

The Implications of an Aging Population for Government Finances in Ontario

by Jake Fuss and Nathaniel Li



SUMMARY

- Seniors currently compose 17.6 percent of Ontario's population, and their share of the province's population will continue to grow and reach nearly 24 percent by 2043.
- This will drive increases in health care spending and slow the growth in revenues, which will impose adverse effects on the provincial economy. The risk of future recessions, rising interest rates, and other unexpected events will only compound problems further.
- Health care expenditures are estimated to increase by approximately 4.1 percent annually

from now until 2040/41. Put differently, Ontario's health care spending will increase from 7.1 percent of GDP in 2019 to 7.6 percent in 2040.

- The aging population will exacerbate challenges for Ontario government finances and projections suggest that at the current trajectory the province will not see a balanced budget before 2040.
- Ontario is expected to run primary deficits (excluding interest costs) equivalent to between 0.3 and 0.4 percent of GDP, unless it makes changes to its spending or tax policies.

Introduction

Over the last decade, academics and pundits have frequently mentioned the economic and fiscal implications of an aging population. Long-term projections suggest that in the coming decades a lower proportion of Canadians will participate in the labour force and the country will experience relatively low rates of economic growth. At the same time, Canada's aging population is expected to lead to slower-growing revenues and rising expenditures on health care in particular. Without a change in policy, these trends will exacerbate provincial government financial challenges and increase their deficits.

This report is one of five in a series about the financial pressures facing provincial governments due to the aging population. These bulletins are intended to be short summaries rather than exhaustive analyses, and will not explore debt ratios in detail or make specific policy recommendations. Instead, the purpose of this series is to inform Canadians of the effects that our aging population will have on government expenditures, and to a lesser extent, deficits, in their respective province or region.

Ontario is one example of a province that will find that its aging population will result in noteworthy changes in its economy and government finances. This bulletin will explore the long-term projections for Ontario's finances after incorporating the effects of the aging population. The first section examines how the province's population may be affected by changing demographics. The middle sections outline the current fiscal situation in Ontario and the impact of the aging population on provincial finances. These sections will primarily focus on health care spending. Finally, the fourth section includes a long-term projection for the fiscal situation in Ontario through 2040.

Demographic changes and implications

Ontario's population growth rate is determined by its birth rate, death rate, and net migration.¹ Over several decades, the province's fertility rate has dropped, and Ontarians are no longer having enough children to replace the existing population given current mortality rates. In recent years, net immigration has played a much bigger role in driving Ontario's population growth than it did in past decades.

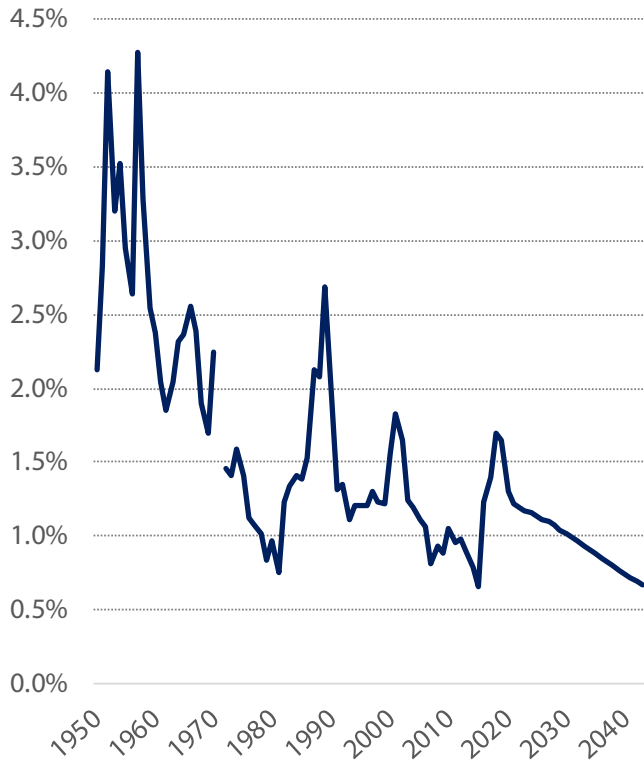
Despite this increase in net immigration, however, there has been a slowdown in population growth. For instance, the average annual population growth rate for Ontario in the 1950s and 1960s was 2.7 percent (Statistics Canada, 2021a). This is more than double the average annual population growth of 1.2 percent over the most recent 20-year period from 2001 to 2020 (Statistics Canada, 2021b). But population growth is expected to slow even further in the future. Based on Statistics Canada's medium growth rate projection for Ontario,² the annual population growth rate is expected to be about one percent or less from now until 2043 (see figure 1).

