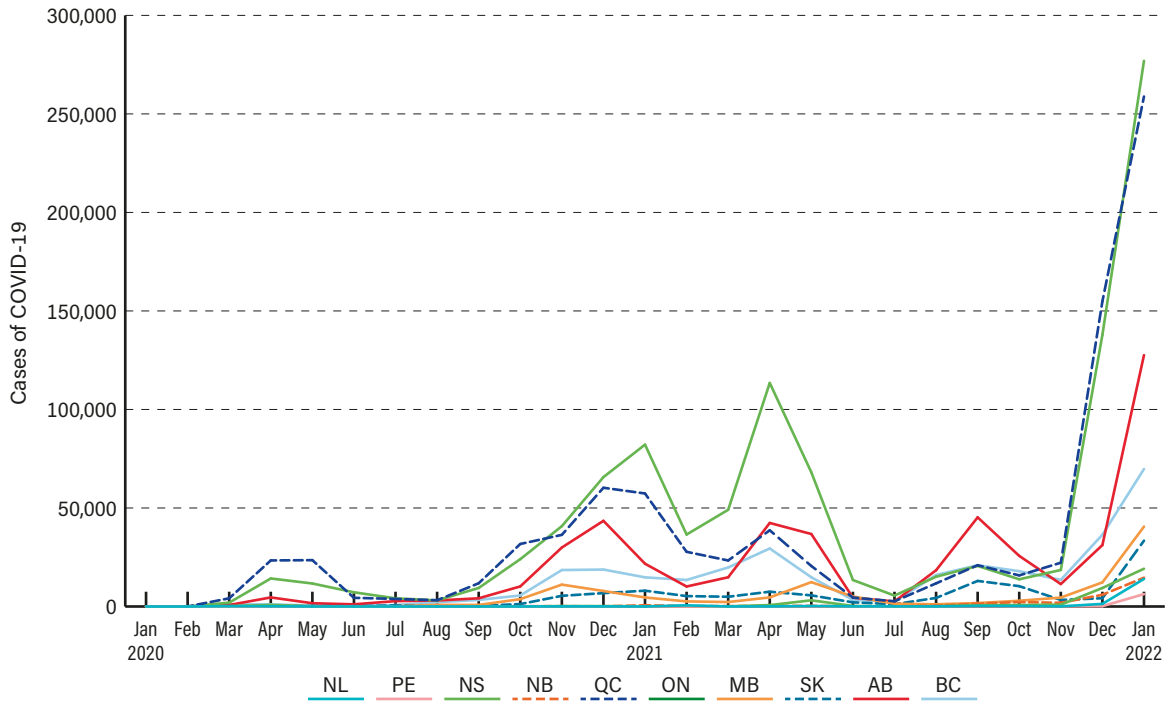
5. A detailed timeline of the COVID-19 emergency responses is provided by McCarthy Tétrault (2022).

Figure 1A: Monthly COVID-19 cases in Canada, January 2020–January 2022



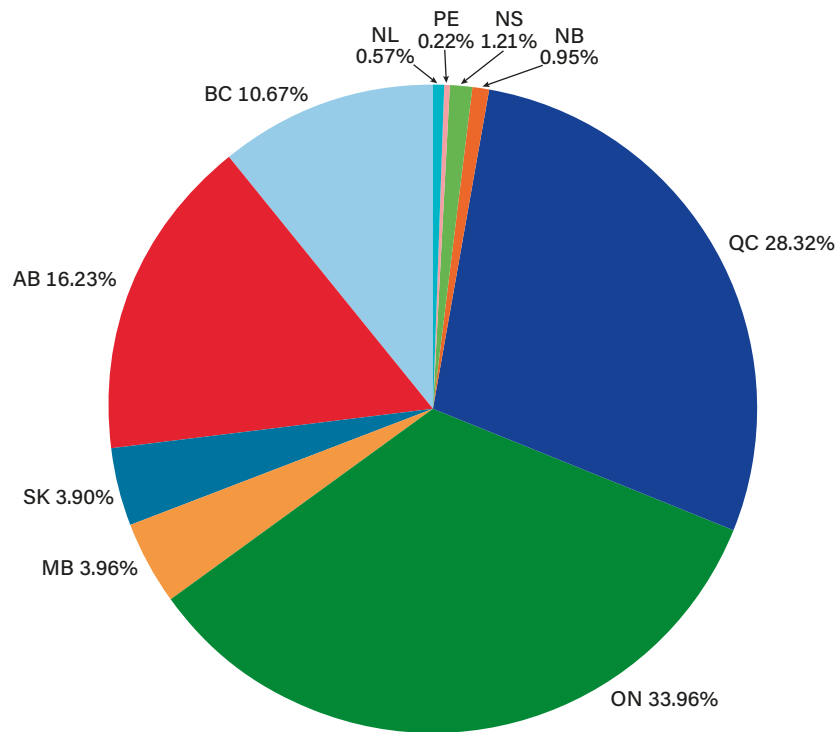
Source: COVID-19 Tracker, 2022.

Figure 1B: Monthly COVID-19 cases in the Canadian provinces, January 2020–January 2022



Source: COVID-19 Tracker, 2022.

Figure 1C: Distribution of total COVID-19 cases by province, January 2020–January 2022

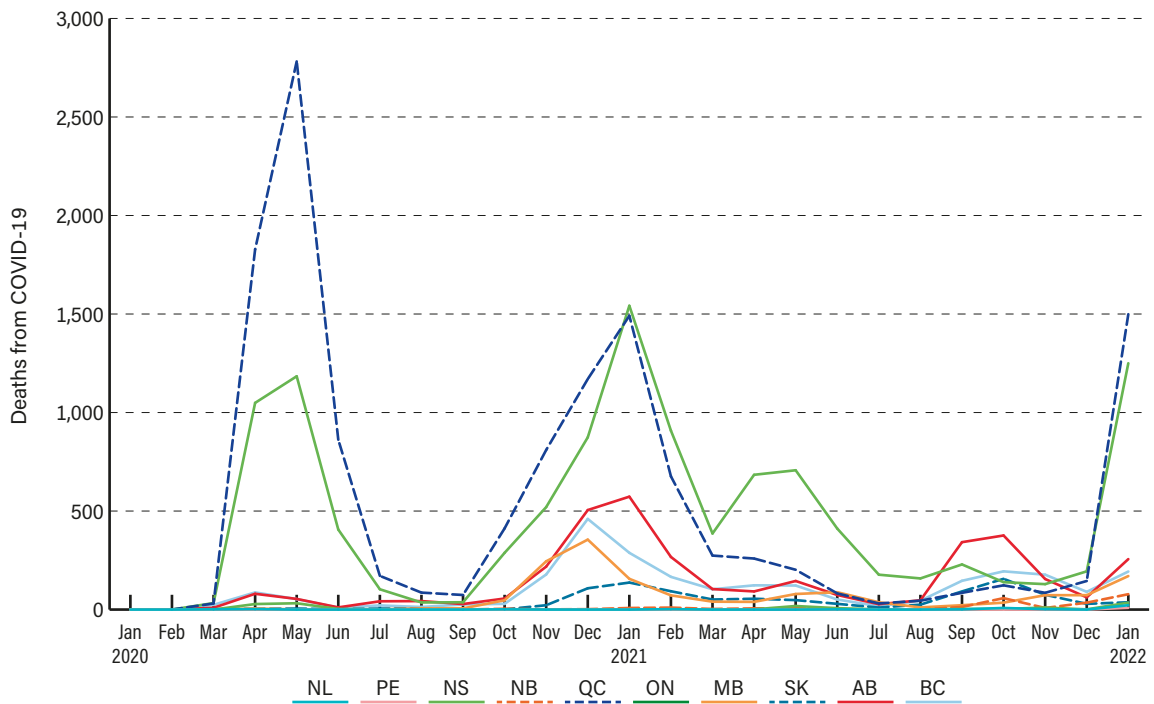


Source: COVID-19 Tracker, 2022.

Deaths in Canada

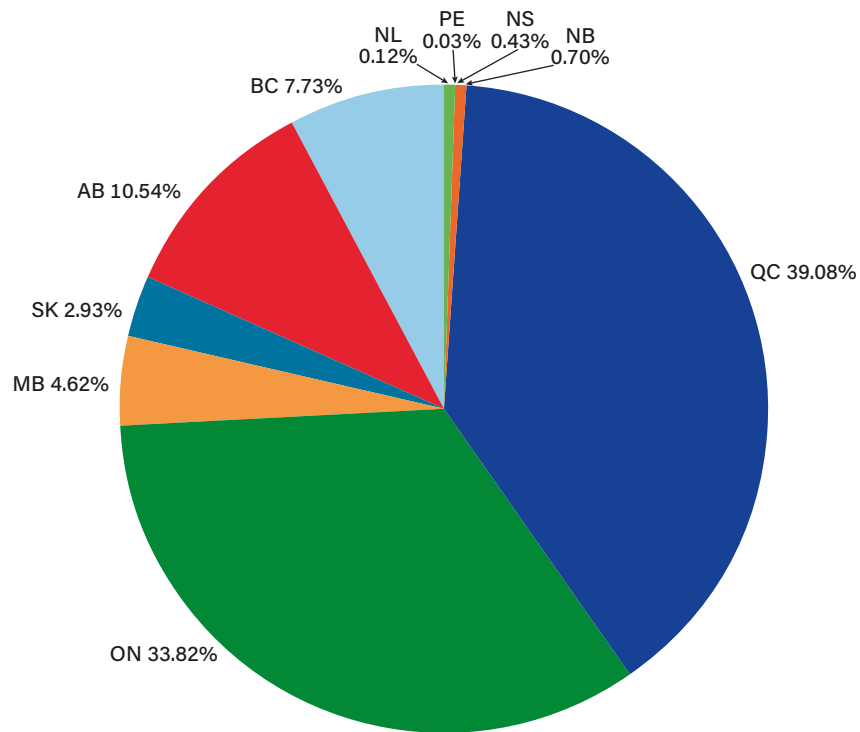
Figures 1D to 1F document the mortality impact of the pandemic. From January 2020 to January 2022, Canada recorded 33,872 deaths from COVID-19. Quebec saw the most deaths at 13,223, followed by Ontario at 11,444, and then Alberta and British Columbia at 3,566 and 2,616, respectively. **Figure 1D** shows that total deaths were highest during the first wave; subsequent waves have seen fewer deaths largely because of improvements in treatment and more importantly the dissemination of vaccines. In terms of the provincial distribution of deaths, except for Quebec and Ontario, the provinces had deaths that aligned with their national population shares. With 34% of Canada's COVID-19 deaths, Ontario had a proportion of deaths below its population share while Quebec was an outlier with 39% of Canada's deaths but only 23% of the population (**figure 1E**). It should be noted that total deaths spiked up during the fifth Omicron wave largely because of the high transmissibility of the variant and the large surge in cases. However, when deaths are considered relative to the total cases, it is evident from the crude case fatality rate (**figure 1F**) that mortality from COVID-19 dropped dramatically after the first wave.

Figure 1D: Monthly COVID-19 deaths in the Canadian provinces, January 2020–January 2022



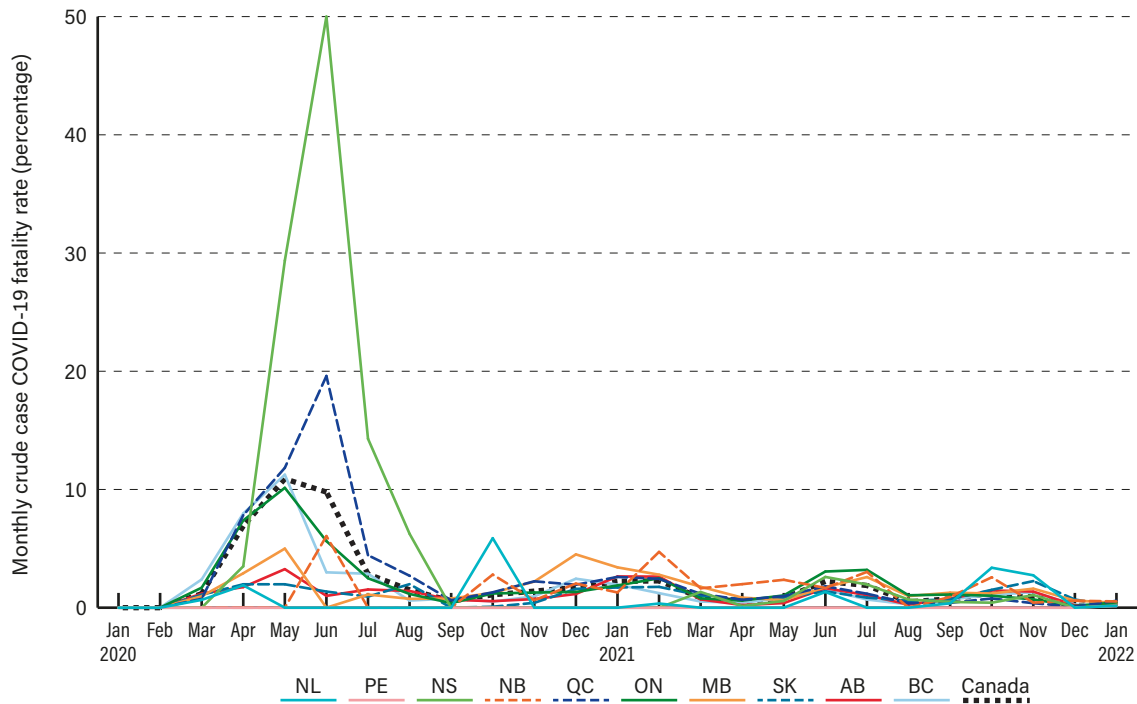
Source: COVID-19 Tracker, 2022.

Figure 1E: Distribution of total COVID-19 deaths by province, January 2020–January 2022



Source: COVID-19 Tracker, 2022.

Figure 1F: Monthly COVID-19 crude case fatality rate (%), Canada and the provinces, January 2020–January 2022

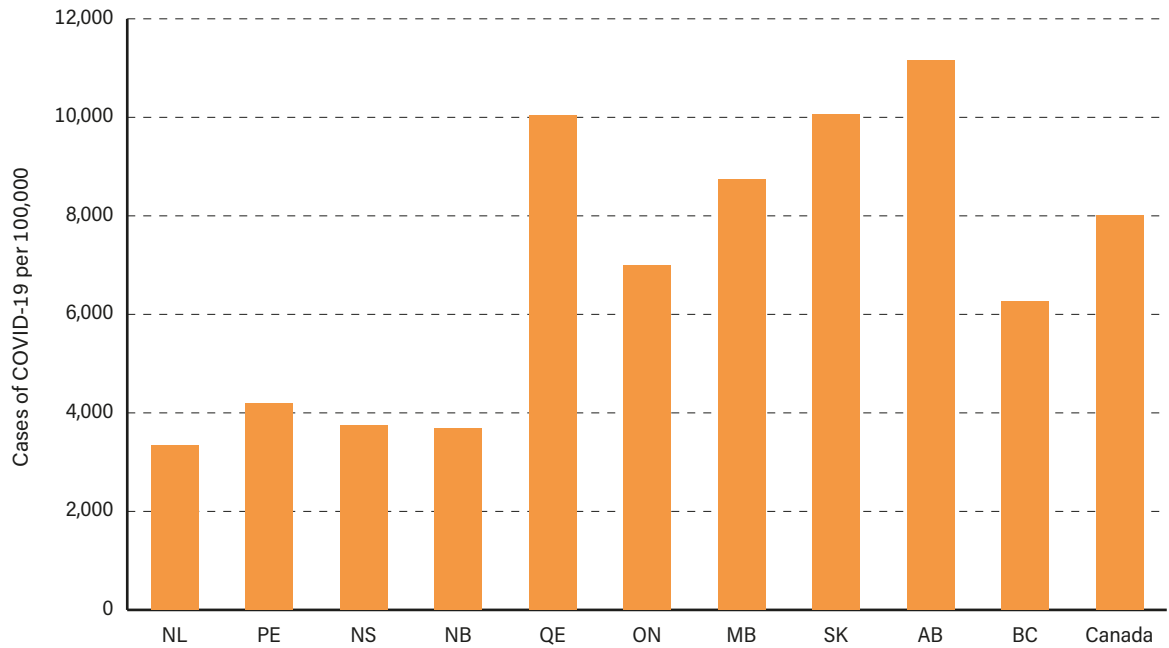


Source: COVID-19 Tracker, 2022.

