

Reconciliation: Growing Canada's Economy by \$27.7 Billion

Background and Methods Paper



Prepared for:
The National Aboriginal Economic Development Board

By: **Fiscal Realities Economists**

November 2016

Table of Contents

Background.....	1
Gaps in Economic Indicators.....	3
Improving Indigenous Education and Training.....	5
Increasing Indigenous Opportunities and Participation	9
Closing the Productivity Gap.....	12
An Opportunity for Canada’s Economy	15
Impact on Government Budgets	17
Fiscal Costs.....	17
Government Revenues.....	19
Combined Impact.....	21

Background

A country's total economic output per capita is an indicator of its average economic well-being, or standard of living. That is, the standard of living enjoyed by a country's population is a product of its labour productivity and employment rate.¹ In order to avoid a reduction in the Canadian standard of living, the productivity of the Canadian labour force must increase to support the growing senior demographic.

The number of Canadian seniors (age 65+) increased 14% between 2006 and 2011.² This rate of growth was more than double the increase for the Canadian population as a whole. In 2011, seniors accounted for a record high of almost 15% of the Canadian population. This proportion has been steadily increasing since the 1960s.

In the 60s, 70s, and 80s, the Canadian population was comprised of at least two people in the 'entering the workforce' age group (age 15-24) for every one person in the 'leaving the workforce' age group (age 55-64).³ In 2011, there were more Canadians in the 55 to 64 age group than in the 15-24 age group for the first time in the country's history. That means there are now fewer young people about to enter the labour force than those about to leave it.

The senior demographic dependency ratio is the ratio of seniors (age 65+) to the working-age population (age 15-64), typically measured as the number of seniors per 100 working age people in the population. In the 60s and 70s, there were fewer than 13 seniors for every 100 working age Canadians. By 2015, the senior demographic had grown considerably, and the Canadian population was comprised of almost 24 seniors

¹ The employment rate is the number of persons employed, expressed as a percentage of the total population age 15+. By electing to close the gap in the employment rate, the methodology implicitly incorporates differences in the labour force participation rate between the two populations. The labour force participation rate is the total labour force, which includes both the employed and the unemployed, expressed as a percentage of the population age 15+.

² Statistics Canada, Analytical Document, The Canadian Population is 2011: Age and Sex. The document is available at <https://www12.statcan.gc.ca/census-recensement/2011/as-sa/98-311-x/98-311-x2011001-eng.cfm>.

³ Statistics Canada, Analytical Document, The Canadian Population is 2011: Age and Sex, Figure 5 Ratio of the number of people aged 15 to 24 and those aged 55 to 64, Canada, 1921 to 2011. The document is available at <https://www12.statcan.gc.ca/census-recensement/2011/as-sa/98-311-x/2011001/fig/fig5-eng.cfm>.



per 100 working-age people.⁴ By 2056, Statistics Canada projects there will be 50 seniors for every 100 working age Canadians.⁵ Theoretically, working age Canadians economically support seniors, and a relatively large senior demographic is associated with additional expenditure pressures.

A focus on raising the productivity of the Indigenous labour force⁶ should be an important feature of Canada's strategy to address the rising senior dependency ratio. In contrast to the Canadian population, the Indigenous population is young and growing fast. In 2011, 46% of the Indigenous population was under age 25 compared with 29% for the non-Indigenous population. The median age of the Indigenous population was 28 compared with 41 for the non-Indigenous population in 2011.⁷ The number of working age (25 to 64) Indigenous people increased 21% between 2006 and 2011 compared with only 5% growth among the non-Indigenous population.

But, the Indigenous labour force is underutilized as illustrated by the significant gaps in economic indicators between Indigenous people and non-Indigenous Canadians.

⁴ Cansim Table 051-0001 Estimates of population, by age group and sex for July 1, Canada, provinces and territories.

⁵ Statistics Canada, Demographic Change, Dependency Ratio. The document is available at <http://www.statcan.gc.ca/pub/82-229-x/2009001/demo/dep-eng.htm>.

⁶ In this analysis, data for the Indigenous population (including associated terms like Indigenous Canadians and Indigenous people) is based on data for the Aboriginal Identity population utilized by Statistics Canada. Data is largely based on the Aboriginal Population Profile and data tables from the 2011 National Household Survey. Statistics Canada states that Aboriginal identity includes persons who reported being an Aboriginal person, that is, First Nations (North American Indian), Métis or Inuk (Inuit) and / or those who reported Registered or Treaty Indian status (that is registered under the Indian Act), and / or those who reported membership in a First Nation or Indian band. This report uses this exact same definition for Indigenous population.