At the same time, life expectancy for people in Ontario is projected to continue increasing. A slower population growth rate combined with increasing life expectancy means that seniors will comprise a larger share of Ontario's population in the future. Figure 2 identifies the ac-

¹ Net immigration is the difference between in migration and out migration in the country.

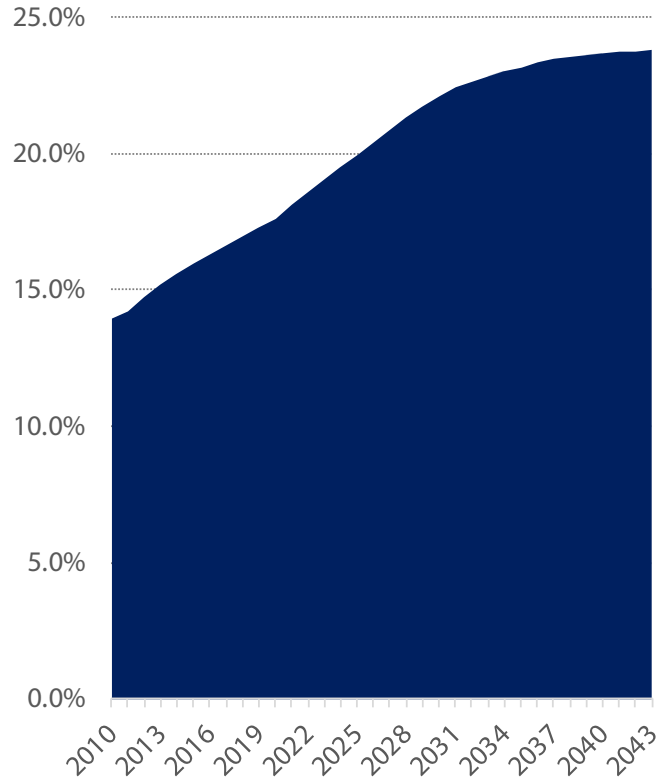
² This is based on Statistics Canada M1 projection for population growth. The medium-growth (M1) scenario expects the total fertility rate will reach 1.59 children per woman in 2042/2043 and remains constant thereafter; interprovincial migration is based on the trends observed between 1991/1992 and 2016/2017; the immigration rate reaches 0.83% in 2042/2043 and remains constant thereafter.

Figure 1: Ontario's Population Growth, 1950-2043



Sources: Statistics Canada (2021a, 2021b, 2021c); calculations by authors.

Figure 2: Share of Ontario's Population over 65 Years Old, 2010-2043

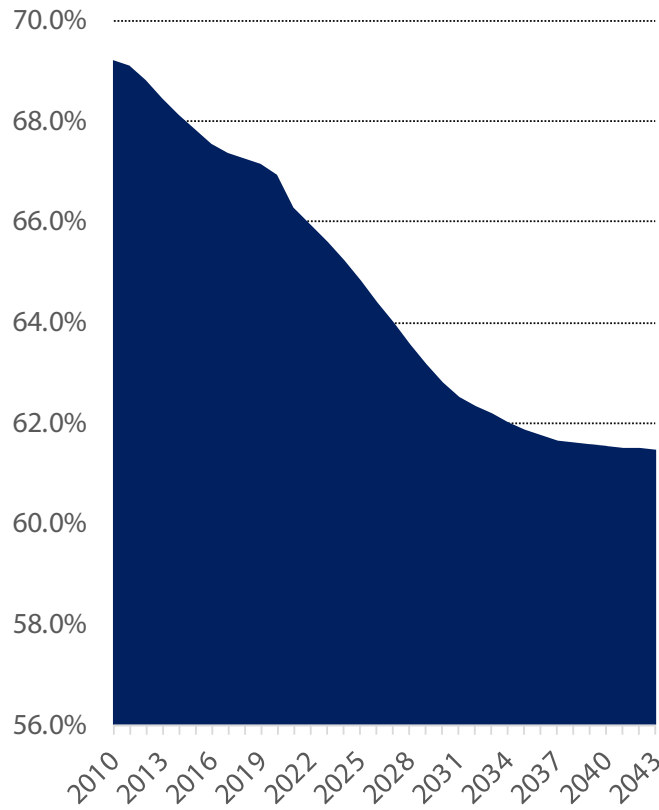


Sources: Statistics Canada (2021b, 2021c); calculations by authors.

