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Taxes versus the Necessities of Life: The Canadian Consumer Tax Index, 2011

Main Conclusions

- The Canadian Consumer Tax Index tracks the total tax bill of the average Canadian family from 1961 to 2010. The total tax bill of the average Canadian family, including all types of taxes, has increased by 1,686 percent since 1961.
- Taxes have grown much more rapidly than any other single expenditure for the average Canadian family. In contrast to the increase in taxes, expenditures on shelter increased by 1,175 percent, food by 498 percent, and clothing by 510 percent from 1961 to 2010.
- The 1,686 percent increase in the tax bill has also greatly outpaced the increase in the Consumer Price Index (642%), which measures the average price that consumers pay for the goods and services that they buy of their own choice including food, shelter, clothing, transportation, health and personal care, education, and many others.
- The average Canadian family spends more of its income on taxes than it does on the basic necessities such as food, shelter and clothing. In 2010, 41.3 percent of the average family's income went to pay taxes while it spent 34.0 percent of its income on basic necessities (food, shelter, and clothing). In comparison, in 1961 the average family had to use 56.5 percent of its income on basic necessities, while only 33.5 percent of the family's income went to taxes.
- In 1961, the average family had an income of $5,000 and paid a total tax bill of $1,675 (33.5 percent). In 2010, the average Canadian family earned an income of $72,393 and paid total taxes equalling $29,913 (41.3 percent).
- Unfortunately, the federal and most provincial governments are running budget deficits, meaning that current taxes do not cover current spending. Of course, these deficits must one day be paid for by taxes.
- Including deferred taxes (deficits) means the tax bill of the average Canadian family has increased by 1,887 percent since 1961.

Introduction

The Canadian tax system is complex and there is no single number that can give us a complete idea of who pays how much tax. That said, the Fraser Institute annually calculates the most comprehensive and easily understood indicator of the overall tax bill of the average Canadian family: *Tax Freedom Day* (see Palacios and Veldhuis, 2010). This Alert examines what has happened to the tax bill of the average Canadian family over the past 49 years. To do this, we have constructed an index of the tax bill, the Canadian Consumer Tax Index, for the period 1961 to 2010.

The total tax bill

In order to calculate the total tax bill of the average Canadian family, we add up all of the various taxes that the family pays to federal, provincial, and local governments. These include direct taxes, such as income taxes, Employment Insurance and Canadian Pension Plan taxes, and indirect taxes such as sales taxes, import duties, excise taxes on tobacco and alcohol, amusement taxes, and gas taxes. Average Canadians also pay the taxes levied on businesses. Although businesses pay these taxes directly, the cost of business taxation is ultimately passed onto ordinary Canadians. (For a further discussion of who pays business taxes, see Clemens and Veldhuis, 2003.)

In 2010, the average Canadian family (which includes both families and unattached individuals) earned cash income[1] of $72,393 and paid total taxes equaling $29,913 (table 1).[2] In other words, the total tax bill of the average Canadian family in 2010 amounted to 41.3 percent of cash income.

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The Canadian Consumer Tax Index

The Canadian Consumer Tax Index tracks the total tax bill paid by a Canadian family with average income. While each of these families had average income in the year selected, the family is not the same one from year to year. The objective is not to trace the tax experience of a particular family, but rather to plot the experience of a family that was average in each year.[3]

The "consumer" in question is the taxpaying family, which can be thought of as consuming government services. Much like the Consumer Price Index calculated by Statistics Canada, which measures the average price that consumers pay for the goods and services that they buy of their own choice, the Canadian Consumer Tax Index measures the price of goods and services that government buys on behalf of Canadians.

Table 1: Tax bill of the average Canadian family, 2010

Total cash income	$72,393
Taxes	
Income taxes	9,594
Sales taxes	4,532
Liquor, tobacco, amusement, and other excise taxes	1,737
Auto, fuel, and motor vehicle licence taxes	763
Social security, medical, and hospital taxes	5,873
Property taxes	3,436
Import duties	220
Profits tax	2,628
Natural resource taxes	389
Other taxes	741
Total taxes	$29,913
Taxes as a percentage of cash income:	41.3%

Source: The Fraser Institute's Canadian Tax Simulator, 2010.
Note: Tax and income calculations for 2010 are preliminary and subject to revision when final tax revenue and income data become available.

