

7. Measuring the Distribution of Taxes in Canada: Do the Rich Pay Their “Fair Share”?

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Many people who are concerned about inequality often propose increasing taxes on upper earners. This is based, in part, on a mistaken impression that the country’s top earners are getting away with paying relatively little tax. Governments, especially the current federal government, have fuelled this misperception, by invoking “tax fairness” to justify recent tax changes such as the creation of a new and higher top personal income tax rate of 33 percent—an increase from the previous top federal rate of 29 percent (Canada, 2017a). Indeed, tax fairness was a prominent theme in the 2017 federal budget, which even featured in the title of one of the chapters (Canada, 2017b). Most recently, the federal government used “tax fairness” to defend its proposed changes to how small businesses are taxed (Canada, 2017c). However, the reality of the distribution of taxes does not match the government’s rhetoric. As this paper will show, top earners in Canada—collectively as a group—pay a disproportionate share of the country’s taxes, particularly when compared to their share of total income earned.¹

While proponents of raising taxes on top income earners almost never define what constitutes a “fair share” of the tax burden, this paper uses a definition of fairness based on the shares of taxes paid and income earned by various income groups. If the shares of taxes and income are equal, then this signals a fair distribution of taxes.

1. While there are some cases where top earners pay little (or no) tax, these cases are the exception rather than the rule. This paper looks at the entire group of top earners collectively (i.e. the top 20 or top 1 percent), and as a group top earners pay more tax than is proportionate to their income. For further discussion on the relatively few cases where top earners pay little tax, see <<https://www.fraserinstitute.org/blogs/cbc-s-misleading-tax-analysis-a-disservice-to-canadians-and-the-inequality-debate>>.

When examining all taxes from all levels of government in Canada, the paper finds that the top 20 percent of income-earning families is the only group that collectively pays a greater share of total taxes than their share of total income earned. Specifically, the top 20 percent earns 49.1 percent of the nation’s income but pays 55.9 percent of total taxes—a difference of 13.9 percent. By contrast, families in the bottom 20 percent earn 4.1 percent of the nation’s income while collectively paying just 1.8 percent of all taxes.

The top 1 percent of income earners is often targeted as the group that should pay higher taxes, so this group warrants special focus. However, the top 1 percent’s collective share of total taxes paid (14.7 percent) is greater than its share of total income earned (10.7 percent). This amounts to a gap of 36.9 percent between the share of taxes paid and the income earned by the top 1 percent. Notably, over time, the top 1 percent’s share of total taxes paid has increased from 11.3 percent in 1997 to 14.7 percent in 2017.

When looking at a subset of total taxes, namely personal income taxes, the imbalance between taxes paid and income earned is even larger for both the top 20 and top 1 percent. The imbalance is larger primarily due to the progressivity of Canada’s personal income tax system, which taxes higher levels of income at higher marginal tax rates.

Specifically, the top 20 percent pays nearly two-thirds of all income taxes (64.4 percent) while earning approximately half of all income (49.1 percent). Put differently, the share of income taxes collectively paid by the top 20 percent is 31.2 percent larger than the share of income earned. Meanwhile, the bottom 20 percent pays 0.6 percent of all personal income taxes even though its share of total income is nearly six and half times larger (4.1 percent). The share of income taxes paid by the top 1 percent (17.9 percent) is more than two-thirds (67.1 percent) larger than the share of total income earned (10.7 percent) by this group.

Canada’s top income earners currently pay a disproportionate share of taxes relative to the share of income that they earn. Those who advocate higher taxes on top income earners are, in effect, arguing that top earners should be paying an even more disproportionate amount of taxes. This raises the question of how much is enough in terms of taxes paid by top income earners.

But it is also important to recognize that taxes cannot be continually raised on top income earners without economic consequences. The reality is that higher tax rates would further erode Canada’s tax competitiveness, discourage economically productive activity (work effort, savings, investment, and entrepreneurship), hinder the country’s ability to attract and retain top talent, and dampen the incentives for income mobility.