tual and projected seniors' share of Ontario's population from 2010 to 2043. Over the last decade, the share of the population aged 65 and older has increased from 14.0 percent to 17.6 percent and is now expected to continue rising. The rate of growth will be highest from now until the mid-2030s, at which point the share of the population over age 65 will have reached more than 23 percent. After the mid-2030s, the rate of growth in the seniors' share of the population is projected to slow down but the actual share will continue to grow such that almost 24 percent of Ontario's overall population will be 65 years or older by 2043.

Figure 3 demonstrates how the share of Ontario's population aged 15 to 64 (encompassing the working age population) is projected to evolve. Working-age Ontarians accounted for 69.2 percent of the total population in 2010 (Statistics Canada, 2021b). Since then, the working-age share of the population has decreased and fell to 66.9 percent in 2020 (latest year of available data). As the baby boomers continue to retire, the working-age share is expected to decline further and gradually will fall well below two-thirds of the Ontario population over the next couple of decades. For instance, the proportion

Figure 3: Share of Ontario's Population Aged 15 to 64, 2010-2043



Sources: Statistics Canada (2021b, 2021c); calculations by authors.

is projected to reach roughly 61.5 percent by 2043 (Statistics Canada, 2021c).

Ontario's current fiscal situation

Ontario will run its 14th consecutive operating deficit in 2021/22, largely due to increased COVID spending and the pandemic's effect on revenues (MOF, 2021). Budget 2021 suggests that Ontario will run one of the largest deficits in provincial history at \$33.1 billion in 2021/22, which is equivalent to 3.7 percent of provincial gross domestic product (GDP) (MOF, 2021). Deficits are expected to continue persisting until 2029/30 in the baseline scenario, but this tar-

get date could improve under more optimistic circumstances.

All of these deficits mean that substantially more debt will be added to the government's books. According to budget forecasts, provincial net debt (total debt minus financial assets) in 2023/24 will reach \$503.1 billion (MOF, 2021). Ontario's debt-to-GDP ratio will reach the highest level in provincial history at 50.2 percent if the current plan comes to fruition. Moreover, the province's current debt-to-GDP ratio (48.8 percent) is the second highest rate among all provinces in Canada behind only Newfoundland & Labrador.³

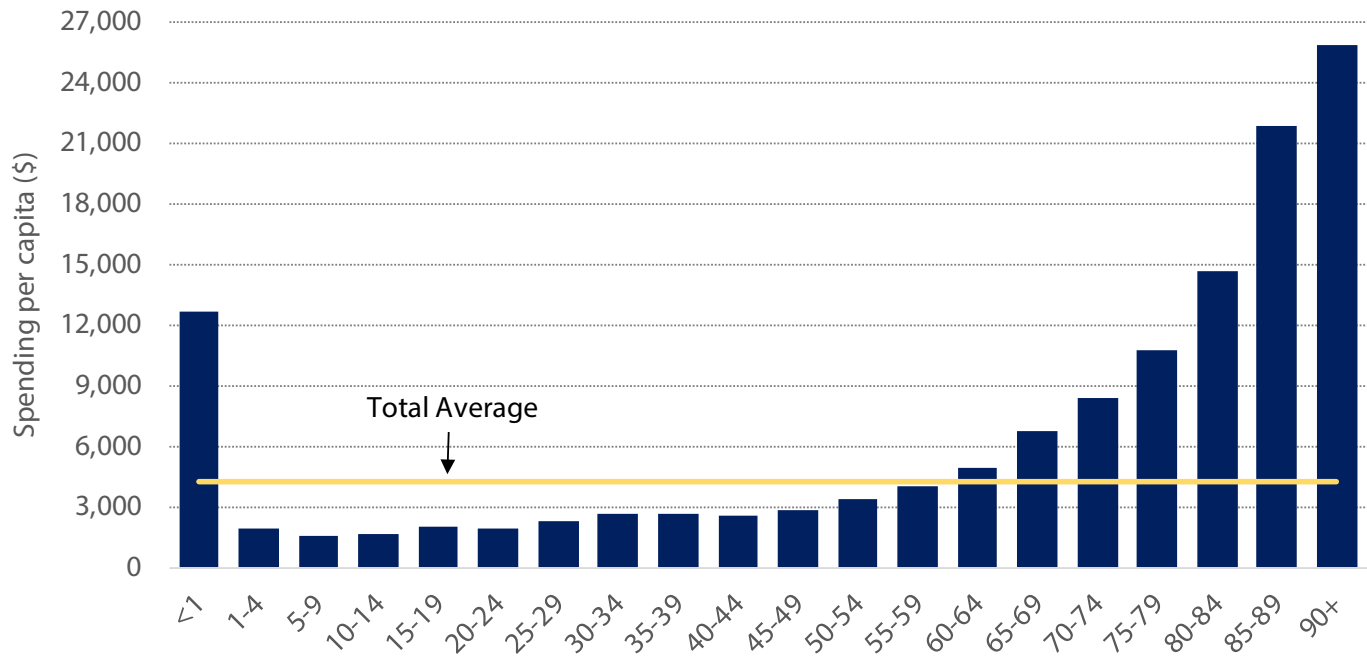
Program spending is projected to equal \$173.0 billion this year and revenues are expected to total \$154.0 billion (MOF, 2021). Specifically, real per-person program spending has increased by 8.2 percent since 2019. Provincial health care spending in 2021/22 is forecasted to be \$69.8 billion, which constitutes approximately 40.3 percent of all program spending. In contrast, K-12 education and post-secondary education account for less than a quarter (24.3 percent) of the province's program spending.

