



OFFICE OF THE
PARLIAMENTARY
BUDGET OFFICER
BUREAU DU DIRECTEUR
PARLEMENTAIRE DU
BUDGET

Budget 2016: Key Issues for Parliamentarians

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The mandate of the Parliamentary Budget Officer (PBO) is to provide independent analysis to Parliament on the state of the nation's finances, the Government's estimates and trends in the Canadian economy; and, upon request from a committee or parliamentarian, to estimate the financial cost of any proposal for matters over which Parliament has jurisdiction.

To assist parliamentarians in their budget deliberations, this report identifies key issues arising from Budget 2016.

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Executive Summary

To assist parliamentarians in their budget deliberations, this report identifies three key issues arising from Budget 2016: 1) the presentation of the fiscal plan, 2) the Government's adjustment to the private sector economic assumptions underlying its fiscal plan, and 3) Finance Canada's estimates of the economic impacts of budget measures.

PBO will provide its own economic and fiscal outlook and more detailed assessments of measures announced in Budget 2016 when it appears before the House Standing Committee on Finance.

The presentation of the fiscal plan

The Government has made changes to the presentation of its fiscal plan that have made it more difficult for parliamentarians to scrutinize public finances.

- The Government did not provide detailed tables that identify the impact of changes to its adjustment to the private sector forecast and the effect of policy measures.
- Budget 2016 shortened the time horizon of cost estimates from 5 years to 2 years.
- Key fiscal information is being released outside of the budget and Fall Update with no reconciliation between the main documents.

To maintain consistency with past presentation practices, PBO has attempted to compile the standard fiscal planning tables for Budget 2016. However, PBO is unable to provide completed tables due to the lack of information provided in Budget 2016. PBO requested the necessary data from Finance Canada in order to publish completed tables for parliamentarians.¹

Summary Table 1

**Summary of economic and fiscal developments since the
2015 Fall Update**

billions of dollars

	2014- 2015	Projection					
		2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021
2015 Fall Update budgetary balance	1.9	-3.0	-3.9	-2.4	-1.4	1.7	6.6
Add: forecast adjustment in Fall Update		1.5	3.0	3.0	3.0	3.0	3.0
2015 Fall Update budgetary balance before forecast adjustment	1.9	-1.5	-0.9	0.6	1.6	4.7	9.6
Impact of economic and fiscal developments¹							
Budgetary revenues	0.0	1.3	-7.7	-6.0	-7.2	-7.7	-8.5
Program expenses							
Major transfers to persons	0.0	0.4	0.2	0.6	1.1	1.2	1.5
Major transfers to other levels of government	0.0	-0.3	-0.3	0.0	0.4	0.4	0.5
Direct program expenses	0.0	-1.6	-1.4	-3.4	-2.5	-1.7	-1.8
Total	0.0	-1.5	-1.5	-2.8	-1.0	-0.1	0.2
Public debt charges ²	0.0	0.2	0.2	1.0	0.6	-0.5	-1.3
Total economic and fiscal developments	0.0	0.0	-9.2	-8.0	-7.7	-8.3	-9.4
Revised status quo budgetary balance before forecast adjustment	1.9	-1.5	-10.1	-7.4	-6.1	-3.6	0.2
Less: forecast adjustment in Budget 2016			-6	-6	-6	-6	-6
Revised status quo budgetary balance (before measures)	1.9	-1.5	-16.1	-13.4	-12.1	-9.6	-5.8

Sources: Finance Canada and Parliamentary Budget Officer.

Note: Totals may not add due to rounding.

¹ A negative number implies a deterioration in the budgetary balance (lower revenues or higher spending). A positive number implies an improvement in the budgetary balance (higher revenues or lower spending).

² Includes public debt charges on the impact of February 2016 Canadian Economic Outlook measures.