The first section of this study defines what a “fair” distribution of taxes is and then measures the distribution focusing only on federal and provincial personal income taxes. The second section broadens the distributional analysis to include all taxes beyond simply personal income taxes, since personal

income taxes are just one of the many taxes that Canadian families pay. In doing so, this section assesses fairness in the overall tax system. The final section discusses the unintended economic consequences of further raising taxes on upper earners.

Measuring the Distribution of Personal Income Taxes

Discussions about tax fairness often focus on a particular form of taxation: personal income taxes. This is despite the fact that personal income taxes constitute approximately 34 percent of the total taxes that average Canadian families pay (Palacios et al., 2017).² Indeed, Canadians pay many more taxes other than simply personal income taxes. However, since raising personal income taxes on upper earners is often proposed as a “solution” for inequality, this section first presents data on the distribution of personal income taxes before presenting data on the distribution of all taxes paid by families.

To calculate the share of taxes paid by income group, the analysis relies on the Fraser Institute’s Canadian Tax Simulator (2017). The Canadian Tax Simulator draws upon SPSPD/M and other government sources to estimate the amount of taxes that Canadians pay to all three levels of government (federal, provincial, and local).³

While personal income taxes are applied to individuals, the analysis focuses on families.⁴ One reason for this is that family income better reflects an individual’s economic well-being than individual income. An individual family member may earn a relatively modest income but contribute to an overall family income that is relatively high. In other words, someone may not be in the top 1 percent of earners as an individual but may belong to a family that is part of the 1 percent. For example, someone with an individual annual income of \$20,000 would be among the bottom half of the distribution among individual earners. But if that person were married to someone with \$170,000 of annual income, he or she would actually be among the top 20 percent of income-earning families. Membership in a particular income group (i.e. lowest or highest earners) is best determined by family income.⁵

2. For further reference, personal income taxes constitute about half of total federal revenues and between 16 and 26 per cent of provincial revenues (Statistics Canada, 2017).

3. For more details on the Canadian Tax Simulator, see Palacios et al. (2017).

4. An economic family is defined as a group of individuals sharing a common dwelling unit and related by blood, marriage (including common law relationships), or adoption/guardianship. Unattached individuals are included as economic families of size 1.

5. As a robustness check, the results have been compared to an alternative data source, which ends in 2014, that divides Canadians into income groups as individuals instead of families (Statistics Canada, 2016). The results are largely similar to what was found for families using the Canadian Tax Simulator. For instance, the top 1 percent of individual income earners paid 20.5 percent of personal income taxes in 2014 and earned 10.3 percent of all income.

Distribution of Personal Income Taxes

Before presenting data on the distribution of taxes, it is important to define what a “fair” distribution is, especially since proponents of raising taxes on top income earners—including the federal government—almost never define what constitutes a fair share of the tax burden. In the absence of a definition, it is impossible to assess claims such as the “rich don’t pay their fair share” or “the rich get away with paying little tax.” This paper adopts the definition of proportionality for fairness when comparing the share of taxes paid by various groups to the share of total income that each group earns. If the shares of taxes and income are equal, then this signals a fair distribution of taxes.⁶

To examine tax fairness across the income distribution, the analysis divides Canadian families into five groups based on total income.⁷ Each group contains 20 percent of families and is referred to as a quintile. The first quintile represents the bottom 20 percent of income-earning families and the fifth quintile represents the top 20 percent.⁸ The income range for each quintile is shown in **table 1**.

Figure 1 displays the share of total income in Canada earned by families in each quintile and the share of federal and provincial personal income taxes paid by families in each quintile. The top 20 percent of income-earning families are the only income group that pays proportionately more in income taxes than they earn in income. Specifically, the top 20 percent pays nearly two-thirds of all income taxes (64.4 percent) while earning approximately half of all income (49.1 percent). Put differently, the share of income taxes collectively paid by the top 20 percent is 31.2 percent larger than the share of income earned.