The Canadian Consumer Tax Index thus answers the following question: How has the tax bill of the average family changed since 1961, bearing in mind that the average family has itself changed in that period?

Table 2 presents the average cash income and total tax bill paid by the average Canadian family for the period from 1961 to 2010. In 1961, the average Canadian family earned an income of $5,000 and paid

Table 2: Taxes paid by the average Canadian family (families and unattached individuals), 1961-2010

Year	Cash income ($)	Tax bill ($)	Increase in tax bill over base year (%)
1961	5,000	1,675	—
1969	8,000	3,117	86
1974	12,500	5,429	224
1976	16,500	5,979	257
1981	27,980	11,429	582
1985	32,309	14,834	786
1990	43,170	18,693	1,016
1992	43,516	17,612	951
1994	44,095	18,366	996
1996	45,370	19,844	1,085
1998	48,487	21,522	1,185
2000	53,988	24,916	1,388
2002	56,181	25,529	1,424
2004	59,933	27,329	1,532
2006	65,405	29,712	1,674
2008	72,238	30,954	1,748
2009	71,033	28,832	1,621
2010	72,393	29,913	1,686

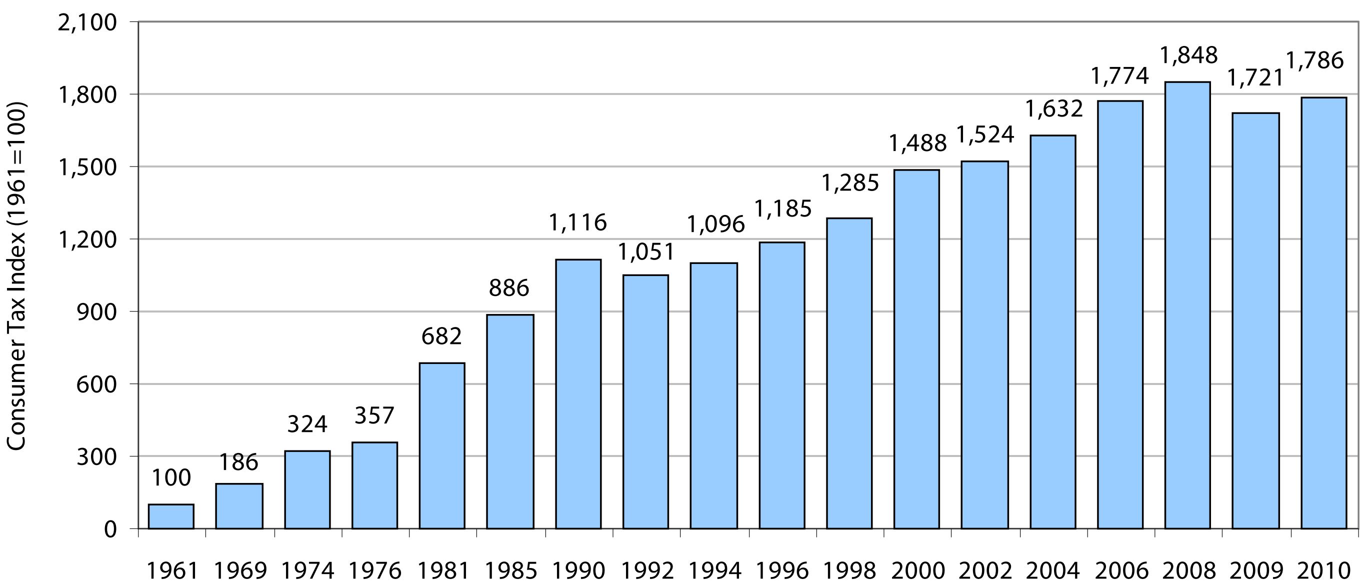
Source: The Fraser Institute's Canadian Tax Simulator, 2010.