⁷ INAC, Fact Sheet – 2011 National Household Survey Aboriginal Demographics, Educational Attainment and Labour Market Outcomes. The fact sheet is available at <https://www.aadnc-aandc.gc.ca/eng/1376329205785/1376329233875>.



Gaps in Economic Indicators

As highlighted in the National Aboriginal Economic Development Board's recent paper, *The Aboriginal Economic Progress Report*, there are significant gaps in the economic outcomes between the Indigenous population and the non-Indigenous population in Canada.⁸ Some key economic and social outcome gaps identified in that report include:

- In 2011, the employment rate among Indigenous people was 9.1 percentage points below the non-Indigenous rate; and the report found that the gap widened from 2006 to 2011.
- The labour force participation rate among Indigenous people was also found to be widening and in 2011 was 4.9 percentage points below the rate among non-Indigenous people.
- The average annual income among Indigenous people (with income, aged 15 years and older) was found to be 27.5% below that of non-Indigenous people, or more than \$11,000 a year less.
- The portion of Indigenous people with a major portion of their income coming from government transfers was found to be 36.5%. This is 11.0 percentage points worse than the rate among non-Indigenous people.
- In 2011, the high school completion rate among Indigenous people was 18.5 percentage points below the non-Indigenous rate.
- The university completion rate was 15.6 percentage points lower among the Indigenous population, relative to non-Indigenous Canadians in 2011.

⁸ *The Aboriginal Economic Progress Report 2015*, The National Aboriginal Economic Development Board. The progress report is available at <http://www.naedb-cndea.com/reports/NAEDB-progress-report-june-2015.pdf>.



The National Aboriginal Economic Development Board initiated a study, undertaken by Fiscal Realities Economists, to conduct an analysis on the expected impact on the Canadian economy resulting from closing the gaps in economic outcomes between Indigenous Canadians and the non-Indigenous population. The analysis focused on two areas, including the anticipated economic impact and the expected fiscal impact. The findings are summarized in the two-fold brochure entitled, *Reconciliation: Moving Forward by \$27.7 billion*. The results of this analysis show that raising the productivity of the Indigenous labour force is potentially a very valuable component of any strategy to maintain the Canadian standard of living in the face of an increasing senior dependency ratio.⁹

This paper will discuss the methodologies, assumptions, and sources utilized in the analysis. These are presented in sections in accordance with the summary graphics in the brochure.

⁹ This assumes economic gains are the result of new economic activity and do not cause a crowding out of existing economic benefits realized by Indigenous people.

Improving Indigenous Education and Training

The methodology assumes that if Indigenous people had the same education and training as non-Indigenous people, then the productivity of Indigenous labour would match the productivity of non-Indigenous labour. As a result of equal labour productivity among both populations, it is also assumed that the average employment income¹⁰ among Indigenous people would rise to match that of non-Indigenous people. It is important to highlight that this does not take into account additional barriers potentially faced by Indigenous Canadians such as systemic racism and different social and cultural norms.

The methodology estimates the additional employment income earned by Indigenous people (currently with employment income) resulting from closing the gap in average employment income. This methodology takes a province-by-province approach.

An example will be described below using Ontario data.

The difference in average employment income among the Indigenous population with employment income (\$33,400) and the non-Indigenous population with employment income (\$44,045) was found to be \$10,645. This is based on income earned in 2010. So, provincial CPI data for 2010 (116.5) and 2015 (127.4) were used to convert this into 2015 dollar terms.¹¹ The 2015 estimate of the gap in average employment income is \$11,641.

In 2010, 47.1% of Indigenous people in Ontario had employment income (142,050 out of 301,425). This portion was applied to the projected 2015 population of Indigenous people in Ontario (358,724) in order to estimate the number of Indigenous people in

¹⁰ Employment income refers to total income received by persons aged 15+ during 2010 as wages and salaries, net income from a non-farm unincorporated business and / or professional practice, and / or net farm self-employment income. Please see Statistics Canada definitions for a full description of each component. In brief, wages and salaries refers to gross wages and salaries before deductions for such items as income tax, pensions and employment insurance. Net non-farm income from unincorporated business and / or professional practice refers to net income (gross receipts minus expenses of operation such as wages, rents and depreciation) received from a non-farm unincorporated business or professional practice. Net farm income refers to net income (gross receipts from farm sales minus depreciation and cost of operation) received from the operation of a farm.