Impact of the aging population on Ontario's health care spending

Provincial finances will experience the primary effect of the aging population—mainly through the needed increases in health care spending. Specifically, the elderly use more health care resources since they are more vulnerable to illnesses and chronic diseases that require acute medical attention (Jackson et al., 2017). Ontarians aged 65 or older accounted for 44.2 per-

³ There are serious concerns about Newfoundland & Labrador's provincial finances. See Drummond and Levesque (2021) for more information.

Figure 4: Ontario’s Health Care Expenditures per Capita by Age Group, 2018



Source: CIHI, 2020.

cent of all provincial health care expenditures in 2018 (the latest year of available data) despite only accounting for approximately 16.9 percent of the provincial population (CIHI, 2020; Statistics Canada, 2021b). In contrast, Ontarians under the age of 25 accounted for only 15.1 percent of all provincial health care spending while constituting a much larger share (28.8 percent) of the population. Clearly, the proportion of elderly Ontarians has a direct effect on the province’s level of health care spending (see figure 4 for more data).

Changes in provincial health care spending can generally be broken down into several categories: demographic factors (population growth and aging), inflation (general and health-spe-

cific inflation), and other unexplained factors.⁴ Any calculation of Ontario’s health care expenditures involves making assumptions about population factors, particularly. In this bulletin, we use the M1 population projections from Statistics Canada and data from CIHI (2020) for average expenditures for different age groups in Ontario to simulate how health care expenditures will grow over time.

We assume that general inflation will have a similar impact on health care spending as it will on the rest of Ontario’s economy. Projections for general inflation come from short-term projections from private forecasters and the Conference Board of Canada’s long-term

⁴ See Xu et al. (2011) for more information about the determinants of health expenditures by country.

forecast for provincial inflation. In addition to general inflation, provincial health care spending is affected by health-sector price inflation, which has been above the rate of general inflation in recent decades. The Canadian Institute for Health Information notes that inflation in health care typically outpaces increases in CPI due to “increases in remuneration, as employers and governments compete for a limited pool of human resources (CIHI, 2011). For this reason, we will continue to assume that provincial health care expenditures will grow in excess of general inflation, by something we refer to in the bulletin as “health-specific inflation.”

There are other, generally less well-known factors, unexplained by inflation and demographic factors, that contribute to the growth in health care expenditures. Some of these include government policy, technological change, and income elasticity. However, there is a great deal of uncertainty over the magnitude of these effects (i.e., the value for elasticity).⁵ For simplicity, we make the same assumption as Barua et al. (2017), that growth in health expenditures due to unexplained factors should be based on observed historical data without separating out the possible contribution of income elasticity of health care spending.⁶ While this is conceptually equivalent to assuming an income elasticity of zero, it does not mean the authors do not acknowledge the existence of income elasticity or that our model excludes this effect. Instead, our model simply does not separate out income

elasticity from other unexplained factors (see Barua et al., 2017, for further explanation).

