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

2013 edition

by Milagros Palacios and Charles Lammam

Main Conclusions

- The Canadian Consumer Tax Index tracks the total tax bill of the average Canadian family from 1961 to 2012. The total tax bill of the average Canadian family, including all types of taxes, has increased by 1,787 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 1,290 percent, clothing by 607 percent, and food by 578 percent from 1961 to 2012.
- The 1,787 percent increase in the tax bill has also greatly outpaced the increase in the Consumer Price Index (675 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 2012, 42.7 percent of the average family's income went to pay taxes while it spent 36.9 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 2012, the average Canadian family earned an income of \$74,113 and paid total taxes equalling \$31,615 (42.7 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 1,932 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 et al., 2012). This Alert examines what has happened to the tax bill of the average Canadian family over the past 51 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 2012.

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

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Table 1: Tax bill of the average Canadian family (families and unattached individuals), 2012

	In dollars (\$)	As % of total taxes
Income taxes	9,195	29.1%
Social security, medical, and hospital taxes	6,769	21.4%
Sales taxes	4,812	15.2%
Property taxes	3,607	11.4%
Profits tax	3,302	10.4%
Liquor, tobacco, amusement, and other excise taxes	1,680	5.3%
Auto, fuel, and motor vehicle licence taxes	791	2.5%
Other taxes	700	2.2%
Natural resource taxes	512	1.6%
Import duties	245	0.8%
Total taxes	\$31,615	
Total cash income	\$74,113	
Taxes as a percentage of cash income	42.7%	

Source: The Fraser Institute's Canadian Tax Simulator, 2012.

Note: Tax and income calculations for 2012 are preliminary and subject to revision when final tax revenue and income data become available.

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 2012, the average Canadian family (which includes both families and unattached individuals) earned cash income¹ of \$74,113 and paid total taxes equaling \$31,615 (table 1).² In other words, the total tax bill of the average Canadian family in 2012 amounted to 42.7 percent of cash income.

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

Table 2: Taxes paid by the average Canadian family (families and unattached individuals), 1961-2012

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	45,186	20,420	1,119
2000	51,673	23,860	1,324
2002	54,023	24,706	1,375
2004	58,323	26,466	1,480
2006	63,874	28,522	1,603
2008	68,591	28,940	1,628
2010	70,590	29,122	1,639
2011	72,562	30,588	1,726
2012	74,113	31,615	1,787

Source: The Fraser Institute's Canadian Tax Simulator, 2012.

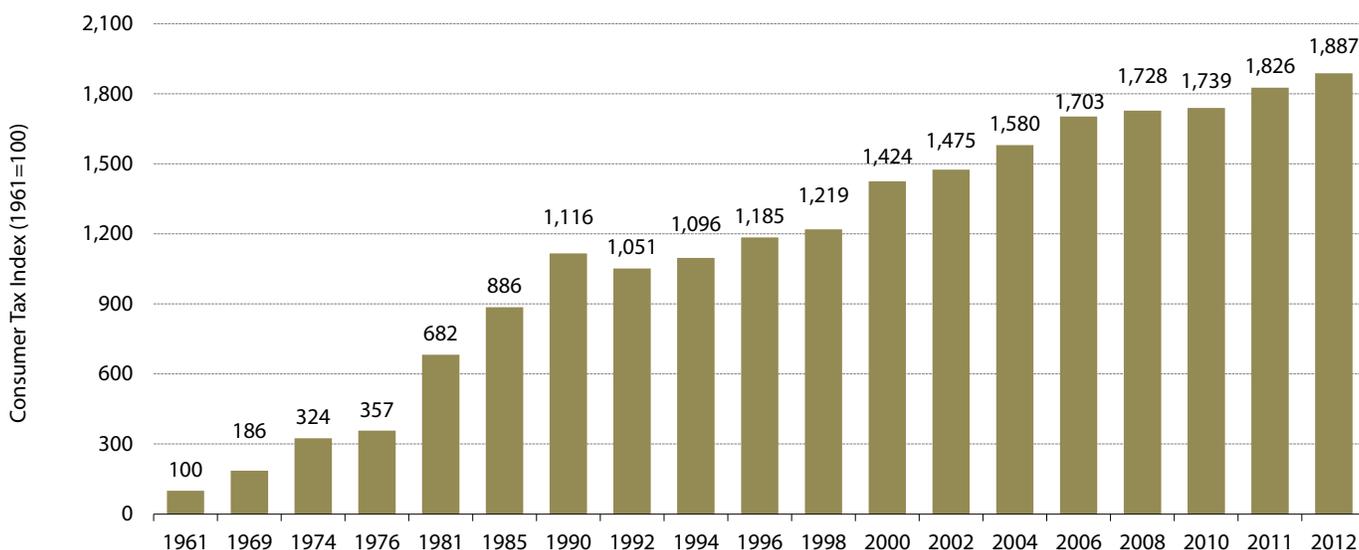
the average price that consumers pay for the goods and services that they buy of their own choice, the Canadian Consumer Tax Index measures the price of goods and services that government buys on behalf of Canadians.