Summary Table 2

Fiscal outlook with measures

billions of dollars

	Projection					
	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021
Revised status quo budgetary balance (before measures)	-1.5	-16.1	-13.4	-12.1	-9.6	-5.8
February 2016 Canadian Economic Outlook measures¹						
Middle class tax cut and other measures announced in December	-0.4	-1.3	-1.2	-1.2	-1.3	-1.3
Alberta stabilization	-0.3					
Syrian refugees	-0.4	-0.2	-0.1	0.0	0.0	0.0
Pratt & Whitney Canada repayment (net cost)	1.0	0.0	-0.1	-0.1	-0.1	-0.1
Reversal of sick leave savings	-0.9	-0.2	-0.2	-0.1	-0.1	-0.1
Whole-of-government strategy in Iraq, Syria, Jordan and Lebanon		-0.5	-0.5	-0.3	0.0	0.0
Canada Summer Jobs Program		-0.1	-0.1	-0.1	0.0	0.0
Total	-0.8	-2.3	-2.1	-1.8	-1.4	-1.4
Budget 2016 measures¹						
Help for the Middle Class	0.5	-3.6	-3.6	N/A	N/A	N/A
Growth for the Middle Class		-4.2	-6.4	N/A	N/A	N/A
A Better Future for Indigenous Peoples		-1.3	-1.8	N/A	N/A	N/A
A Clean Growth Economy		-0.1	-1.5	N/A	N/A	N/A
An inclusive and Fair Canada	-3.7	-1.2	-1.5	N/A	N/A	N/A
Canada in the World	0.2	-0.3	1.1	N/A	N/A	N/A
Open and Transparent Government		-0.4	-0.2	N/A	N/A	N/A
Tax Fairness and a Strong Financial Sector		0.1	0.7	N/A	N/A	N/A
Total	-3.1	-10.9	-13.3	-8.5	-6.1	-6.2
Total measures since 2015 Fall Update	-3.9	-13.2	-15.4	-10.3	-7.5	-7.6
Public debt charges on Budget 2016 measures		0.0	-0.2	-0.4	-0.6	-0.9
Budgetary balance (after measures)	-5.4	-29.4	-29.0	-22.8	-17.7	-14.3

Sources: Finance Canada and Parliamentary Budget Officer.

Note: Totals may not add due to rounding.

¹ A negative number implies a deterioration in the budgetary balance (lower revenues or higher spending). A positive number implies an improvement in the budgetary balance (higher revenues or lower spending).

The Government's adjustment to private sector economic assumptions

Budget 2016 highlights that the use of private sector economic forecasts for fiscal planning "introduces an element of independence in the Government's fiscal forecast." However, in Budget 2016, the Government judged it appropriate to lower the private sector forecast of nominal gross domestic product (GDP)—the broadest single measure of the tax base—by \$40 billion per year over 2016 to 2020. This forecast adjustment translates into a fiscal impact of \$6 billion annually over 2016-17 to 2020-21.

Based on historical experience, PBO believes that the \$40 billion per year forecast adjustment to the February 2016 private sector forecast of nominal GDP in 2016 and 2017 is excessive. Indeed, based on the past performance of private sector forecasters, it is likely that the actual outcome for nominal GDP in 2016 and 2017 will exceed the levels used for fiscal planning purposes, resulting in smaller-than-expected budgetary deficits in 2016-17 and 2017-18, all else being equal.

PBO believes that the Government's adjustments to the private sector forecast (particularly when the adjustments are excessive and always in the same direction) erode the "element of independence" that is introduced into the fiscal plan by using the average private sector forecast.

PBO is, however, encouraged by the inclusion of alternative growth scenarios in Budget 2016 to gauge the sensitivity of the fiscal track. Budget 2016 also commits the Government to develop alternative growth scenarios and their fiscal implications, communicating the analysis "to Canadians as projections are updated."

Finance Canada's estimates of the economic impacts of Budget 2016 measures

Finance Canada has provided estimates of the economic impacts of measures contained in Budget 2016 based on its macroeconomic and fiscal model. However, unlike previous analyses, Finance Canada did not conduct an external assessment of its estimates. For instance, in Budget 2009, to gauge the sensitivity of its estimates, Finance Canada asked private sector organizations to calculate comparable fiscal multipliers.

To provide parliamentarians with an independent estimate of the economic impacts of Budget 2016 measures, PBO has used its own macroeconomic and fiscal model. On balance, these estimates are somewhat smaller than Finance Canada's.

PBO's estimates assume that measures in Budget 2016 will be implemented as scheduled and as targeted. Aside from the uncertainty surrounding fiscal multiplier estimates, differences in timing (for example by lapsing funds) or in the targeted sector would impact these results.

