

## Taxes versus the Necessities of Life: The Canadian Consumer Tax Index, 2017 edition

by Milagros Palacios, Feixue Ren, and Charles Lammam

### SUMMARY

■ The Canadian Consumer Tax Index tracks the total tax bill of the average Canadian family from 1961 to 2016. Including all types of taxes, that bill has increased by 2,006% since 1961.

■ Taxes have grown much more rapidly than any other single expenditure for the average Canadian family: expenditures on shelter increased by 1,527%, clothing by 677%, and food by 639% from 1961 to 2016.

■ The 2,006% increase in the tax bill has also greatly outpaced the increase in the Consumer Price Index (718%), which measures the average price that consumers pay for food, shelter,

clothing, transportation, health and personal care, education, and other items.

■ The average Canadian family now spends more of its income on taxes (42.5%) than it does on basic necessities such as food, shelter, and clothing combined (37.4%). By comparison, 33.5% of the average family's income went to pay taxes in 1961 while 56.5% went to basic necessities.

■ In 2016, the average Canadian family earned an income of \$83,105 and paid total taxes equaling \$35,283 (42.5%). In 1961, the average family had an income of \$5,000 and paid a total tax bill of \$1,675 (33.5%).

## 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., 2017). This publication draws from those calculations and examines what has happened to the tax bill of the average Canadian family over the past 55 years.<sup>1</sup> 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 from 1961 to 2016.

## 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. This includes income taxes, payroll taxes, health taxes, sales taxes, property taxes, fuel taxes, carbon taxes, vehicle taxes, import taxes, alcohol and tobacco taxes, and the list goes on. 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.<sup>2</sup>

<sup>1</sup> The Tax Freedom Day calculations are for the average Canadian family with two or more people. The average family in this publication includes families and unattached individuals. That is why the data for the same year are different. For instance, in 2016 the tax rate for the average Canadian family with two or more people was 43.3% and for the average family including unattached individuals it was 42.5% (see Palacios et al., 2017).

<sup>2</sup> See Clemens and Veldhuis (2003) for a discussion of who actually pays business taxes and Ebrahimi and Vaillancourt (2016) and McKenzie and Ferde (2017) for empirical evidence in Canada on the incidence of business taxes.

**Table 1: Tax bill of the average Canadian family (families and unattached individuals), 2016**

	In dollars (\$)	As % of total taxes
<b>Taxes</b>		
Income taxes	10,964	31.1%
Payroll & health taxes	7,150	20.3%
Sales taxes	5,089	14.4%
Property taxes	4,004	11.3%
Profit tax	3,946	11.2%
Liquor, tobacco, amusement, & other excise taxes	1,818	5.2%
Fuel, motor vehicle licence, & carbon taxes	942	2.7%
Other taxes	839	2.4%
Natural resource taxes	219	0.6%
Import duties	312	0.9%
<b>Total taxes</b>	<b>\$35,283</b>	
<b>Total cash income</b>	<b>\$83,105</b>	
<b>Taxes as a percentage of cash income</b>	<b>42.5%</b>	

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

In 2016, the average Canadian family, including both families and unattached individuals, earned cash income of \$83,105 and paid total taxes equaling \$35,283 (table 1).<sup>3</sup> In other words, the total tax bill of the average Canadian family in 2016 amounted to 42.5% of cash income.

<sup>3</sup> The tax and income calculations are based on the methodology used in Palacios et al. (2016). Cash income is used to 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.

# The Canadian Consumer Tax Index, 2017

## 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.<sup>4</sup>

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.

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 2016. In 1961, the average Canadian family earned an income of \$5,000 and paid \$1,675 in taxes (33.5%). In 2016, the average Canadian family earned an income of \$83,105 and paid a total of \$35,283 in taxes (42.5%).

The basis of the Canadian Consumer Tax Index is the total tax calculation presented in table 2.

<sup>4</sup> According to the latest Statistics Canada Survey of Household Spending, we can note, for example, that in 2015 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 2017d).