Given variations in provincial population size as well as in the number of cases, it is useful to standardize based on population so that interprovincial comparisons can be made more effectively. **Figure 2A** plots cumulative COVID-19 cases per 100,000 of population for the entire period from January 2020 to January 2022. Canada as a whole saw 8,013 cases per 100,000 population. Across the provinces, the incidence ranged from a high of 11,151 cases per 100,000 in Alberta to a low of 3,331 cases per 100,000 in Newfoundland & Labrador. The four Atlantic provinces had the lowest total incidence rates, followed by British Columbia and Ontario. Quebec and the Prairies generally saw the highest incidence rates.

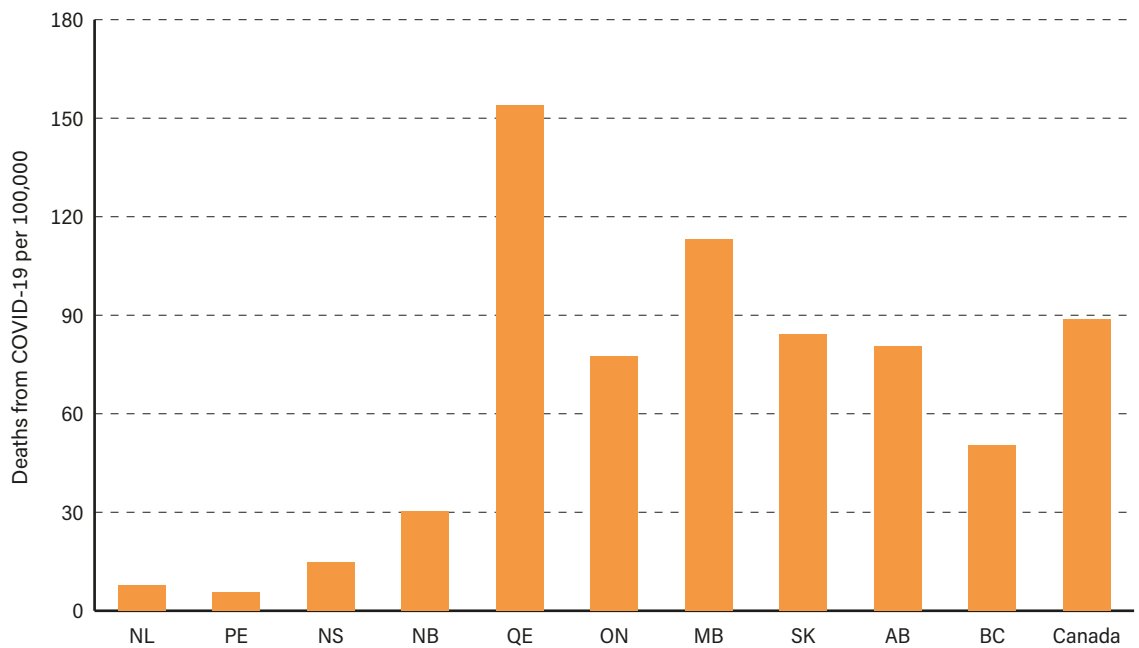
In the case of deaths, the patterns for both deaths per 100,000 population (**figure 2B**) and deaths per 100,000 COVID-19 cases (**figure 2C**) were quite similar. While Quebec did not have the highest incidence in terms of cases per 100,000 population, it had the most deaths per 100,000 population and thus the highest case fatality rate. In general, a Canadian resident was most likely to die of COVID-19 in Quebec and Manitoba and least likely to die of it in Newfoundland & Labrador, Prince Edward Island, and Nova Scotia. While New Brunswick had relatively few deaths per 100,000 population, it had an overall case fatality rate similar to Saskatchewan, Alberta, and British Columbia.

Figure 2A: COVID-19 cases per 100,000 population, Canada and the provinces, January 2020–January 2022



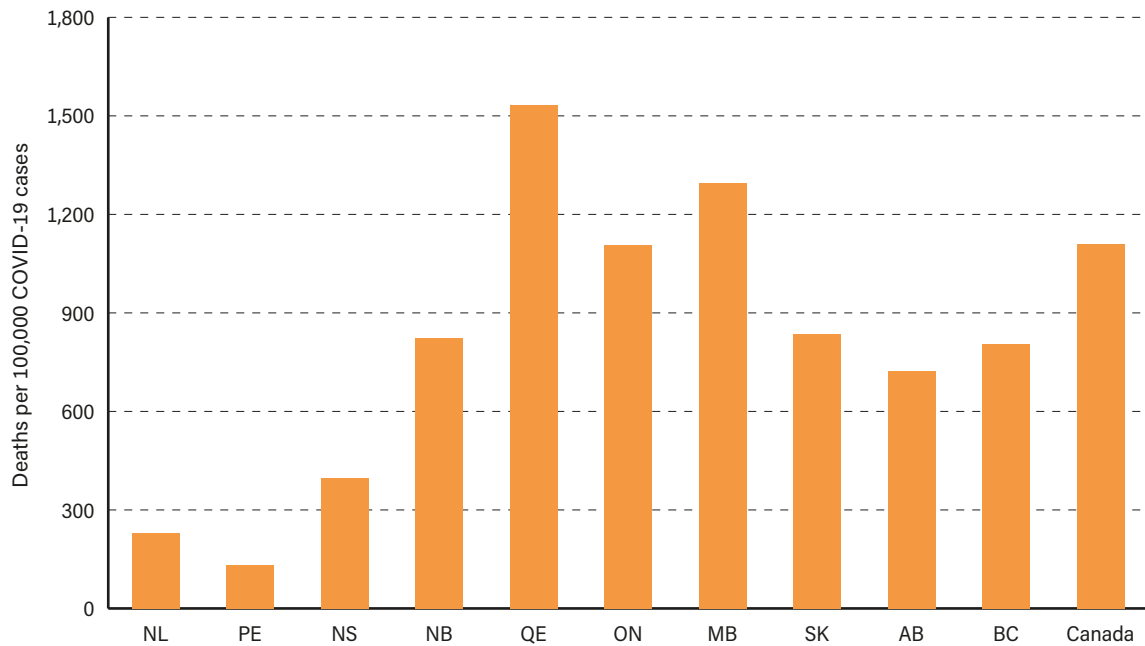
Source: COVID-19 Tracker, 2022; calculations by author.

Figure 2B: COVID-19 deaths per 100,000 population, Canada and the provinces, January 2020–January 2022



Source: COVID-19 Tracker, 2022; calculations by author.

Figure 2C: COVID-19 fatality rate per 100,000 cases, Canada and the provinces, January 2020–January 2022



Source: COVID-19 Tracker, 2022; calculations by author.

The general effects of the pandemic globally have been to disrupt health and social systems as well as the economy. In this regard, the impact of the pandemic on Canada and its provinces should be similar but, given the regional variations in the demographics and other characteristics across the country, one might also expect differences in the impacts upon the economy and the health system. Indeed, other studies have noted such jurisdictional and regional variations. For example, in Spain, a country that has devolved health care onto regions, one study of the first wave of the pandemic found that 90% of the variation of the pandemic's impact was attributable to differences between and within regions as a result of devolved health authority as well as population density and age distribution (Gutiérrez, Inguanzo, and Orbe, 2021). Differences in health status, practice, and capacity would even spread into economic impacts as noted for the United States by a study on the employment impacts of the pandemic by economic region and sector (Foerster, Garvey, and Sarte, 2021).

Economic Impacts of the Pandemic

The COVID-19 pandemic and the assorted public measures implemented to slow the virus's spread particularly during the early wave in the absence of vaccines resulted in a major economic contraction in the spring of 2020, not only in Canada but around the world with disparate sectoral effects.⁶ While this was followed by a period of recovery, subsequent viral surges and the lockdowns and restrictions used to curb their spread saw continued disruptive effects on employment and income as well as on public finances.⁷ In the case of Canada, differences in the stringency of mandated public-health measures in the provinces would have inevitably been a factor behind some of the differential economic effects of the pandemic across the country.

According to the Canadian Economic Recovery Tracker (CERT) of Export Development Canada (EDC), following the initial drop in economic activity in spring of 2020, Canadian businesses and governments appear to have adjusted their operations with each successive wave and by March of 2020 achieved pre-pandemic levels of activity (EDC, 2022). Disruptions and drops in activity were the most severe early in the pandemic given the uncertainty over the virus and its lethality. Later, restrictions to protect the health-care system from surges as a result of limited capacity and weaknesses in the health-care system that were not addressed after SARS were more important in affecting economic activity.⁸

In general, the COVID-19 pandemic and its associated disruptive effects operated through several pathways. First was the initial absence of a vaccine and effective treatments given the novelty of the coronavirus, the scarcity of initial information and subsequent uncertainty, shortages of protective equipment, and the easy and rapid transmission of the virus. Second was disruption of both international and domestic supply chains amid widespread government-imposed measures to control infection such as travel restrictions and stay-at-home orders and the accompanying disruption of interdependent and integrated trade and production chains, as well as limits on the population's mobility.

Third was the reality that, unlike past pandemics when economic production was more goods intensive, the production and consumption patterns characterizing modern

6. The literature on the economic effects of the pandemic both on entire economies and specific sectors is large and growing. For some samples, see Altig et al., 2020; Ashraf, 2020; Boissey and Rungcharoenkitkul, 2020; Macdonald, Piazza, and Sher, 2020; Rothengatter, Zhanga, Hayashi, Nosach, Wang, and Oume, 2021.

7. For an overview of the impact of the pandemic globally during its first year, see Di Matteo, 2021a.

8. For an overview of Canada's failure to learn from SARS, see Di Matteo, 2021b.

developed economies are dominated by services, including services that were particularly prone to COVID-related disruptions, such as restaurants, accommodation, retail, and travel. At the same time, increasing digitization of the workplace and business operations allowed for many services to be handled remotely and the shift of employment to home activity is a feature that is expected to persist to some degree once the virus has disappeared, particularly for workers with skills that enable them to work remotely⁹ much to the chagrin of some urban mayors with substantial downtowns.¹⁰

Finally, there is the unprecedented size of the fiscal and economic response to the pandemic by government, on a scale that dwarfs experience with past pandemics. This last feature was intended to support the medical response to COVID-19 through the provision of added health resources as well as to stabilize employment and income in the economy amid the economic disruption stemming from the virus and aggressive public-health mitigation measures. The legacy of the outsized government fiscal response in 2020/21 includes significantly higher levels of public debt in many jurisdictions along with high and rising inflation (Ebrahimi, Igan, and Peria, 2020).

The following sections will provide more detail about the economic impacts of the pandemic on Canada and the provinces using a few select key indicators. Where possible, some correlations will be drawn, notably with respect to the intensity of the pandemic and pandemic response and their effects on assorted aspects of economic performance.

9. A report from the McKinsey Global Institute noted: “Hybrid models of remote work are likely to persist in the wake of the pandemic, mostly for a highly educated, well-paid minority of the workforce (Lund, Madgavkar, Manyika, and Smit, 2020). These types of jobs would include knowledge-economy intensive occupations requiring computer interaction, thinking creatively, processing and analyzing data, and information and administrative and organizational activities.

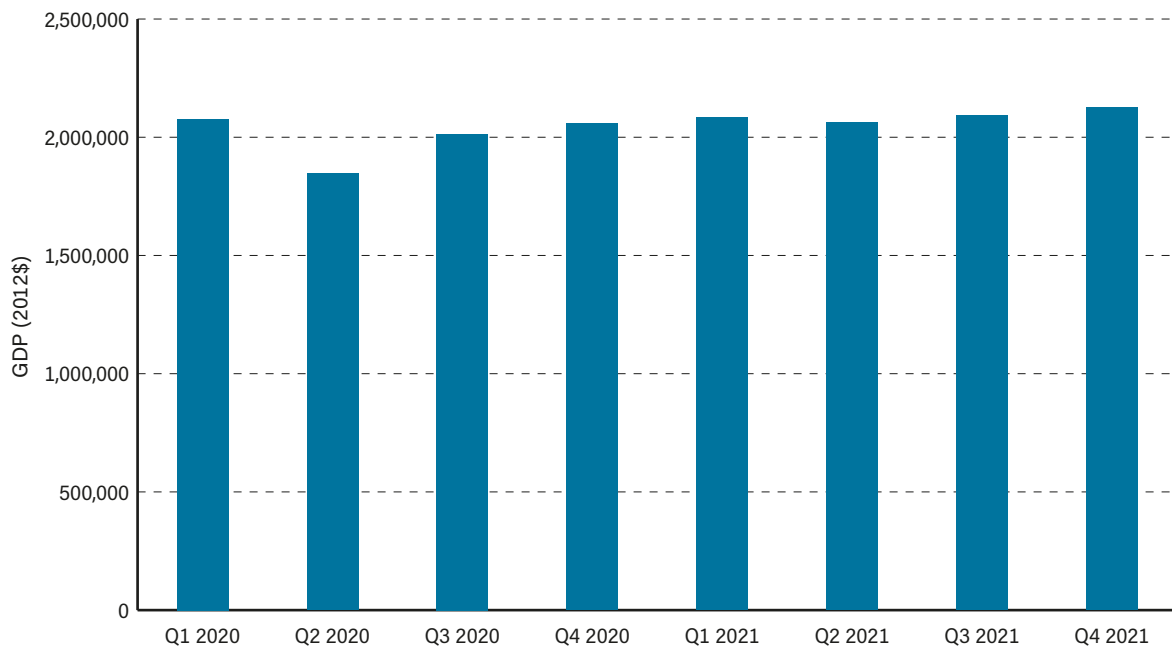
10. For example, the Mayor of Ottawa has exhorted the federal government to bring workers downtown to bolster local businesses (Osman, 2022).

Overall Economic Growth

The first wave of the pandemic had the most severe impact on Canada's economic output given its novelty, uncertainty about its consequences and spread, and assorted measures to contain the virus in the absence of either vaccines or immunity. In the spring of 2020, the pandemic quickly shut down large swathes of the economy. The economy subsequently went on to recover more rapidly than expected as firms, employees, and consumers adapted to the new realities of pandemic life. Subsequent waves of the pandemic did not result in GDP contractions as serious as those seen during the first wave. Nevertheless, the recovery of the Canadian economy started robustly and then slowed as figures 3A.1 and 3A.2 illustrate. The recovery was also affected by sectoral factors such as the surge in lumber prices as well as the surge in real estate activity that saw housing prices driven up dramatically.

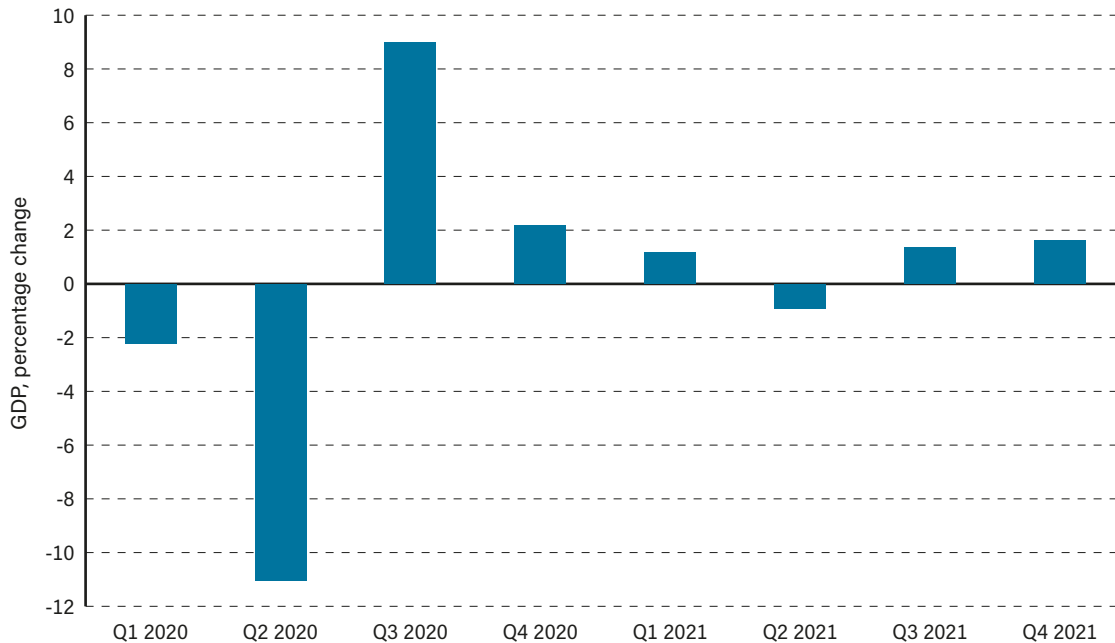
Figure 3A.1 provides annualized quarterly real GDP (seasonally adjusted) for Canada while **figure 3A.2** shows the quarterly percentage change. There was a drop of 11% in real GDP in the second quarter of 2020 followed by rebounds of 9%, 2%, and 1% in the third and fourth quarters of 2020 and the first quarter of 2021. There was, however, another

Figure 3A.1: Gross domestic product at market prices, quarterly, Canada, 2020-2021 (chained 2012 dollars, seasonally adjusted at annual rates)



Source: Statistics Canada, 2022k.