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 bill paid by the average Canadian family from 1961 to 2012. In 1961, the average Canadian family earned an income of \$5,000 and paid \$1,675 in taxes (33.5 percent). In 2012, the average Canadian family earned an income of \$74,113 and paid a total of \$31,615 in taxes (42.7 percent).

The basis of the Canadian Consumer Tax Index is the total tax

Figure 1: The Canadian Consumer Tax Index, 1961-2012



Sources: The Fraser Institute's Canadian Tax Simulator 2012; calculations by authors.

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 2012 is 1,887 (figure 1), which indicates that the tax bill of the average Canadian family has increased by 1,787 percent since 1961.

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 2012 purchasing power. While this adjustment has the effect of reducing the steepness of the index's path over time, the inflation-adjusted Consumer Tax Index nevertheless increased by 143.5 percent over the period (see table 3).

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 2012. Among those factors is, first, a sizeable increase in incomes over the period: 1,382 percent since 1961. 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

Table 3: Inflation-adjusted tax bill and the Consumer Tax Index, 1961-2012

Year	Tax bill (2012\$)	Percent change in taxes since 1961
1961	12,981	—
1969	19,252	48.3
1974	25,213	94.2
1976	23,392	80.2
1981	28,094	116.4
1985	28,650	120.7
1990	29,011	123.5
1992	25,511	96.5
1994	26,076	100.9
1996	27,160	109.2
1998	27,213	109.6
2000	30,431	134.4
2002	30,061	131.6
2004	30,757	136.9
2006	31,805	145.0
2008	30,864	137.8
2010	30,424	134.4
2011	31,051	139.2
2012	31,615	143.5

Sources: The Fraser Institute's Canadian Tax Simulator, 2012; Statistics Canada, 2013a; calculations by authors.

increase in the tax bill from \$1,675 in 1961 to \$24,828 in 2012. Second, the average family faced a tax rate increase from 33.5 percent in 1961 to 42.7 percent in 2012.

