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

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by Milagros Palacios and Niels Veldhuis

Main Conclusions

- **The Canadian Consumer Tax Index tracks the total tax bill of the average Canadian family from 1961 to 2011. The total tax bill, including all types of taxes, of the average Canadian family has increased by 1,738 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 1,185 percent, food by 518 percent, and clothing by 500 percent from 1961 to 2011.**
- **The 1,738 percent increase in the tax bill has also greatly outpaced the increase in the Consumer Price Index (663 percent), which measures the average price that consumers pay for the goods and services they buy of their own choice including food, shelter, clothing, transportation, health and personal care, education, and many others.**
- **The average Canadian family now spends more of its income on taxes than it does on basic necessities such as food, shelter, and clothing. In 2011, 41.5 percent of the average family's income went to pay taxes while it spent 33.6 percent of its income on food, shelter, and clothing. In comparison, in 1961 the average family spent 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 2011, the average Canadian family earned an income of $74,233 and paid total taxes equalling $30,792 (41.5 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 1,897 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. 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, 2011). This Alert examines what has happened to the tax bill of the average Canadian family over the past 50 years. To do this, we have constructed an index of the tax bill of the average Canadian family, the *Canadian Consumer Tax Index*, for the period 1961 to 2011.

The total tax bill

In order to calculate the total tax bill of the average Canadian family, we add up all 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 2011, the average Canadian family (which includes both families and unattached individuals) earned cash income[1] of $74,233 and paid total taxes equaling $30,792 (table 1).[2] In other words, the total tax bill of the average Canadian family in 2011 amounted to 41.5 percent of cash income.

Table 1: Tax bill of the average Canadian family, 2011

Total cash income in dollars ($)	74,233	
Taxes	**in dollars ($)**	**as % of total taxes**
Income taxes	9,137	29.7%
Social security, medical, and hospital taxes	6,328	20.6%
Sales taxes	4,748	15.4%
Property taxes	3,520	11.4%
Profits tax	3,133	10.2%
Liquor, tobacco, amusement, and other excise taxes	1,735	5.6%
Auto, fuel, and motor vehicle licence taxes	775	2.5%
Other taxes	736	2.4%
Natural resource taxes	444	1.4%
Import duties	236	0.8%
Total taxes	$30,792	
Taxes as a percentage of cash income		41.5%

Source: The Fraser Institute's Canadian Tax Simulator, 2011.
Note: Tax and income calculations for 2011 are preliminary and subject to revision when final tax revenue and income data become available.

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

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Table 2: Taxes paid by the average Canadian family (families and unattached individuals), 1961-2011

Year	Average 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	45,392	20,466	1,122
2000	51,915	23,892	1,326
2002	53,920	24,531	1,365
2004	58,497	26,476	1,481
2006	64,349	28,672	1,612
2008	68,899	28,782	1,618
2010	72,296	29,664	1,671
2011	74,233	30,792	1,738

Source: The Fraser Institute's Canadian Tax Simulator, 2011.