¹¹ CPI data was collected from Cansim Table 326-0021 Consumer Price Index by province.



2015 in Ontario expected to benefit from an increase in average employment income.¹²
The estimated number is 169,053.

The \$11,641 estimate was applied to the 169,053 estimate; and the result is an additional \$1.97 billion in employment income among Indigenous people with employment income.

This same process was repeated for each province and territory, with our findings summarized in Table 1 below.

Province / Territory	Estimated Gap in Average Employment Income (2015 dollars)	Estimated Number of Indigenous people with Employment Income (2015)	Estimate of Additional Income Earned by Indigenous People with Employment Income (2015 dollars)
BC	\$10,795	125,596	\$1,355,774,862
AB	\$13,626	114,248	\$1,556,747,393
SK	\$11,629	63,416	\$737,450,292
MB	\$8,963	81,388	\$729,490,639
ON	\$11,641	169,053	\$1,967,938,814
QC	\$7,088	87,316	\$618,866,304
NL	\$4,862	26,059	\$126,706,434
PE	\$6,506	1,963	\$12,770,973
NS	\$7,161	21,773	\$155,912,984
NB	\$10,132	12,964	\$131,343,046
YT	\$15,857	4,443	\$70,449,217
NT	\$29,880	11,140	\$332,854,412
NU	\$52,329	13,014	\$681,007,384
Sum			\$8,477,312,754

¹² The projected population was estimated by determining the province-specific annual growth rate in Indigenous population between the 2006 Census and the 2011 Census, and projecting that rate forward to 2015.

In the table above, the first column identifies the province or territory. The second column provides the estimated gap in average employment income between the Indigenous population and the non-Indigenous population. These are stated in 2015 dollars.¹³ The third column provides the estimated number of Indigenous people with employment income.¹⁴ The fourth column provides the estimate of additional income resulting from closing the gaps.¹⁵ This is also presented in 2015 dollars. This is the result when the gap in employment income (column 2) is applied to the number of Indigenous people with employment income (column 3).

Summing estimates for all provinces and territories provides a national estimate of almost \$8.48 billion in additional employment income. These estimates are also depicted in the Improving Indigenous Education and Training graphic in the brochure and reproduced on the next page.

¹³ Average employment income gaps were calculated using 2011 National Household Survey data, which is based on 2010 income. The methodology used province-specific CPI data to inflate the gap as measured in 2010 dollars to 2015 dollars.

¹⁴ 2011 National Household Survey data was used to identify the number of Indigenous people in each province and the number with employment income in 2010. The portion of the Indigenous population with employment income in 2010 was applied to the projected Indigenous population in 2015 to yield an estimate of the number of Indigenous people with employment income in 2015. The Indigenous population in 2015 in each province was projected by applying the province-specific annually growth rate between the 2006 Census and the 2011 Census.

¹⁵ This is based on the current portion of the Indigenous population with employment income. This does not include Indigenous people that would be newly employed if the employment rate gap were closed. This will be discussed next.

Improving Indigenous Education and Training

If Indigenous peoples currently with employment income had the same education and training as non-Indigenous peoples, then the productivity of Indigenous labour would match the productivity of non-Indigenous labour. The average employment income among Indigenous peoples would then rise to match that of non-Indigenous Canadians.

Closing the education and training gaps would result in an additional \$8.5 billion in income earned annually by the estimated Indigenous workforce.



Increasing Indigenous Opportunities and Participation

The methodology assumes that if given the same access to economic opportunities available to other Canadians, the Indigenous population would be equally incentivized to participate in the labour force. If economic outcomes are matched between the two populations, the Indigenous population will be able to capitalize on these opportunities at the same rate as the non-Indigenous population. That is, the methodology assumes the employment rate among the Indigenous population will increase to match the rate of the non-Indigenous population. This will result in a number of newly employed Indigenous workers.¹⁶ Further, the methodology in this section also relies on the same assumptions as the previous section. As such, the newly employed Indigenous workers are assumed to have the same average employment incomes as the non-Indigenous population.

The methodology estimates the additional employment income earned by newly Indigenous people resulting from closing the gap in employment rate. Again, a province-by-province approach is utilized.