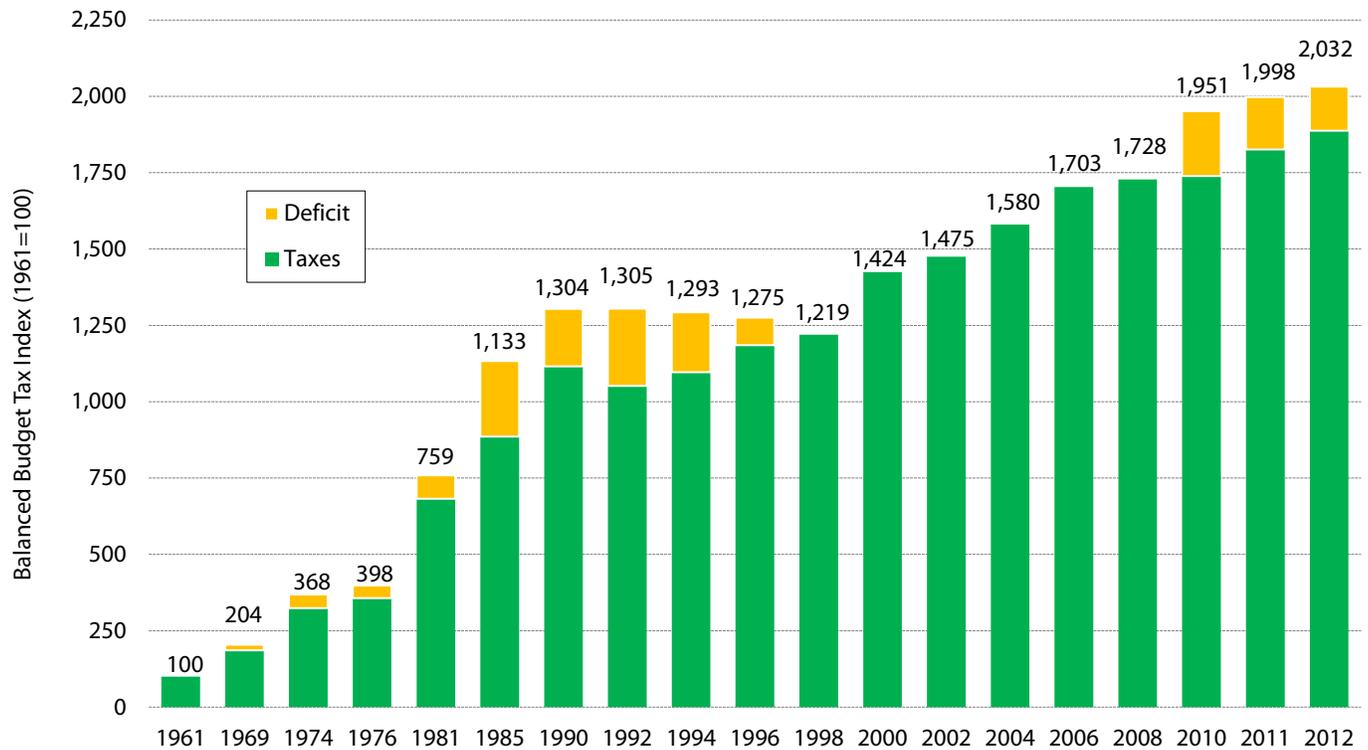
Balanced Budget Consumer Tax Index

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.

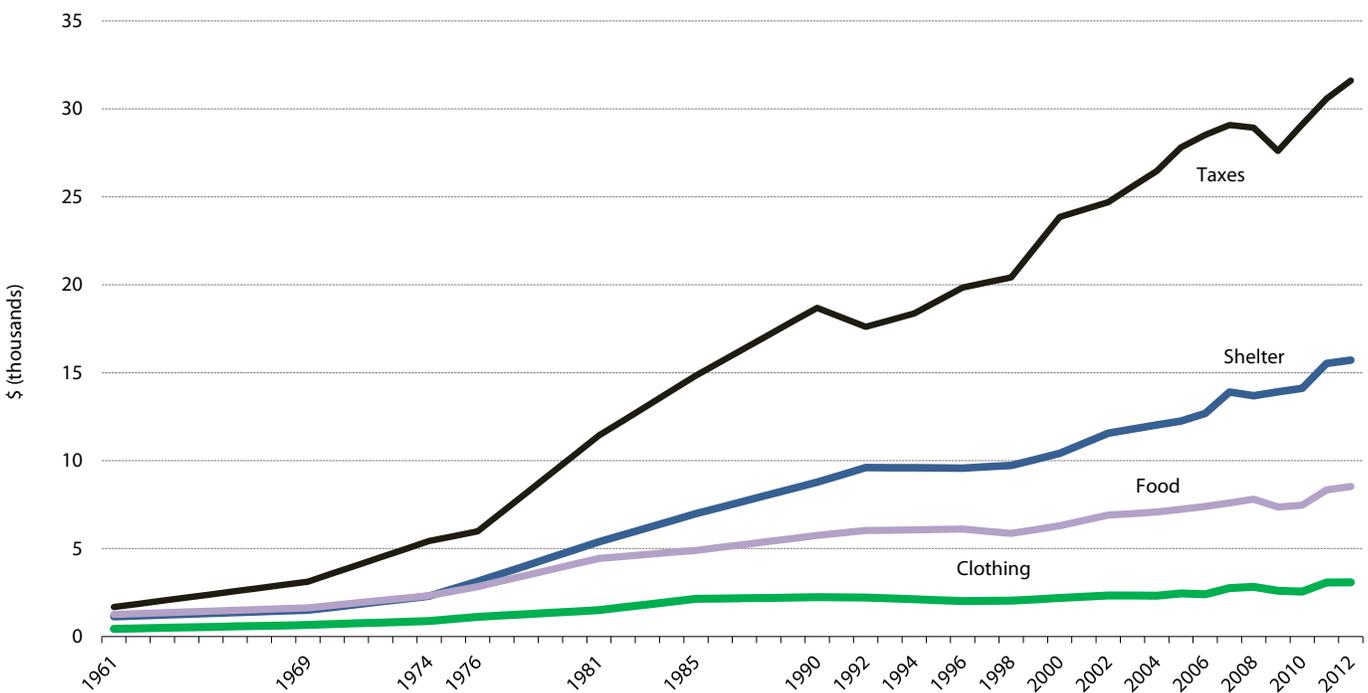
The total tax bill of the average family would be higher than it actually is if, instead of financing its expenditures by deficits, all Canadian governments had simply increased tax rates to balance their budgets. Indeed, the Canadian Consumer