In contrast, the bottom 20 percent pays only 0.6 percent of all personal income taxes even though its share of total income is nearly six and a half times larger (4.1 percent). Similarly, the third (or middle) quintile pays a smaller share of personal income taxes (10.6 percent) than its share of total income earned (14.9 percent).

In short, even though the top 20 percent earns a sizable share of total income, this group of income earners collectively pays an even larger—and disproportionate—amount of the country’s personal income taxes. By the standard of proportionately, the highest income group is paying more than its fair share of personal income taxes.

6. This definition of fairness is related to the concept of vertical equity, which refers to differences in how taxpayers of different income levels are taxed. This is distinct from horizontal equity, which refers to difference in how taxpayers of the same income level are taxed.

7. Total income includes income from market sources (employment/investment) and from government transfers.

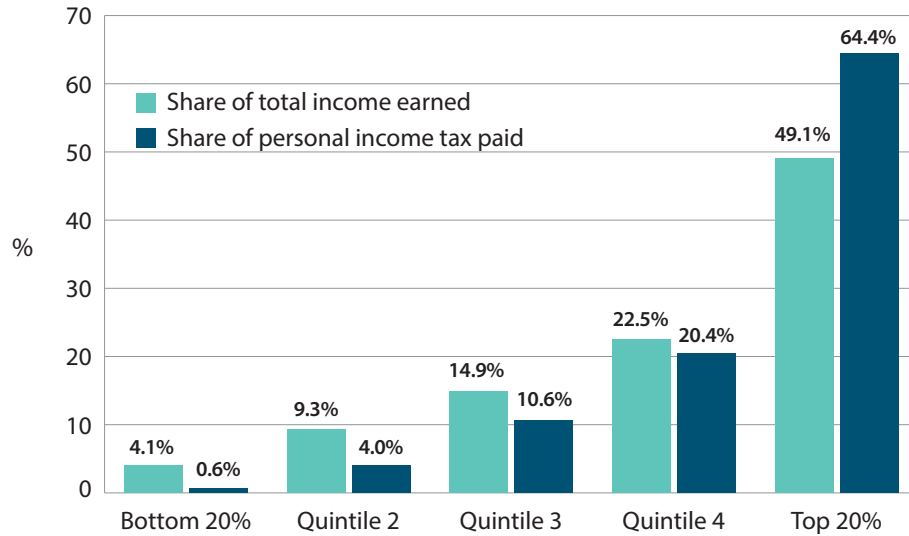
8. An alternative, commonly used way to divide Canadian families by income is by decile (groups of 10 percent), and deciles were considered in an early stage of this analysis. However, quintiles are presented in the paper because they more clearly reflect the pattern found in the distribution of taxes in Canada. The top two deciles, which form the top quintile, are the only two deciles that pay a higher share of taxes than they earn in income.

Table 1: Family Income Range by Income Group

Income group	Income range
Bottom 20%	\$45,299 or less
Quintile 2	\$45,300 to \$80,843
Quintile 3	\$80,844 to \$121,659
Quintile 4	\$121,659 to \$186,874
Top 20%	\$186,875 or more

Source: The Fraser Institute’s Canadian Tax Simulator, 2017.

Figure 1: Share of Personal Income Taxes Paid and Total Income Earned by Quintile, 2017



Note: Families are the unit of analysis in the calculations.

Source: The Fraser Institute’s Canadian Tax Simulator, 2017.

The primary reason for this is that higher levels of income in Canada are taxed at progressively higher rates. For instance, the top federal income tax rate is 33 percent on individual incomes over \$202,800, more than twice the rate (15 percent) paid on income below \$45,916. Similar progressive tax structures exist at the provincial level. Moreover, while members of top-earning families are subject to higher personal income tax rates, many members of families in the bottom 20 percent pay no income tax at all. This is 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 amount, which means the first \$11,635 of earned income is tax exempt. Someone making \$11,635 or less would thus not have to pay any federal personal income tax.