Saskatchewan data will be used to provide a descriptive example.

Using data from the 2011 National Household Survey, the employment rate among the Indigenous population (46.8%) and the non-Indigenous population (67.8%) was found.¹⁷ In Saskatchewan, the gap in employment rate was found to be 21 percentage points. This gap was applied to the projected Indigenous population age 15+ for 2015 or 115,573.¹⁸

¹⁶ It is assumed these newly employed Indigenous workers previously had zero labour income (either because they were previously unemployed or were not participating in the work force).

¹⁷ The methodology relied on data from the provincial and territorial profiles from both the National Household Survey Profile and Aboriginal Profile, as well as NHS Data Tables, including Income and Earnings Statistics 99-014-X20110401.

¹⁸ The projected population was estimated by determining the province-specific annual growth rate in the Indigenous population between the 2006 Census and the 2011 Census, and projecting that rate forward to 2015.



The result was an estimated 24,302 newly employed Indigenous people in Saskatchewan. Each of these newly employed Indigenous people was assumed to have employment income increase from zero to the estimated 2015 average employment income of the non-Indigenous population with employment income. In Saskatchewan, this was estimated to be \$46,033.¹⁹ The resulting estimate of additional employment income in Saskatchewan was calculated to be \$1.12 billion annually.

This process was repeated for each province and territory. Results are provided in Table 2 below.

Province / Territory	Estimated Gap in Employment Rate (percentage points)	Estimated Number of Newly Employed Indigenous People (2015)	Estimate of Additional Income Earned by Newly Employed Indigenous People (2015 dollars)
BC	7.7	15,730	\$672,089,266
AB	12.9	23,354	\$1,342,003,147
SK	21.0	24,302	\$1,118,719,027
MB	15.2	22,548	\$956,976,879
ON	7.0	19,673	\$947,587,790
QC	6.8	9,614	\$387,399,429
NL	3.2	1,356	\$54,272,682
PE	6.0	123	\$4,136,285
NS	4.1	1,469	\$57,077,979
NB	8.3	1,803	\$67,844,544
YT	19.9	1,168	\$60,695,716
NT	33.8	5,239	\$391,632,579
NU	46.2	8,829	\$793,356,237
Sum			\$6,853,791,559

¹⁹ The average employment income among the non-Indigenous population in SK in 2010 was collected from the National Household Survey and found to be \$41,775. Using provincial CPI numbers for 2010 (118.7) and 2015 (130.8), this average employment income was inflated to an estimated value in 2015 or \$46,033.

In the table above, the first column identifies the province or territory. The second column provides the estimated gap in the employment rate between the Indigenous population and the non-Indigenous population.²⁰ The third column provides the estimated number of newly employed Indigenous people, resulting from closing the employment rate gap.²¹ The fourth column provides the estimate of additional employment income earned by newly employed Indigenous people.²² This is presented in 2015 dollars. This is the result when the employment rate gap (column 2) is applied to the number of newly employed Indigenous people (column 3).

Summing estimates for all provinces and territories provides a national estimate of just over \$6.85 billion in additional employment income. These estimates are also depicted in the Increasing Indigenous Opportunities and Participation graphic in the brochure. The graphic is also shown below.



²⁰ This is based on data collected from the 2011 National Household Survey.

²¹ This was estimated by applying the employment rate gap to the projected Indigenous population age 15+ for 2015, which was estimated by determining the province-specific annual growth rate in the Indigenous population between the 2006 Census and the 2011 Census, and projecting that rate forward to 2015.

²² Each of these newly employed Indigenous people was assumed to have employment income increase from zero to the estimated 2015 average employment income of the non-Indigenous population with employment income.

Closing the Productivity Gap

The two sections above estimate increased employment income earned by Indigenous people currently with employment income and those that would be newly employed. This methodology estimates the economic impact associated with this increase in employment income as the change in gross domestic product. This is also done using province- and territory-specific data.

This paper will use Nova Scotia data to provide an example.

Two economic impact multipliers were collected from the Statistics Canada Input-Output Model multiplier tables.²³ In Nova Scotia, the total (all industries in the provincial economy) labour income multiplier is 0.44 and the total GDP (at basic prices) multiplier is 0.73. These multipliers indicate that if the gross economic output of the provincial economy increases by \$1.00, the associated rise in total labour income is expected to be about \$0.44 and the associated increase in the province's GDP is anticipated to be about \$0.73.²⁴ That is, a \$0.44 increase in labour income is associated with a \$0.73 increase in GDP. The impact on GDP is 1.64 times the size of the impact on labour income.