Figure 2: The Balanced Budget Tax Index, 1961-2012



Sources: The Fraser Institute's Canadian Tax Simulator, 2012; Statistics Canada, 2013b; calculations by authors.

Figure 3: Taxes and basic expenditures of the average Canadian family, 1961-2012



Source: Table 4.

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

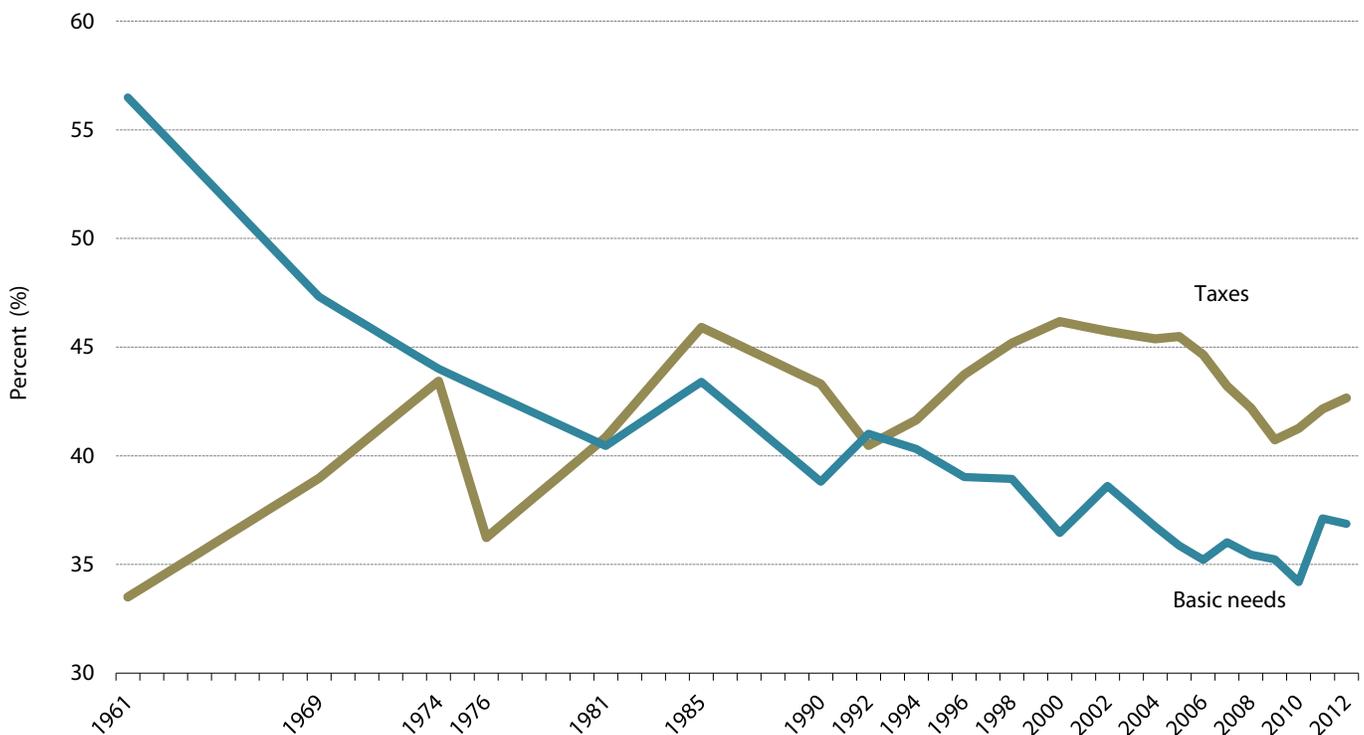
Year	Average cash income	Average tax bill	Average expenditures		
			Shelter	Food	Clothing
1961	5,000	1,675	1,130	1,259	435
1969	8,000	3,117	1,497	1,634	654
1974	12,500	5,429	2,294	2,320	886
1976	16,500	5,979	3,134	2,838	1,119
1981	27,980	11,429	5,381	4,440	1,499
1985	32,309	14,834	6,984	4,899	2,141
1990	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	45,186	20,420	9,722	5,864	2,041
2000	51,673	23,860	10,414	6,296	2,188
2002	54,023	24,706	11,566	6,902	2,329
2004	58,323	26,466	12,025	7,076	2,324
2006	63,874	28,522	12,688	7,401	2,404
2008	68,591	28,940	13,688	7,807	2,822
2010	70,590	29,122	14,109	7,471	2,554
2011	72,562	30,588	15,525	8,333	3,072
2012	74,113	31,615	15,710	8,535	3,076

