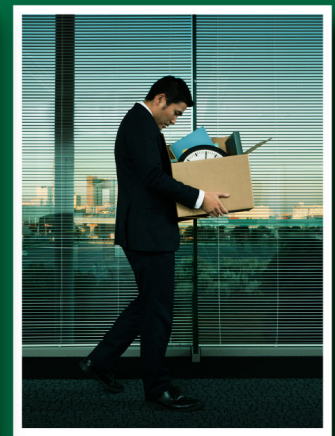


The Implications of an Aging Population for Government Finances in the Prairies

by Jake Fuss and Nathaniel Li



SUMMARY

- Seniors currently compose a large share of Saskatchewan and Manitoba's population, and will constitute an even greater share of the region's population in the years ahead.
- This will drive increases in health care spending and slow the growth in revenues, while imposing adverse effects on the provincial economies. 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 5.4 percent annually

from now until 2040/41 in Saskatchewan and by 4.9 percent in Manitoba.

- The aging population will exacerbate challenges for provincial government in the form of persistent deficits. Projections suggest that at the current trajectory the province will not see a balanced budget before 2040.
- Saskatchewan is expected to run primary deficits (excluding interest costs) equivalent to between 2.0 and 2.8 percent of GDP absent a change in spending or tax policy. Manitoba is also on track to run primary deficits of between 0.8 and 1.0 percent of GDP until 2040/41.

Introduction

Academics and pundits alike have spent much time over the past decade discussing Atlantic Canada's relatively old and 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 result in slower-growing revenues and rising expenditures, particularly for health care. This will exacerbate challenges for provincial government finances and increase deficits if there is no change in policy.

This report is one of five bulletins in a series about the financial pressures facing provincial governments due to an aging population. These bulletins are intended to be short summaries, rather than exhaustive analyses, and do not explore debt ratios in detail or make specific policy recommendations. Instead, the purpose of this bulletin 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.

Saskatchewan and Manitoba are two examples of provinces with aging populations that will experience noteworthy changes for their economy and government finances. This report will explore long-term projections for these provinces' finances after incorporating the effects of an aging population. The first section examines how the populations of the two provinces may be affected by changing demographics. The middle sections outline the current fiscal situation in both provinces 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 Saskatchewan and Manitoba through 2040.

Demographic changes and implications

The population growth rate for any province is determined by its birth rate, death rate, and net migration.¹ Over several decades, the fertility rate has dropped in Saskatchewan and Manitoba and their residents 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 population growth for Saskatchewan and Manitoba than it did in past decades.

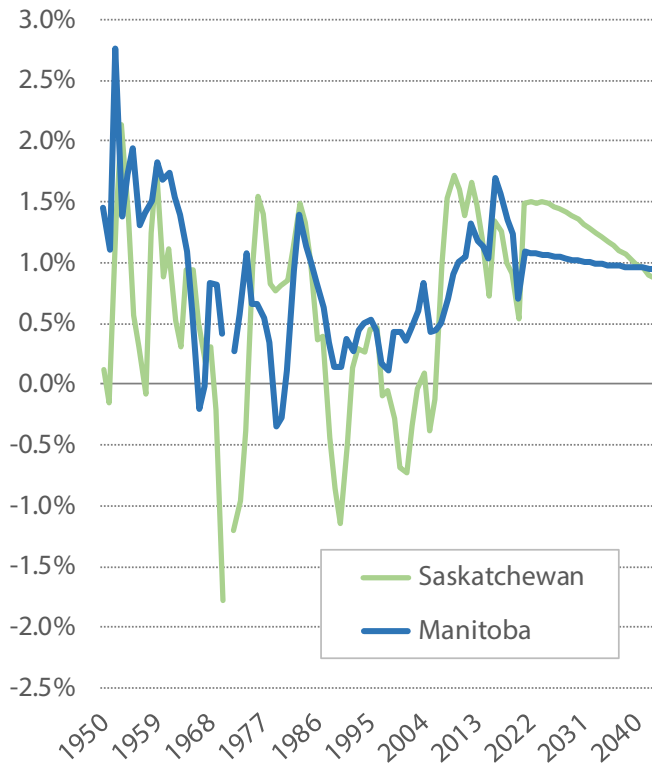
While the population growth has ticked upwards in the prairies since the early 2000s, it remains below the peak levels seen during the 1950s. For instance, Saskatchewan's highest population growth rate was in 1953 at 2.1 percent and Manitoba's was in 1952 at a 2.8 percent (Statistics Canada, 2021a). In contrast, over the last decade the average annual population growth was 1.1 percent for Saskatchewan and 1.2 percent for Manitoba (Statistics Canada, 2021b). In the future, the population of both provinces is expected to grow at roughly the same rate as in the last decade. Based on Statistics Canada's medium growth projection,² the annual population growth rate is expected to be 1.3 percent in Saskatchewan and 1.0 percent in Manitoba from now until 2043 (see Figure 1).³

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

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 percent in 2042/2043 and remains constant thereafter.

