

Effect of Federal Income Tax Changes on Canadian Families Who Are in the Bottom 20 Percent of Earners

by Charles Lammam, Milagros Palacios, and Hugh MacIntyre

SUMMARY

- Since coming into office in 2015, Prime Minister Justin Trudeau's government has made several major changes to the federal personal income tax system. This report examines how those tax changes affect Canadian families with children, focusing particularly on families who are in the bottom 20 percent of income earners.
- Specifically, the report measures the number and percentage of families in this income group who are paying higher personal income taxes due to the federal government's changes—and how much more they are paying.
- Among the bottom 20 percent of income earning families with children, 406,000 (of a total 660,000) are paying more federal income tax following the changes. Specifically, 61 percent of families who are the bottom 20 percent of earners are paying more—\$269 more on average.
- Families in the bottom 20 percent of earners benefitted very little from the federal gov-

ernment's reduction to the second lowest personal income rate. This is because most of the individuals in lower income families earn too little income to qualify for the tax reduction, which starts at incomes of \$45,916.

- However, many families in this group pay more income tax because they no longer benefit from income splitting and other tax provisions (including tax credits for children's fitness, public transit, and education and textbooks) which were eliminated by the Trudeau government.
- For the 61 percent of families in the bottom 20 percent who are paying more overall income tax due to federal changes, the tax rate cut amounts to an average tax reduction of just \$22. By contrast, the elimination of income splitting represents an average increase of \$154, while the elimination of other tax credits amounts to an average tax increase of \$148.

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Introduction

Since coming into office in 2015, Prime Minister Justin Trudeau's government has made several major changes to the federal personal income tax system. One of these changes reduced the income tax that Canadian families pay, while other changes increased the income tax that many of the same families pay. In a previous study examining the effect of federal income tax changes, Lammam et al. (2017) showed that, despite the federal government's rhetoric about cutting income taxes on the middle class, when taken as a whole, the changes have resulted in the vast majority of middle income families with children paying more income tax.

While Lammam et al. (2017) focused on the effect of federal changes on middle income families, that research uncovered an additional concern emanating from the federal government's income tax changes—a finding that has received little attention thus far. Specifically, many families who are the bottom 20 percent of earners may also be paying higher income taxes as a result of the federal government's tax changes. This report measures the number and percentage of families with children in the bottom 20 percent of earners who are paying higher personal income taxes due to the changes, and how much more they are paying.

The first section briefly outlines the major changes to the federal income tax system that the government introduced after coming to power and explains how the impact of these changes is measured. The second section uses Statistics Canada's Social Policy Simulation Database and Model (SPSD/M) to calculate how the tax changes, when taken together, affect the amount of federal income tax that lower-income Canadian families pay.

How the effect of federal income tax changes is measured

The method for measuring the overall effect of federal income tax changes is similar to the approach used by Lammam et al. (2017). In this bulletin, the term "families" means families who have young children, which includes couples with children and singles with children.¹

The focus of this report is the impact of federal income tax changes on families who are the bottom 20 percent of earners. The analysis includes the effect of the cut to the second lowest federal income tax rate (from 22 to 20.5 percent) and the elimination of the following credits: income splitting for couples with young children, children's fitness tax credit, education tax credit, textbook tax credit, and the public transit tax credit.²

The analysis uses Statistics Canada's SPSD/M to calculate the percentage of Canadian families who are the bottom 20 percent of income

¹ This definition corresponds with Statistics Canada's definition of a "nuclear family." According to SPSD/M, a "nuclear family consists of a head, their spouse (if there is one), and their children under the age of 18, living together in the same dwelling."

² The calculations also account for the new, higher top tax rate of 33 percent on incomes above \$202,800. However, the bottom 20 percent of income-earning families are not directly affected by this tax change, which means that this tax increase is not relevant to the main analysis of this paper. Due to limitations of SPSD/M, some tax changes could not be included in the analysis, including the elimination of the children's arts tax credit. However, these changes are relatively small compared to those that are included and are therefore unlikely to have a significant impact on the results of the analysis in this bulletin. See Lammam et al. (2017) for more discussion.

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earners with children that pay higher personal income taxes due to the federal government's tax changes.³ The calculation compares the amount of personal income tax individual families would have paid without any changes compared to what they are now expected to pay after the federal tax changes. The calculations are for the 2017 tax year.

The main difference between this report and Lammam et al. (2017) is that the sample group includes only those with taxable returns—that is, it excludes non-taxable returns.⁴ A non-taxable return means that the tax filer is not paying income taxes because the value of the tax credits and deductions they claim is equal to or greater than the amount of income tax they would have owed. For example, every taxpayer receives the federal basic personal amount, which means the first \$11,635 of earned income is tax exempt. Someone making \$11,635 or less would not have to pay any personal income tax.