Figure 3A.2: Gross domestic product at market prices, percentage change, quarterly, Canada, 2020–2021 (chained 2012 dollars, seasonally adjusted at annual rates)

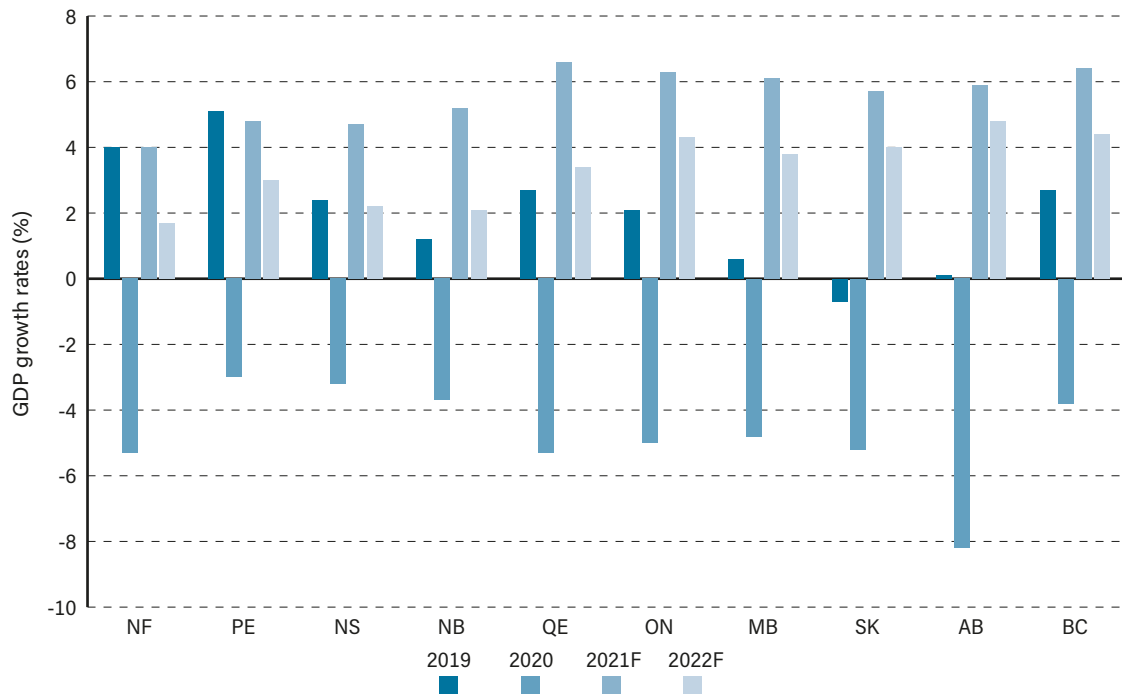


Source: Statistics Canada, 2022k.

decline in output of approximately 1% in the second quarter of 2021 because of another wave of COVID-19, but vaccine rollout during this period mitigated the drop. Recovery commenced, with real GDP in the third quarter of 2021 finally surpassing the level set in the first quarter of 2020. By the fourth quarter of 2021, real GDP was about 2% higher than it had been two years earlier. Given that this 2% increase took two years to materialize and recent historical growth rates for real GDP have been approximately 2% annually, a substantial amount of economic growth was foregone during the pandemic.

When preliminary annual real GDP numbers from RBC Economics (Hogue and Freestone, 2021) are combined with estimates from Statistics Canada for the provinces, the result shows that all provinces were hit by large GDP downturns in 2020 but with substantial variation among them (**figure 3B**). Hardest hit was Alberta with an estimated 8% real GDP drop followed by Quebec and Newfoundland & Labrador, each falling by over 5%, then Ontario at about 5%. The Atlantic provinces and British Columbia, on the other hand, were hit less hard with real GDP drops of between 3% and 4%. The subsequent estimated real GDP rebound in 2021 was greatest in Quebec, British Columbia, and Ontario at over 6%, respectively, followed by Alberta, Saskatchewan, and New Brunswick at over 5%.

Figure 3B: Real GDP growth rates (%), Canadian provinces, 2019–2022F



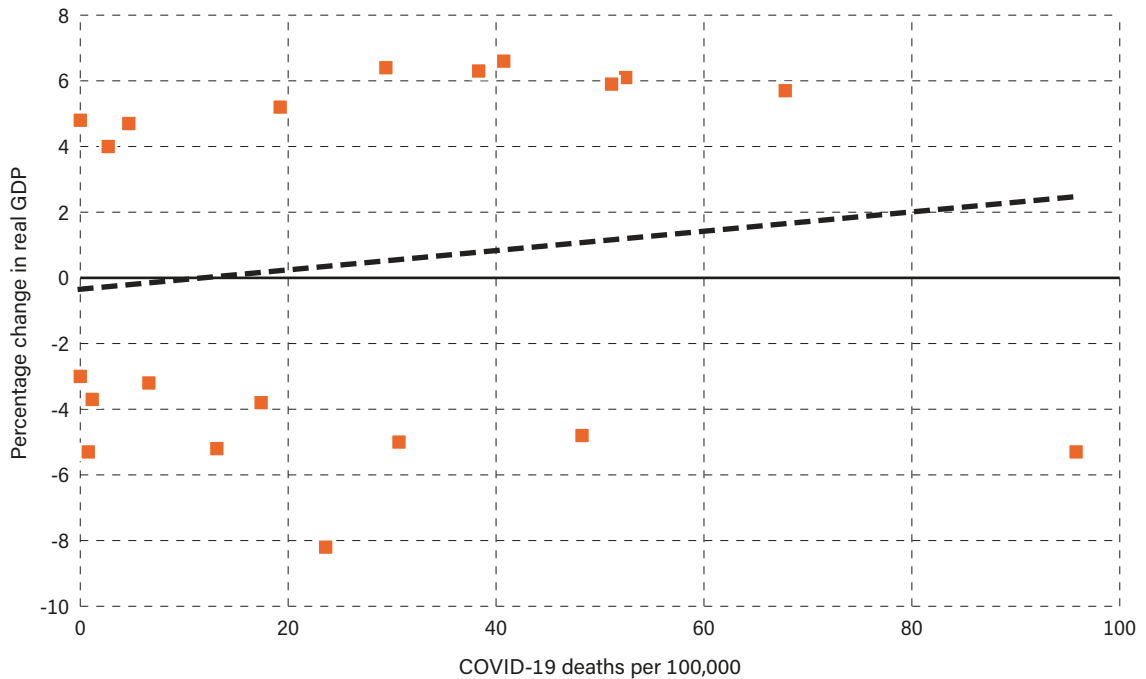
Sources: Statistics Canada, 2022I; Houge and Freestone, 2021.

In assessing the impact of the pandemic on real GDP growth, a first attempt is provided by **figure 3C**, which plots the annual growth rate of real GDP for each province against the COVID-19 deaths per 100,000 of population in 2020 and 2021 and adds a linear trend. There is a divergence in performance between the two years with the observations for 2021 all showing growth and a slightly positive relationship between COVID-19 deaths and real GDP growth and growth rates for 2020 showing negative growth and a slightly negative relationship between the two variables. Taken together, the overall relationship between deaths and real GDP growth exhibits a positive linear trend. This suggests that mortality from the pandemic was not an important factor in the contraction of real economic activity that occurred during the pandemic.

Of course, the relationship between the impact of the pandemic and real GDP performance is complex and not necessarily simply a function of mortality, given the relatively low mortality of the COVID-19 pandemic by historical standards (for example, the Spanish flu of 1918/19).¹¹ One should also consider the economic performance in

11. While unprecedented in the period after World War II, the COVID-19 pandemic was not the Black Death, which between 1347 and 1351 is estimated to have carried off up to half of the European population; or the Spanish Flu, which is estimated to have killed anywhere from 20 to 100 million people. Moreover,

Figure 3C: Provincial percentage change in real GDP compared to COVID-19 deaths per 100,000, 2020 and 2021



Sources: Statistics Canada, 2022i; Houge and Freestone, 2021.

jurisdictions prior to the pandemic. In the case of the three provinces with the most energy-intensive provincial economies—Alberta, Saskatchewan, and Newfoundland & Labrador—the two years prior to the pandemic saw mixed economic growth as a result of low energy prices. For example, in 2018 and 2019, Alberta posted real GDP growth rates of 1.9% and 0.1%, Saskatchewan’s growth was 1.2 and –0.7%, and growth in Newfoundland & Labrador was –3.5% and 4.0%. This illustrates the importance of global and North American energy prices to overall economic growth in Canada’s main energy-producing provinces.

The pandemic’s effects on the economy were influenced by the restrictions and lockdowns instituted across the country, especially during the first two waves when effective COVID-19 treatments and vaccines were not available in Canada. With the development and dissemination of vaccines in late 2020 and early 2021, the more serious health effects of the virus were partially blunted, though hospitalizations were still an important issue especially during the fifth wave caused by the highly transmissible Omicron variant, which saw the sheer number of total cases and hospitalizations exceed the

unlike past pandemics, the mortality and morbidity effects of the COVID pandemic have been concentrated on the elderly rather than the working-age population (Di Matteo, 2021).

previous peaks and total deaths match or exceed previous records in many jurisdictions. For example, Prince Edward Island reported no deaths from COVID-19 until January of 2022, when it had 9 deaths (COVID-19 Tracker, 2022).

Ultimately, even after widespread vaccination, the need to slow infections and prevent the overwhelming of fragile provincial health-care systems with limited capacity resulted in protracted lockdowns and other stringent control measures, with the associated negative consequences for economic activity. Moreover, despite the occurrence of both SARS and H1N1 in the previous decade, Canada still had allowed stockpiles of personal protective equipment to be depleted and did not have its own vaccine-manufacturing capacity (Di Matteo, 2021b; Tasker, 2022).

Despite total health spending rising during the pandemic, it remains that the closing of outpatient departments and postponing of medical visits and procedures during the height of the pandemic to release resources for COVID-19 reduced health services and spending in other important areas. Indeed, according to CIHI's own analysis of COVID-19's effect on hospital care services, from March to December 2020 overall surgery numbers fell 22% compared with the same period in 2019, a drop of 413,000 surgeries (CIHI, 2021).

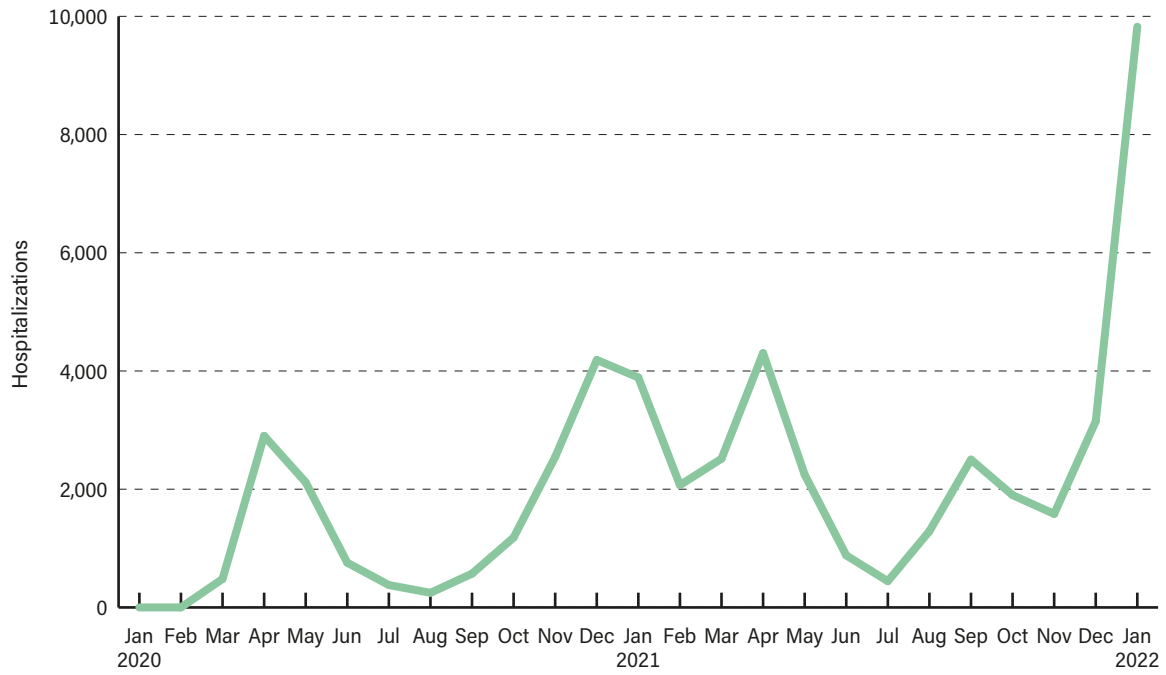
Canada had one of the lowest ratios of hospital beds to population of the developed countries (Di Matteo, 2021a) and the stringency of lockdown and other assorted measures to conserve the capacity of health systems were factors in the size and variation of economic contractions during the pandemic. Thus, hospitalizations as well as the stringency of lockdowns and other measures may also be factors in the size and variation of economic contractions in the provinces over the course of the pandemic. **Figure 4A** plots monthly total hospitalizations during the pandemic in Canada while **figure 4B** plots these monthly hospitalizations for each province. The five waves are clearly visible. These waves of hospitalizations also stressed the human resources side of the health-care system and shortages of health-care workers emerged that have carried over into the present.

Figure 4C plots the monthly average of the daily COVID-19 Stringency Index¹² for Canada's provinces provided by the Institute for Research on Public Policy's Centre of Excellence on the Canadian Federation. The Index measures the policy response of each province in terms of the measures and restrictions enacted, including sizes of gatherings permitted, masks, school closures, and travel restrictions.¹³ It takes on a value from 0 to 100 with larger numbers being associated with greater degrees of stringency. Restrictions

12. The index is similar in principle and construction to the Oxford Stringency Index (Blavatnik School of Government, University of Oxford, 2021).

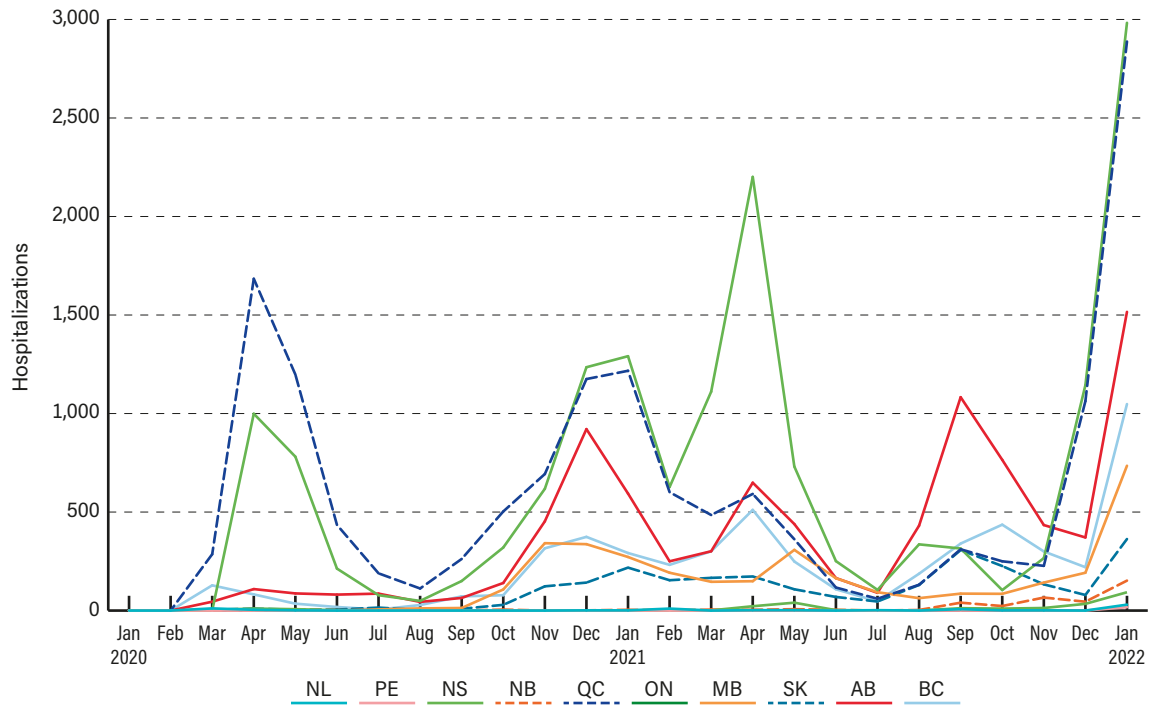
13. There are a total of 17 indicators (IRPP, 2021).