³ Population projections for Saskatchewan and Manitoba come directly from Statistics Canada. For brevity, we do not disaggregate the different ele-

Figure 1: Population Growth in Saskatchewan and Manitoba, 1950-2043



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

At the same time, life expectancy for people in the prairies is projected to continue increasing. Modest population growth rates combined with increasing life expectancy means that seniors will comprise a larger share of Saskatchewan and Manitoba's future population. Figure 2 identifies the actual and projected seniors' share of both provinces' populations from 2010 to 2043. Over the last decade, the share of Sas-

ments (i.e., inter-provincial migration, immigration, etc.) contributing to their projections. See Statistics Canada (2021c) for more information.

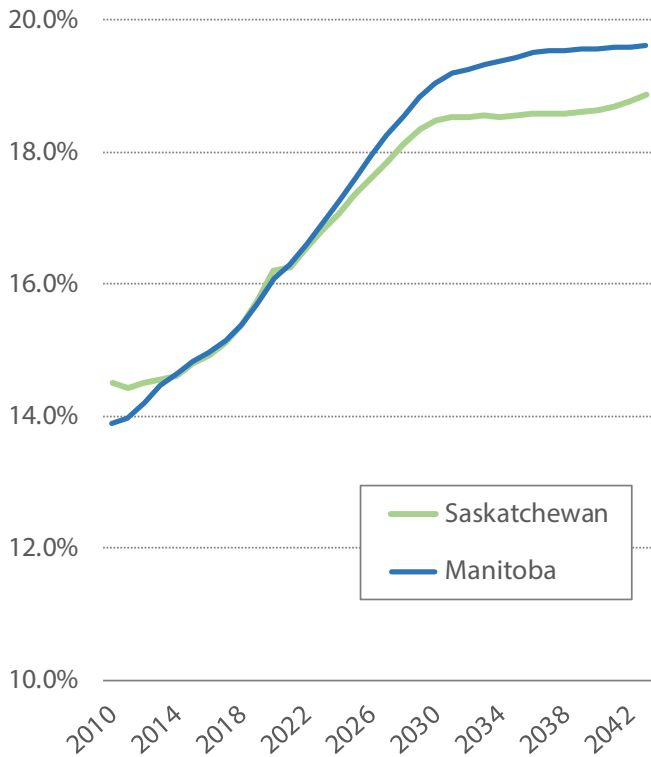
katchewan's population aged 65 and older has increased from 14.5 percent to 16.2 percent and is now expected to continue rising. Manitoba has experienced a similar development with those over age 65 comprising 13.9 percent of the provincial population in 2010 and growing to 16.1 percent by 2020. By 2043, the share of seniors in both provinces will continue to grow such that 18.9 percent of Saskatchewan's overall population and 19.6 percent of Manitoba's population will be 65 years or older.

Figure 3 demonstrates how the share of the prairie population aged 15 to 64 (encompassing the working-age population) is projected to evolve. Working-age residents accounted for just over two-thirds of the total population for both provinces in 2010 (Statistics Canada, 2021b). Since then, the share of the population that is of working age has fallen to 64.2 percent in Saskatchewan and 65.0 percent for Manitoba 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 fall well below two-thirds of the prairie population over the next couple decades. Specifically, the proportion is projected to reach roughly 62.5 percent by 2043 for Saskatchewan and 62.2 percent in Manitoba (Statistics Canada, 2021c).