Personal Income Taxes Paid by the Top 1 Percent of Earners

The top 1 percent of income-earners is often criticized in the inequality debate and targeted as the group that should pay higher taxes, so this group warrants special focus in our analysis of the distribution of taxes.⁹ For example, the federal government has repeatedly pointed to measures it has undertaken to increase taxes on the top 1 percent of income earners in Canada as part of its plan for “tax fairness” (e.g., Canada, 2017a). Moreover, academics and non-government organizations have proposed raising taxes on the top 1 percent as a way to alleviate inequality.¹⁰ These calls are partly based on the notion that the top 1 percent generally gets away without paying personal income taxes.¹¹

In reality, Canadian families in the top 1 percent of earners as a group pay a disproportionate share of income taxes relative to their share of total income. Families in the top 1 percent pay 17.9 percent of federal and provincial personal income taxes while earning 10.7 percent of total income (**figure 2**). The share of income taxes paid by the top 1 percent is more than two-thirds (67.1 percent) larger than the share of total income earned. A similar pattern holds when looking at families in the top 5 and 10 percent of earners.¹²

In contrast, the bottom 50 percent of income earners in Canada pay a proportionately small share of income taxes relative to their share of total income earned. Specifically, the bottom 50 percent earn 20.2 percent of total income but pay 9.0 percent of personal income taxes. This means that the top 1 percent are collectively paying twice the share of personal taxes as the bottom 50 percent.

The top 1 percent not only pays a disproportionate share of Canada’s personal income taxes, but its share of personal income taxes paid has been increasing over time. **Figure 3** displays the share of personal income taxes paid by the top 1 percent of income-earning families and this group’s share of total income earned from 1997 (the first year of available data using the Canadian Tax Simulator) to 2017. In 1997, the top 1 percent paid 14.0 percent of personal income taxes, almost the same share (14.2 percent) as in 2005. However, after 2005 the personal income tax share of the top 1 percent generally increased, reaching 17.9 percent in 2017. This is despite the fact that the share of total income earned by the top 1 percent is essentially the same in 2005 (10.0 percent) as 2017 (10.7 percent).

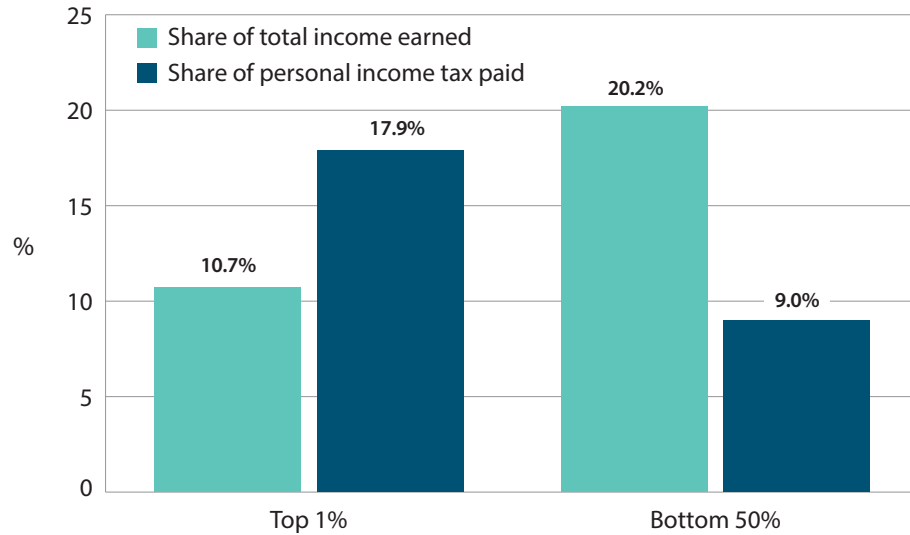
9. The 2017 threshold for Canadian families in the top 1 percent of earners is \$646,720. Note that this threshold reflects the contribution of each member of the family to total family income, and not necessarily the income of individuals in the top 1 percent.