Ontario’s health spending is projected until 2040/41 based on the sum of the products of estimates for health care spending by age group and population by age group. Health care spending values for 2020/21 to 2023/24 are assumed to be the same values as projected in Ontario’s 2021 Budget (see MOF, 2021). We calculated health care spending for 2024/25 through 2040/41 by multiplying projected spending per age group (in five-year increments) by a growth factor that reflects inflation and unexplained factors. We then multiplied these numbers by the projected population of each age band to account for the demographic effects of an aging population. To summarize, provincial health care spending in year t can be illustrated using the following equation:

$$HS_t = \sum_{k=1}^n \left[hc_{k,t-1} \left(\frac{CPI_t}{CPI_{t-1}} \right) \left(\frac{HSI_t}{HSI_{t-1}} \right) (1 + X_t) \right] Pop_{k,t}$$

Where t is the year, k is the five-year age band, n is the total number of age bands, HS is total provincial health spending, hc is health spending per capita, CPI is the consumer price index, HSI is health-specific inflation (based on historical data), X is other unexplained factors (based on historical data), and Pop is the population (based on Statistics Canada’s M1 scenario). Table 1 lists the various assumptions used for the formula.

Other spending and revenue projections

There are additional assumptions that affect our calculations of the effects of the aging population. For instance, we assume that spending projections for elementary and secondary education increase conservatively in line with the provincial growth rate for the K-12 popula-

⁵ See Kneebone (2012) for reasons why there is uncertainty over the appropriate elasticity to use in Canada.

⁶ The income elasticity of health care spending refers to the relationship between growth in per capita income and demand for health care services (Barua et al., 2017).

Table 1 : Assumptions for Ontario

Growth Factor		Assumption		Average Annual Growth Rate (percent)
Inflation	General Inflation	Average private forecasters; Conference Board of Canada	Variable	2.0%
	Health-specific inflation	Historical Observation (2004-2019)	Constant	0.2%
Demographics	Population Growth	Statistics Canada (2021) Population Projections M1	Variable	1.0%
Other Factors		Historical Observation (2004-2019)	Constant	0.4%

Sources: Grantham and Bognar (2021); CIHI (2020); Conference Board of Canada (2020); Hogue and Freestone (2021); Desormeaux (2021); Statistics Canada (2021c); Caranci, Burleton, Abdelrahman, and Sondhi (2021); calculations by authors.

tion (5 to 18 year olds) plus inflation. Likewise, post-secondary education spending rises at the provincial rate of growth for the 19 to 24-year-old population plus inflation. All other program spending is estimated to simply grow at the rate of inflation plus total population growth.

Slower revenue growth is another potential consequence of the aging population. As the PBO (2021) noted, population aging will put downward pressure on the growth in total hours worked in Ontario and cause slower growth in real GDP and real GDP per capita. The subsequent result is slower growth in revenues as well.⁷

To account for demographic effects, this bulletin follows a similar approach to Tombe (2020) and the PBO (2021) in estimating Ontario's annual growth in revenue until 2040. For simplic-

ity, revenues for personal income taxes, corporate income taxes, sales taxes, payroll taxes, excise taxes, and natural resources all grow in line with nominal GDP projections (Tombe, 2020; PBO, 2021).

Property tax revenues and other own-source revenues are projected to grow with population plus inflation, and gasoline tax revenues to grow with real GDP. Growth in tobacco tax revenues is expected to slow substantially and in this report is only anticipated to rise with inflation. Projections for inflation, nominal GDP, and real GDP growth for 2020 to 2022 come from private forecasters. From 2023 onwards, we follow the Conference Board of Canada's (2021) outlines for inflation and assume it will grow by 2.0 percent; we also assume that GDP growth will be equivalent to the Parliamentary Budget Officer's projections (PBO, 2021).

Transfers from the federal government differ according to the existing rules. Revenues for the Canada Health Transfer (CHT) and the Can-

⁷ Please see PBO (2021) for more information about the various factors contributing to slower growth in revenues and real GDP.