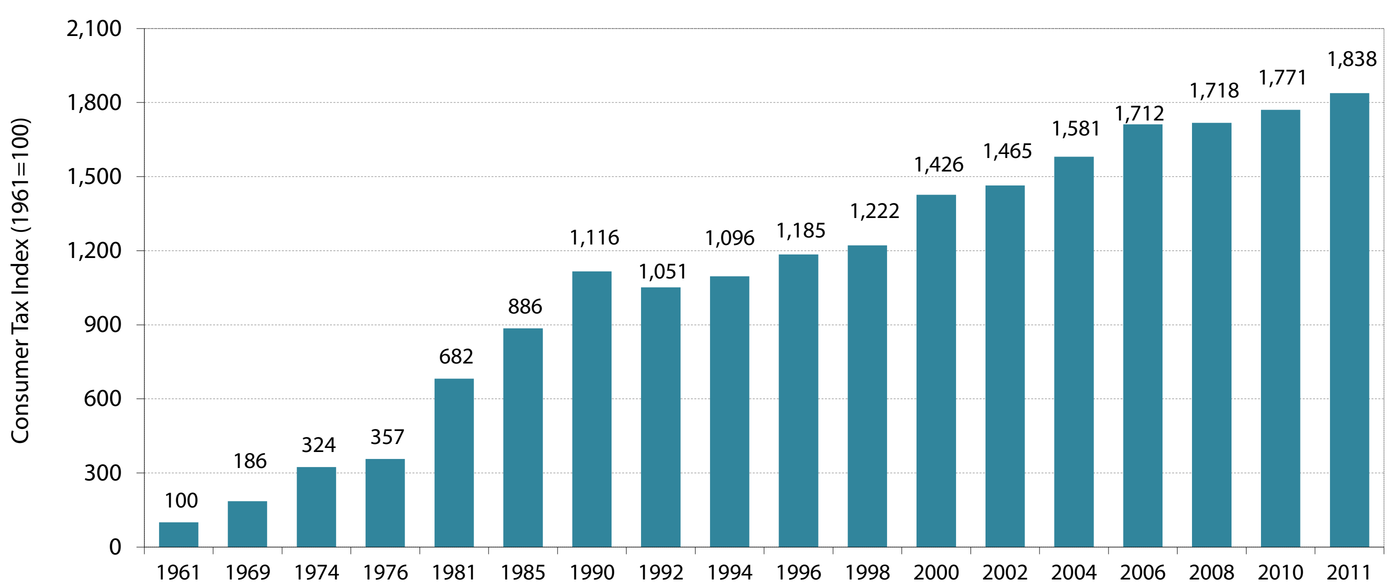
Table 3: The Canadian Consumer Tax Index

(1961 = 100)

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	1,222
2000	1,426
2002	1,465
2004	1,581
2006	1,712
2008	1,718
2010	1,771
2011	1,838

Source: The Fraser Institute's Canadian Tax Simulator, 2011.

Figure 1: The Canadian Consumer Tax Index, 1961-2011



Source: Table 3.

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.

The Canadian Consumer Tax Index thus answers the following question: How has the tax burden 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 till paid by the average Canadian family from 1961 to 2011. In 1961, the average Canadian family earned an income of $5,000 and paid $1,675 in taxes (33.5 percent). In 2011, the average Canadian family earned an income of $74,233 and paid a total of $30,792 in taxes (41.5 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; in subsequent years, values reflect the percentage increase over the 1961 value. The value of the Canadian Consumer Tax Index for 2011 is 1,838, which indicates that the tax bill of the average Canadian family has increased by 1,738 percent since 1961 (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 also calculated the tax index in real dollars, that is, in dollars with 2011 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 140.8 percent over the period (see table 4).