**Table 2: Taxes paid by the average Canadian family (families and unattached individuals), 1961-2016**

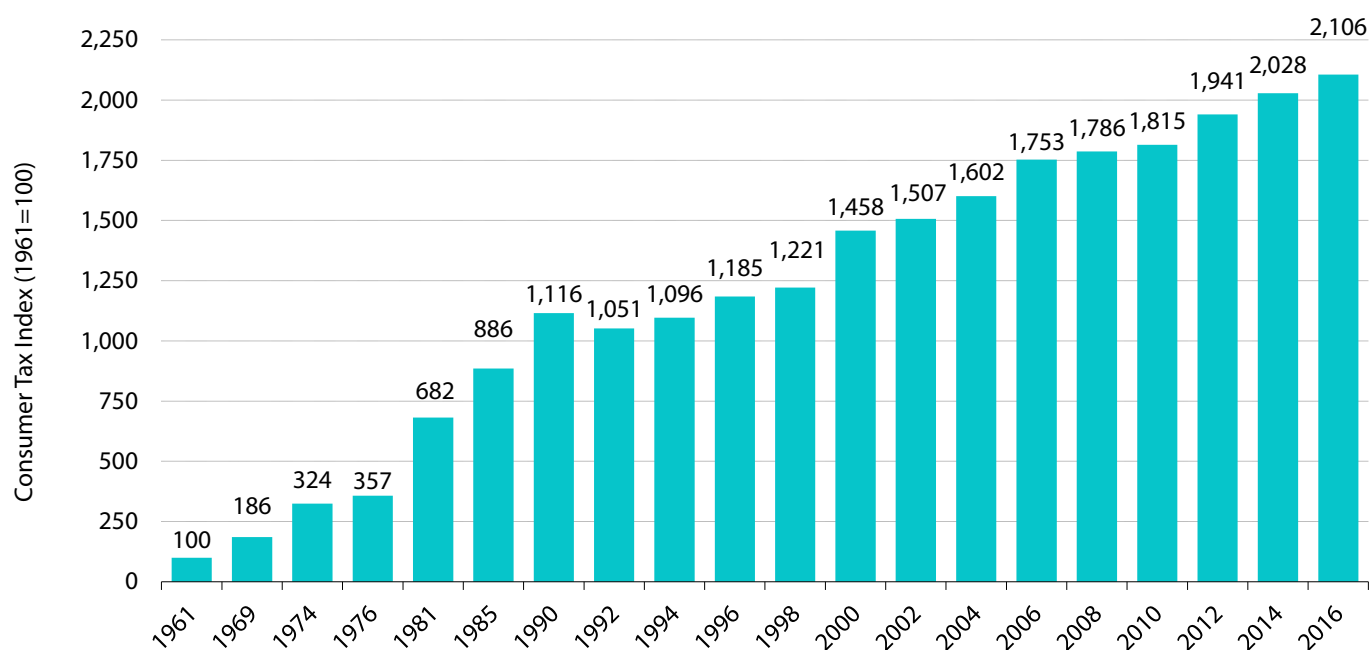
Year	Average cash income (\$)	Tax bill (\$)	Increase in tax bill over base year (%)
1961	5,000	1,675	—
1969	8,000	3,117	86
1974	12,500	5,429	224
1976	16,500	5,979	257
1981	27,980	11,429	582
1985	32,309	14,834	786
1990	43,170	18,693	1,016
1992	43,516	17,612	951
1994	44,095	18,366	996
1996	45,370	19,844	1,085
1998	45,119	20,453	1,121
2000	52,661	24,429	1,358
2002	54,848	25,238	1,407
2004	58,698	26,828	1,502
2006	64,957	29,355	1,653
2008	70,349	29,920	1,686
2010	72,033	30,393	1,715
2012	75,868	32,506	1,841
2014	79,464	33,973	1,928
2016	83,105	35,283	2,006

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

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

# The Canadian Consumer Tax Index, 2017

Figure 1: The Canadian Consumer Tax Index, 1961-2016



Sources: The Fraser Institute's Canadian Tax Simulator 2017; calculations by authors.

Index for 2016 is 2,106 (figure 1), which indicates that the tax bill of the average Canadian family has increased by 2,006% since 1961.

Part of that increase reflects the effects of inflation. In order to eliminate the portion of the increase that is due to the erosion of purchasing power, we also calculate the tax index in real dollars, that is, in dollars with 2016 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 157.6% 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 2016. Among those factors is, first, a sizeable increase in incomes

over the period: 1,562% 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 increase in the tax bill from \$1,675 in 1961 to \$27,840 in 2016. Second, the average family faced a tax rate increase from 33.5% in 1961 to 42.5% in 2016.

## Balanced Budget Consumer Tax Index

Unfortunately, the federal and provincial governments have reverted to deficits to finance their expenditures in recent years.<sup>5</sup> 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.

<sup>5</sup> In fiscal year 2016/17, the federal and seven provincial governments ran operating deficits.