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, 2013a, and 2013c; The Fraser Institute's Canadian Tax Simulator, 2012; calculations by authors.

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 were estimated using the results of the 2009 *Survey of Household Spending* and adjusting final results for inflation.
- 4) Expenditures for 2012 were estimated using the results of the 2011 *Survey of Household Spending* and adjusting final results for inflation.

Figure 4: Taxes and basic needs as percentage of cash income, 1961-2012



Source: Table 4.

Tax Index would have increased to 2,032 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 1,932 percent since 1961.

Taxes versus the necessities of life

One way to gauge the significance of the increased tax bill on Canadian families is by comparing the evolution of the tax take with the average family's other major expenditures. Table 4 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.

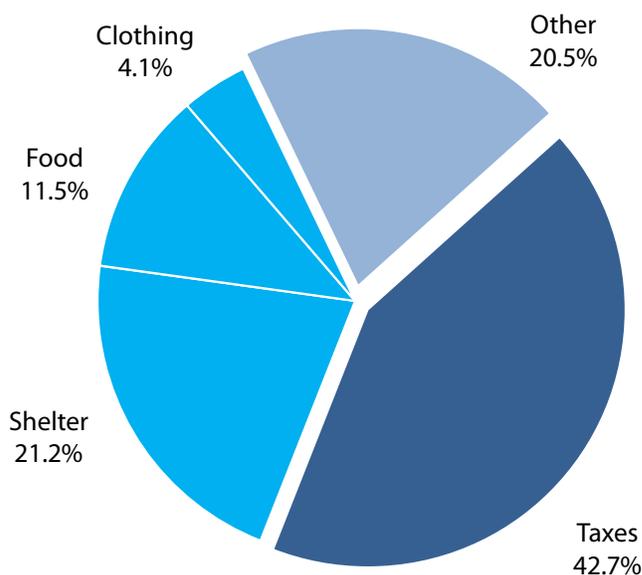
In 1961, the average family spent 56.5 percent of its cash income to pay for shelter, food, and clothing. In the same year, 33.5 percent of the family's income went to governments as tax. By 1981, the spending demands had evened up: 40.8 percent of an average family's income went to governments in the form of taxes, while 40.5 percent was spent to provide it with shelter, food, and clothing. By 2012, the situation was reversed from 1961: the average family spent 36.9 percent of its income on the necessities of life while 42.7 percent of its income went to taxes (see figures 4 and 5).

Table 5 and figure 6 show the Canadian Consumer Tax Index relative to income and other expenditure indices. Average cash income rose by 1,382 percent from 1961 to 2012, overall consumer prices rose by 675 percent, expenditures on shelter by 1,290 percent, food by 578 percent, and clothing by 607 percent. Meanwhile, the tax bill of the average family grew by 1,787 percent.

Conclusion

The Canadian Consumer Tax Index tracks the total tax bill paid by a Canadian family with average income from 1961 to 2012. The results show that the tax burden faced by the average Canadian family has risen compared with 51 years

Figure 5: The average Canadian family's expenditures as a percentage of cash income, 2012



Source: Table 4.