²³ Input-Output Multipliers Catalogue no. 150046XDB Industry Accounts Division was provided by Statistics Canada specialist Andreas Trau. Multiplier data for combined direct and indirect impacts were used. Induced impacts were excluded. Induced impacts are those resulting from the spending of wages on consumption – sometimes called the household round of spending. Directly and indirectly generated incomes are spent on a variety of items in the broader economy, like food, clothing, entertainment, etc. This is the induced effect. Models that include induced effects are sometimes criticized for potentially overstating economic benefits. In fact, multiplier data and input-output models from Statistics Canada often include cautionary notes on model limitations and the potential for misinterpretation related to the inclusion of induced effects. This study relies on open model data and excludes the induced round of impacts. Including induced effects in closed models results in larger multipliers, relative to those in open models (all other factors being equal). The result is that closed models will estimate a larger economic impact for projects with relatively high levels of labour income. This bias is why closed models have been criticized and why the methodology in this study excludes induced impacts.

²⁴ Please note that gross economic output and gross domestic product are not the same. They are both measures of economic productivity in a defined area over a defined period of time. But, economic output measures the value of all sales of goods and services (including final purchases and intermediate inputs); whereas gross domestic product is a measure of only the value added (economic output minus the value of intermediate inputs). This is why the gross domestic product multiplier is less than 1.0.

Alternatively, we can say that for every \$1.00 increase in labour income, we estimate the associated increase in GDP to be \$1.64.²⁵

About \$213 million annually in additional employment income was estimated above.²⁶ The GDP to income factor of 1.64 was applied to this estimate of additional labour income. The result is an estimated increase in provincial GDP of about \$349.8 million annually.

This process was repeated for each province and territory, and our results are provided in Table 3 below.

Province / Territory	GDP to Income Factor	Combined Estimate of Additional Employment Income (2015 dollars)	Estimated Impact on GDP (2015 dollars)
BC	1.72 (0.78 & 0.45)	\$2,027,864,128	\$3,496,719,818
AB	1.95 (0.80 & 0.41)	\$2,898,750,540	\$5,645,459,844
SK	2.23 (0.72 & 0.32)	\$1,856,169,320	\$4,144,542,197
MB	1.69 (0.70 & 0.41)	\$1,686,467,518	\$2,848,126,175
ON	1.62 (0.75 & 0.46)	\$2,915,526,604	\$4,735,633,842
QC	1.68 (0.77 & 0.46)	\$1,006,265,733	\$1,692,271,483
NL	2.10 (0.70 & 0.33)	\$180,979,116	\$380,857,051
PE	1.67 (0.74 & 0.44)	\$16,907,259	\$28,272,210
NS	1.64 (0.73 & 0.44)	\$212,990,962	\$349,800,142
NB	1.69 (0.60 & 0.36)	\$199,187,590	\$336,866,291
YT	1.79 (0.71 & 0.40)	\$131,144,932	\$234,547,663
NT	2.12 (0.67 & 0.32)	\$724,486,990	\$1,532,683,267
NU	1.53 (0.62 & 0.41)	\$1,474,363,621	\$2,249,085,003
Sum			\$27,674,864,986

²⁵ The methodology assumes the differences between employment income and labour income is negligible.

²⁶ An estimated \$57.1 million resulting from closing the gap in employment rate (see NS row in Table 2) and an estimated \$155.9 million resulting from closing the gap in average employment income (see NS row in Table 1).

In the table above, the first column identifies the province or territory. The second column provides the GDP to income factor.²⁷ The third column provides the estimated additional employment income earned by Indigenous people resulting from closing the gap in average employment income and closing the gap in employment rate.²⁸ The fourth column provides the estimated increase in gross domestic product, presented in 2015 dollars. This is the result when the GDP to income factor (column 2) is applied to the estimate of additional income earned by Indigenous people (column 3).

Summing estimates for all provinces and territories provides a national estimate of \$27.67 billion. This is the amount by which Canada's GDP can be expected to increase as a result of closing the economic gaps between Indigenous people and the non-Indigenous population. This is about a 1.5% boost in the country's GDP.²⁹ These estimates are summarized in the Closing the Productivity Gap graphic in the brochure and below.