Table 4: Inflation-adjusted tax bill and Consumer Tax Index, 1961-2011

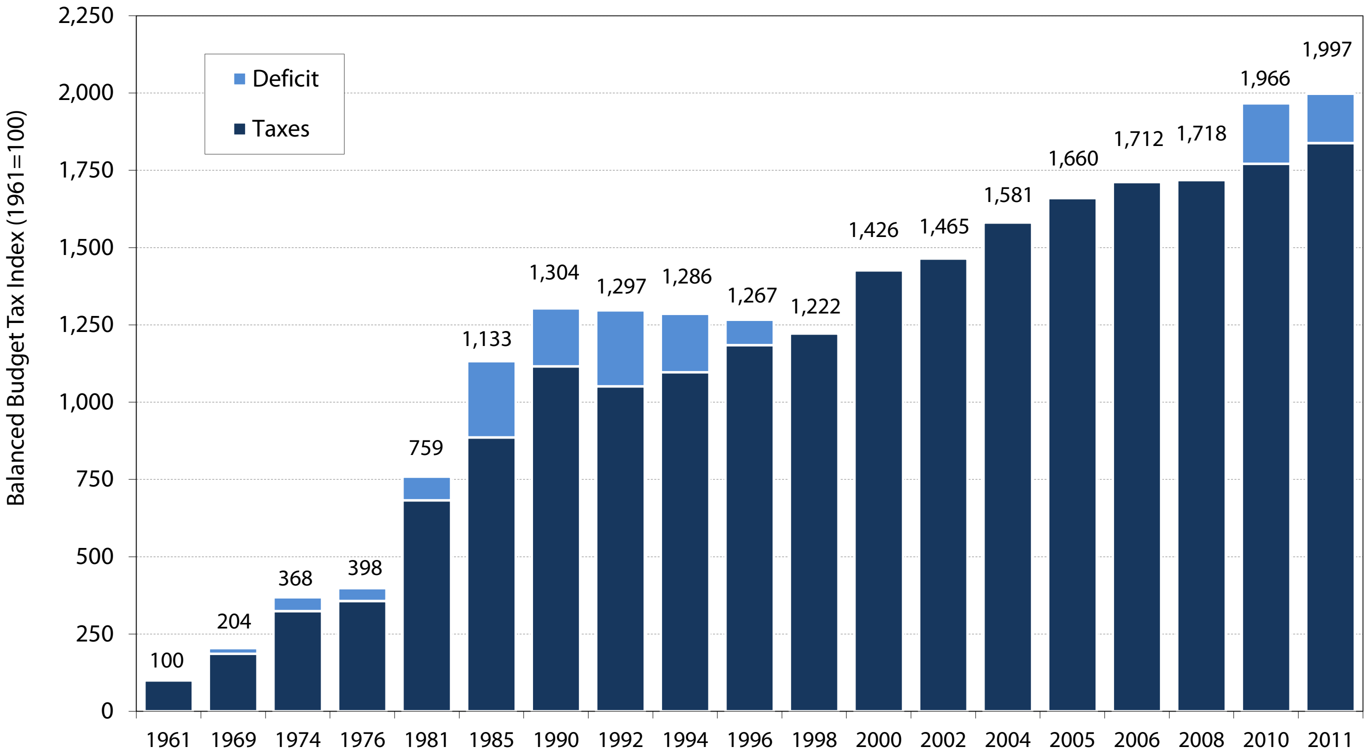
Year	Tax bill (2011 $)	Percent change in taxes since 1961
1961	12,787	—
1969	18,964	48.3
1974	24,836	94.2
1976	23,043	80.2
1981	27,675	116.4
1985	28,222	120.7
1990	28,577	123.5
1992	25,130	96.5
1994	25,687	100.9
1996	26,755	109.2
1998	26,868	110.1
2000	30,017	134.7
2002	29,403	129.9
2004	30,310	137.0
2006	31,494	146.3
2007	32,210	151.9
2008	30,237	136.5
2010	30,528	138.7
2011	30,792	140.8

Sources: The Fraser Institute's Canadian Tax Simulator, 2011; Statistics Canada (various issues), *The Consumer Price Index*; calculations by authors.