Current fiscal situation in the prairies

Saskatchewan will run its seventh consecutive operating deficit in 2021/22, largely due to increased COVID spending and the pandemic's effect on revenues (MOF, 2021). Budget 2021 suggests Saskatchewan will run one of the largest deficits in provincial history at \$2.6 billion in 2021/22, which is equivalent to 2.9 percent of provincial gross domestic product (GDP) (MOF, 2021). Deficits are expected to continue persisting until at least 2026/27 according to the

Figure 2: Share of Population over 65 years old in Saskatchewan and Manitoba, 2010-2043

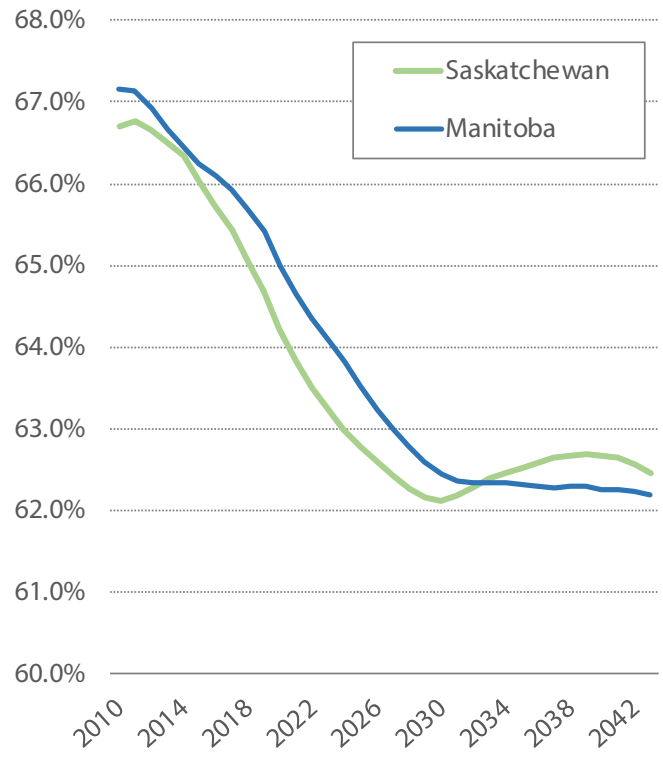


Sources: Statistics Canada (2021b, 2021c); calculations by authors.

budget, but this target date could improve under more optimistic circumstances. Manitoba faces a similar fiscal situation. The province is expected to run a \$1.6 billion deficit in 2021/22 and deficits are projected to continue persisting until at least 2028/29 under the current set of assumptions (DOF, 2021).

These deficits mean that substantially more debt will be added to the government's books. According to budget forecasts, Saskatchewan's provincial net debt (total debt minus financial assets) will reach 26.3 percent of provin-

Figure 3: Share of Population aged 15 to 64 in Saskatchewan and Manitoba, 2010-2043



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

cial GDP in 2024/25 (MOF, 2021), an increase from today's 19.0 percent. Manitoba's debt-to-GDP ratio is expected to equal 38.4 percent in 2024/25, which is up from the 34.2 percent ratio recorded prior to the pandemic (DOF, 2021).

Program spending is projected to equal \$16.3 billion this year in Saskatchewan and revenues are expected to total \$14.5 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 as \$6.5 billion, which constitutes ap-

proximately 40.0 percent of all program spending (MOF, 2021). In contrast, education accounts for less than a quarter (23.0 percent) of the province's program spending. For Manitoba, program spending is expected to total \$18.4 billion in 2021/22 and revenues are projected to equal \$17.6 billion (DOF, 2021). Real per-person program spending in that province has grown by 13.8 percent since 2019 and health care spending this year is forecasted to be roughly \$6.6 billion (DOF, 2021).

Impact of the aging population on 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). In 2018, residents aged 65 or older accounted for 39.9 percent of all provincial health care expenditures in Saskatchewan and 43.4 percent in Manitoba (the latest year of available data) despite seniors only amounting to approximately 15.4 percent of the population in both provinces (CIHI, 2020; Statistics Canada, 2021b). In contrast, residents under the age of 25 accounted for only 17.9 percent of all provincial health care spending in Saskatchewan and 16.1 percent in Manitoba while constituting a much larger share of the population (32.1 percent in Saskatchewan and 32.5 percent in Manitoba). Clearly, the proportion of elderly residents has a direct effect on the level of health care spending in the provinces (see Figure 4 for more data).