²⁷ This relates the estimated change in labour income to the expected impact on GDP. These factors are based on Statistics Canada Input-Output Multipliers. The GDP at basic prices multiplier and the labour income multiplier are also shown in parentheses. These are direct and indirect multipliers, which exclude induced impacts, for the total economy (all industries).

²⁸ This is the sum of estimates in Table 1 and Table 2.

²⁹ Cansim Table 379-0031 provides Canada's GDP in 2015 at basic prices. It was \$1,648,539,500,000. This is presented in chained 2007 dollars. Whereas constant dollar values are weighted by an unchanging basket of goods and services, chained dollar values are weighted by a basket that changes yearly to more accurately reflect actual spending, where the basket is also chained or averaged over successive pairs of years. The GDP number is still reflective of 2007 dollar terms, so it was converted to 2015 dollar terms using national CPI data for 2007 (111.5) and 2015 (126.6). An increase of \$27.7 billion represents an increase of 1.5%.



Closing the Productivity Gap

Closing the gap would mean an estimated increase in GDP of **\$27.7 billion** annually, or about a **1.5%** boost to the nation's economy.



An Opportunity for Canada's Economy

The economic loss currently suffered by all of Canada resulting from the gaps in economic outcomes between Indigenous Canadians and the non-Indigenous population is significant. This analysis has shown that closing these gaps would result in an estimated increase in Canadian GDP by about \$27.7 billion annually. That is, the immediate closure of the gaps in economic outcomes could be expected to result in a 1.5% boost in Canada's GDP. This is a significant impact in light of current economic conditions.³⁰

³⁰ GDP rose by less than this amount last year. Based on a Mar 1, 2016 Statistics Canada report, the Financial Post reported that GDP rose by 1.2% in 2015. The Gordon Isfeld article, entitled "*Canada's economy grows more than expected, lifting loonie higher*" is available at <http://www.financialpost.com/m/wp/blog.html?b=business.financialpost.com/news/economy/canadas-economy-grows-more-than-expected-3>. The FP article also states, "Most economists are forecasting GDP growth of 0.5 per cent in the first quarter of 2016."

But, the actual impact resulting from actually closing the gaps will likely be even larger than this estimate. This is a result of the time required to make the investments necessary to actually close the gaps in economic outcomes:

- It will take time to make the necessary investments in high quality education and training required to ensure Indigenous labour force productivity matches the productivity of the non-Indigenous labour force, resulting in equalized average employment incomes; and
- It will take time to make the necessary investments to improve access to economic opportunities required to ensure the Indigenous labour force participation rate matches the participation rate among the non-Indigenous population, ultimately leading to equalized employment rates.

The demographic trends discussed in the background section of this paper will continue during the time period required for investment. As discussed, the Indigenous population is young and growing fast. There are more and more working-age Indigenous people in Canada every year. This growth will enhance the impact of improved education and training and greater access to economic opportunities. A larger Indigenous labour force will result in a larger economic impact when economic outcome gaps are closed in the future.



Impact on Government Budgets

There are high fiscal costs borne by all governments associated with any Canadian person living in poverty. Higher healthcare costs, social assistance spending and criminal justice expenditures are all associated with people living in poverty. Further, people with lower income generate fewer government revenues.

All governments in Canada are losing an estimated \$8.4 billion annually as a result of the poverty rate gap between Indigenous people and the non-Indigenous population.

Fiscal Costs

It is important that we point out this isn't specifically an Indigenous issue. This is a poor Canadian issue. The concept is applicable to all poor Canadians. Poverty leads to higher expenditures, which are made on all poor Canadians. This is because of higher social, housing, health and education costs.³¹ For the purposes of this project, we limit our analysis to the poverty gap between the Indigenous population and the non-Indigenous population. But, the same analysis could easily be applied to any poor Canadian and the results would be the same.

The methodology assumes the economic outcomes among the Indigenous population are improved to match the levels of the non-Indigenous population. As a result, the poverty rate among the Indigenous population falls to the same level as the non-Indigenous population.³² Since there are no regional variations to account for prices or cost of living differences, this means all households in Canada face the same line

³¹ See Canada Without Poverty's summary called *The Cost of Poverty* (available at <http://www.cwp-csp.ca/poverty/the-cost-of-poverty/>) for a short discussion on the costs associated with poverty and some data on costs borne by all governments.