Summary Table 3 **Estimates of the economic impacts of Budget 2016 measures**

% impact on real GDP unless otherwise indicated	2016-17		2017-18	
	PBO	Finance Canada	PBO	Finance Canada
Housing investment measures	0.1	0.1	0.1	0.1
Infrastructure investment	0.2	0.2	0.3	0.4
Personal income tax measures	0.0	0.0	-0.1	0.0
Measures for modest- and low-income households	0.2	0.2	0.3	0.4
Other spending measures	0.1	0.1	0.2	0.2
Corporate income tax measures	0.0	0.0	0.0	0.0
Total real GDP impact	0.5	0.5	0.8	1.0
Employment impact (jobs created or maintained)	26,000	43,000	60,000	100,000

Sources: Finance Canada and Parliamentary Budget Officer.

Note: Estimates are based on the assumption of no monetary policy response.

1. The Presentation of the Fiscal Plan

Budget documents that provide a clear and complete presentation of economic and fiscal developments and the impact of measures in the fiscal framework are central to parliamentary and public scrutiny of government spending and fiscal planning.

Beginning with the 2015 Fall Update, the following changes to the Government's presentation of its fiscal plan have made it more difficult for parliamentarians to evaluate government policy and scrutinize the fiscal framework:

- **The Government did not provide, as per past practice, detailed tables that identify the impact of changes to its adjustment to the private sector forecast and the effect of policy measures.** To adequately evaluate the Government's fiscal plan, it is necessary to separate purely discretionary decisions such as new policy measures and changes to planning assumptions from the deterioration or improvement in economic conditions.²
- **Budget 2016 shortened the time horizon of the Government's cost estimates from 5 years to 2 years.** While uncertainty surrounds cost estimates, particularly five years into the future, a medium-term horizon is required to more fully assess the evolution of program costs. For example, the full annual cost of many policy decisions, such as the cancellation of the small business rate reduction, occur beyond the two years provided. Budget 2016 provides a five-year projection of the budgetary balance, but it is important to also show the detailed measures on which it is based.
- **Key fiscal information is being released outside of the budget and Fall Update with no reconciliation between the main documents.** Budget 2016 was preceded by Finance Canada's background document "Canadian Economic Outlook" published in February, which provided updated economic forecasts and also announced and costed several measures since the Fall Update.³ While timely information is desirable, this background document formed the planning basis for Budget 2016 and made it more difficult to evaluate the impact of measures since the Fall Update. Further, many policy details are being provided in Finance Canada backgrounders rather than budget documents tabled in the House of Commons. More frequent and timely fiscal information is helpful, but it remains important that the main fiscal planning documents tabled before Parliament provide a detailed reconciliation of

announcements and provide consistent and reliable benchmarks for twice-annual scrutiny.

To assist parliamentarians in their budgetary deliberations, PBO has attempted to compile the standard fiscal planning tables.

Table 1-1 transparently presents the fiscal impact of the Government's adjustment to the private sector economic forecast, along with economic and fiscal developments since the Fall Update. The bottom line of this table forms the starting point for the measures presented in Budget 2016 and the outlook that preceded it in February.

Table 1-1 shows the importance of clearly presenting the impact of the Government's change to the forecast adjustment and clearly describing the sources of changes in the outlook attributable to the economy. Before the Government's discretionary \$6 billion adjustment to revenues (the fiscal impact of its adjustment to the private sector forecast of nominal GDP), the status quo budgetary deficit would be \$10.1 billion in 2016-17 and the budget would be balanced by the end of the medium-term planning horizon.

Table 1-2 updates the revised status quo budgetary balance with five-year cost estimates for the February 2016 Canadian Economic Outlook and shows the gaps in the information provided for Budget 2016 measures. The cost of measures announced since the 2015 Fall Update amounts to \$13.2 billion in 2016-17 and \$15.4 billion in 2017-18. The cost falls to \$7.6 billion in 2020-21.