10. See for example Osberg (2015) and Broadbent Institute (2012).

11. For more discussion, see <<https://www.fraserinstitute.org/blogs/cbc-s-misleading-tax-analysis-a-disservice-to-canadians-and-the-inequality-debate>>.

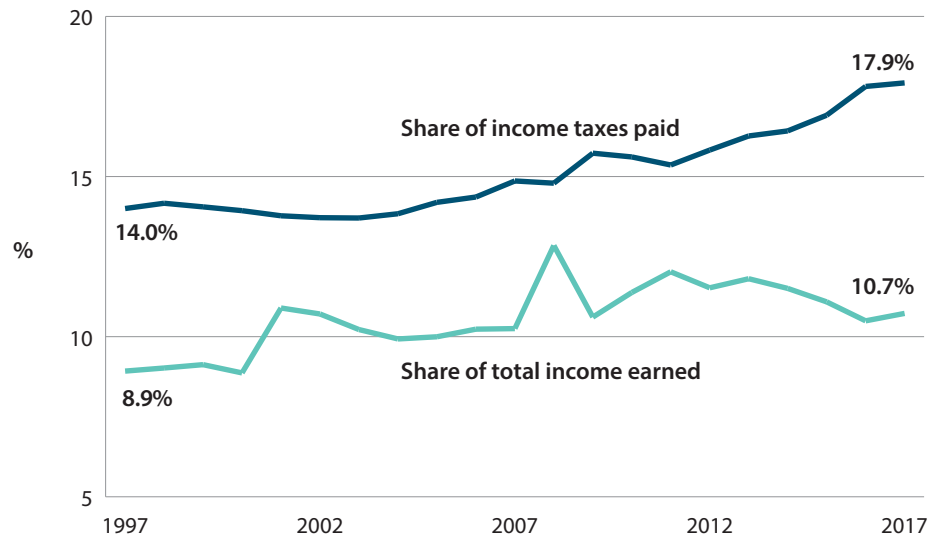
12. The top 5 percent pay 35 percent of income taxes and earn 22.8 percent of total income. The top 10 percent pay 47.1 percent of income taxes and earn 33.1 percent of total income.

Figure 2: Share of Personal Income Taxes Paid and Total Income Earned by Top 1% and Bottom 50%, 2017



Note: Families are the unit of analysis in the calculations.
Source: The Fraser Institute’s Canadian Tax Simulator, 2017.

Figure 3: Share of Personal Income Taxes Paid and Income Earned by Top 1% of Income-Earning Families, 1997–2017



Source: The Fraser Institute’s Canadian Tax Simulator, 2017.

The gap between the share of personal income taxes paid and income earned by the top 1 percent has also been increasing over time. In 1997, the top 1 percent earned 8.9 percent of total income and paid 14.0 percent of personal income taxes—a difference of 56.9 percent. By 2017, that difference had increased so that the share of income taxes paid by the top 1 percent is 67.1 percent higher than the share of income earned. This means that the share

of taxes paid by the top 1 percent of income-earning families has grown more disproportionate over the past two decades.

One reason why top earners are paying a growing share of personal income taxes is that top personal income tax rates at the federal and provincial levels have been increasing (Lammam et al., 2016). At the federal level, the government created a new top personal tax rate of 33 percent in 2016, which now applies to individual incomes above \$202,800. This is 4 percentage points higher than the previous top rate of 29 percent (which is still applied to incomes from \$142,353 to \$202,800). This tax rate hike comes on top of similar rate increases at the provincial level. For example, Ontario’s top tax rate has increased from 17.41 percent in 2011 to 20.53 percent. Overall, the combined federal and Ontario provincial top personal income tax rate has increased from 46.41 percent to 53.31 percent. Top income earners in other provinces typically pay marginal income tax rates of nearly 50 percent or more.