What the Canadian Consumer Tax Index shows

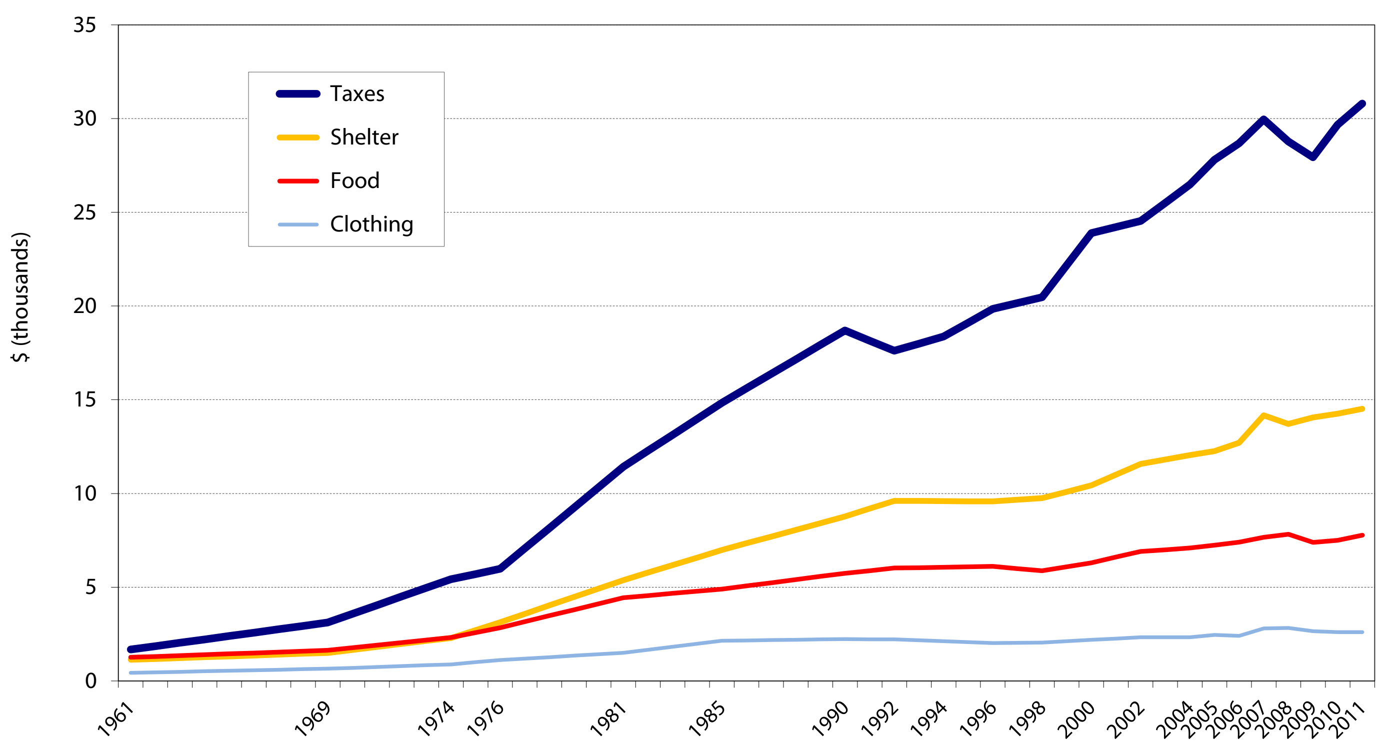
The interaction of a number of factors produced the dramatic increase in the average family's tax bill from 1961 to 2011. Among those factors is, first, a sizeable increase in incomes over the period, 1,385 percent since 1961. Even with no changes in tax rates, the family's tax bill would have increased substantially: growth in family income

Figure 2: The Balanced Budget Tax Index, 1961-2011



Source: The Fraser Institute's Canadian Tax Simulator, 2011; Statistics Canada, 2012; calculations by authors.

Figure 3: Taxes and basic expenditures of the average Canadian family, 1961-2011



Source: Table 5.