Table 1-1

Summary of economic and fiscal developments since the 2015 Fall Update

billions of dollars

	2014- 2015	Projection					
		2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021
2015 Fall Update budgetary balance	1.9	-3.0	-3.9	-2.4	-1.4	1.7	6.6
Add: forecast adjustment in Fall Update		1.5	3.0	3.0	3.0	3.0	3.0
2015 Fall Update budgetary balance before forecast adjustment	1.9	-1.5	-0.9	0.6	1.6	4.7	9.6
Impact of economic and fiscal developments¹							
Budgetary revenues	0.0	1.3	-7.7	-6.0	-7.2	-7.7	-8.5
Program expenses							
Major transfers to persons	0.0	0.4	0.2	0.6	1.1	1.2	1.5
Major transfers to other levels of government	0.0	-0.3	-0.3	0.0	0.4	0.4	0.5
Direct program expenses	0.0	-1.6	-1.4	-3.4	-2.5	-1.7	-1.8
Total	0.0	-1.5	-1.5	-2.8	-1.0	-0.1	0.2
Public debt charges ²	0.0	0.2	0.2	1.0	0.6	-0.5	-1.3
Total economic and fiscal developments	0.0	0.0	-9.2	-8.0	-7.7	-8.3	-9.4
Revised status quo budgetary balance before forecast adjustment	1.9	-1.5	-10.1	-7.4	-6.1	-3.6	0.2
Less: forecast adjustment in Budget 2016			-6	-6	-6	-6	-6
Revised status quo budgetary balance (before measures)	1.9	-1.5	-16.1	-13.4	-12.1	-9.6	-5.8

Sources: Finance Canada and Parliamentary Budget Officer.

Note: Totals may not add due to rounding.

¹ A negative number implies a deterioration in the budgetary balance (lower revenues or higher spending). A positive number implies an improvement in the budgetary balance (higher revenues or lower spending).

² Includes public debt charges on the impact of February 2016 Canadian Economic Outlook measures.

Table 1-2 Fiscal outlook with measures

billions of dollars	Projection					
	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021
Revised status quo budgetary balance (before measures)	-1.5	-16.1	-13.4	-12.1	-9.6	-5.8
February 2016 Canadian Economic Outlook measures¹						
Middle class tax cut and other measures announced in December	-0.4	-1.3	-1.2	-1.2	-1.3	-1.3
Alberta stabilization	-0.3					
Syrian refugees	-0.4	-0.2	-0.1	0.0	0.0	0.0
Pratt & Whitney Canada repayment (net cost)	1.0	0.0	-0.1	-0.1	-0.1	-0.1
Reversal of sick leave savings	-0.9	-0.2	-0.2	-0.1	-0.1	-0.1
Whole-of-government strategy in Iraq, Syria, Jordan and Lebanon		-0.5	-0.5	-0.3	0.0	0.0
Canada Summer Jobs Program		-0.1	-0.1	-0.1	0.0	0.0
Total	-0.8	-2.3	-2.1	-1.8	-1.4	-1.4
Budget 2016 measures¹						
Help for the Middle Class	0.5	-3.6	-3.6	N/A	N/A	N/A
Growth for the Middle Class		-4.2	-6.4	N/A	N/A	N/A
A Better Future for Indigenous Peoples		-1.3	-1.8	N/A	N/A	N/A
A Clean Growth Economy		-0.1	-1.5	N/A	N/A	N/A
An inclusive and Fair Canada	-3.7	-1.2	-1.5	N/A	N/A	N/A
Canada in the World	0.2	-0.3	1.1	N/A	N/A	N/A
Open and Transparent Government		-0.4	-0.2	N/A	N/A	N/A
Tax Fairness and a Strong Financial Sector		0.1	0.7	N/A	N/A	N/A
Total	-3.1	-10.9	-13.3	-8.5	-6.1	-6.2
Total measures since 2015 Fall Update	-3.9	-13.2	-15.4	-10.3	-7.5	-7.6
Public debt charges on Budget 2016 measures		0.0	-0.2	-0.4	-0.6	-0.9
Budgetary balance (after measures)	-5.4	-29.4	-29.0	-22.8	-17.7	-14.3

Sources: Finance Canada and Parliamentary Budget Officer.

Note: Totals may not add due to rounding.

¹ A negative number implies a deterioration in the budgetary balance (lower revenues or higher spending). A positive number implies an improvement in the budgetary balance (higher revenues or lower spending).