³² This methodology is based on closing the gap in the prevalence of low income based on the after-tax low-income measure (LIM-AT). The LIM-AT is a relative measure used by Statistics Canada. The LIM-AT is set at 50% of median adjusted after-tax income of households observed at the person level. In this case, 'adjusted' indicates that a household's needs are taken into account. Adjustment for household sizes reflects the fact that a household's needs increase as the number of members increase, although not necessarily by the same proportion per additional member. The 2011, the LIM-AT after tax income thresholds were \$19,460 for a 1-person household; \$27,521 for a 2-person household; \$33,706 for a 3-person household; \$38,920 for a 4-person household; \$43,514 for a 5-person household; \$47,667 for a 6-person household; and \$51,486 for a 7-person household.

(adjusted for household size). Therefore, our analysis is at a national level only and not broken down by province and territory.

Based on 2010 earnings data, the prevalence of low income among the Indigenous population and the non-Indigenous population was collected from the National Household Survey.³³ The poverty rate among the non-Indigenous population was found to be 14.5% (4,554,575 out of 31,366,210), while the poverty rate among the Indigenous population was 25.3% (257,545 out of 1,019,960). The poverty rate gap was 10.7 percentage points. Closing this gap in 2015 would result in 173,234 fewer Indigenous people living in poverty in Canada.³⁴

The average fiscal cost of poverty per low income Canadian was estimated to be \$12,662.³⁵ Based on this average cost, the fiscal savings realized by a reduction in the number of people living in poverty by 173,234 is estimated to be about \$2.2 billion.

³³ The NHS does not specifically report the rate among the non-Indigenous population, but it was found by removing counts for the Indigenous population from the total population.

³⁴ The 10.7 percentage point gap was applied to the 2015 projected Indigenous population of 1,614,500. This projected population was estimated by applying the annual growth rate (3.6%) in the Indigenous population between the 2006 Census (1,172,785) and the 2011 National Household Survey (1,400,685).

³⁵ This estimate is shown in 2015 dollar terms. The estimate is based on a 2011 report from the National Council of Welfare (NCW) called *The Dollars and Sense of Solving Poverty* (available at http://publications.gc.ca/collections/collection_2011/cnb-ncw/HS54-2-2011-eng.pdf). This report estimated the direct cost of poverty in Canada in 2007 at \$12.3 billion and cited an Ontario Association of Food Banks study that estimated the indirect cost of poverty in Canada in 2007 at \$24.4 billion. Direct costs of poverty include income supports like social assistance and working income tax benefits, and services specifically for people in poverty. Indirect costs include the additional costs associated with higher use of emergency wards, police, courts, remedial education and other specialized services. These are both public expenditures and together make up the fiscal costs of poverty. The average fiscal cost was estimated using Cansim Table 202-0802 that states the number of persons in low income (the same measure used in the NCW report) in 2007 in Canada was 3,291,000. This yields an average fiscal cost of poverty for 2007 of \$11,152. This figure was adjusted to 2015 dollars using the national CPI data for 2007 (111.5) and 2015 (126.6).

Government Revenues

This methodology assumes the s. 87 of the *Indian Act* tax exemption is maintained in its current form and therefore assumes the various components of the Indigenous population do not generate the same government revenues per dollar of additional employment income. In this methodology, additional employment income earned by First Nations people living on reserve does not generate additional income tax revenues, but does lead to increases in other government revenues. In 2011, about 22.8% of the Indigenous population was comprised of First Nations people living on reserve (320,030 out of 1,400,685). This methodology assumes that 22.8% of the \$15.3 billion in additional employment income resulting from closing the gaps in employment rate and average employment income (estimated in the previous section) is earned by First Nation persons living on reserve. That is, closing the employment gaps results in an estimated \$3.5 billion in additional employment income earned annually by First Nations people living on reserve, and an estimated \$11.8 billion in additional employment income earned annually by all other Indigenous Canadians.

The methodology then developed estimates for the increase in (i) government revenue generated per dollar of additional employment income earned by First Nations people living on reserve and (ii) government revenue generated per dollar of additional employment income earned by other Indigenous people.

The first step in estimating the impact of government budgets was to estimate the government revenues generated from additional employment income. Based on 2015 income and tax data from the Fraser Institute, the average family's tax bill accounted for 43.7% of the average family's total income (\$44,980 out of \$102,874) in Canada.³⁶ Income tax paid by the average family was \$14,954. Therefore, the average family's total tax bill excluding income taxes was about 29.2% of the total income of the average Canadian family.