Figure 4A: Monthly hospitalizations during the pandemic in Canada, January 2020–January 2022



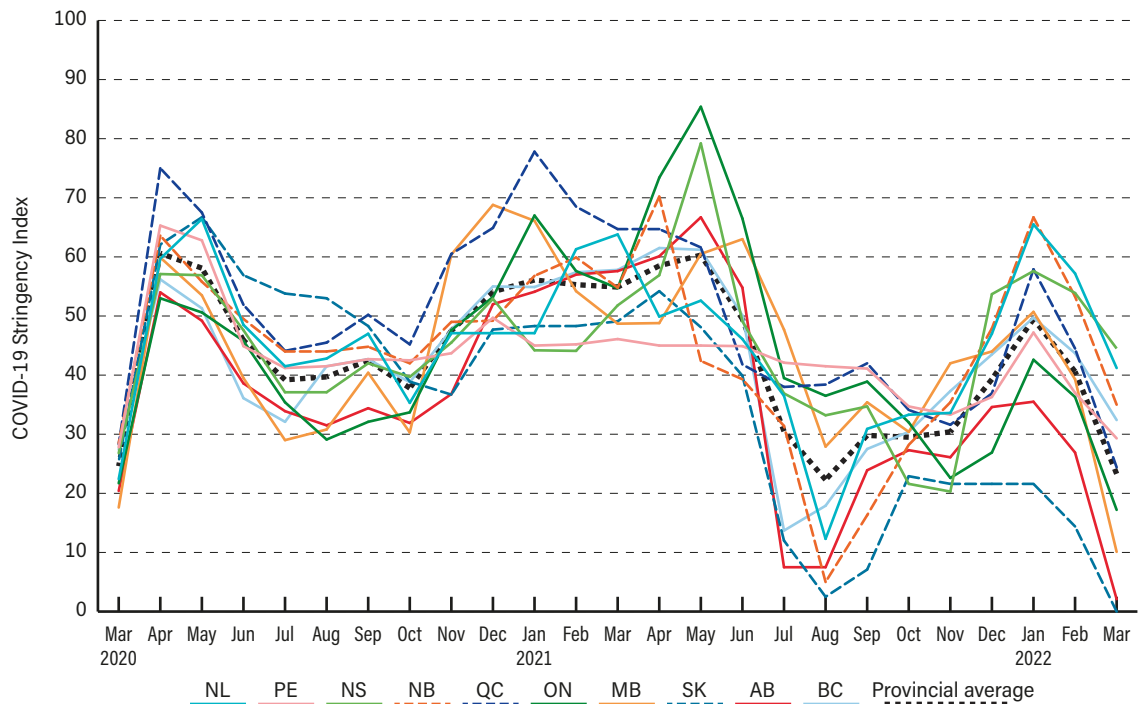
Source: COVID-19 Tracker, 2022.

Figure 4B: Monthly hospitalizations during the pandemic in the Canadian provinces, January 2020–January 2022



Source: COVID-19 Tracker, 2022.

Figure 4C: Average monthly COVID-19 Stringency Index in the provinces March 2020–March 2022



Source: IRPP, 2021.

ramped up quickly in March of 2020 with the average daily value of the Index for all the provinces sitting at 0.42 on March 1 and soaring to 56.9 by March 31. Stringency then declined bottoming out in October of 2020 before starting to rise and again peaking in May 2021 and then declined reaching a low point in August of 2021 before rising again to hit another peak in January 2022 during the Omicron wave of COVID-19.

Quebec and Ontario had some of the highest stringency-index values at certain points during the pandemic, namely, April of 2020, January of 2021, and, in Ontario especially, May of 2021. Stringency then declined bottoming out in December of 2020 before starting to rise again. It peaked in early 2021 in both provinces and then declined in Quebec while peaking in Ontario in May 2021 before declining. There was another stringency peak in January 2022 that once again declined. Over the entire period covered by figure 4C, Ontario and Quebec consistently had some of the highest levels of stringency. Given that higher levels of stringency have been associated with a negative impact on real GDP growth across countries during the pandemic,¹⁴ this is likely to have been a factor in the economic performance of Canada's provinces too.

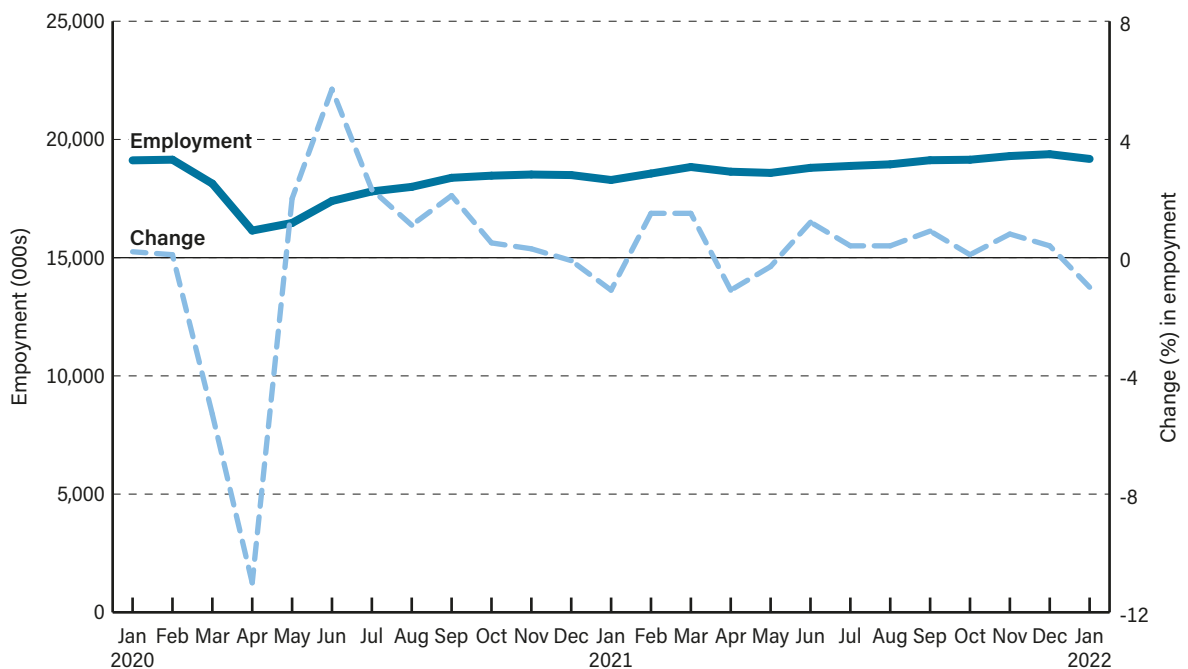
14. As noted in Di Matteo (2021a: 53): "While stringency measures such as lockdowns had limits in dealing with either the spread or mortality from COVID-19, they certainly appear to have been effective in having a consistently negative impact on real GDP growth in 2020. In the end, it was not the deaths from COVID-19 *per se* that devastated economies, but more the restrictions and stringency measures enacted to reduce its spread".

Employment and Unemployment

The COVID-19 pandemic and its associated lockdowns, quarantines, and travel restrictions had major effects on Canadian employment especially in the international travel industry, the labour-intensive personal services, food and accommodation, tourism, and arts and entertainment sectors. The initial impact during the first wave of the pandemic in the spring of 2020 was exceptionally severe and the recovery to pre-pandemic levels of employment took considerable time.

Figure 5A presents seasonally adjusted monthly total-employment data for Canada as well as the monthly percentage change in total employment from January 2020 to January 2022. Total seasonally adjusted monthly employment in Canada in January of 2020 was 19,115,500 and it rose to 19,143,600 in February of 2020. With the arrival of COVID-19, Canada then saw a sudden 5.3% drop in employment in March of 2020 and another 11% decline the month after bringing total employment down to 16,145,800, a total decrease of 16% in total employment or nearly 3 million fewer jobs. In just two months, Canada's total employment fell to the level last seen the summer of 2005.

Figure 5A: Monthly total employment (000s) and monthly percentage change in Canada, January 2020–January 2022

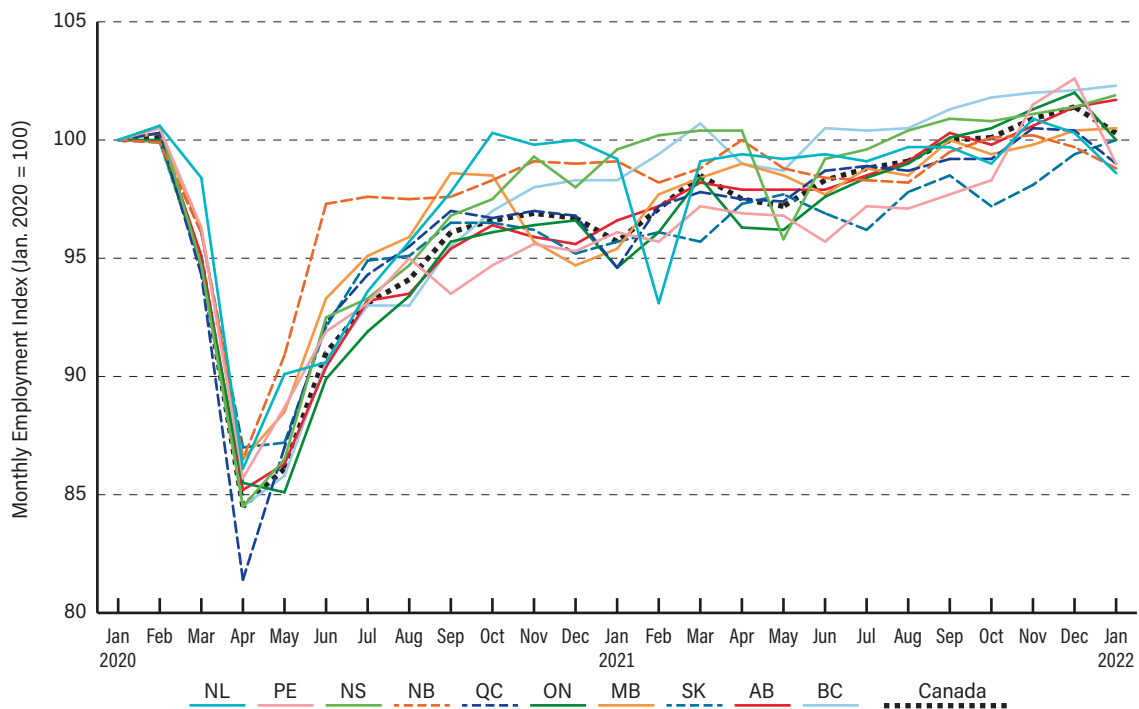


Source: Statistics Canada, 2022f.

Employment in Canada then began to rebound but did not exceed the pre-pandemic level set in February 2020 until November of 2021. Moreover, some of this rebound was financed by keeping employees on the payroll because of the federal wage subsidy but the effect on output and production was more erratic in the face of assorted pandemic restrictions.

Figure 5B looks at relative employment levels across the provinces by setting each province’s employment equal to a base of 100 in January of 2020 and then moving forward. By April of 2020, the largest drop had occurred in Quebec, approximately 19%. Next for severity of the drop in employment came Nova Scotia (16.0%), British Columbia (15.4%), and Alberta (15.1%). The smallest declines in employment were found in Saskatchewan (13.0%), New Brunswick (13.4%), and Manitoba (13.8%). Prince Edward Island, Ontario and Newfoundland & Labrador ranked in the middle, between 14.7% and 14.5%. Employment then began to recover, though there were ebbs and flows in the process and even by January 2022 not all provinces had recovered to pre-pandemic levels. Indeed, the Omicron wave in the winter of 2022 appears to have affected employment in some provinces harder than others, namely Newfoundland & Labrador, Prince Edward Island, New Brunswick, Quebec, and Ontario.

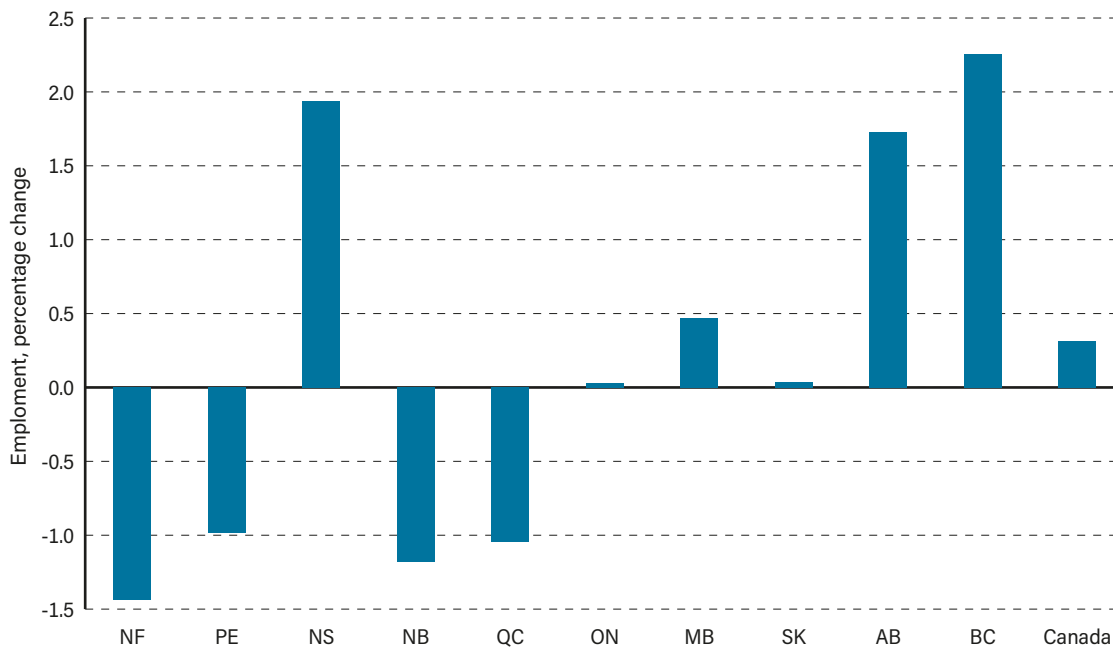
Figure 5B: Monthly employment level Index in Canada and the provinces, January 2020–January 2022 (January 2020 = 100)



Source: Statistics Canada, 2022e.

Figure 5C looks at the percentage change in total employment from January 2020 to January 2022 for Canada and the provinces. During the entire two-year period, Canada’s total employment grew by one third of 1%. By way of comparison, from January 2019 to January 2020, employment growth in Canada was 1.6% (Statistics Canada, 2022e; author’s calculation). After two years, as of January 2022, four provinces—Newfoundland & Labrador, Prince Edward Island, New Brunswick, and Quebec—had still not returned to where they were in January of 2020 and Ontario and Saskatchewan were barely where they had been two years before. Meanwhile, Nova Scotia, Manitoba, Alberta, and British Columbia did the best in recovering their employment levels in the longer term from the impact of the pandemic.