Table 3: The Canadian Consumer Tax Index (1961 = 100)

Year	
1961	100
1969	186
1974	324
1976	357
1981	682
1985	886
1990	1,116
1992	1,051
1994	1,096
1996	1,185
1998	1,285
2000	1,488
2002	1,524
2004	1,632
2006	1,774
2008	1,848
2009	1,721
2010	1,786

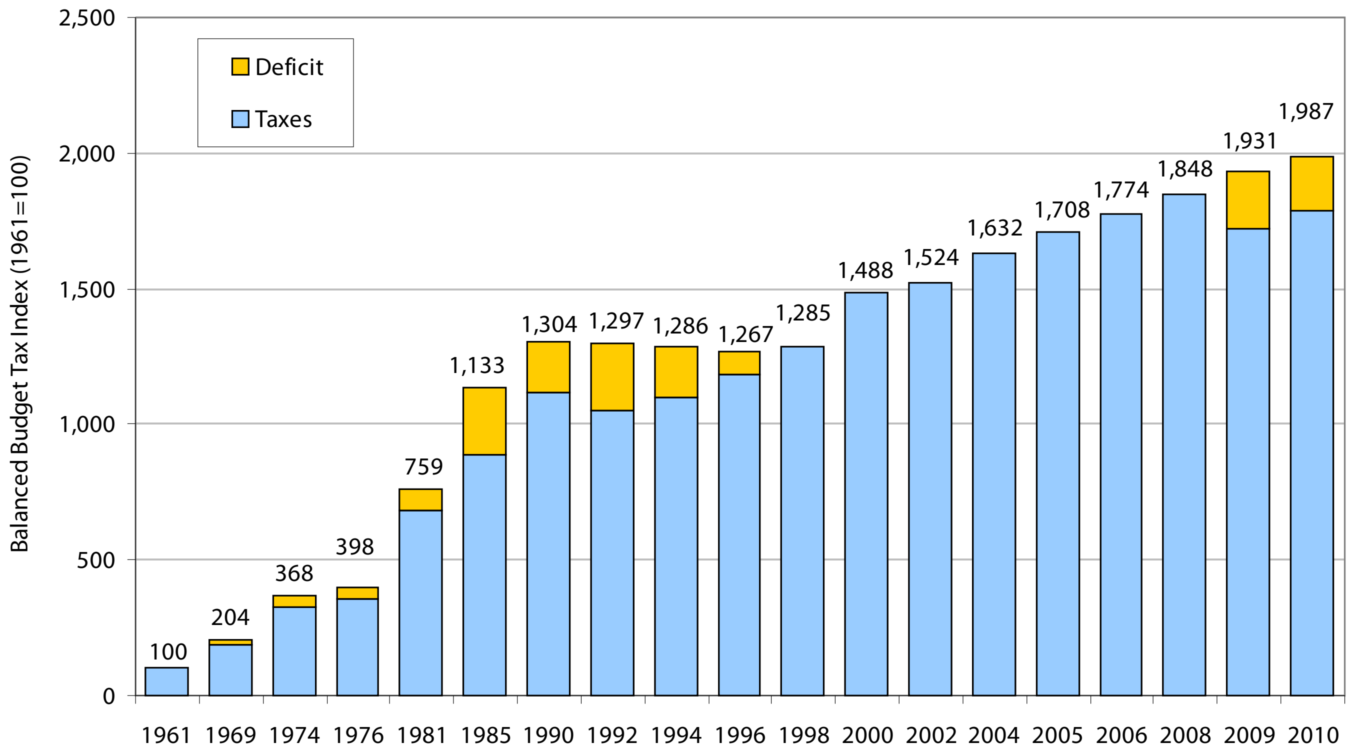
Source: The Fraser Institute's Canadian Tax Simulator, 2010.