**Table 3: Inflation-adjusted tax bill and percent change since 1961**

Year	Tax bill (2016\$)	Percent change since 1961
1961	13,699	—
1969	20,316	48.3
1974	26,606	94.2
1976	24,685	80.2
1981	29,647	116.4
1985	30,233	120.7
1990	30,614	123.5
1992	26,921	96.5
1994	27,517	100.9
1996	28,662	109.2
1998	28,765	110.0
2000	32,879	140.0
2002	32,406	136.6
2004	32,901	140.2
2006	34,542	152.2
2008	33,672	145.8
2010	33,507	144.6
2012	34,302	150.4
2014	34,852	154.4
2016	35,283	157.6

Sources: The Fraser Institute's Canadian Tax Simulator, 2017; Statistics Canada, 2017a; calculations by authors.

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 2,191 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 2,091% 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% of its cash income to pay for shelter, food, and clothing. In the same year, 33.5% of the family's income went to governments as tax. By 1981, the spending demands had roughly evened up: 40.8% of an average family's income went to governments in the form of taxes, while 40.5% was spent to provide it with shelter, food, and clothing. After crossing paths again in 1992, the situation in 2016 is reversed from 1961: the average family spent 37.4% of its income on the necessities of life while 42.5% of its income went to taxes (see figures 4 and 5).

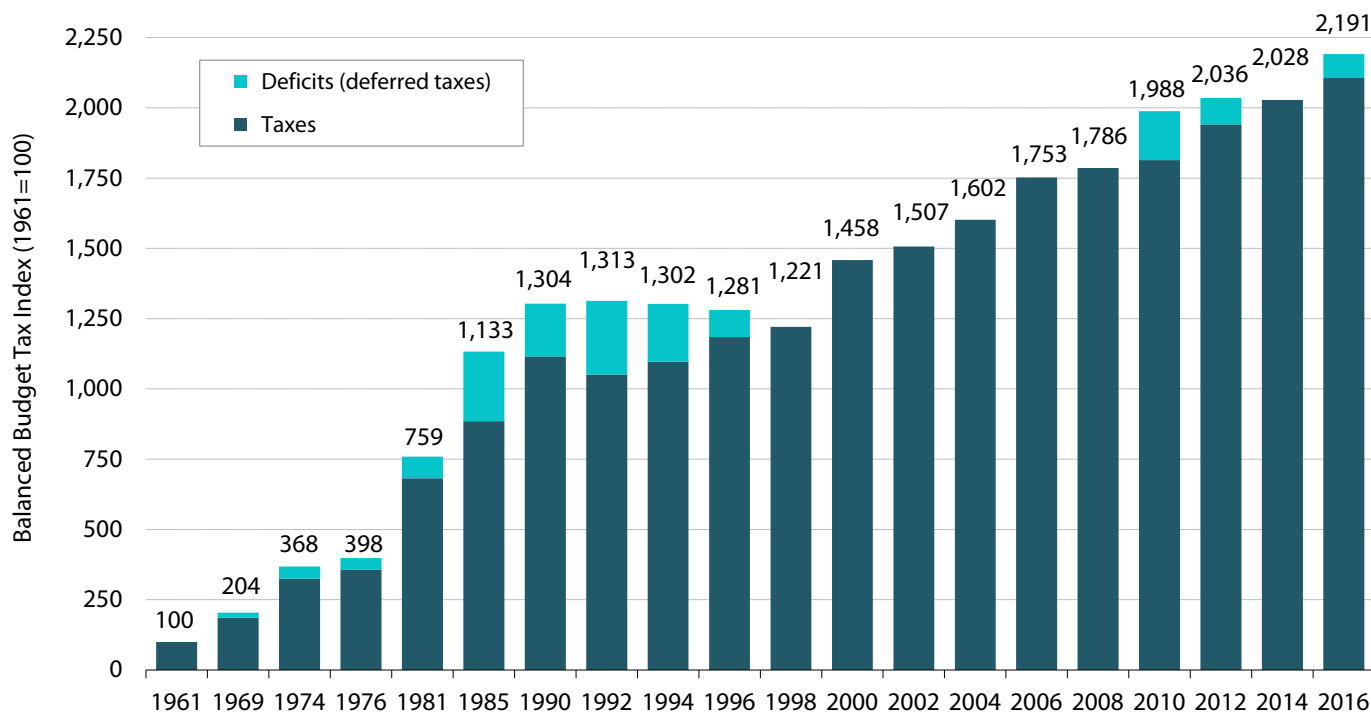
Table 5 and figure 6 show the Canadian Consumer Tax Index relative to income and other expenditure indices. Average cash income rose by 1,562% from 1961 to 2016, overall consumer prices rose by 718%, expenditures on shelter by 1,527%, food by 639%, and clothing by 677%. Meanwhile, the tax bill of the average family grew by 2,006%.