Changes in provincial health care spending can generally be broken down into several categories:

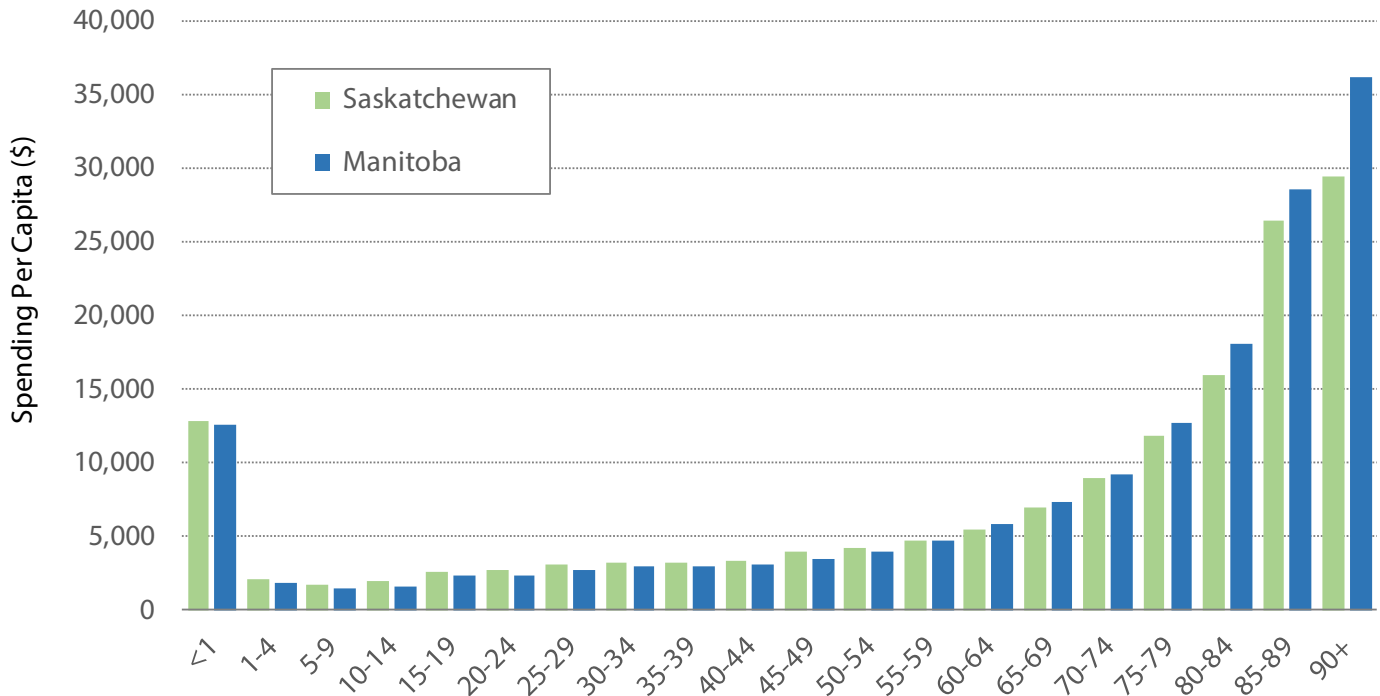
demographic factors (population growth and aging), inflation (general and health-specific inflation), and other unexplained factors.⁴ Calculating health care expenditures for Saskatchewan and Manitoba involves making assumptions about population factors in particular. In this bulletin, we use the M1 population projections from Statistics Canada and data from CIHI (2020) for average expenditures for different age groups in the provinces 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 Saskatchewan and Manitoba's economies. Projections for general inflation come from short-term projections from private forecasters and the Conference Board of Canada's long-term 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 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 grow in excess of general inflation and instead grow 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 in-

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

Figure 4: Saskatchewan and Manitoba’s Health Care Expenditures Per Capita by Age Group, 2018



Source: CIHI, 2020.

come elasticity. However, there is a great deal of uncertainty over the magnitude of these effects (i.e., 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 elastic-

ity 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).

Saskatchewan and Manitoba’s health spending are 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 2021/22 are assumed to be the same values as projected in the 2021 provincial budgets (see DOF, 2021 and MOF, 2021). For spending numbers in 2022/23 to 2040/41, health care spending is calculated by multiplying projected spending per age group (5-year increments) by

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).