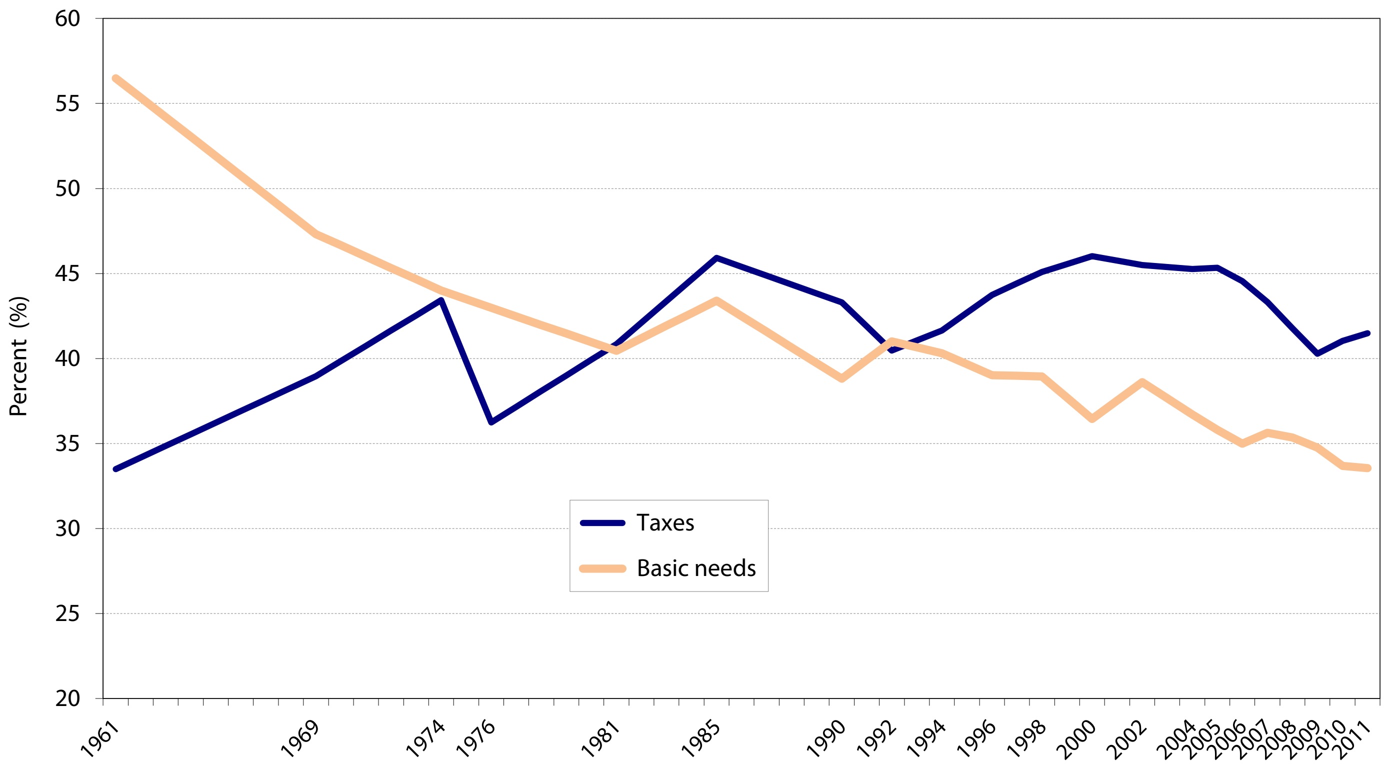
Table 5: Income, taxes, and selected expenditures of the average Canadian family (dollars)

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	45,392	20,466	9,753	5,875	2,047
2000	51,915	23,892	10,430	6,301	2,191
2002	53,920	24,531	11,578	6,909	2,333
2004	58,497	26,476	12,050	7,091	2,332
2006	64,349	28,672	12,702	7,407	2,411
2008	68,899	28,782	13,709	7,823	2,827
2010[3]	72,296	29,664	14,256	7,498	2,601
2011[3]	74,233	30,792	14,522	7,778	2,609

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, 2011.

Notes:
[1] All expenditure items include indirect taxes.
[2] Average Shelter Expenditures for years prior to 1998 are estimates. The estimate is to take into account a change in the definition of shelter between the *Family Expenditure Survey* and the *Survey of Household Expenditures*.
[3] Expenditures for 2010 and 2011 were estimated using the results of the 2009 *Survey of Household Spending* and adjusting final results for inflation.