Overall, the evidence shows that the top income-earning families (i.e. the top 20, 10, 5, and 1 percent) collectively pay a disproportionate share of personal income taxes relative to their share of total income earned. And the gap between the shares of personal income tax paid and income earned has been growing over time.

Measuring the Distribution of All Taxes

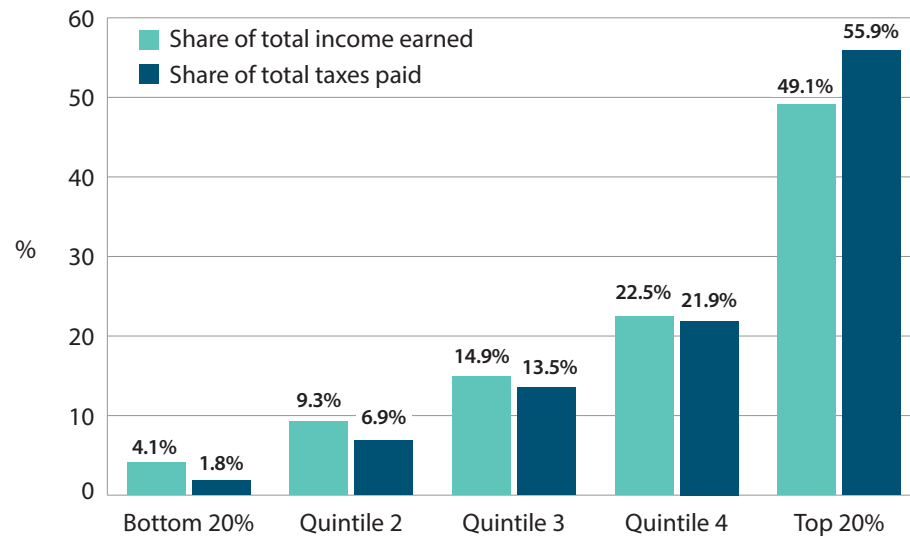
While discussions about “tax fairness” typically focus on personal income taxes only, this is just one of the many types of taxes that Canadian families pay. To more comprehensively measure the share of taxes paid by top earners—and to assess the overall fairness of the tax system—these other types of taxes must be accounted for. The Fraser Institute’s Canadian Tax Simulator is used to calculate the share of all taxes paid by income groups. This includes the following taxes: income taxes, payroll taxes, sales taxes, property taxes, profit taxes, fuel taxes, carbon taxes, vehicle taxes, import duties, liquor taxes, tobacco taxes, and a host of other levies.

Distribution of Total Taxes

As was done with personal income taxes, the distribution of total taxes is measured by dividing Canadian families into five equally-sized income groups. The shares of all taxes paid and income earned for each quintile is displayed in **figure 4**. The income ranges for each quintile are the same as those displayed in table 1.

Similarly to personal income taxes in figure 1, the top 20 percent of families is the only income group that collectively pays a greater share of total taxes than it earns in income. Specifically, the top quintile pays 55.9 percent of all Canadian taxes and earns 49.1 percent of income. The gap between the

Figure 4: Share of Total Taxes Paid and Total Income Earned by Quintile, 2017



Note: Families are the unit of analysis in the calculations.

Source: The Fraser Institute’s Canadian Tax Simulator, 2017.