2. The Government's Adjustment to Private Sector Economic Assumptions

Budget 2016 highlights the Government's use of private sector economic forecasts as the basis for fiscal planning since 1994, noting that it "introduces an element of independence in the Government's fiscal forecast". However, the Government judged it appropriate to lower the private sector forecast of nominal GDP by \$40 billion per year over 2016 to 2020. This forecast adjustment translates into a fiscal impact of \$6 billion annually over 2016-17 to 2020-21.

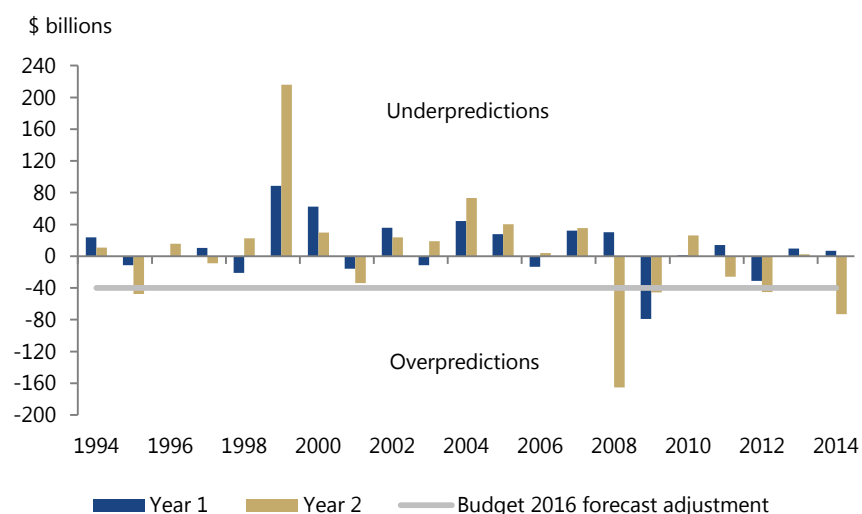
Based on historical experience, PBO believes that the \$40 billion per year forecast adjustment to the February 2016 private sector forecast of nominal GDP in 2016 and 2017 is excessive. Indeed, based on the past performance of private sector forecasters, it is likely that the actual outcome for nominal GDP in 2016 and 2017 will exceed the levels used for fiscal planning purposes. All else equal, this would result in smaller-than-expected budgetary deficits in 2016-17 and 2017-18.

Since 1994, the average private sector forecast in year 1 and year 2 has tended to underpredict nominal GDP. That is, the actual outcome for nominal GDP typically exceeds the forecast of nominal GDP. Using Finance Canada's approach to constructing forecast errors, PBO estimates that the private sector forecast has, on average, underpredicted the level of nominal GDP by \$10 billion and \$4 billion in year 1 and year 2, respectively, over the period 1994 to 2014.⁴

By not taking into account this historical underprediction, there is effectively an additional \$10 billion and \$4 billion in forecast adjustment in 2016 and 2017 respectively, on top of the \$40 billion made by the Government. Further, overpredictions exceeding \$40 billion in both year 1 and year 2 are rare occurrences (Figure 2-1).

Figure 2-1

Private sector nominal GDP forecast errors



Sources: Finance Canada and Parliamentary Budget Officer.

Note: The calendar year on the horizontal axis corresponds to the year in which the Finance Canada survey was conducted. A positive (negative) forecast error denotes an underprediction (overprediction).

Over the period 1994 to 2014, the private sector forecast of nominal GDP has underpredicted the level of nominal GDP in either year 1 or year 2 approximately 60 per cent of the time (13 instances in 21 surveys).⁵ In only one instance did the private sector forecast overpredict nominal GDP by more than \$40 billion in both year 1 and year 2. This occurred in the January 2009 survey, which was conducted during the global financial crisis. The private sector forecast in the January 2009 survey overpredicted nominal GDP in year 1 by close to \$80 billion and by \$45 billion in year 2.

Looking instead at averages of year 1 and year 2 forecast errors, there have been only two instances out of 21 surveys when the average overprediction exceeded \$40 billion (January 2008 and January 2009 surveys).