Figure 4: Taxes and basic needs as percentage of cash income, 1961-2011



Source: Table 5.

alone would have produced an increase in the tax bill from $1,675 in 1961 to $24,868 in 2011. Second, the average family faced a tax rate increase from 33.5 percent in 1961 to 41.5 percent in 2011.

Balanced Budget Consumer Tax Index

Unfortunately, after many years of budget surpluses, the federal and most provincial governments resorted to deficits 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.

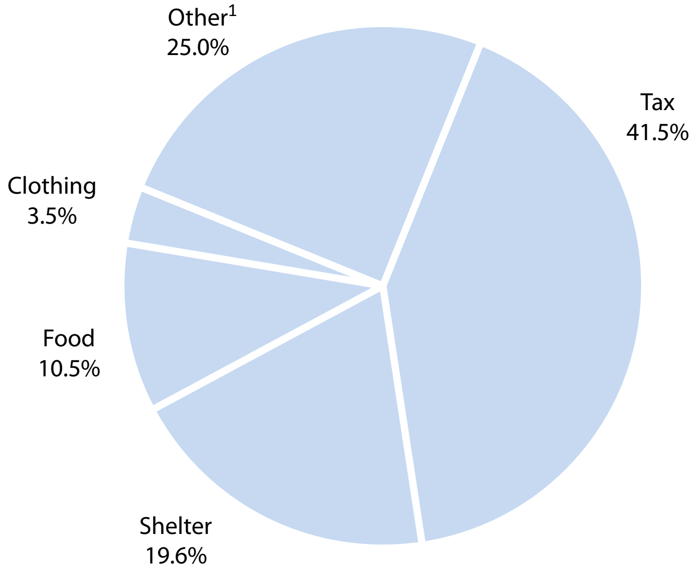
The total tax bill of the average family would be higher than it actually is if, instead of financing its expenditures by deficits, all Canadian governments had simply increased tax rates to balance their budgets. Indeed, the Canadian Consumer Tax Index would have increased to 1,997 if deferred taxation 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 1,897 percent since 1961.

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 5 and figure 3 compare family cash income and total taxes paid with 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

Figure 5: The average Canadian family's total expenditures as percentage of cash income, 2011