Figure 1: The Canadian Consumer Tax Index, 1961-2010



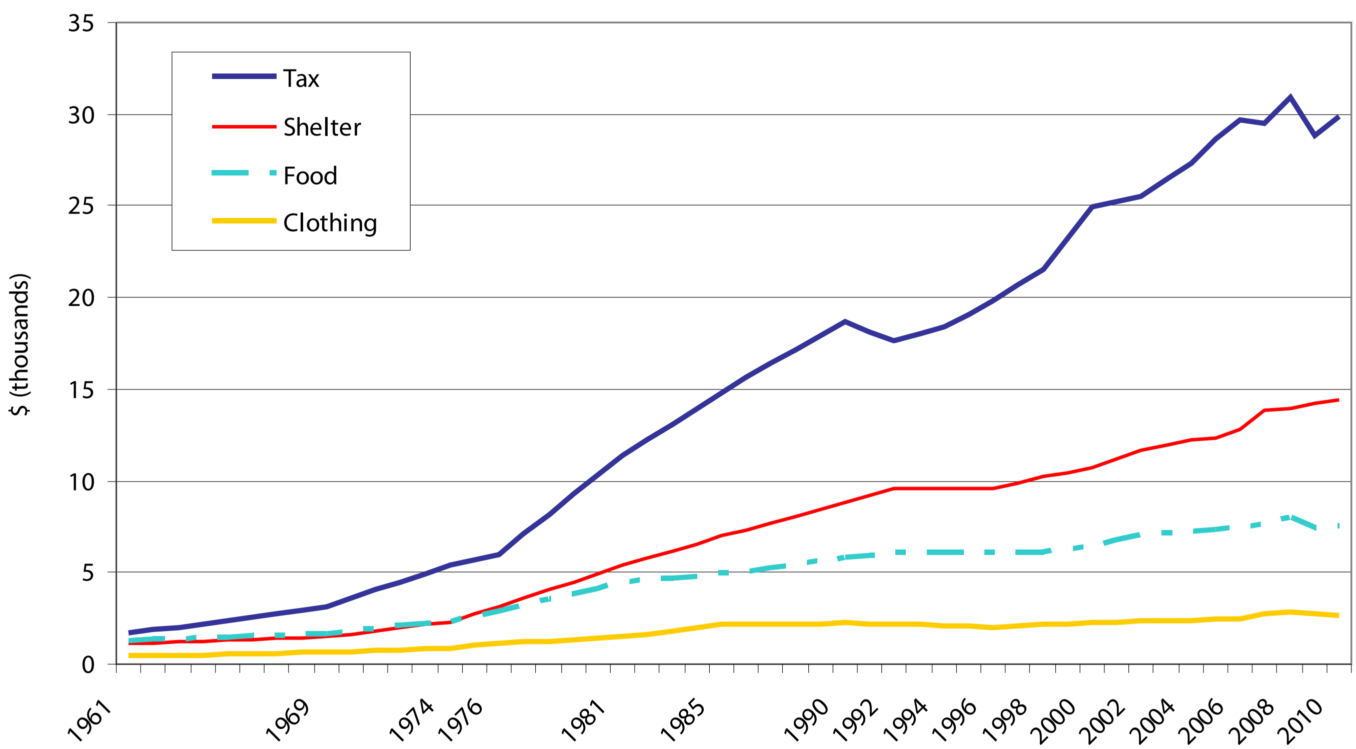
Source: Table 3.

Figure 2: The Balanced Budget Tax Index, 1961-2010



Source: The Fraser Institute's Canadian Tax Simulator, 2010; Statistics Canada, 2010a; calculations by the authors.

Figure 3: Taxes and basic expenditures of the average Canadian family, 1961-2010



Source: Table 4.