³⁶ Total tax bill includes (i) income taxes; (ii) sales taxes; (iii) liquor, tobacco, amusement, and other excise taxes; (iv) auto, fuel, and motor vehicle license taxes; (v) social security, pension, medical, and hospital taxes; (vi) property taxes; (vii) import duties; (viii) profits tax; (ix) natural resources levies; and (x) other taxes. This is collected by all orders of government.



Owing to data availability, the percentages above for the average Canadian family are used instead of figures for the average non-Indigenous family. It's expected that this difference will lead to a small underestimate in the resulting tax revenue estimate.

A change in employment income will result in an equal change in total income. Therefore, these percentages are applied to estimated changes in employment income resulting from closing the gaps in employment rate and average employment income. The estimated \$3.5 billion in additional employment income earned by First Nations people living on reserve is expected to generate an estimated \$1.0 billion in additional government revenues (29.2% of \$3.5 billion). The estimated \$11.8 billion in additional employment income earned by other Indigenous people is expected to generate an estimated \$5.2 billion in additional government revenue (43.7% of \$11.8 billion). Combined, the additional employment income resulting from closing the employment gaps is expected to lead to an estimated \$6.2 billion increase in government revenues.

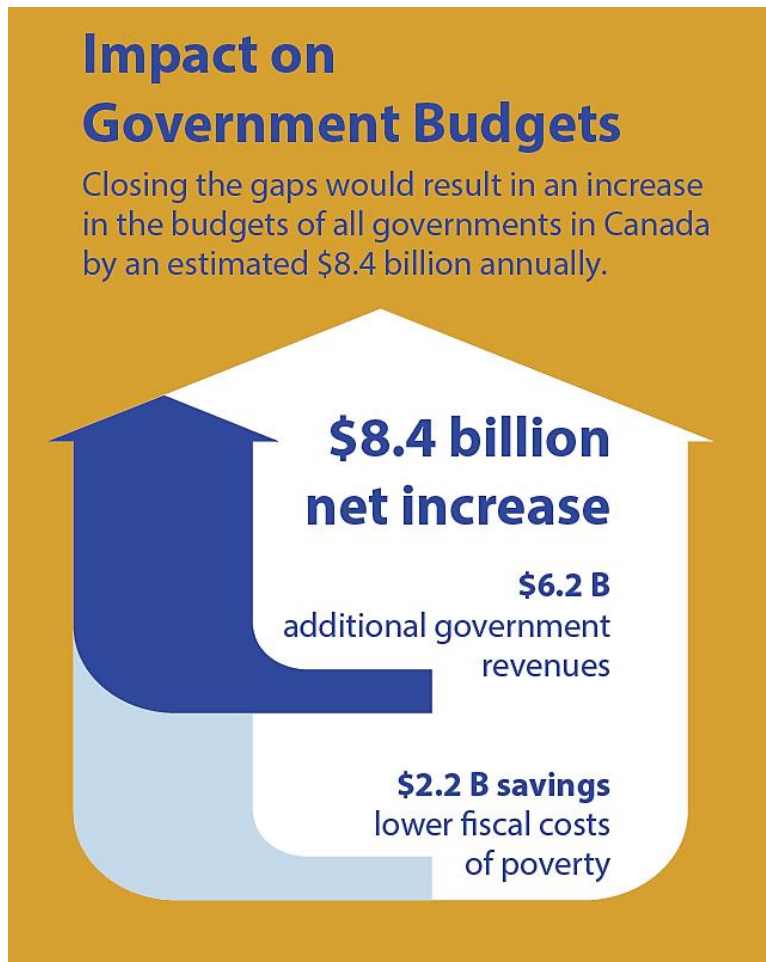


Combined Impact

Combined these two effects will improve the budgets of all governments by an estimated \$8.4 billion annually. This is summarized in Table 4 below.

Region	Fiscal Cost of Poverty (saved by all governments)	Additional Government Revenue (raised by all governments)	Combined Impact Government Budgets (all governments)
Canada	\$2,193,530,717	\$6,194,093,730	\$8,387,624,447

This is summarized in the Impact on Government Budgets graphic below. This graphic is also in the brochure.





The National Aboriginal Economic Development Board

10 Wellington St., 17th floor

Gatineau, (Quebec) K1A 0H4

819-953-2994

www.naedb-cndea.com