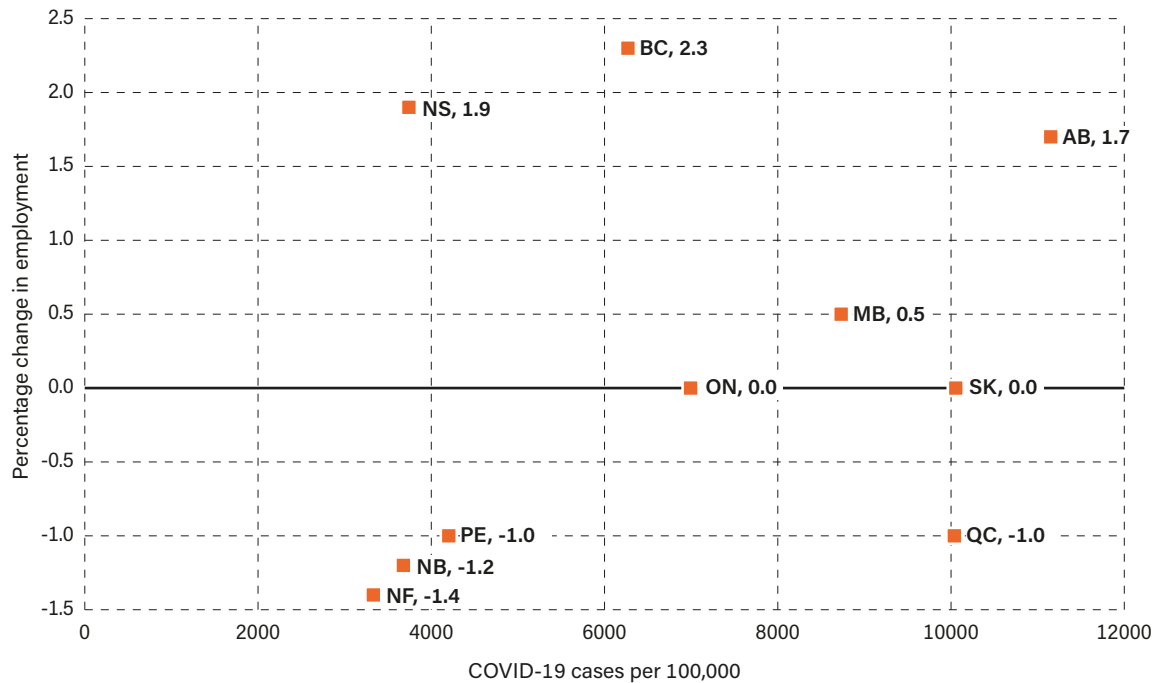
Figure 5C: Total employment, percentage change by Canadian province, January 2020–January 2022



Source: Statistics Canada, 2022e.

Sorting out whether the severity of the pandemic or the intensity of the response mattered in these different effects on employment is difficult, in part as a result of the relatively small sample size of ten provinces. Indeed, if one constructs a scatterplot of the percentage change in employment in each province over the period from January 2020 to January 2022 and plots it against the total number of COVID-19 cases per 100,000 population over the same period (**figure 5D**), one finds a slightly positive linear correlation between case numbers and the change in employment. Part of the reason may be the three Atlantic provinces of Prince Edward Island, Newfoundland & Labrador, and New Brunswick as they had both low COVID-19 rates as well as declines in employment. If these three provinces are excluded, one does get an inverse relationship between employment growth and COVID-19 cases per 100,000.

Figure 5D: Provincial percentage change in employment compared to COVID-19 cases per 100,000, January 2020–January 2021

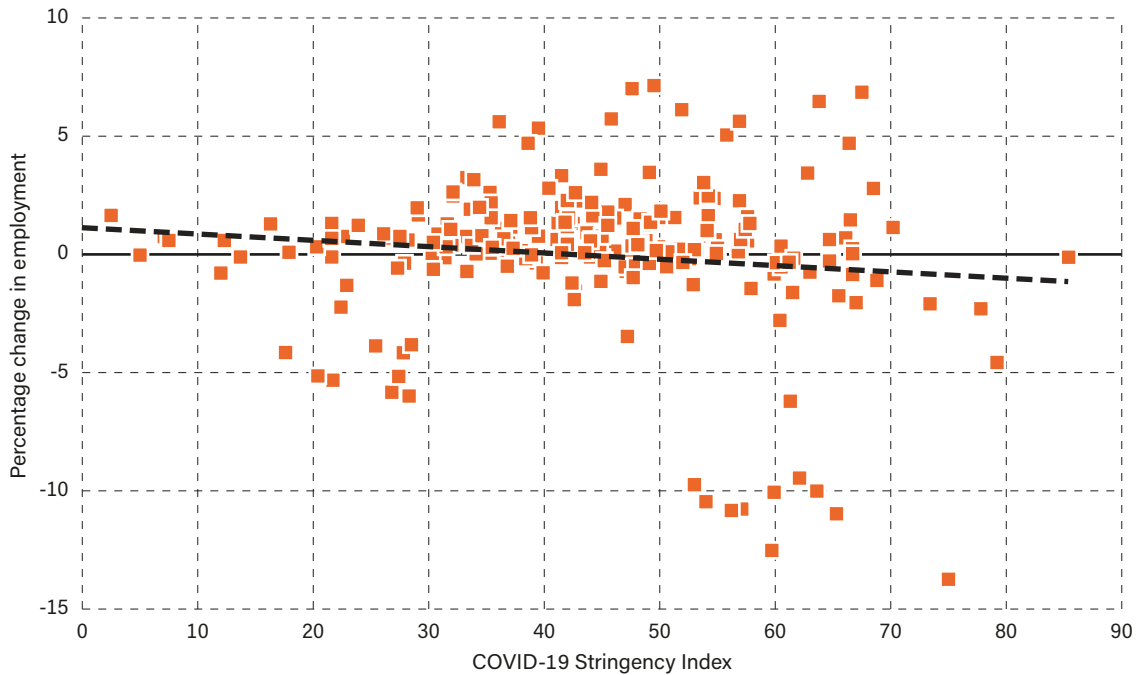


Sources: COVID-19 Tracker, 2022; Statistics Canada, 2022e; author's calculations.

That stringency did have some impact on employment growth is perhaps better illustrated in **figure 5E**, which for the period of March 2020 to January 2022 plots the monthly percentage change in employment against the average monthly COVID-19 stringency index for each province. The large set of data points indicates that there is indeed a slight inverse relationship, with higher stringency levels accompanied by lower employment growth rates. However, given the small sample size it is again difficult to conclude that the relationship is of any significance.

All of this suggests that the variability in economic performance across provinces was in many ways independent of the mortality or morbidity impact of the virus *per se*, but instead more likely was a function of how each province responded to the impact of the pandemic with restrictions and lockdowns. Ontario and Quebec, on the one hand, responded to the pandemic with some of the most stringent lockdowns and other restrictions. Alberta, on the other, instituted fewer restrictions but had much higher case counts overall, as well as the second highest employment growth of the ten provinces. Meanwhile, British Columbia had the largest overall increase in employment over the two-year period, but also substantially fewer cases per 100,000 after following what might be termed a “middle of the road” approach (Cordasco, 2022) to pandemic restrictions as evidenced by both cases and deaths per 100,000 when compared to the other provinces. And, while Prince Edward Island, New Brunswick, and Newfoundland &

Figure 5E: Monthly percentage change in employment compared to the average monthly Stringency Index, March 2020–January 2022



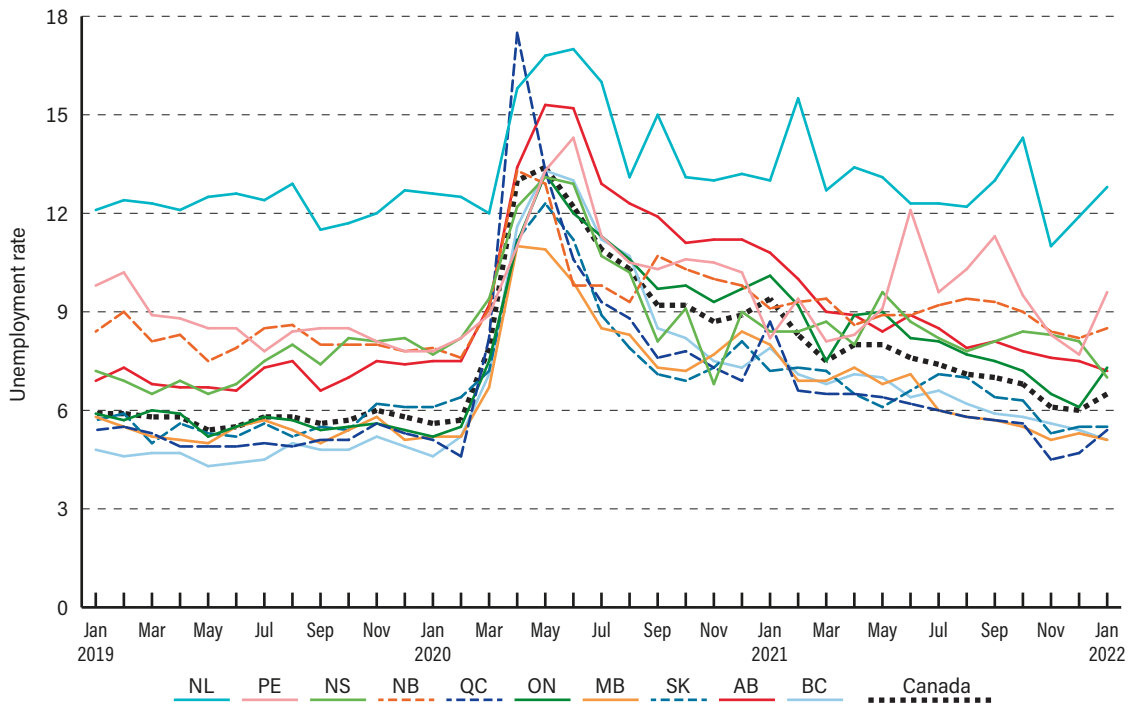
Sources: IRPP, 2021; Statistics Canada, 2022e; calculations by author.

Labrador were part of the Atlantic bubble along with Nova Scotia, only Nova Scotia appears to have enjoyed a substantial employment rebound.

Finally, **figure 5F** shows the unemployment rates for each province starting in January of 2019 and over the course of the pandemic. There was already, of course, regional variation in unemployment rates pre-COVID with the highest rates in Atlantic Canada. The pandemic saw unemployment rates spike everywhere, with the monthly average for Canada rising from 5.7% in February of 2020 to a peak of 13.4% in March of 2020, before beginning a gradual decline. By January of 2022, Canada's unemployment rate was 6.5%, still slightly above where it stood before the start of the pandemic.

During the pandemic, Manitoba had among the lowest unemployment rates of all the provinces. By January of 2022, the lowest unemployment rates in Canada were found in Manitoba and British Columbia (at 5.1% each), followed by Quebec at 5.4%, and then Saskatchewan at 5.5%, all below the national average. On the other hand, the highest rates were in Newfoundland & Labrador (12.8%) Prince Edward Island (9.6%), and Ontario (7.3%). However, these variations in unemployment both over time and at a point in time need to be interpreted cautiously as measures of performance given the regional variations in the pandemic as well as the effects of assorted economic incentives such as the Canada Emergency Response/Recovery Benefit (CERB) and wage subsidies.

Figure 5F: Monthly unemployment rate (%) in Canada and the provinces, January 2019–January 2022



Source: Statistics Canada, 2022d.

Retail and Automobile Sales

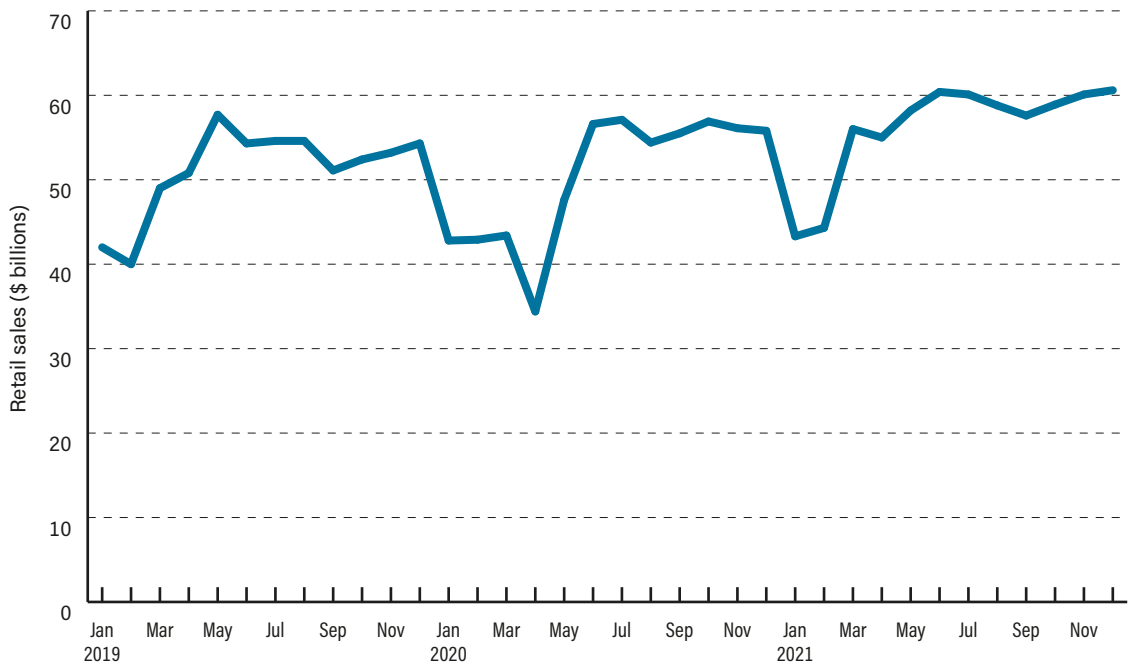
Retail sales

With the onset of lockdowns and restrictions, retail sales in Canada fell dramatically during the Alpha wave of the COVID-19 pandemic but then recovered as retail businesses and consumers adapted to the new conditions with practices such as curbside pickup and greater use of online shopping. Indeed, retail sales even grew somewhat despite the onset of supply-chain issues in the second half of 2020 and into 2021. It should be noted that retail sales typically exhibit a cyclical pattern that sees a peak in May, a decline thereafter, then an autumn increase with another peak in December. Sales then usually drop in January and February with a rebound commonly starting in March. Over the period from 2015 to 2019, for example, the December-to-February drop in retail sales averaged 26% Canada-wide.

Figure 6A plots monthly retail sales for Canada from January 2019 to December 2021. The drop in retail sales from December 2019 to February 2020 was only 21%, well below the usual decline. However, the March rebound did not materialize in 2020, as sales were flat, while April brought another decline with a rebound in May and June. The pandemic's first wave, then—the Alpha wave—triggered a sharp decline of 37% in Canadian retail sales between December 2019 and April 2020. The period from December 2020 to April 2021, which coincided with the peaks of both the Beta and Gamma variants, saw a decline of only 1% suggesting that, after one year of living with the virus, the retail sector and its customers had adapted quite well to the new environment. As well, the Delta wave from August of 2021 to October 2021 saw retail sales stay flat. **Figure 6B** plots retail sales for each province. Note that the patterns of decline and recovery generally move in tandem with those at the national level.