Table 4: Income, taxes, and selected expenditures of the average Canadian family ($)

Year	Average cash income	Average tax bill	Average expenditures[1]		
			Shelter[2]	Food	Clothing
1961	5,000	1,675	1,130	1,259	435
1969	8,000	3,117	1,497	1,634	654
1974	12,500	5,429	2,294	2,320	886
1976	16,500	5,979	3,134	2,838	1,119
1981	27,980	11,429	5,381	4,440	1,499
1985	32,309	14,834	6,984	4,899	2,141
1990	43,170	18,693	8,776	5,745	2,234
1992	43,516	17,612	9,607	6,024	2,215
1994	44,095	18,366	9,592	6,066	2,116
1996	45,370	19,844	9,577	6,108	2,017
1998	48,487	21,522	10,228	6,039	2,136
2000	53,988	24,916	10,667	6,384	2,235
2002	56,181	25,529	11,683	6,972	2,364
2004	59,933	27,329	12,259	7,216	2,394
2006	65,405	29,712	12,790	7,449	2,455
2008	72,238	30,954	13,932	7,998	2,884
2009	71,033	28,832	14,217	7,423	2,705
2010[3]	72,393	29,913	14,416	7,527	2,652

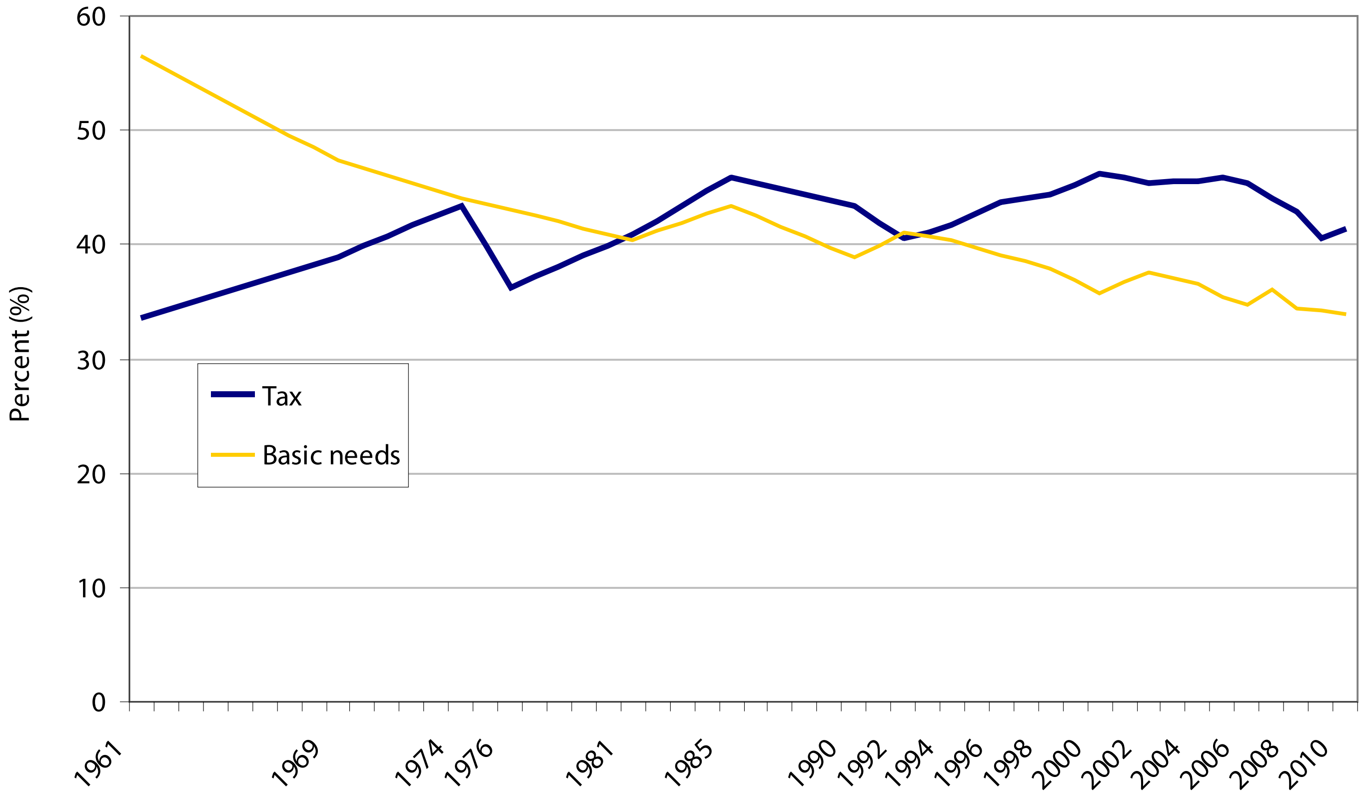
Sources: Statistics Canada (various issues), *Urban Family Expenditure*; Statistics Canada (various issues), *Family Expenditures in Canada*; Statistics Canada (various issues), *Spending Patterns in Canada*; Statistics Canada (2011); Statistics Canada (various issues), *The Consumer Price Index*; The Fraser Institute's Canadian Tax Simulator, 2010.
Notes:
[1]All expenditure items include indirect taxes.
[2]Average Shelter Expenditures for years prior to 1998 are estimates. The estimate is to take account of a change in the definition of shelter between the *Family Expenditure Survey* and the *Survey of Household Expenditures*.
[3]Expenditures for 2010 were estimated using the results of the 2009 *Survey of Household Spending* and adjusting final results for inflation.