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Table 1 : Assumptions for Saskatchewan and Manitoba

Growth Factor		Assumption		Average Annual Growth Rate in Saskatchewan (percent)	Average Annual Growth Rate in Manitoba (percent)
Inflation	General Inflation	Average private forecasters; Conference Board of Canada	Variable	2.0%	2.0%
	Health-specific inflation	Historical Observation (2004-2019)	Constant	0.6%	0.4%
Demographics	Population Growth	Statistics Canada (2021) Population Projections M1	Variable	1.3%	1.0%
Other Factors		Historical Observation (2004-2019)	Constant	1.2%	0.8%

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

a growth factor that reflects inflation and unexplained factors. These numbers are then multiplied 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 popu-

lation (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 population (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 noted (2021), population aging will put downward pressure on growth in total hours worked in Saskatchewan and Manitoba 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 Saskatchewan and Manitoba's annual growth in revenue until 2040. 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).⁸

Property tax revenues and other own-source revenues grow with population plus inflation, while gasoline tax revenues grow with real GDP. Growth in tobacco tax revenues is expected to slow substantially and it only rises with inflation in this report. Projections for inflation, nominal GDP, and real GDP growth for 2020 to 2022 come from private forecasters. From 2023 onwards, inflation is assumed to grow by 2.0 percent as outlined by the Conference Board of Canada (2021) and GDP growth is 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 Canada Social Transfer (CST) both grow conserva-

tively at an annual rate of 3.0 percent. For simplicity, we assume that equalization payments will be zero for Saskatchewan over the entire period to reflect its current status as a non-recipient and that Manitoba's equalization payments will grow in line with a projection for the three-year moving average of nominal GDP for Canada and the province's proportion of total equalization payments will remain constant. We also 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 revenue will grow at an average annual rate of 3.9 percent in Saskatchewan and 3.7 percent in Manitoba from now until 2040/41. Put differently, annual revenue growth in Saskatchewan and Manitoba is expected to be below average annual nominal GDP growth in both provinces over the same time period. Meanwhile, annual provincial revenue is projected to roughly double (in nominal terms) over the next two decades for both provinces. In total, annual program spending is projected to increase nominally by 119.5 percent in Saskatchewan and 98.9 percent in Manitoba by 2040/41. All program spending outside of health care is estimated to grow by an annual average of 3.3 percent in Saskatchewan and 2.9 percent in Manitoba between 2021/22 and 2040/41.

Health care expenditures are estimated to increase by approximately 5.4 percent annually from now until 2040/41 in Saskatchewan and by 4.9 percent in Manitoba. Relative to the size of the provincial economies, our projections suggest that health care spending by Saskatchewan will increase from 7.3 percent in 2019 (the last year before the pandemic) to 8.5 percent

⁷ A breakdown of the factors that affect GDP and revenue growth is beyond the scope of this brief bulletin series. Please see PBO (2021) for more information about the various factors contributing to slower growth in revenues and real GDP.

⁸ Our report assumes there will be no tax rate or tax policy changes during the period of analysis.

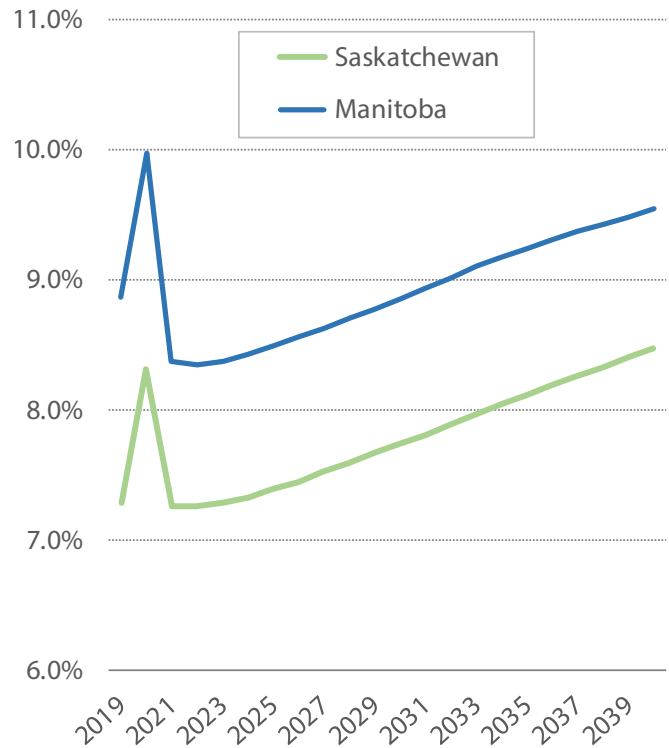
in 2040 (figure 5). In Manitoba, health care expenditures are projected to increase from 8.9 percent in 2019 to 9.5 percent in 2040. This highlights the pressure the aging population will place on provincial finances in the coming decades. Notably, health spending as a share of the economy surges in 2020 (by 8.3 percent in Saskatchewan and 10.0 percent in Manitoba) due to the temporary effects of COVID-19, then briefly declines as the economy recovers.⁹ Afterwards, health spending is expected to increase again as a share of GDP and will eventually exceed the pre-pandemic total.