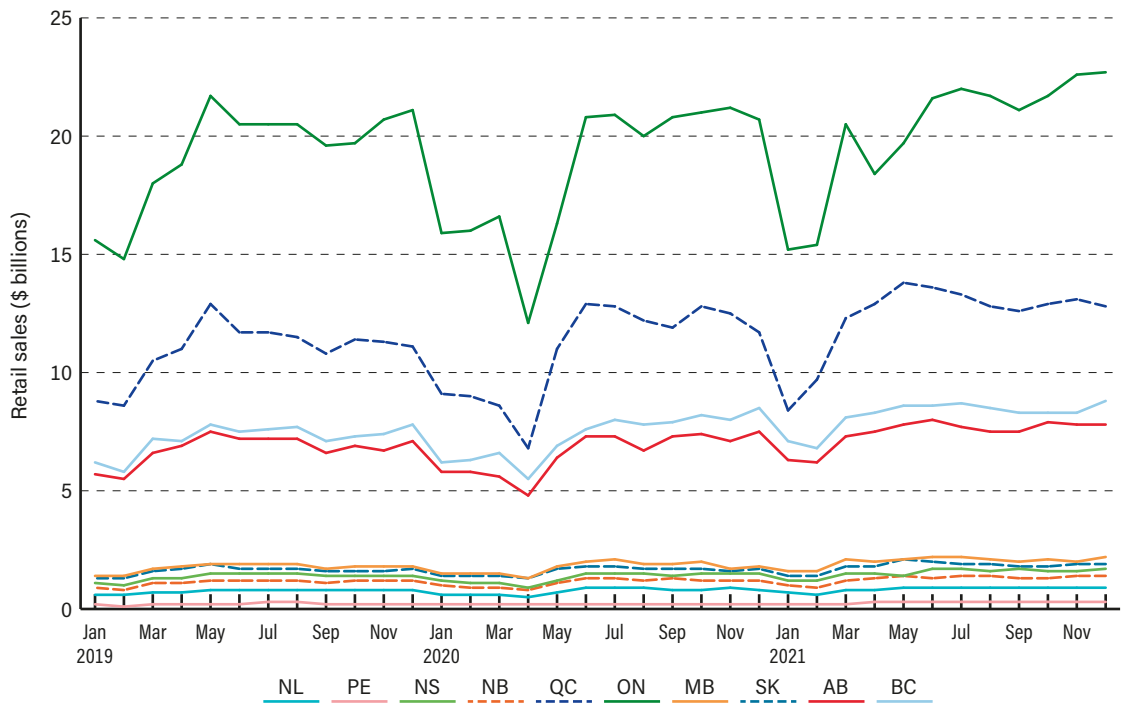
However, **figure 6C** shows that retail performance during these pandemic waves also varied somewhat across the provinces. During the Alpha wave, the largest contractions in retail sales occurred in Ontario (42%), Quebec (38%), and Nova Scotia (36%) while the smallest were in Saskatchewan (24%) and British Columbia and Prince Edward Island, both 29%. During the period of the Beta and Gamma waves, Ontario's poor performance dragged down the national performance as it suffered an 11% drop in retail sales while the other provinces save for British Columbia (a 2.6% decline) experienced increases ranging from 11% for Manitoba and Prince Edward Island to just under 1% in Alberta and Newfoundland & Labrador. As for the Delta wave, here the Atlantic provinces and British Columbia were hit the hardest, retail sales falling by 5.4% in New Brunswick and 2% in British Columbia. Alberta saw retail sales grow 4.3% and Manitoba followed

Figure 6A: Monthly retail sales (\$ billions) in Canada, January 2019–December 2021 (unadjusted)



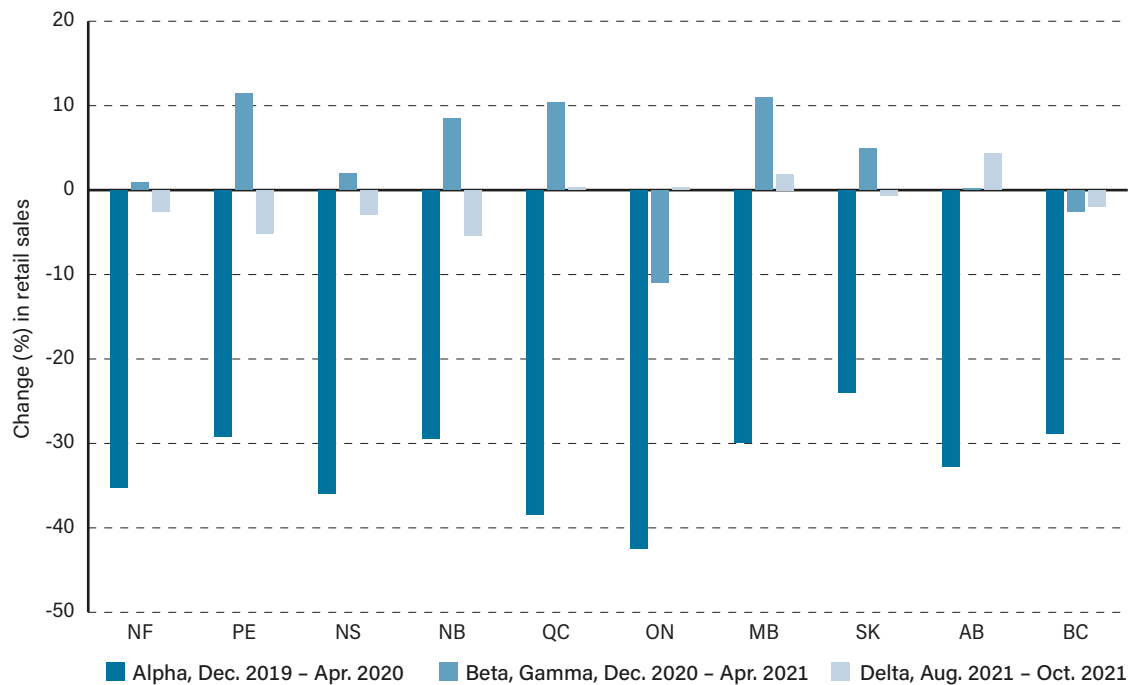
Source: Statistics Canada, 2022g.

Figure 6B: Monthly retail sales (\$ billions) in the Canadian provinces, January 2019–December 2021 (unadjusted)



Source: Statistics Canada, 2022g.

Figure 6C: Percentage change (%) in retail sales in Canadian provinces by key pandemic waves



Sources: Statistics Canada, 2022g.

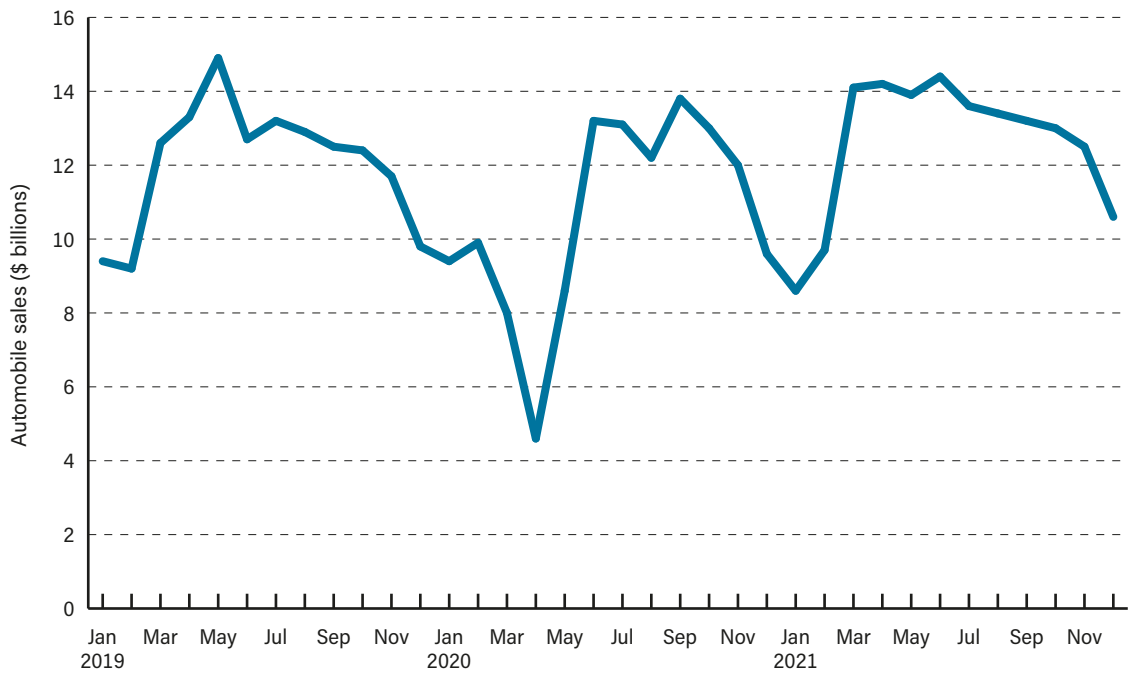
with 1.9%, while Ontario and Quebec each managed to eke out increases of one third of 1%. Again, Ontario's weak retail performance coincides with public-health orders that forced the closure of many businesses.

Automobile sales

Another dimension of the pandemic's impact on trade and commerce is provided by tracking automobile sales as illustrated by **figures 7A, 7B, and 7C**. While, like other types of retail trade, there already was online shopping for both new and used vehicles, there was still a substantial in-person interaction with automobile dealership and sales personnel making the sector vulnerable to pandemic shocks. In addition, the automobile business had been plagued by numerous supply-side issues: a particular difficulty was obtaining a supply of the computer chips that are now integral in modern vehicles (Lee, 2021). This, of course, led to new-vehicle shortages, which then spilled over into increased demand for used vehicles and price increases and shortages there. Nationally, automobile sales saw two large plunges with bottoms in April of 2020 and January of 2021 and the provincial performance generally paralleled this. As well, when the percentage change over comparative period is examined, the declines and rebounds occur in all the provinces.¹⁵

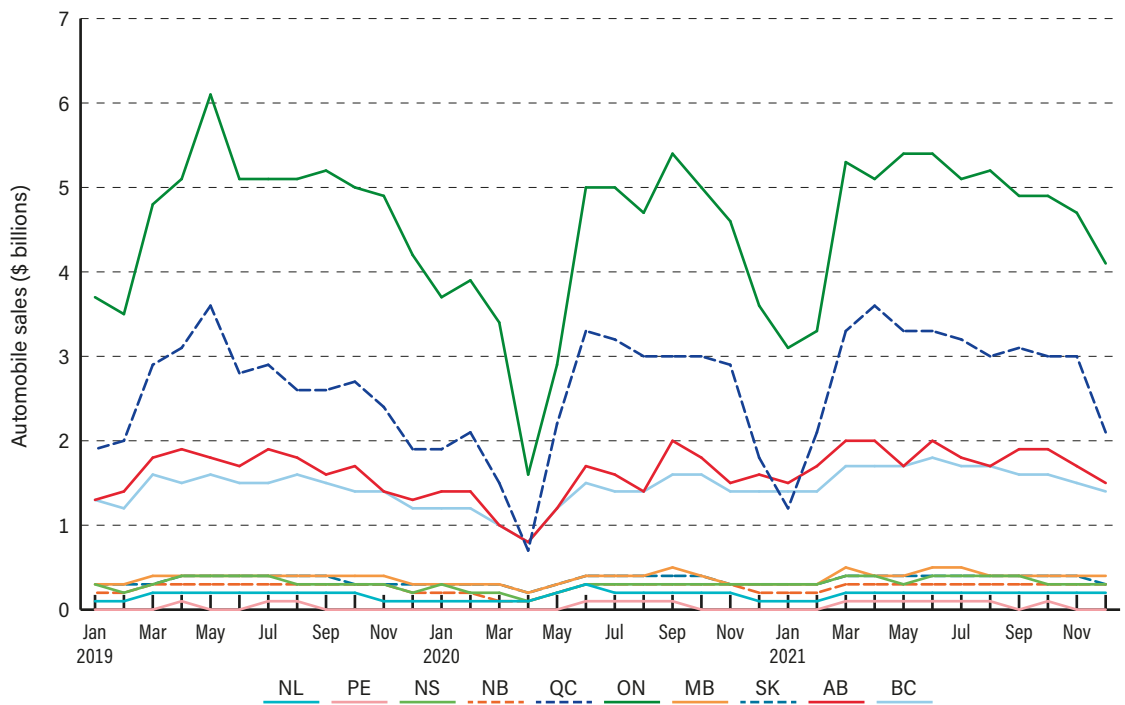
15. Though Quebec appears to have experienced a particularly strong revival in automobile sales between January and April of 2021 relative to the other provinces.

Figure 7A: Monthly automobile sales (\$ billions) in Canada, January 2019–December 2021 (unadjusted)



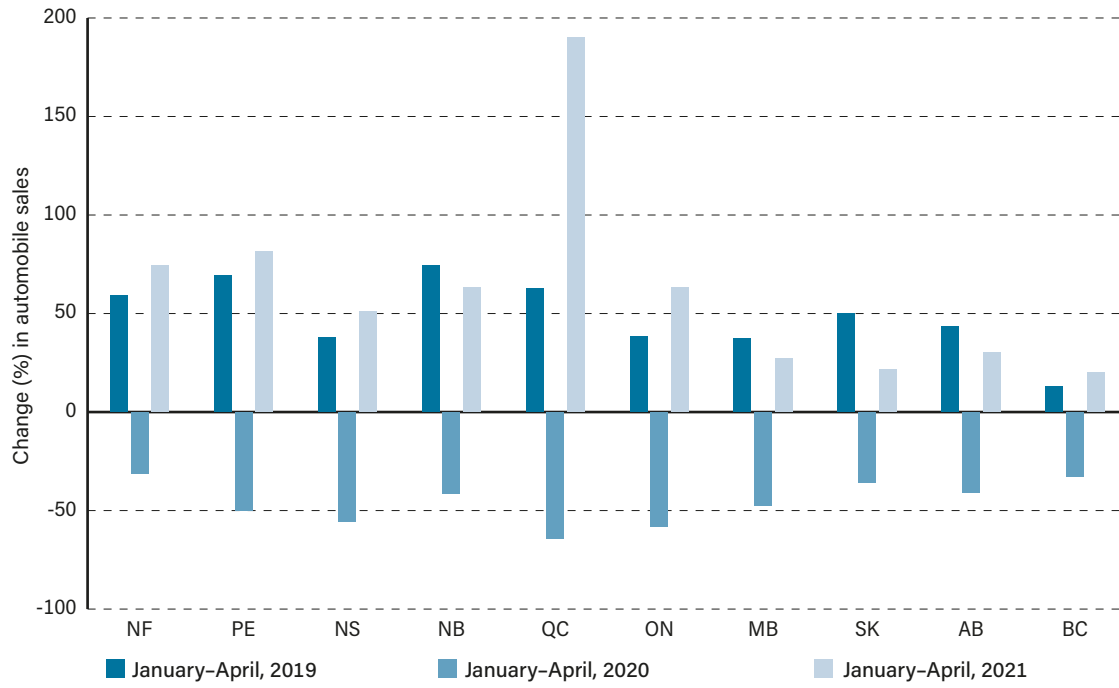
Source: Statistics Canada, 2022f.

Figure 7B: Monthly automobile sales (\$ billions) in the Canadian provinces, January 2019–December 2021 (unadjusted)



Source: Statistics Canada, 2022f.

Figure 7C: Percentage change (%) in automobile sales in Canadian provinces from January-April, 2019, 2020, and 2021

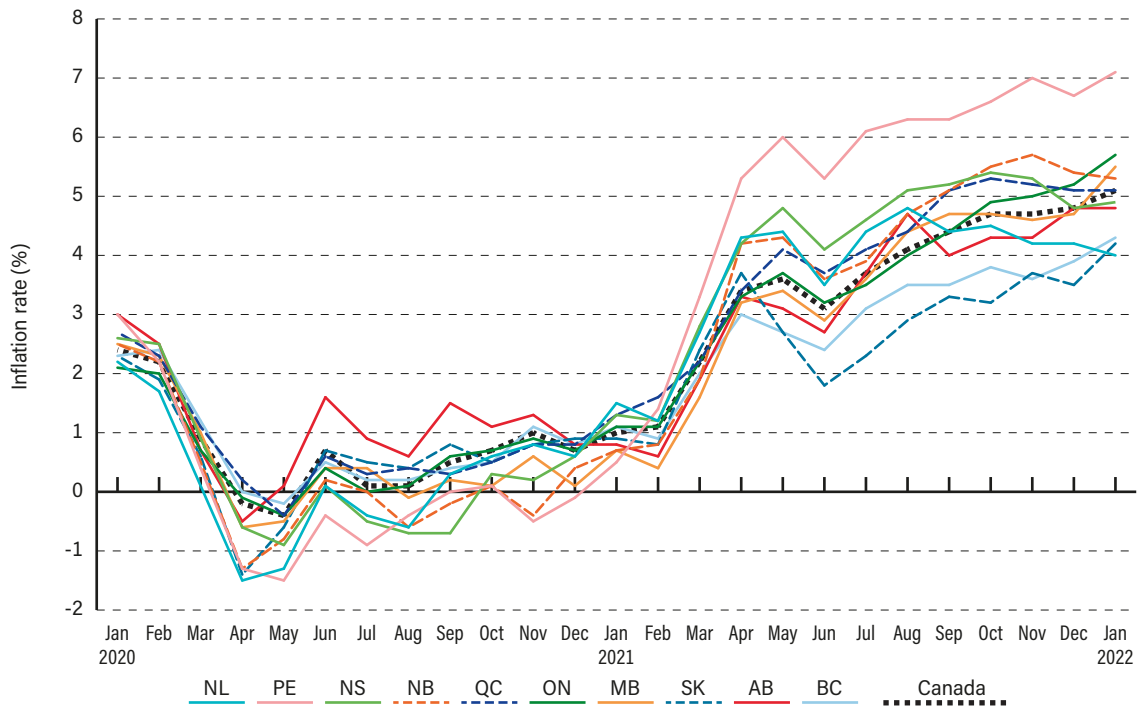


Sources: Statistics Canada, 2022f.