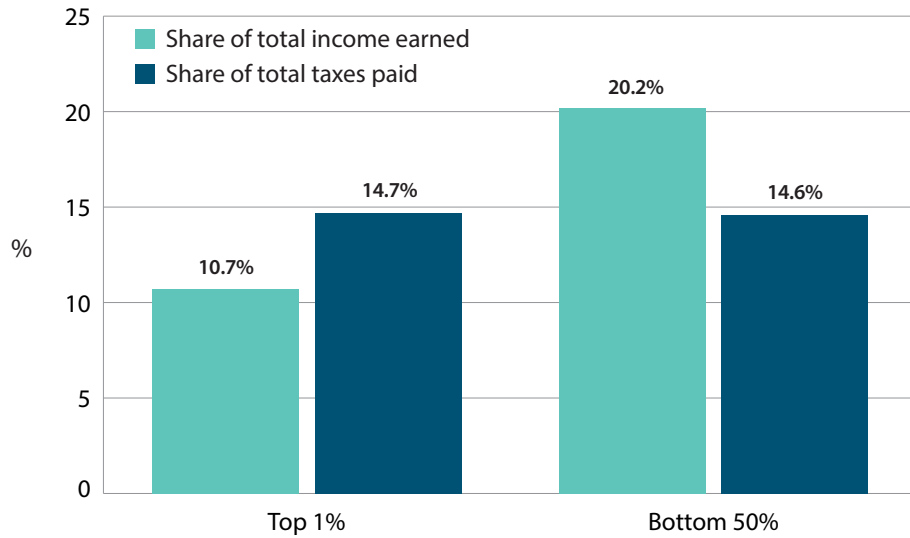
share of total taxes paid and income earned (a 13.9 percent difference) is less than the gap for personal income taxes (31.2 percent), reflecting the fact that personal income taxes are more progressive than most other forms of taxation in Canada. For every other quintile, the share of total taxes paid is less than the share of income earned. For instance, families in the lowest quintile collectively pay 1.8 percent of all taxes while earning a larger share of total income (4.1 percent). Indeed, Canada’s overall tax system disproportionately taxes the top 20 percent of earners, which runs contrary to the misperception that top income earners in Canada are paying less than their fair share of taxes.

Total Taxes Paid by the Top 1 Percent of Earners

Figure 5 displays the share of total taxes collectively paid by the top 1 percent of income earning families compared to the bottom half of Canadian families. As a group, the top 1 percent pays 14.7 percent of all taxes, compared to earning 10.7 percent of all income.¹³ That is a difference of 36.9 percent, again less than the difference with personal income taxes (67.1 percent). Notably, the share of taxes paid by the bottom 50 percent is approximately the same (14.6 percent) as the share paid by the top 1 percent. However, the bottom 50 percent earns twice the share of total income (20.2 percent) than the top 1 percent. The concern that top earners, as a collective group, are not paying their fair share is clearly misplaced.

¹³ A similar pattern is observed for families in the top 5 percent and 10 percent of earners. Families in the top 5 percent of earners pay 28.8 percent of all taxes and earn 22.8 percent of total income. Families in the top 10 percent pay 39.6 percent of all taxes and earn 33.1 percent of total income.

Figure 5: Share of Total Taxes Paid and Total Income Earned by Top 1% and Bottom 50%, 2017

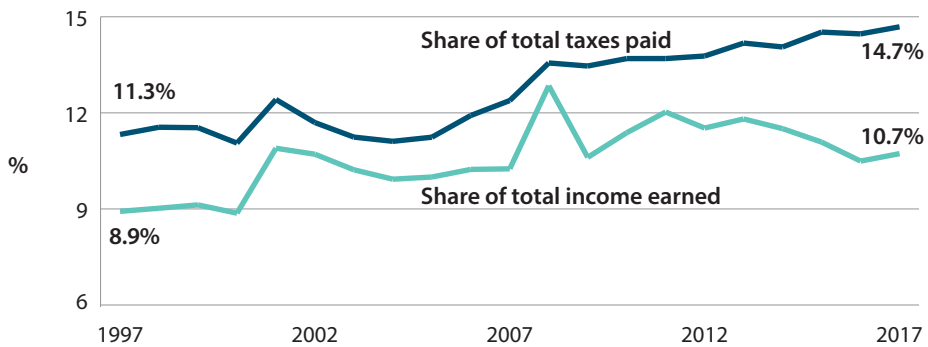


Note: Families are the unit of analysis in the calculations.