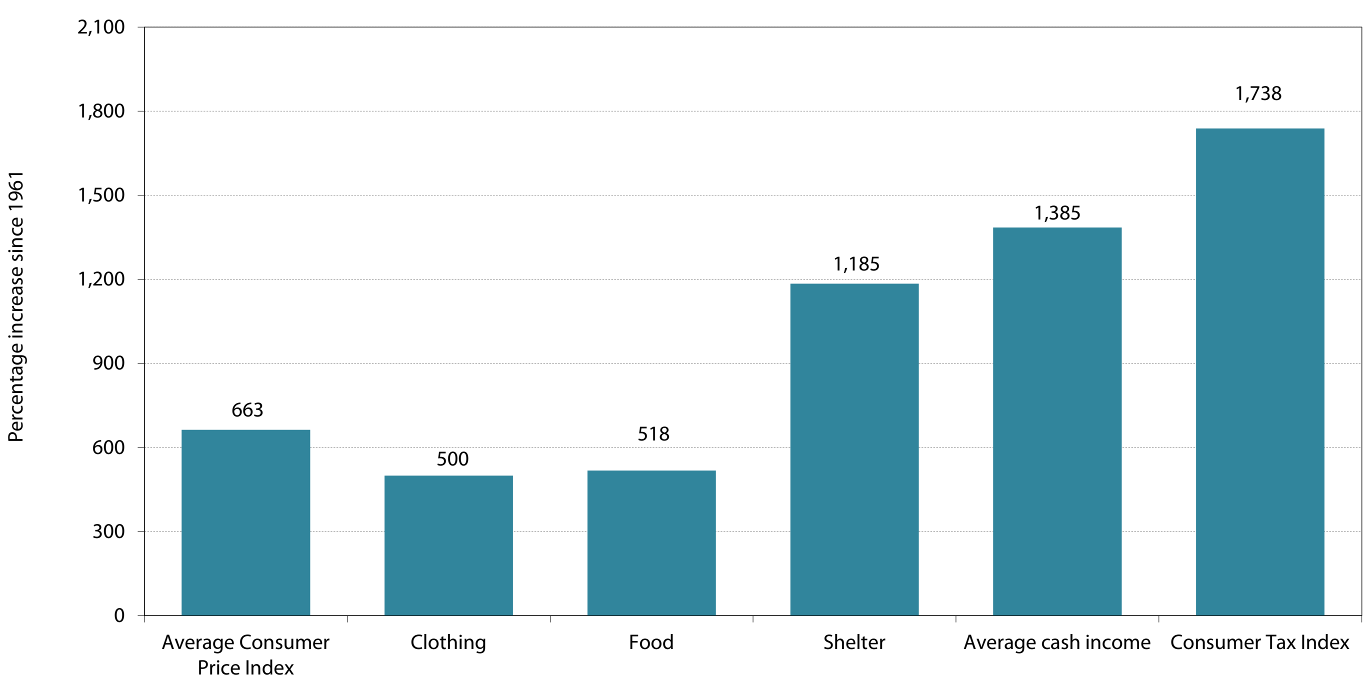


[1]Other expenditures include household operations (communications, child care expenses, pet expenses), transportation, health care, recreation, education, tobacco products and alcoholic beverages, among other expenses.
Source: Table 5; calculations by authors.

pay for shelter, food, and clothing. In the same year, 33.5 percent of the family's income went to governments as tax. By 1981, the spending demands had evened up: 40.8 percent of an average family's income went to governments in the form of taxes, while 40.5 percent was spent to provide it with shelter, food, and clothing. By 2011, the situation was reversed from 1961: the average family spent 33.6 of its income on the necessities of life while 41.5 percent of its income went to taxes (see figures 4 and 5).

Table 6 and figure 6 show the Canadian Consumer Tax Index relative to income and other expenditure indices. Average cash income rose by 1,385 percent from 1961 to 2011, prices rose by 663 percent, expenditures on shelter by 1,185 percent, food by 518 percent, and clothing

Figure 6: How the Canadian Consumer Tax Index has increased relative to other indices, 1961-2011



Source: Table 6.

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	908	1,222	582	863	467	471
2000	1,038	1,426	608	923	501	504
2002	1,078	1,465	637	1,024	549	536
2004	1,170	1,581	667	1,066	563	536
2006	1,287	1,712	695	1,124	588	554
2008	1,378	1,718	727	1,213	621	650
2010	1,446	1,771	742	1,261	596	598
2011	1,485	1,838	763	1,285	618	600
Percentage increase 1961-2011	1,385	1,738	663	1,185	518	500

Sources: Table 5; The Fraser Institute's Canadian Tax Simulator, 2011.
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.

by 500 percent. Meanwhile, the tax bill of the average family grew by 1,738 percent.

Conclusion

The Canadian Consumer Tax Index tracks the total tax bill paid by a Canadian family with average income from 1961 to 2011. The results show that the tax burden faced by average Canadian family has risen compared to 50 years earlier. The total tax bill, which includes all types of taxes, has increased by 1,738 percent since 1961, and the tax bill has grown more rapidly than any other single expenditure item.

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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 estimated growth in personal incomes. Tax and income calculations are subject to revision when final tax revenue and income data become available.

3 According to the latest Statistics Canada's Spending Patterns in Canada released in 2010, we can note, for example, that in 2010 the average family is headed by an older person who is more likely to own a car and a house, and has fewer members than the average family in 1961 (Dominion Bureau of Statistics 1962, and Statistics Canada 1983 and 2010a).

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