Inflation and Housing

After several decades of low inflation—total inflation as measured by the Consumer Price Index (CPI)—the pandemic was accompanied by a surge in prices driven by a combination of demand fueled by deficit financed pandemic income supports, exceptionally low interest rates,¹⁶ and supply-chain disruptions that created shortages of goods and long backlogs for ordering and shipping goods. As **figure 8A** and **figure 8B** illustrate, the initial impact of the pandemic involved reductions in demand that generated a brief decline in inflation and even temporarily raised the spectre of deflation. This was certainly the case between March and May of 2020 during the Alpha wave. Inflation in Canada then rose gradually but remained below 1% until late fall of 2020. Total CPI inflation began to surge in February and March of 2021 and has continued to rise since. Inflation was 2.2% in March of 2021 and topped 4% by August of 2021 before reaching over 5% by January of 2022; in April of 2022 it was 6.8% and, then, 7.7% in May of 2022.

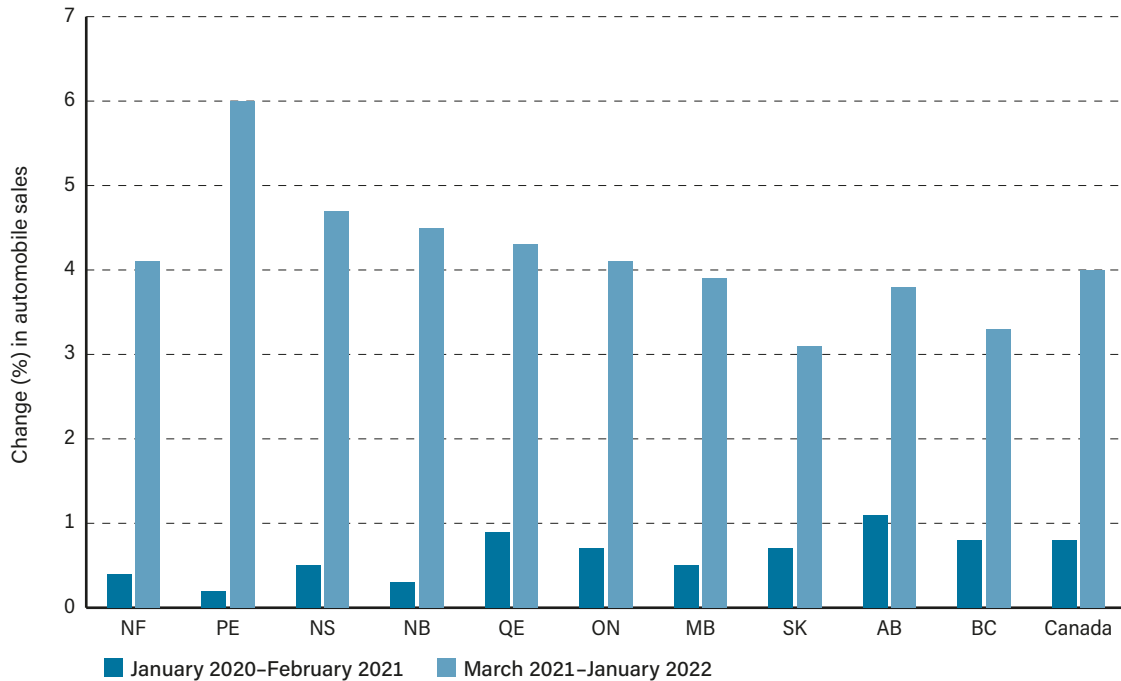
Figure 8A: Monthly inflation rate (CPI, %, annualized) in Canada and the provinces, January 2020–January 2022



Source: Statistics Canada, 2022b.

16. Azad, Serletis, and Xu (2021) in an empirical study of COVID-19 and fiscal and monetary policy in Canada conclude that deficit spending led to higher inflation with the positive effects of fiscal stimulus ending once the stimulus terminated.

Figure 8B: Average monthly inflation rate (CPI, %) in Canada and the provinces, January 2020–February 2021 and March 2021–January 2022



Sources: Statistics Canada, 2022b.

Between May of 2021 and May of 2022 prices for some goods such as gasoline have been up nearly 50%. All the provinces saw rising prices, but inflation was lowest in western Canada and generally the highest in Prince Edward Island, Nova Scotia, Quebec, New Brunswick, and Ontario.

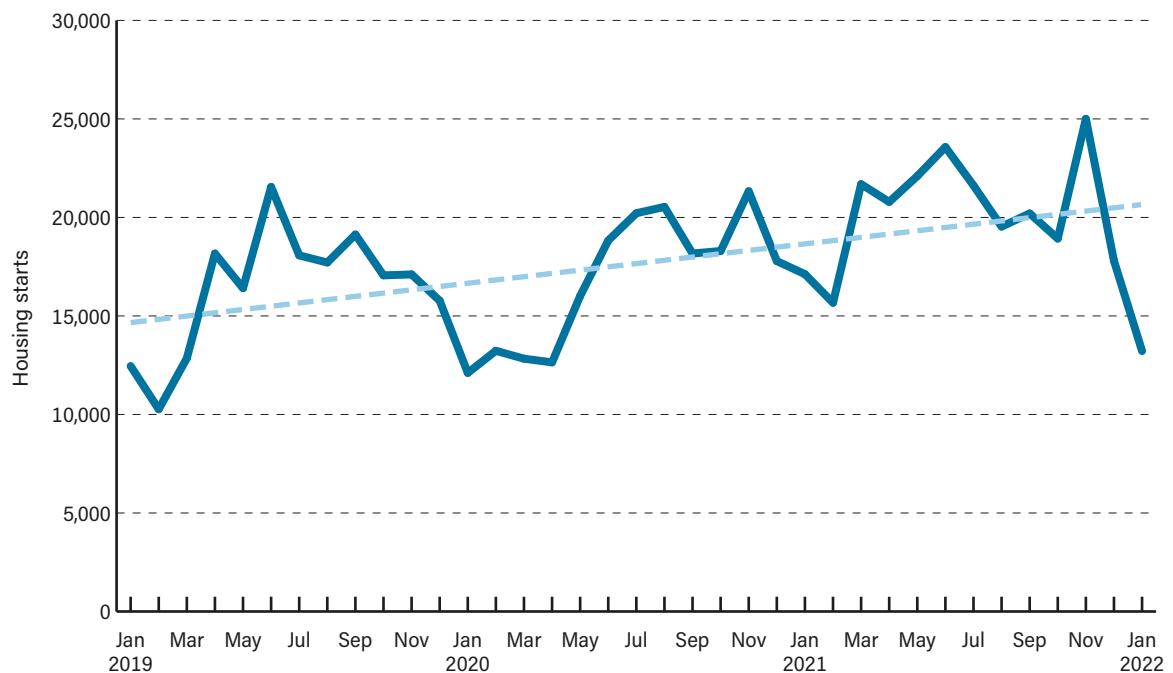
Of course, nowhere was inflation more visible than in housing markets, where prices soared on top of the longer-term rising price trend that has been affecting Canadian housing markets over the last two decades. Housing prices are in general determined by demand and supply factors. Demand factors include household income, general economic conditions such as unemployment rates, mortgage interest rates, and population growth (mainly via immigration in Canada). Supply-side factors can include the cost of construction, the stock of available housing as well as additions to that housing, and the cost and time required to obtain local government approvals for new development.¹⁷ The pandemic appears to have generated an enormous demand for larger houses and houses outside urban core areas, which drove up prices not only in the suburbs of large metropolitan areas but also in smaller and more remote communities.

17. For some examples of relatively recent papers on housing demand and supply, see Borowiecki, 2009, Chong, 2020, Latif, 2015, and Nistor and Reianu, 2018.

The accumulation of substantial household savings during the pandemic also may have been a factor fueling housing demand. Canada's household saving rate in the fourth quarter of 2019 was 2.7%; by second quarter of 2020 it had jumped to 27.2%. By the fourth quarter of 2020, the household saving rate had declined, but only to 11.5%. The decline continued into 2021 with the fourth quarter of that year showing a savings rate of 6.4%, still above the last quarter of 2019. Indeed, the accumulation of savings together with the rise in housing prices also helped fuel a substantial increase in national net worth over this period (Statistics Canada, 2022d).

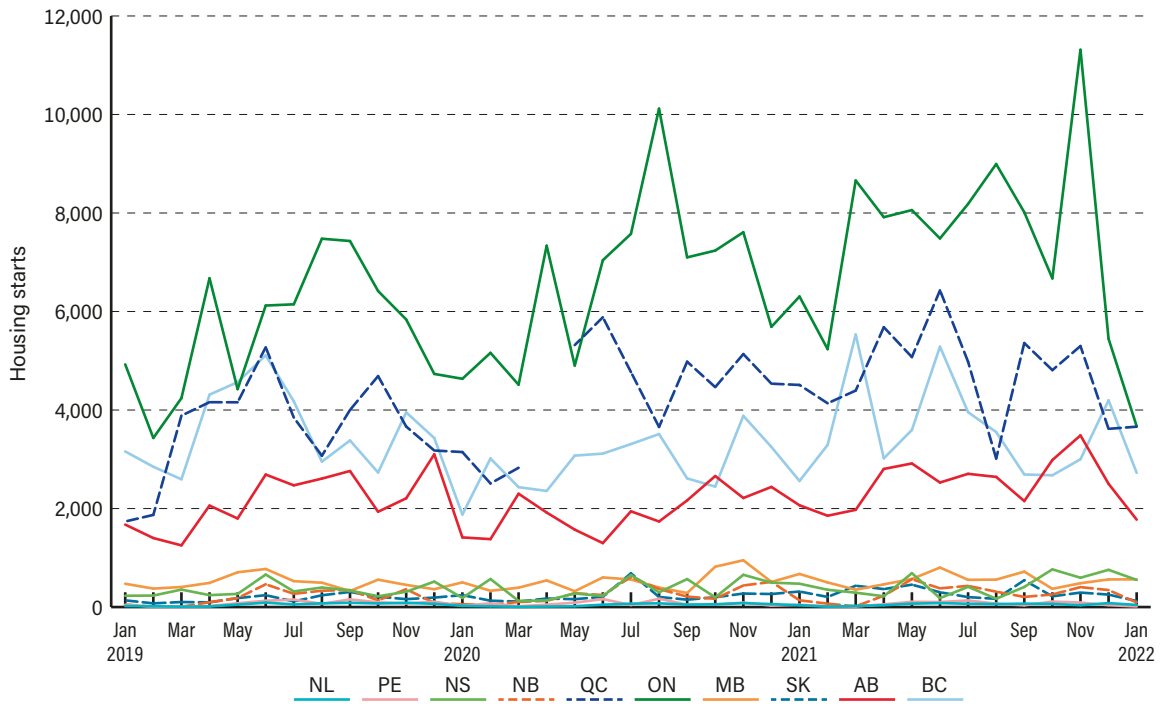
In terms of the supply side, one might expect that, in the face of this rising demand and pandemic economic disruption, the supply of new housing would have been depressed. As illustrated in **figure 9A**, **figure 9B**, and **figure 9C**, while there were definite declines in new housing starts at certain points from 2020 to 2021, which tended to coincide with the usual seasonal fluctuations, it remains the case that housing starts on an annual basis were up in most provinces in the first two years of the pandemic. For example, Ontario, which has been shown to have the largest structural housing deficit in Canada in terms of per-capita housing stock (Perrault, 2022), saw annual housing starts climb from 67,864 in 2019 to 92,284 in 2021, a 36% increase. Other provinces posted similar or larger increases over the same period with the biggest jumps in Saskatchewan (83%) and New Brunswick (43%). However, two provinces, Newfoundland & Labrador and Prince Edward Island, experienced declines in starts, while British Columbia rebounded after 2020 but was flat relative to 2019.

Figure 9A: Monthly housing starts in Canada, January 2019–January 2022



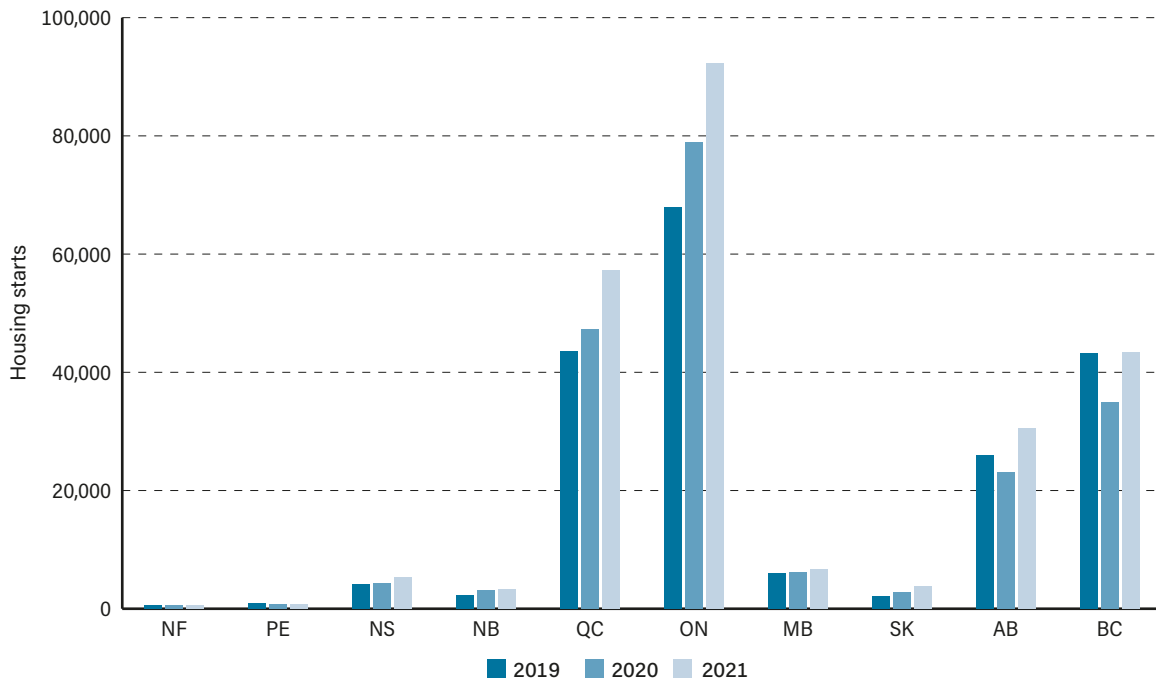
Source: Statistics Canada, 2022h.

Figure 9B: Monthly housing starts in the Canadian provinces, January 2019–January 2022



Source: Statistics Canada, 2022h.

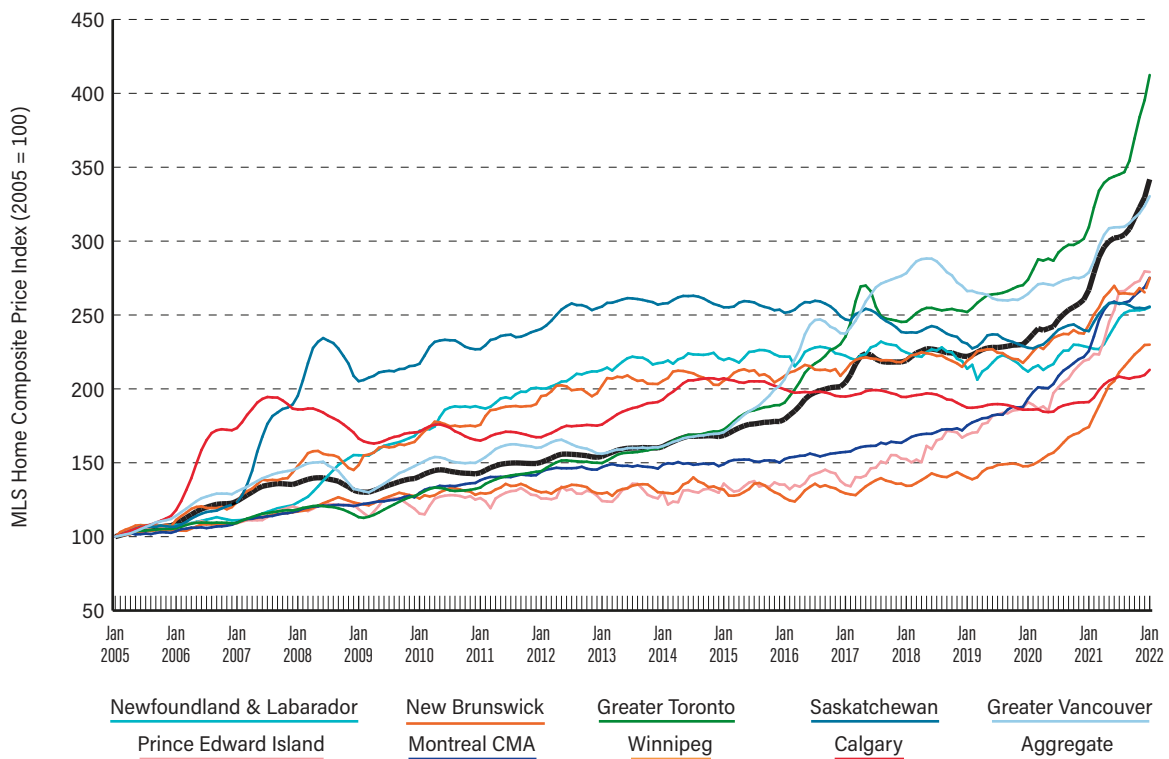
Figure 9C: Annual housing starts in the Canadian provinces, 2019, 2020, and 2021



Sources: Statistics Canada, 2022h.