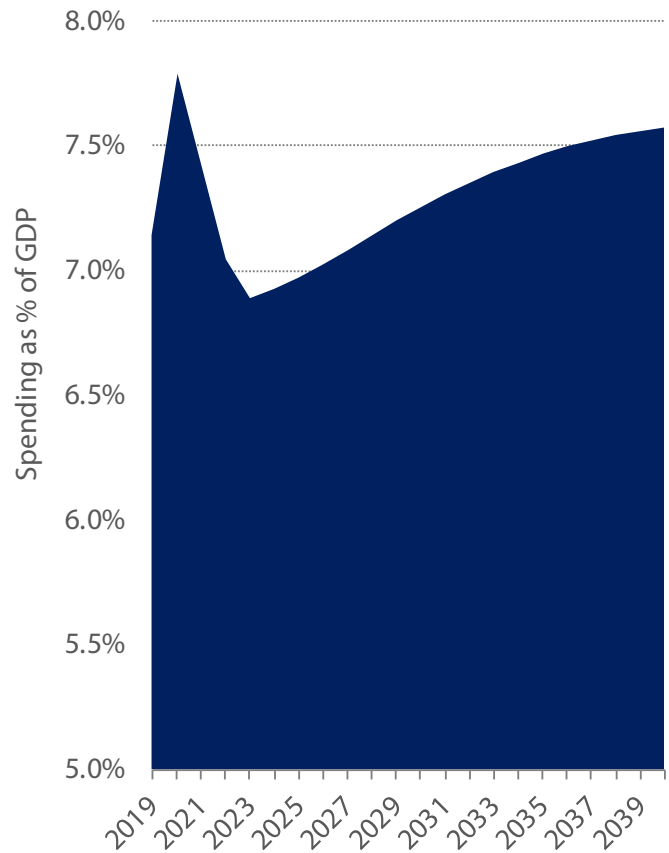
ada Social Transfer (CST) both grow conservatively at an annual rate of 3.0 percent. For simplicity purposes and to reflect its current status as a non-recipient, equalization payments are assumed to be zero for Ontario over the entire period. We assume that other transfers from the federal government will keep pace with population growth plus inflation.

Fiscal projections

Based on the assumptions outlined in the previous section, our model suggests that Ontario's revenue will grow at an average annual rate of 3.5 percent from now until 2040/41. Put differently, annual revenue growth in Ontario is expected to be below average annual nominal GDP growth (4.2 percent) in the province over the same time period. Annual provincial revenue is projected to nearly double (in nominal terms) over the next two decades from \$154.0 billion in 2021/22 to approximately \$297.8 billion in the last year of projections. In total, annual program spending is projected to increase nominally from approximately \$173.0 billion in 2021/22 to \$303.2 billion by 2040/41—an increase of 75.3 percent. All program spending outside of health care is estimated to grow by an annual average of 2.2 percent between 2021/22 and 2040/41.

Health care expenditures are estimated to increase by approximately 4.1 percent annually from now until 2040/41. This represents a nominal increase of 113.0 percent from \$69.8 billion in 2021 to \$148.6 billion in 2040. Relative to the size of the Ontario economy, our projections suggest that health care spending by the province will increase from 7.1 percent in 2019 (the last year before the pandemic) to 7.6 percent in 2040 (figure 5). This highlights the pressure Ontario's aging population will place on its budget in the coming decades. Notably, health

Figure 5: Ontario's Projected Health Spending Relative to the Economy (GDP), 2019-2040