Budget 2016 also notes that the \$40 billion forecast adjustment is broadly equivalent to the size of the average downward revision to the private sector forecast of nominal GDP in 2016 and 2017 since the September 2014 survey. Given that the size of the adjustment coincides with recent forecast revisions and not actual outcomes, it is not apparent how this would inform the Government's judgement—apart from incorporating the expectation of similar future downward forecast revisions into its current fiscal planning assumptions.

In terms of maintaining the \$40 billion forecast adjustment to nominal GDP going forward, Budget 2016 states that "the Government will continue to evaluate economic developments and risks to determine the appropriateness of this forecast adjustment in the future."

To the extent that the average private sector forecast represents the most likely scenario over the planning horizon, adjusting the forecast for nominal GDP—either downward or upward—can help to balance the overall risk, if any, to the private sector economic outlook. That said, the Government's adjustments to the private sector forecast (particularly when the adjustments are excessive and always in the same direction) erode the "element of independence" that is introduced into the Government's fiscal plan by using the average private sector forecast.

PBO is, however, encouraged by the inclusion of alternative growth scenarios in Budget 2016 to gauge the sensitivity of the fiscal track. Budget 2016 also commits the Government to develop alternative growth scenarios and their fiscal implications, communicating the analysis "to Canadians as projections are updated".

3. Finance Canada's Estimates of the Economic Impacts of Budget 2016 Measures

Similar to the analysis provided in the 2009 and 2010 budgets, Finance Canada has provided estimates of the economic impacts of measures contained in Budget 2016 based on its macroeconomic and fiscal model. Annex 2 in Budget 2016 (page 255) also includes Finance Canada's "fiscal multipliers" which are summary measures of the impact on real GDP of a one-dollar increase in budgetary measures.

Finance Canada estimates that Budget 2016 measures, along with the personal income tax (PIT) changes announced in December 2015, will raise the level of real GDP by 0.5 per cent in 2016-17 and by 1.0 per cent in 2017-18. The Government expects that these GDP impacts will translate into 100,000 jobs created or maintained by 2017-18.

Budget 2016 cautions that "there is some uncertainty, and debate, surrounding the size of fiscal multipliers" and cites recent research suggesting that multipliers could be larger when there is economic slack and when policy interest rates are near to their effective lower bounds.

However, unlike previous analyses, Finance Canada did not conduct an external assessment of its estimates. For instance, in Budget 2009, to gauge the sensitivity of its estimates, Finance Canada asked two private sector organizations (the Conference Board of Canada and the University of Toronto's Policy and Economic Analysis Program) to calculate comparable fiscal multipliers. Budget 2016 indicates that Finance Canada's multipliers and resulting GDP impacts are "appropriate and prudent."

To provide parliamentarians with an independent estimate of the economic impacts of Budget 2016 measures (including the December 2015 PIT changes), PBO has used its own macroeconomic and fiscal model and the value and classification of measures provided in Budget 2016 (see Table A2.4 on page 257). Table 3-1 provides a comparison of PBO and Finance Canada fiscal multipliers.

Table 3-1 Comparing fiscal multipliers

	2016-17		2017-18	
	PBO	Finance Canada	PBO	Finance Canada
Housing investment measures	0.9	1.0	1.0	1.5
Infrastructure investment	0.9	0.9	1.1	1.4
Personal income tax measures	0.3	0.2	0.6	0.6
Measures for modest- and low-income households	0.8	0.8	1.1	1.3
Other spending measures	1.0	0.9	1.2	1.4
Corporate income tax measures	0.1	0.0	0.3	0.1

Sources: Finance Canada and Parliamentary Budget Officer.

Note: Fiscal multipliers are estimated assuming no monetary policy response.

Different macroeconomic models will typically generate different estimates of fiscal multipliers. Although PBO's multiplier estimates for the various types of measures in 2016-17 are similar to Finance Canada's, the estimates for investment, support measures and other spending in 2017-18 are smaller than Finance Canada's. It is difficult to determine the precise factor(s) responsible for these differences. For example, Finance Canada's estimates could reflect a lower assumed "leakage" of imports.

Estimates of fiscal multipliers from the Bank of Canada's LENS and ToTEM models⁶ are smaller than estimated by PBO and Finance Canada. Bank of Canada spending multipliers (average of years 1 and 2) range from 0.53 to 0.65 and tax multipliers range from 0.025 to 0.03. The smaller multipliers generated by the Bank of Canada models, however, reflect an assumed monetary response that dampens the stimulative impact of government measures.