However, even the expansion of new housing stock was insufficient to meet the growing demand for housing fueled by low interest rates, pandemic savings, high population growth,¹⁸ and pandemic-driven desires to move to larger homes or smaller more remote centers given the increased ability to work from home online (Drudi, 2022). It should be noted that housing statistics at the provincial level mask the fact that housing markets can be very local, with variation in the factors driving up prices. For example, the Maritime provinces saw a spike in housing prices as people from other provinces chose to relocate there given that they could work remotely. Smaller centres located outside major metropolitan areas and where demand was usually lower, also saw spikes in demand and prices as workers relocated outside major cities. **Figure 10A** and **figure 10B** provide evidence from the MLS Home Price Index (Canadian Real Estate Association, 2022) on the long-term rise of housing prices in select Canadian cities and regions as well as during the pandemic. Prices have been rising steadily since 2005 but the aggregate index in particular shows a marked upturn after January 2020. From January 2017

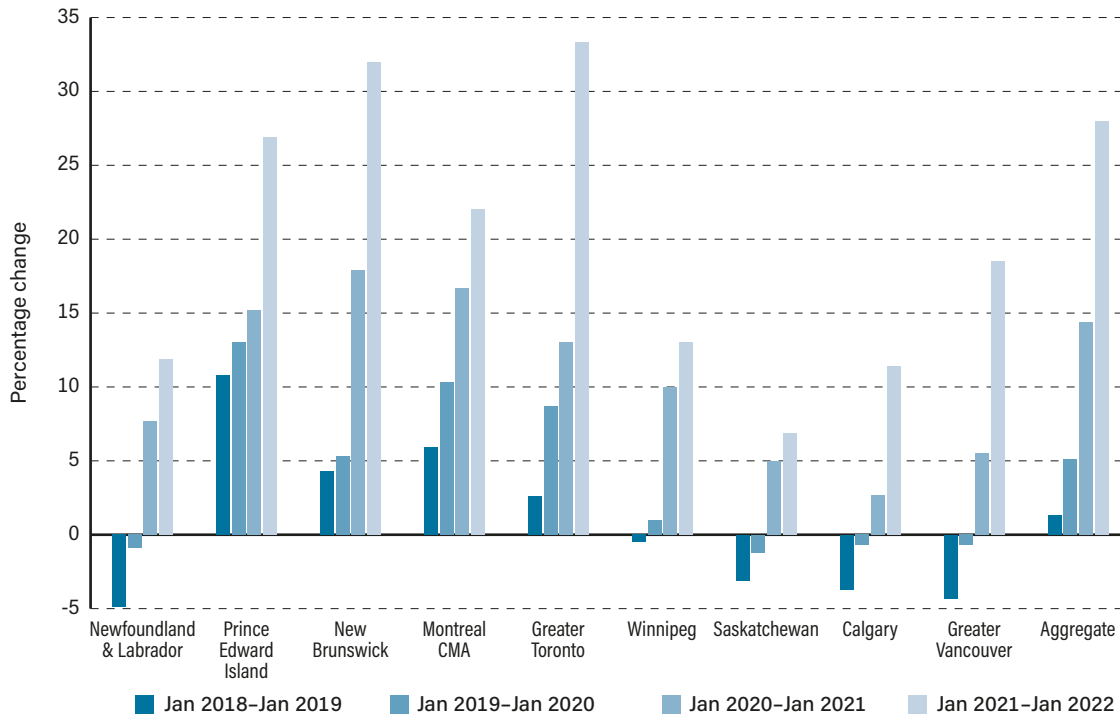
Figure 10A: MLS Home Composite Price Index for selected cities and regions in Canada, January 2005-January 2022 (2005 = 100)



Source: Canadian Real Estate Association, 2022.

18. According to Statistics Canada (2022b), in 2021 Canada topped the G7 for population growth despite COVID, growing at nearly twice the rate and adding 1.8 million people since 2015. Of these 1.8 million additional people, four out of five immigrated to Canada since 2016.

Figure 10B: Change (%) in the MLS Home Composite Price Index for selected cities and regions in Canada, 2018–2022



Source: Canadian Real Estate Association, 2022.

to January 2020, the aggregate MLS index in Canada rose a relatively moderate 14% while from January 2020 to January 2022 prices increased by 46%.

Some of the largest increases between January 2021 and January 2022 were in the Greater Toronto Area (33%) and New Brunswick (32%). Moreover, as 2022 continues to unfold, there is little evidence that price increases will abate even in the face of higher interest rates though some signs of “cooling off” have been noted, given the recent rise in both variable- and fixed-term mortgage rates (Lord, 2022). At the same time, given the unprecedented times and the obvious supply constraints in the face of continued robust demand in the Canadian housing market, the affordability of homes is likely to be a continuing issue.¹⁹ It should be noted that rising interest rates, all other things given, can contribute to increased lack of affordability and the evidence suggests that a downturn in housing prices and sales has begun (Younglai, 2022). In addition, there have also been concerns that the surge in the ratio of household debt to disposable income, which peaked at 185% in the fourth quarter of 2021, may pose additional vulnerability to the economy as interest rates rise (*CBC News*, 2022).

19. Badger and Bui (2022) chronicle the distinct possibility that, in the United States, given the housing shortage, interest rates and housing prices may rise in tandem.

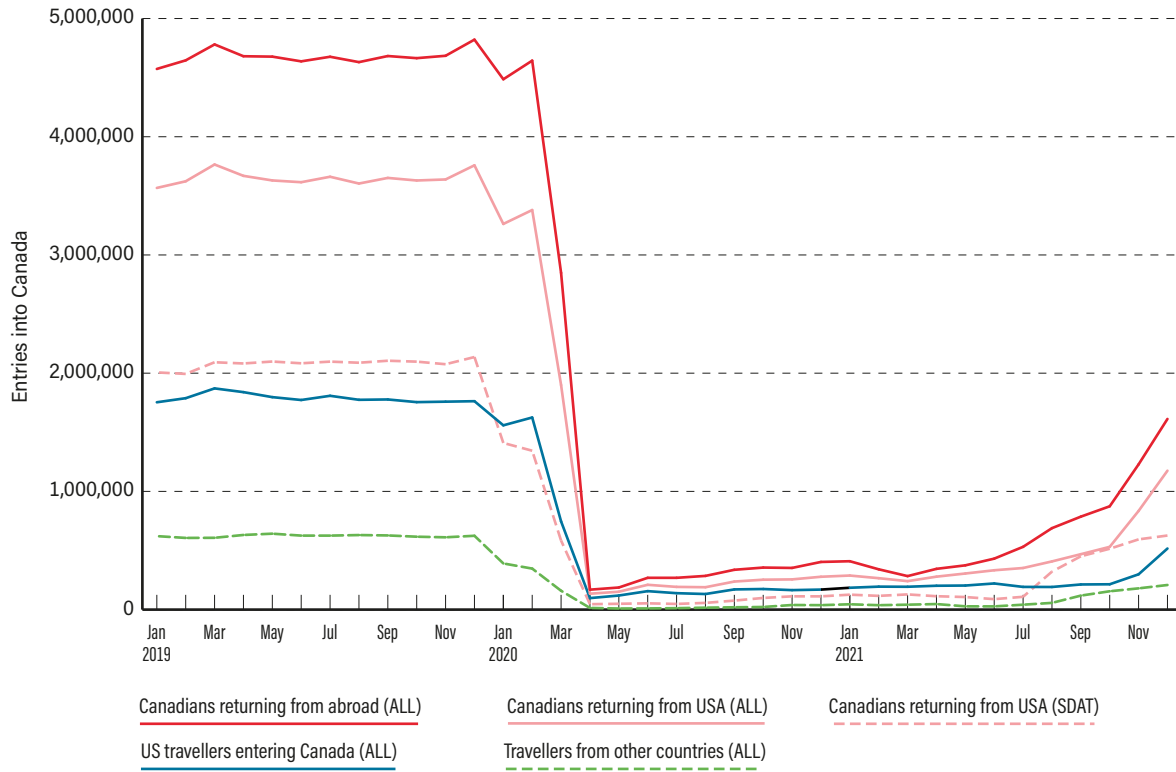
International Travel

No discussion of the pandemic impact on Canada would be complete without at least some mention of the impact on travel. Internationally, the COVID-19 pandemic with its travel and other restrictions and border closures disrupted what had been a golden age of international tourism, the period leading up to 2020 when hundreds of millions of people globally took to the skies, embarked on cruises, and voyaged to all corners of the earth. On March 13, 2020, the Canadian government began advising travellers to avoid all non-essential travel outside Canada, with a partial closure also extended to the US land border shortly thereafter, which remained in place for 19 months. It was only as vaccinations ramped up that relaxation of border control and travel measures began, though isolation and testing requirements remained in place for 2020 and much of 2021.

The United Nations World Tourism Organization (UNWTO) reports that compared to 2019, during the period from January 2020 to December 2020, global international tourist arrivals were down 73%, and during the period from January 2021 to December 2021, down 71% (UNWTO, 2022). Airports Council International provides an assessment of global airport passenger traffic that reports global air passenger traffic (both domestic and international) as rising from 7.2 billion passengers in 2015 to 9.2 billion in 2019, an increase of 28%. Between 2019 and 2020, air passenger traffic plummeted 61%, reaching 3.6 billion, and recovered only gradually in 2021 to 4.6 billion. Global air passenger traffic is not projected to exceed 2019 levels until 2024 (Airports Council International, 2021). In the case of Canada, a recent Statistics Canada report on the pandemic's impact on Canadian airlines finds: "In April 2020, there was a 97% year-over-year decline in the number of passengers carried by Canadian Level I air carriers. Previously the largest year-over-year declines recorded were 26% following both the September 11, 2001, terrorist attacks in the US and during the SARS (severe acute respiratory syndrome) outbreak in 2003 ... in December 2021, passenger numbers were slightly over half (55%) of pre-pandemic (December 2019) levels" (Mordvinova, 2022).

Figure 11 provides a visual snapshot of some of the havoc that was wreaked on Canadian international travel during the pandemic as represented by international border-count data compiled by Statistics Canada. Monthly data for the period from January 2019 to December 2021 is plotted for the total number of Canadians returning from abroad, the total number of Canadians returning from the United States, Canadians returning from the United States via same-day automobile trips (a traditional measure of cross-border shopping), total US travellers entering Canada, and total other international (foreign) travellers entering Canada.

Figure 11: International border-count data for entries into Canada, selected series, January 2019–December 2021



Sources: Statistics Canada, 2022i, using Computing in the Humanities and Social Sciences (CHASS) at the University of Toronto; calculations by author.

The monthly total number of Canadians returning from abroad plunged from 2.84 million to 168,607 between March and April of 2020, a 94% drop, while those returning from the United States fell from 1.90 million to 134,522, a 93% decrease. Whereas in 2019 some 56.2 million Canadian travellers returned from outside the country, the total in 2020 was 14.6 million, 80% of which occurred between January and March of 2020. In 2021, the total number of Canadians entering the country from abroad was 7.9 million. Thus, relative to volumes in 2019, the full year of pandemic in 2021 saw a drop of 86%.

Most of this decline occurred abruptly between March 2020 and April 2020. Over this two-month period, same-day automobile trips by Canadians returning from the United States fell by 87%, the percentage of US travellers entering Canada by all means of transport fell by 92%, while the number of other foreign international travellers declined by 91%. Totals remained essentially flat until March of 2021 when a modest rebound began, but it remains that international travel to and from Canada virtually vanished for a significant portion of 2020/21.

The economic impact of slumping travel and tourism was substantial despite attempts at federal assistance to some airlines as well as passengers for cancelled flights.²⁰ In the case of air travel, according to Statistics Canada (2022a), after 10 consecutive annual increases in air traffic since the 2009 economic downturn, in 2020 during the COVID-19 pandemic Canadian air carriers transported 28.4 million passengers, fewer than one third (30.2%) of the 94.1 million passengers carried in 2019. As well, Canadian air carriers' operating revenue in 2020 fell to less than half (41.4%) of the figure reported in 2019. At the same time, cargo revenue jumped, rising 20.0% to \$2.1 billion, an impressive gain but not enough to offset the decline in passenger revenue. For air carriers, the net result was that operating income was down by over \$5 billion in 2020 from 2019. At present, Canadian airports continue to be plagued by capacity issues and staffing shortages in the wake of the pandemic with long lineups at security checkpoints as well as for international returning passengers.

20. See, for example, Jones, 2021. It should be noted that, as its financial position improved, Air Canada then withdrew from federal assistance. WestJet, on the other hand, except for the Canada Emergency Wage subsidy, operated without a direct federal bailout (Burke, 2021).

Conclusion

The economic impact of the COVID-19 pandemic on the economy of Canada and the provinces was substantial. This report merely scratches the surface in describing the extent of the economic disruption, decline in employment and losses of income that affected the country. The immediate economic impact of the COVID-19 pandemic was a sharp decline in economic activity in the second quarter of 2020, with real GDP alone plunging 11%. However, the third and fourth quarters saw a rebound that hinted the recovery from the pandemic might be quicker than many expected. However, even with the rollout of vaccinations in early 2021, subsequent variants and their accompanying waves and continued public-health restrictions meant that, after two years of living with the virus, output and employment had barely recovered to their pre-pandemic levels. The fact that by early 2022 Canada finally surpassed the output peak of 2019 reveals the long-term economic cost of the pandemic as one of foregone growth and output. As the effects of these earlier output and growth losses compound, Canada will have a lower level of per-capita income than would otherwise have been the case.

All provinces were affected by the virus and the various public measures instituted to manage it, though some weathered the storm better than others at certain points during the pandemic, depending in part on the size of the COVID-19 surge in each province and the economic effects of the restrictions imposed as well as their length. For example, in 2020 the hardest hit economy was Alberta with an estimated 8% real GDP drop followed by Quebec and Newfoundland & Labrador, each falling by over 5%, then Ontario at about 5%. The Atlantic provinces and British Columbia, on the other hand, were hit less hard with real GDP drops of between 3% and 4%. The subsequent estimated real GDP rebound in 2021 was greatest in Quebec, British Columbia, and Ontario at over 6%, respectively, followed by Alberta, Saskatchewan, and New Brunswick at over 5%. The correlation between COVID infections and deaths and GDP and employment performance does not appear as important as that between the length and intensity of restrictions—restrictions that in the end were adopted mainly to conserve scarce hospital capacity—and poorer economic performance.

Going forward, the pandemic is seeing an abatement in the spring and summer of 2022 but autumn 2022 may see a resurgence of the pandemic with either the current Omicron variant or new subvariants. As well, there are indicators that other seasonal

viruses such as flu and colds may once again reassert themselves and disrupt both the economy and health systems. In trying to put the pandemic behind us, it is not clear whether the federal and provincial governments have learned any clear lessons about how to deal with either a resurgence of COVID-19 or a new pandemic while minimizing disruption to the economy. At the same time, the experience of the pandemic appears to have underscored the ultimate resilience and adaptability of firms, workers, and consumers in the Canadian economy as they adapted to the challenges of a new economic environment.

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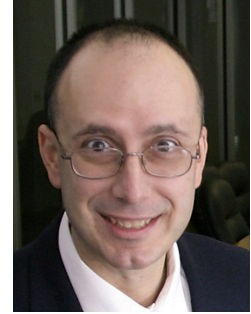
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