³ The data and calculations used in this report come from Statistics Canada's Social Policy Simulation Database and Model (SPSD/M) version 23.2 unless otherwise indicated. Statistics Canada's SPSD/M is a statistically representative database of individuals in their family contexts, with enough information on each individual to compute taxes paid. Two sets of calculations were run using SPSD/M. The first set, the baseline, calculated the taxes that families within the database would pay if the included had not been implemented. For example, the tax rates and number of income tax brackets under this first set of iterations are the same as they were in 2015, but the income ranges within the tax brackets are set at the 2017 levels. The second calculates tax payments for Canadian families under the current system with the tax changes fully implemented. The difference between the baseline and the second set of calculations provides the average tax increase. For further details see Lammam et al. (2017).

⁴ As was done in Lammam et al. (2017), families with a member over age 65 are excluded.

An individual making more than this may still not pay income tax if they claim or receive other tax credits. A family in which at least one tax filer has a taxable return is included in the analysis. If none of the family members files a taxable return, then they are excluded.⁵ Families that file taxable returns are the focus of this report because they are more likely to be affected by the changes than families who do not pay personal income taxes.

All families with children (and taxable returns) are divided into five income groups (or quintiles), each representing 20 percent of families with children that pay income taxes. The bottom 20 percent of income-earning families are the focus of this analysis. Families in this group recorded income of between \$1 and \$66,448.⁶

The effect of federal personal income tax changes on families in the bottom 20 percent

This section discusses the results, focusing on families in the bottom 20 percent (the first quintile of income earning families). Figure 1 shows the percentage of taxpaying families with children, by quintile, who are paying higher income taxes due to the federal government's tax changes.

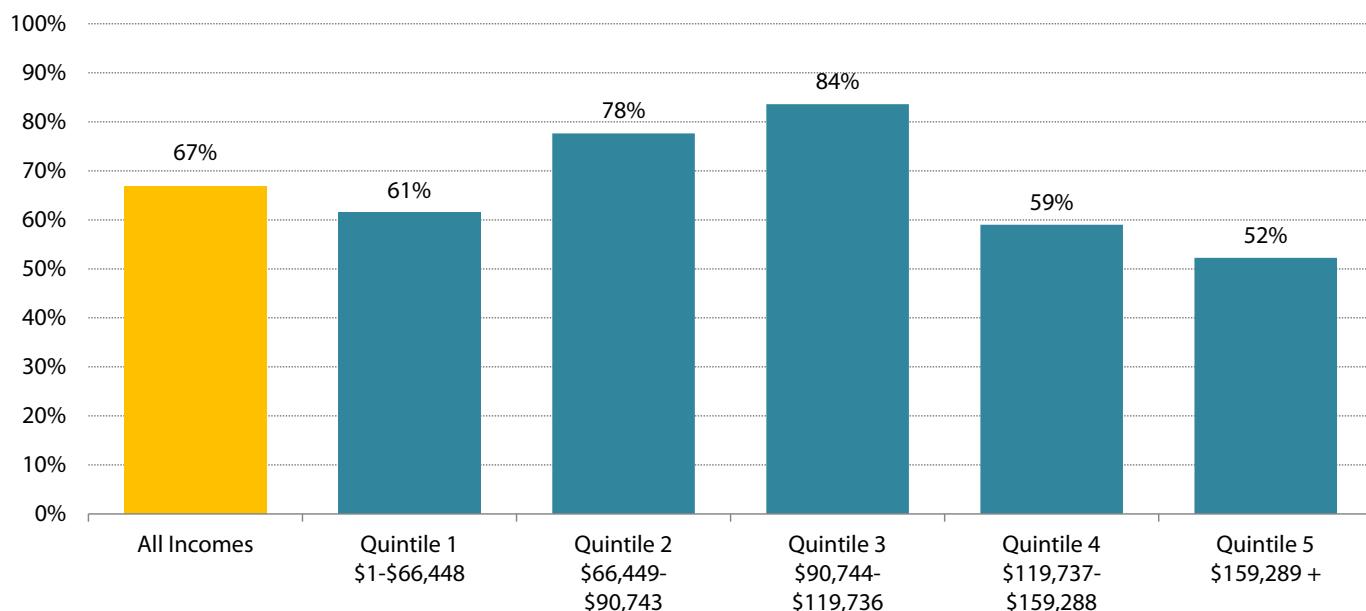
Among the 660,000 families in the bottom 20 percent of income earners, 406,000 are pay-

⁵ Of families with children and income of \$66,448 or below, 53.7 percent file taxable returns.