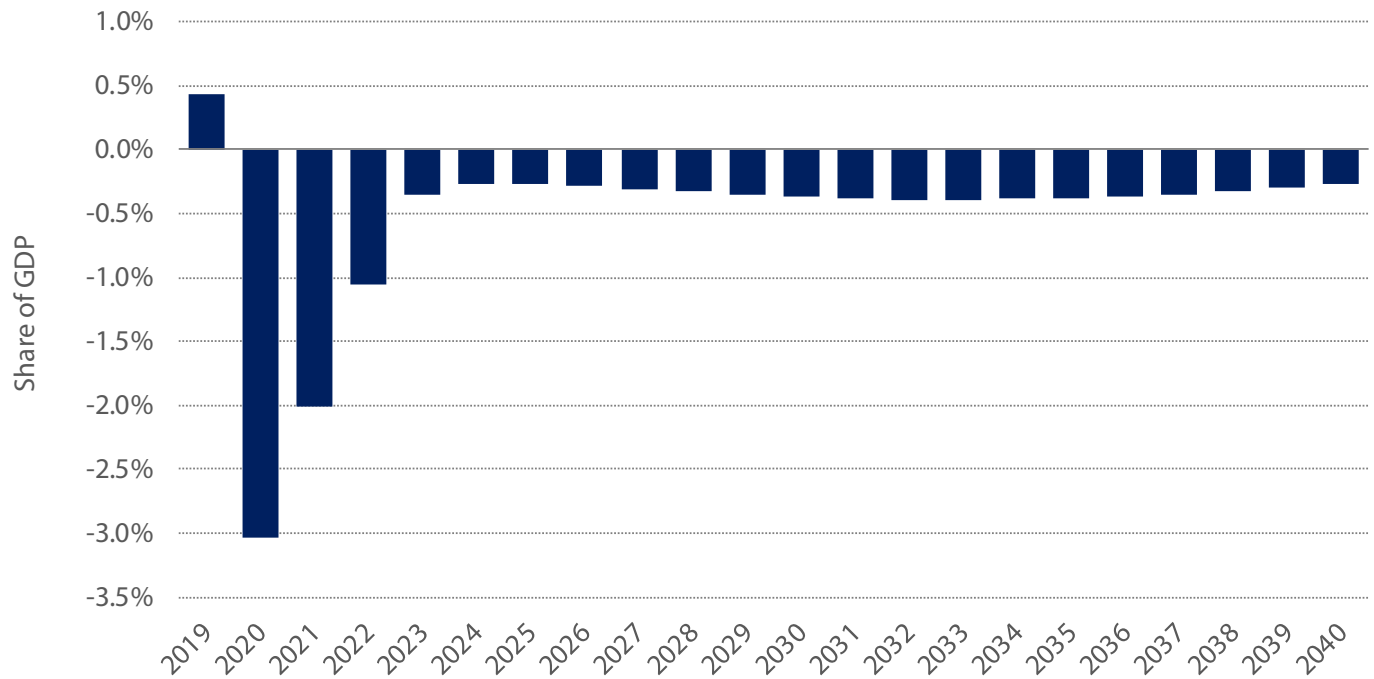


Sources: CIHI (2020); MOF (2021); calculations by authors.

spending as a share of the economy reaches a peak in 2020 (7.8 percent) due to the temporary effects of COVID-19, then briefly declines as the economy recovers.⁸ Afterwards, health spending is expected to increase again as a share of GDP and eventually exceed the pre-pandemic total.

⁸ In 2020, provincial GDP declined at the same time as health spending grew. This caused a noticeable surge in health spending as a share of Ontario's GDP.

Figure 6: Primary Balance in Ontario, as a Percent of GDP, 2019/20 to 2040/41



Sources: MOF (2021); calculations by authors.

We also calculate a primary balance for the province, which demonstrates what the government’s fiscal balance would be in the absence of debt interest costs. In other words, the primary balance compares provincial revenues to program expenditures. If revenues exceed program spending, the province is said to be in “primary surplus,” whereas a “primary deficit” arises when program spending exceeds revenues. Throughout the entire 2021 to 2040 period, we project that Ontario will have a primary deficit due to a structural imbalance between revenues and program spending (figure 6). While the primary deficit declines from its 2020 peak, the Ontario government could be running primary deficits roughly equivalent to 0.3 to 0.4 percent

of GDP until at least 2040. While our primary deficit estimates for Ontario are different from those of the Parliamentary Budget Officer, these numbers are lower than the average annual primary deficit projected in Tombe (2020) by 2030 (2.1 percent of GDP) and 2050 (2.7 percent of GDP).

Simply put, these projections signal that the Ontario government is likely not on track to balance its budget before 2040 as it deals with upward pressure on health care spending and relatively modest revenue growth. The risk of rising debt interest payments will further compound these challenges by consuming more revenue, thus making it increasingly difficult to balance the budget any time soon.

Conclusion

Ontario's finances will be in a precarious situation in the years ahead due to the economic effects of both the province's aging population and COVID-19. Seniors will continue to constitute a growing share of Ontario's population, which will drive increases in health care spending and slow revenue growth while imposing adverse economic effects on the province. Moreover, absent a change in current policy, the aging population will exacerbate the problem of persistent deficits that will continue to challenge Ontario's government finances. In fact, at its current trajectory Ontario may not see another balanced budget until after 2040. The risk of future recessions, rising interest rates, and other unexpected events will only compound problems further. Ultimately, the Ontario government will have to implement new policies in order to avoid a serious deterioration in the health of its finances.

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