$1,675 in taxes (33.5 percent). In 2010, the average Canadian family earned an income of $72,393 and paid total taxes equaling $29,913 (41.3 percent).

The basis of the Canadian Consumer Tax Index is the total tax calculation presented in table 2. Specifically, the Canadian Consumer Tax Index is constructed by dividing the tax bill of an average Canadian family by the average tax bill of an average family in 1961, and then multiplying by 100, for each of the years included in the index. The Canadian Consumer Tax Index has a value of 100 in 1961. Values in subsequent years reflect the percentage increase over the 1961 value. The value of the Canadian Consumer Tax Index for 2010 is 1,786, which indicates that the tax bill of the average Canadian family has increased by 1,686 percent since 1961 (see table 3, figure 1).

Part of that increase reflects the effects of inflation. In order to eliminate the portion of the increase due to the erosion of purchasing power, we have also calculated the tax index in real dollars—that is, dollars

Figure 4: Taxes and basic needs as percentage of cash income, 1961-2010



Source: Table 4.

of 2010 purchasing power. While this adjustment has the effect of reducing the steepness of the index's path over time, the real-dollar tax index, nevertheless, increased by 140.7 percent over the period (see table 5).

What the Canadian Consumer Tax Index shows

The interaction of a number of factors produced the dramatic increase in the average family's tax bill from 1961 to 2010. Among those factors are, first, a sizeable increase in incomes over the period (1,348 percent since 1961), and even with no changes in tax rates, the family's tax bill would have increased substantially: growth in family income alone would have produced an increase in the tax bill from $1,675 in 1961 to $24,252 in 2010. Second, the average family faced a tax rate increase from 33.5 percent in 1961 to 41.3 percent in 2010.[4]

Balanced Budget Consumer Tax Index

Unfortunately, after many years of budget surpluses, the federal and most provincial governments resorted to deficits in 2009 and 2010 to finance their expenditures. Of course, these deficits must one day be paid for by taxes. Deficits should therefore be considered as deferred taxation. Figure 2 shows what the Canadian Consumer Tax Index looks like when the annual deficits of governments are added to the tax bill.

The total tax bill of the average family would be higher than it actually is if, instead of financing its expenditures with deficits, all Canadian governments had simply increased tax rates to balance their budgets. Indeed, the Canadian Consumer Tax Index would have increased to 1,987 if deferred taxation was added to the average family's total tax bill. Once deferred taxes are included, the tax bill of the average Canadian family has increased by 1,887 percent since 1961.

Table 5: Inflation-adjusted tax bill and Consumer Tax Index, 1961-2010

Year	Tax Bill (2010 $)	Percent change in taxes since 1961
1961	12,426	—
1969	18,428	48.3
1974	24,133	94.2
1976	22,391	80.2
1981	26,892	116.4
1985	27,423	120.7
1990	27,769	123.5
1992	24,419	96.5
1994	24,960	100.9
1996	25,998	109.2
1998	27,455	121.0
2000	30,418	144.8
2002	29,733	139.3
2004	30,400	144.7
2006	31,713	155.2
2008	31,598	154.3
2009	29,344	136.2
2010	29,913	140.7

Sources: The Fraser Institute's Canadian Tax Simulator, 2010; Statistics Canada, *The Consumer Price Index, cat. 62-001-XPB.*

Taxes versus the necessities of life

To gauge the significance of the increased tax bill on Canadian families it is necessary to compare the evolution of the tax take to the average family's other major expenditures. Table 4 and figure 3 compare family cash income with total taxes paid and the family's expenditures on shelter, food, and clothing. It is clear that taxes have become the most significant item in family budgets, and that taxes have grown more rapidly than any other single item.