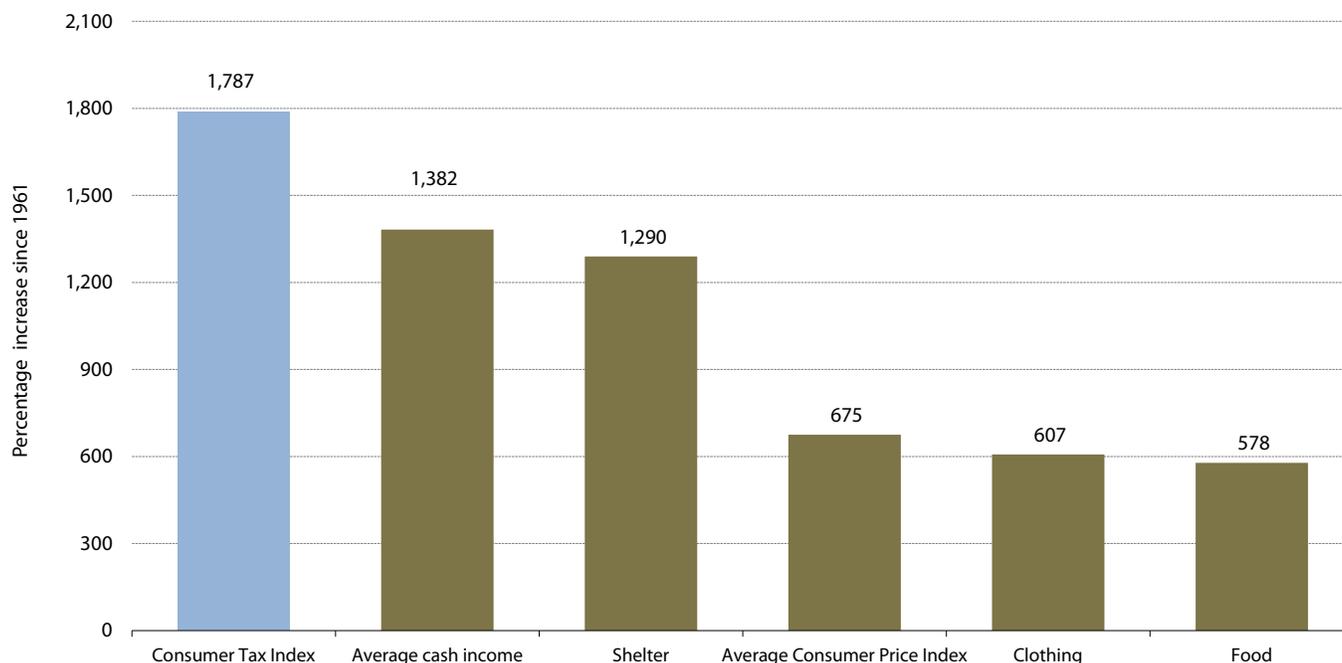
Note: Other expenditures include household operations (communications, child care expenses, pet expenses), transportation, health care, recreation, education, tobacco products and alcoholic beverages.

earlier. The total tax bill, which includes all types of taxes, has increased by 1,787 percent since 1961, and the tax bill has 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 estimated growth in personal incomes. Tax and income calculations are subject to revision when

Figure 6: Increase in the Canadian Consumer Tax Index relative to other indices, 1961-2012



Source: Table 5.

Table 5: Income, tax, and expenditure indices (1961=100)

Year	Average cash income	Consumer Tax Index	Average Consumer Price Index	Average expenditures		
				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	904	1,219	582	860	466	469
2000	1,033	1,424	608	921	500	503
2002	1,080	1,475	637	1,023	548	535
2004	1,166	1,580	667	1,064	562	534
2006	1,277	1,703	695	1,122	588	553
2008	1,372	1,728	727	1,211	620	649
2010	1,412	1,739	742	1,248	593	587
2011	1,451	1,826	763	1,373	662	706
2012	1,482	1,887	775	1,390	678	707
Percentage increase 1961-2012	1,382	1,787	675	1,290	578	607

Sources: Table 4.

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.

final tax revenue and income data become available.

- 3 According to the latest Statistics Canada's Survey of Household Spending, we can note, for example, that in 2011 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 2013d).

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