⁶ Note that due to differences in the samples used, the income ranges for each quintile differ from Lammam et al. (2017). The range for lower income families is wider than in the Lammam et al. (2017) study for the sample of taxable returns in part because the range excludes families with relatively low income that do not pay personal income taxes.

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Figure 1: Percentage of Families with Children Paying Higher Personal Income Taxes



Note: The sample group includes only those filing taxable returns—that is, it excludes those filing non-taxable returns. A non-taxable return means that the tax-filer is not paying income taxes because the value of the tax credits and deductions they claim is equal to or greater than the amount of income tax they would have owed. A family in which at least one tax-filer has a taxable return is included in the analysis. If none of the family members file a taxable return, then they are excluded.

Source: Calculations by authors based on Statistics Canada's SPSD/M (version 22.3).

ing more in personal income taxes due to the federal government's tax changes (see table 1). Specifically, 61 percent of families in the bottom 20 percent are paying higher income taxes. On average, these families are paying \$269 more federal income tax (see table 2).

By comparison, among all taxpaying families, 67 percent are paying higher income taxes. This means that families in the bottom 20 percent are almost as likely to be paying higher income taxes as the general population of taxpaying families with children.

Perhaps more striking, families in the bottom 20 percent are slightly more likely to be paying higher income taxes than families in the top 20

percent (the highest income quintile). Indeed, relative to other income groups, a smaller percentage of upper income earning families (52 percent) are paying higher personal income taxes due to the tax changes implemented by the federal government.⁷

⁷ Given that the income threshold for the top income quintile is \$159,289, many families in the top 20 percent of earners are not paying the new, higher top personal income tax rate of 33 percent, which applies to marginal income over \$202,800. Note that personal income taxes are applied to individual income and not family income. This means that even if a family's income is over \$202,800, the family may still not be paying the top personal income tax rate

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Table 1: Number and Percentage of Bottom 20 Percent of Families with Children Who Are Paying Higher Personal Income Taxes

Family type	Number of families paying higher taxes (thousands)	All families (thousands)	Percent of total paying higher taxes
All families with children: \$66,448 and below	406	660	61%
Couple with children: \$72,579 and below	408	574	71%
Single with children: \$48,701 and below	36	86	41%

Source: Calculations by authors based on Statistics Canada's PSD/M (version 22.3).

Table 2 breaks down into its component parts the overall average increase in tax payments for families in the bottom 20 percent of earners who are paying higher taxes. The table displays not only the average change resulting from the personal income tax rate reduction, but the effect of eliminating income splitting and various tax credits (children's fitness credit, education and textbook credits, and public transit credit) and the Quebec abatement.⁸

if the individual members of the family have incomes below this level.

⁸ The Quebec abatement means that Quebecers pay less in federal taxes than other provinces. The abatement exists as part of an arrangement that

For the 61 percent of families with children in the bottom 20 percent of income earners who are paying more income tax, the elimination of income splitting represents an average increase of \$154, while the elimination of other tax credits amounts to an average tax increase of \$148. Families in the bottom 20 percent benefitted very little from the reduction in the second lowest personal income rate—an average tax reduction of just \$22. This is because most of the individuals in lower income families earn too little to qualify for the tax reduction, which starts at incomes of \$45,916 (the top threshold for families in the bottom 20 percent is a family income of \$66,448).

Note that even if a family has a combined income of \$66,448, the lower tax rate will not result in a tax reduction for it if that family consists of multiple income earners each making less than \$45,916. For example, a family with an income of \$66,448 could have two income earners each making \$33,244. In this case, there will be no benefit from the tax rate reduction. On the contrary, such a family could pay more income tax if it is now unable to claim one or more of the eliminated tax credits.

Effect on couples versus singles with children

Given that one of the tax changes (the elimination of income splitting) only effects couples with children and not singles with children, it is informative to also consider how the tax changes may affect couples with children differently from single parents. The top income threshold for families with children in the bottom 20 percent consisting of couples is \$72,579; for singles it is \$48,701. Note that these thresholds are based on the distribution of income for

allows provincial governments to opt out of certain federal-provincial programs.

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Table 2: Breakdown of the Overall Average Change for Families with Children in the Bottom 20 Percent Paying Higher Personal Income Taxes

Family type	Tax rate changes	Elimination of income splitting	Elimination of tax credits	Indirect effects from Quebec abatement*	Overall average change
All families with children: \$66,448 and below	-22	154	148	-11	269
Couple with children: \$72,579 and below	-35	273	124	-14	348
Single with children: \$48,701 and below	-1	0	191	-6	184

*The Quebec abatement means that Quebecers pay less in federal taxes than other provinces. The abatement exists as part of an arrangement that allows provincial governments to opt out of certain federal-provincial programs.