In 1961, the average family spent 56.5 percent of its cash income to pay for its shelter, food, and clothing. In the same year, 33.5 percent of the family's income went to governments as tax. By 1981, the situation had been reversed: 40.8 percent of an average family's income was taken by governments in the form of taxes while 40.5 percent was spent to provide the family with shelter, food, and clothing. In 2010, the average family spent 34.0 of its income on the necessities of life while 41.3 percent of its income went to taxes (see figure 4).

Table 6 and figure 5 show the Canadian Consumer Tax Index relative to income and other expenditure indices. Average cash income rose by 1,348 percent from 1961 to 2010, prices rose by 642 percent, expenditures on shelter by 1,175 percent, food by 498 percent, and clothing by 510 percent. Meanwhile, the tax bill of the average family grew by 1,686 percent.

Conclusion

The Canadian Consumer Tax Index tracks the total tax bill paid by a Canadian family with average income from 1961 to 2010. The results show that the average Canadian family's tax bill has been rising steadily for the better part of 49 years. Indeed, the average Canadian family's total tax bill, including all types of taxes, has increased by 1,686 percent since 1961 and taxes have grown more rapidly than any other single expenditure item.

Notes

1 Cash income is used convey the size of the total tax bill imposed on Canadian families and includes wages and salaries, income from farm operations, unincorporated non-farm income, interest, dividends, private and government pension payments, old age pension payments, and other transfers from government. For a further discussion, see Palacios and Veldhuis, 2008.

2 Tax and income calculations are preliminary estimates based on government projections of tax revenues and an estimated growth in personal incomes. Tax and income calculations are subject to revision when final tax revenue and income data become available.

3 We can note, for example, that in 2010 the average family is headed by

Table 6: Income tax and expenditure indices (1961=100)[1]

Year	Average cash income	Consumer Tax Index	Average Consumer Price Index	Average expenditures[2]		
				Shelter	Food	Clothing
1961	100	100	100	100	100	100
1969	160	186	125	132	130	150
1974	250	324	167	203	184	204
1976	330	357	198	277	225	257
1981	560	682	315	476	353	345
1985	646	886	401	618	389	492
1990	863	1,116	499	776	456	514
1992	870	1,051	535	850	478	509
1994	882	1,096	546	849	482	486
1996	907	1,185	566	847	485	464
1998	970	1,285	582	905	480	491
2000	1,080	1,488	608	944	507	514
2002	1,124	1,524	637	1,034	554	543
2004	1,199	1,632	667	1,084	573	550
2006	1,308	1,774	695	1,131	592	564
2008	1,445	1,848	727	1,232	635	663
2009	1,421	1,721	729	1,258	590	622
2010	1,448	1,786	742	1,275	598	610
Percentage increase 1961-2010	1,348	1,686	642	1,175	498	510