Source: The Fraser Institute’s Canadian Tax Simulator, 2017.

In addition, the share of total taxes collectively paid by the top 1 percent has been increasing over the course of two decades. **Figure 6** displays the share of total taxes paid and total income earned by the top 1 percent of income-earning families from 1997 to 2017. Over that period, the share of total taxes that the top 1 percent pay has increased from 11.3 percent in 1997 to 14.7 percent in 2017. This represents a growing share of the tax burden being borne by the country’s highest income-earning families. Moreover, the difference between the share of total taxes paid and total income earned widened from 26.9 percent to 36.9 percent over the same period.

Figure 6: Share of Total Taxes Paid and Income Earned by Top 1% of Income-Earning Families, 1997–2017



Source: The Fraser Institute’s Canadian Tax Simulator, 2017.

Economic Consequences of Increasing Taxes on Top Earners

Canada’s top income earners are currently paying a disproportionate share of total taxes relative to the share of income that they earn. Those who advocate higher taxes on top income earners are, in effect, arguing that top earners should be paying an even more disproportionate amount of taxes. This raises the question of how much is enough in terms of taxes paid by top income earners. But it is also important to recognize that taxes cannot be continually raised on top income earners without economic consequences.

Consider the economic consequences of further increasing marginal income tax rates on upper earners, which is the main driver of progressivity in Canada’s tax system. Doing so would further discourage individuals from undertaking productive economic activities such as working, saving, investing, and being entrepreneurial (Murphy et al., 2013). This is because higher marginal tax rates reduce the reward that individuals receive from earning more income. Since earning more income generally involves effort and/or risk taking, reducing the after-tax benefits makes such endeavors less worthwhile for many individuals.

Discouraging productive activities such as entrepreneurial risk taking has widespread implications for Canada’s economy. Entrepreneurship leads to innovation, which results in novel ways of combining resources to better serve customers through new and improved products and services. By reducing the rewards to risk taking, higher marginal tax rates hinder innovation and this hampers productivity growth. Productivity is a key driver of long-term economic growth and the compensation of workers, so higher marginal tax rates ultimately negatively affect the prosperity of Canadians.

There are also implications for Canada’s competitiveness as a place to work and do business. Raising marginal tax rates on upper earners makes it harder for Canada to attract and retain highly skilled, educated workers such as business professionals, scientists, doctors, and engineers. Canada is part of a global marketplace that competes for top talent and tax rates play a role in the decision of where highly skilled workers choose to live and work (Kleven et al., 2013; Akcigit et al., 2015). In this regard Canada is already at a competitive disadvantage, with one of the highest top marginal tax rates among industrialized countries—in fact, 8th highest of 35 countries (OECD, 2017).

Taxing top income earners may appear to be a simple solution to inequality but it comes with considerable costs. Further increases to marginal tax rates on upper earners would have deleterious consequences on the economy and the general prosperity of Canadians. And the evidence suggests there will be little gained in terms of reducing inequality.¹⁴ In addition, higher marginal tax

14. For instance, Milligan and Smart (2015) found that increasing the highest provincial income tax rates by 5 percentage points would yield only a 6 percent reduction in the concentration of income in the top 1 percent.

rates on upper earners send a negative signal—that success will be penalized with higher rates—to Canadians who are currently not part of the top 20 or top 1 percent. By discouraging those in lower income groups from becoming top earners, higher marginal tax rates discourage income mobility.

Conclusion

Raising taxes on top income earners is often proposed as a solution for reducing inequality in Canada. This argument is fueled, in part, by a misconception that top income earners are not paying their fair share of taxes. However, the reality is that top income earners already collectively pay a disproportionate, and growing, share of both personal income taxes and total government taxes. Proponents of raising taxes on top earners must recognize that there are considerable economic costs to such policies.

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