Source: Calculations by authors based on Statistics Canada's SPSD/M (version 22.3).

these two types of families rather than all families with children, which is why the threshold for couples with children is higher than for all families with children. The threshold for singles with children is lower than the threshold for couples reflecting the fact that this type of family has only one adult as a potential income earner.

Table 1 displays the number and percentage of families in the bottom 20 percent who are paying higher income taxes by each type of family. The results are shown graphically in figure 2. Families consisting of couples with children in the bottom 20 percent are much more likely to be paying higher income taxes than those consisting of single parents with children (71 percent vs. 41 percent, respectively).

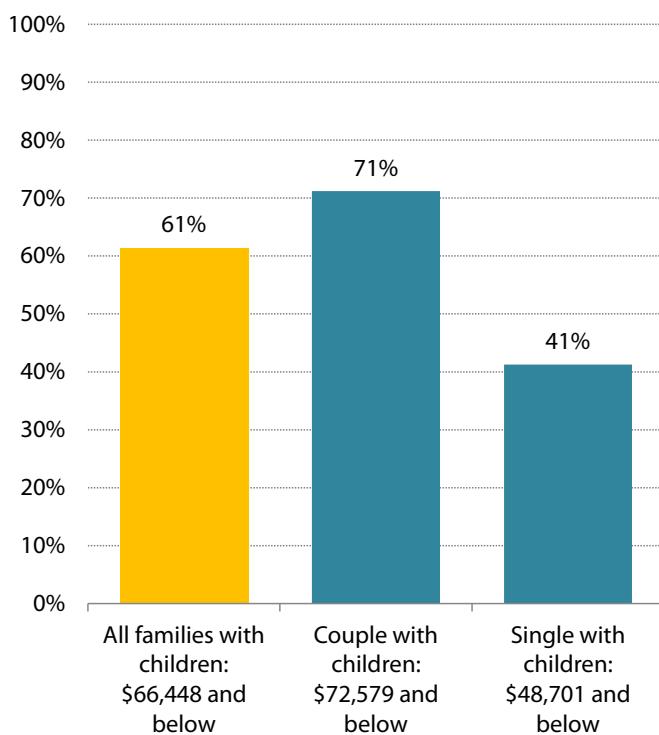
Couples with children who are paying higher income taxes are paying \$348 more on aver-

age (see figure 3). This is higher than the average increase for all families with children (\$269) and indicates that couples with children in the bottom 20 percent are disproportionately affected by the government's tax changes. While the average income tax increase for singles with children is lower (\$184), it still represents a decrease in the budget of many single parents with relatively low income.

Table 2 displays the average increase in income taxes from each component of the government's tax changes. For couples with children, the main driver of the average tax increase is the elimination of income splitting, which amounts to an average of \$273 in higher taxes for these families. The average tax increase due to the elimination of other tax credits is \$124 for couples with children. Couples with children benefit more from the tax rate reduction than the overall average for all families (\$22) in

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Figure 2: Percentage of Bottom 20 Percent of Families with Children Paying Higher Personal Income Taxes, by Family Type



Source: Calculations by authors based on Statistics Canada's SPSD/M (version 22.3).

Figure 3: Average Tax Increase for Bottom 20 Percent of Families Paying Higher Personal Income Taxes, by Family Type



Source: Calculations by authors based on Statistics Canada's SPSD/M (version 22.3).

the bottom 20 percent, mostly due to the fact that the income range is higher for couples with children (\$72,579). Still, the tax reduction remains relatively small (\$35) and is more than offset by the tax increases.

Single parents with children in the bottom 20 percent who are paying more in taxes essentially do not benefit from the tax rate reduction, with an average tax reduction of \$1. They also are not affected by the elimination of income splitting since they do not have a spouse to split income with. They do, however, pay higher taxes because

of the \$191 worth (on average) of now eliminated tax credits that they previously claimed.

Conclusion

Relatively little attention has been given to how the federal government's personal income tax changes are affecting families who are the bottom 20 percent of earners, with much of the attention instead going to middle income families. However, the majority of those families, who can ill afford it, are in fact paying higher taxes as a result of the government's changes.

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Notably, families in the bottom 20 percent of income earners are largely not benefiting from the federal government's reduction to its second lowest tax rate. On the contrary, they are paying more in taxes due to the elimination of income splitting and other tax credits.

Reference

Lammam, Charles, Milagros Palacios, and Hugh MacIntyre (2017). *Measuring the Impact of Federal Personal Income Tax Changes on Middle Income Canadian Families*. Fraser Institute. <<https://www.fraserinstitute.org/studies/measuring-the-impact-of-federal-personal-income-tax-changes-on-middle-income-canadian-families>>, as of October 16, 2017.



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