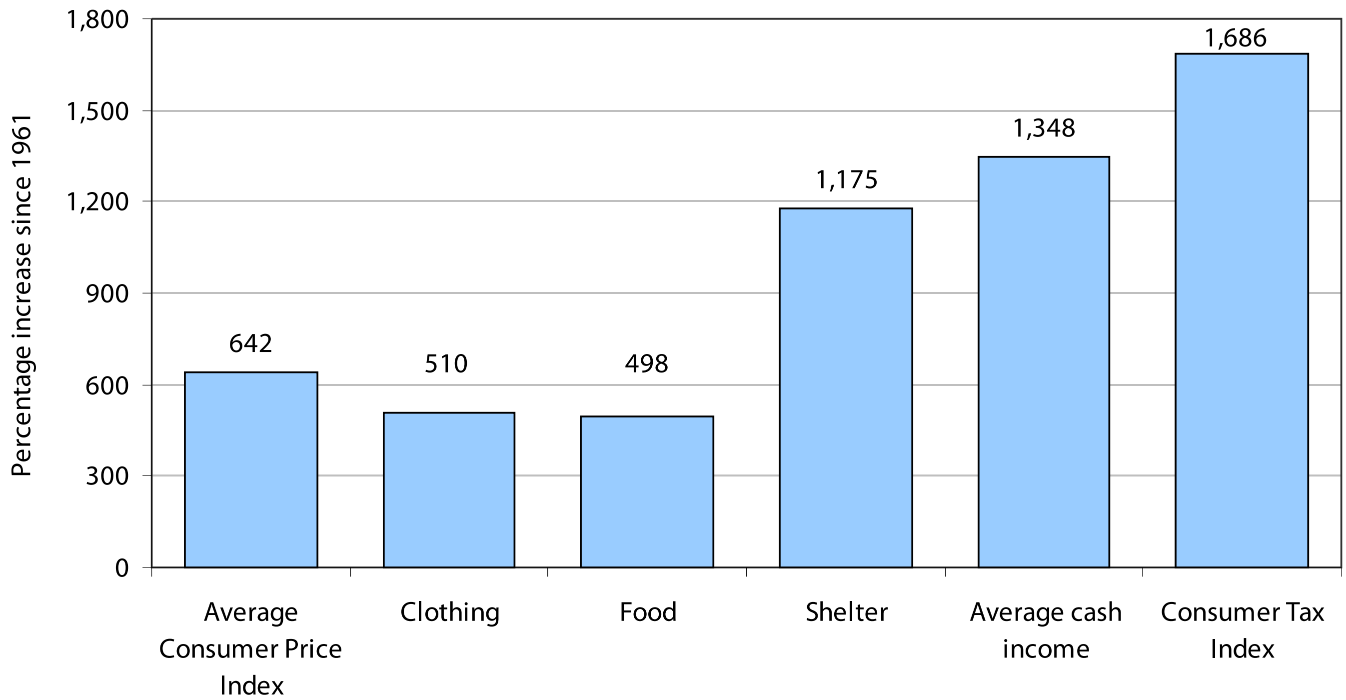
Sources: Table 4; The Fraser Institute's Canadian Tax Simulator, 2010.
Notes:
[1]All figures in this table are converted to indices by dividing each series in table 4 by its value in 1961, and then multiplying that figure by 100.
[2]All expenditure items include indirect taxes.

an older person, who is more likely to own a car and a house, and has fewer members than the average family of 1961 (Dominion Bureau of Statistics, 1962; and Statistics Canada, 1983 and 2010b).

4 As Table 2 reveals, the total tax bill for the average Canadian family actually declined in 2009 before increasing in 2010. There are a number of reasons for the drop in 2009. First, some tax relief provided at the federal and provincial levels contributed to the decline. The second contributing factor has nothing to do with tax reductions from either the federal or provincial governments: in 2009, the Canadian economy slipped into recession. In a recession, incomes stagnate or decline, and the family tax bill tends to drop to a greater extent than incomes. This accelerated decrease in the income tax bill is due to the progressive nature of the Canadian tax system. Progressivity means that as one earns more income, one also pays proportionately more tax. The reverse is also true, and this reverse phenomenon drove some of the decline in the 2009 tax bill.

Additionally, there are other cyclically-related tax reductions that have an impact on the tax bill during an economic downturn. For example, sales and other consumption taxes tend to decrease since individuals prioritize savings over consumption. Similarly, business profits are also reduced, which necessarily reduces the profit taxes these businesses pay.

Figure 5: How the Canadian Consumer Tax Index has increased relative to other indices, 1961-2010



Source: Table 6.

This reasoning, though in reverse, also applies to the increase in the tax bill from 2009 to 2010. The Canadian economy recovered from the recession midway through 2009 and into 2010, which led to increased tax revenues for Canadian governments.

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