We also calculate a “primary balance” for both provinces, which demonstrates what each government’s fiscal balance could 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, provinces are said to be in “primary surplus,” whereas a “primary deficit” arises when program spending exceeds revenues. Throughout the entire period from 2021 to 2040, we project that Saskatchewan and Manitoba will be running primary deficits due to a structural imbalance between revenues and program spending in each province (figure 6).

While the primary deficit is projected to decline from its peak in 2020 in Manitoba, it is anticipated to continue increasing in Saskatchewan. The Saskatchewan government could be running primary deficits roughly equivalent to 2.0 to 2.8 percent of GDP until at least 2040. Manitoba is expected to have a primary deficit equivalent to approximately 0.8 to 1.0 percent of GDP. Our primary deficit estimates for Mani-

⁹ 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 GDP in both provinces.

Figure 5: Saskatchewan and Manitoba’s Projected Health Spending Relative to the Economy (GDP), 2019-2040

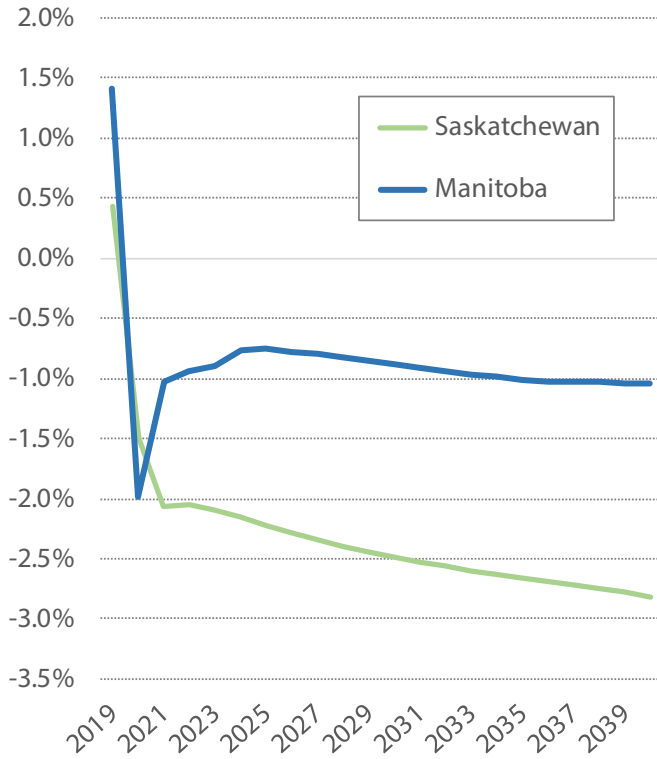


Sources: CIHI (2020); MOF (2021); calculations by authors.

to and Saskatchewan are comparable to projections from Tombe (2020) and the PBO (2021). For instance, the PBO estimates slightly lower average annual primary deficits of 1.7 percent of GDP for Saskatchewan and 0.5 percent of GDP for Manitoba by 2040/41.

Simply put, these projections indicate that the governments of Saskatchewan and Manitoba are likely not on track to balance their budgets before 2040 as they deal with increasing pressure on health care spending and relatively modest revenue growth. The risk of rising debt interest payments will further compound these

Figure 6: Primary Balance in Saskatchewan and Manitoba, as a Percentage of GDP, 2019-2040



Sources: DOF (2021); MOF (2021); calculations by authors.

challenges by consuming more revenue, thus making it increasingly difficult for either to balance their budget any time soon.

Conclusion

The provincial finances of both Saskatchewan and Manitoba will be in a precarious situation in the years ahead due to the economic effects of both the aging population and COVID-19. As seniors constitute a growing share of provincial populations moving forward, this will drive increases in health care spending and slow

growth in revenues, while imposing adverse effects on the provincial economies. Seniors will continue to constitute a growing share of the population in the prairies, which will drive increases in health care spending and slow revenue growth while imposing adverse economic effects on the two provinces. Moreover, absent a change in current policy, the aging population will exacerbate the problem of persistent deficits that will continue to challenge government finances in both provinces. In fact, Saskatchewan and Manitoba may not see balanced budgets until after 2040. The risk of future recessions, rising interest rates, and other unexpected events will only compound problems further. Ultimately, the governments of Saskatchewan and Manitoba will have to implement new policies in order to avoid a serious deterioration in the health of their finances.

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