Based on the value and classification provided in Budget 2016, PBO estimates that budget measures would raise the level of real GDP by 0.5 per cent in 2016-17 and by 0.8 per cent in 2017-18. The overall level of employment in 2017-18 would be 60,000 jobs higher.⁷

Table 3-2 Comparing estimates of the economic impacts of Budget measures

% impact on real GDP unless otherwise indicated	2016-17		2017-18	
	PBO	Finance Canada	PBO	Finance Canada
Housing investment measures	0.1	0.1	0.1	0.1
Infrastructure investment	0.2	0.2	0.3	0.4
Personal income tax measures	0.0	0.0	-0.1	0.0
Measures for modest- and low-income households	0.2	0.2	0.3	0.4
Other spending measures	0.1	0.1	0.2	0.2
Corporate income tax measures	0.0	0.0	0.0	0.0
Total real GDP impact	0.5	0.5	0.8	1.0
Employment impact (jobs created or maintained)	26,000	43,000	60,000	100,000

Sources: Finance Canada and Parliamentary Budget Officer.

Note: Estimates are based on the assumption of no monetary policy response. Aside from the uncertainty surrounding fiscal multiplier estimates, differences in timing (for example by lapsing funds) or in the targeted sector would impact these results.

PBO's estimates of the economic impacts of Budget 2016 measures are, on balance, somewhat smaller than Finance Canada's estimates. This reflects differences in fiscal multipliers as well as the sensitivity between changes in real GDP and employment.

PBO's estimate of the total impact on real GDP in 2017-18 is 0.8 per cent versus Finance Canada's estimate of 1.0 per cent. This is consistent with PBO's smaller expenditure multipliers. In terms of the impact on employment, PBO's estimate of 60,000 jobs is significantly smaller than the 100,000 jobs estimated by Finance Canada. The lower employment estimate reflects both the smaller real GDP impact in 2017-18 as well as a lower sensitivity of changes in employment to changes in real GDP.⁸

Notes

1. Available at: http://www.pbo-dpb.gc.ca/web/default/files/Documents/Info%20Requests/2016/IR0217_FC_Budget_2016_EN.pdf.
2. For example, compare Table 1 from Budget 2016 to Tables 5.2.2 and Table 5.2.3 in Budget 2015.
3. See http://www.fin.gc.ca/n16/data/16-025_1-eng.asp.
4. As a measure of private sector forecast accuracy, Budget 2016 presents mean absolute forecast errors on the level of nominal GDP based on budgets and updates since 1994 (see Chart 29 on page 51 in Budget 2016). Following Finance Canada's approach, PBO calculates the forecast error in percentage difference in the level of nominal GDP at each forecast horizon and applies it to the projected level of nominal GDP from the Department's February 2016 survey to get comparable figures in billions of dollars. However, to control for changes in the projection horizon, PBO instead uses departmental surveys corresponding, as closely as possible, to February vintages.
5. Over the remaining years of the forecast horizon, the private sector forecast of nominal GDP shifts from a tendency to overpredict (55 per cent of the time) in year 3 to a balanced performance in year 5, that is an equal number of overpredictions and underpredictions. Moreover, in years 3 to 5 of the forecast horizon, the overprediction of nominal GDP typically exceeds \$40 billion (80 per cent of the time).
6. See page 29 in Bank of Canada Technical Report No. 102, "Analyzing and Forecasting the Canadian Economy through the LENS Model" by Olivier Gervais and Marc-André Gosselin. Available at: <http://www.bankofcanada.ca/wp-content/uploads/2014/07/tr102.pdf>.
7. For all budget measures, PBO makes the simplifying assumption that the quarterly profile is uniform across each fiscal year.
8. Finance Canada assumes that a 1 per cent increase in real GDP translates into an immediate 0.2 per cent increase in employment, rising to 0.6 per cent after eight quarters. PBO's sensitivity is somewhat lower, with a 1 per cent increase in real GDP translating into an immediate 0.1 per cent increase in employment and rising to 0.5 per cent after eight quarters.