## Conclusion

The Canadian Consumer Tax Index tracks the total tax bill paid by a Canadian family with average income from 1961 to 2016. The results show that the tax burden faced by the average Canadian family has risen compared with 55 years earlier. The total tax bill, which includes

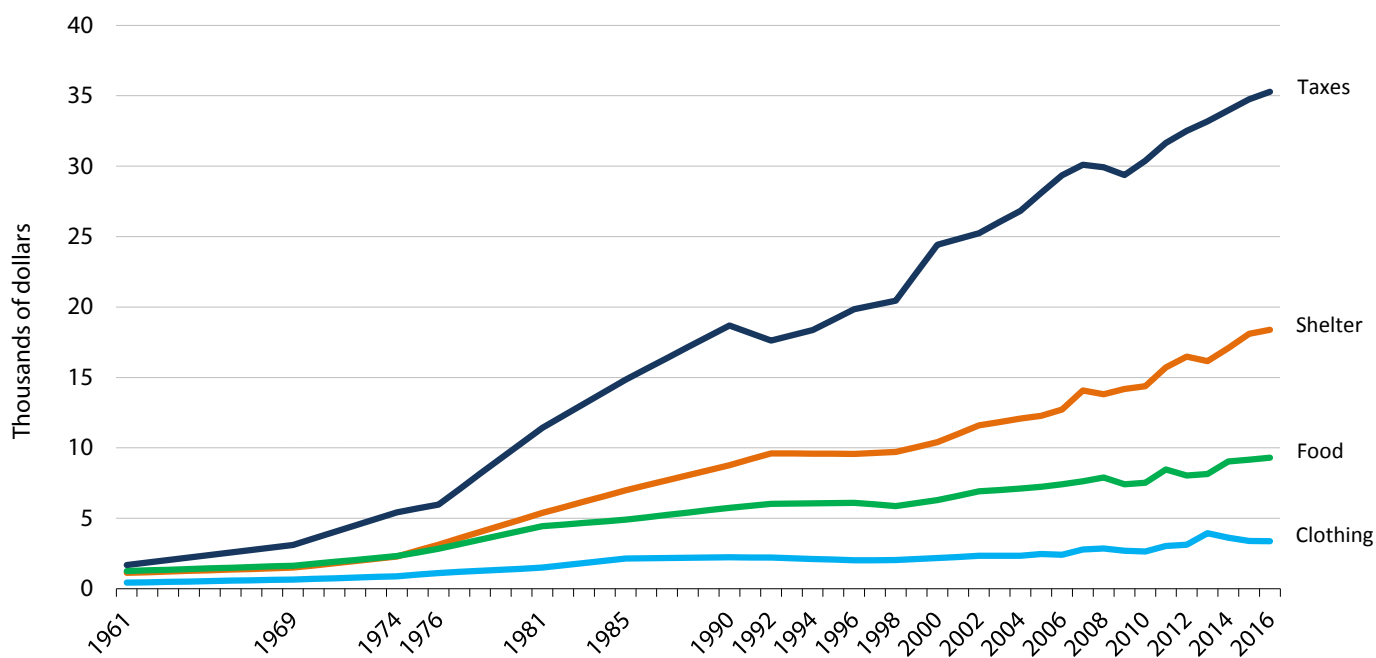
# The Canadian Consumer Tax Index, 2017

**Figure 2: The Balanced Budget Tax Index, 1961-2016**



Sources: The Fraser Institute's Canadian Tax Simulator, 2017; Statistics Canada, 2017b; calculations by authors.

**Figure 3: Taxes and basic expenditures of the average Canadian family, 1961-2016**



Source: Table 4.

# The Canadian Consumer Tax Index, 2017

**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	45,119	20,453	9,712	5,861	2,039
2000	52,661	24,429	10,409	6,294	2,187
2002	54,848	25,238	11,593	6,918	2,337
2004	58,698	26,828	12,079	7,108	2,341
2006	64,957	29,355	12,719	7,415	2,419
2008	70,349	29,920	13,806	7,899	2,852
2010	72,033	30,393	14,385	7,521	2,642
2012	75,868	32,506	16,480	8,043	3,126
2014	79,464	33,973	17,077	9,037	3,631
2016	83,105	35,283	18,386	9,302	3,381

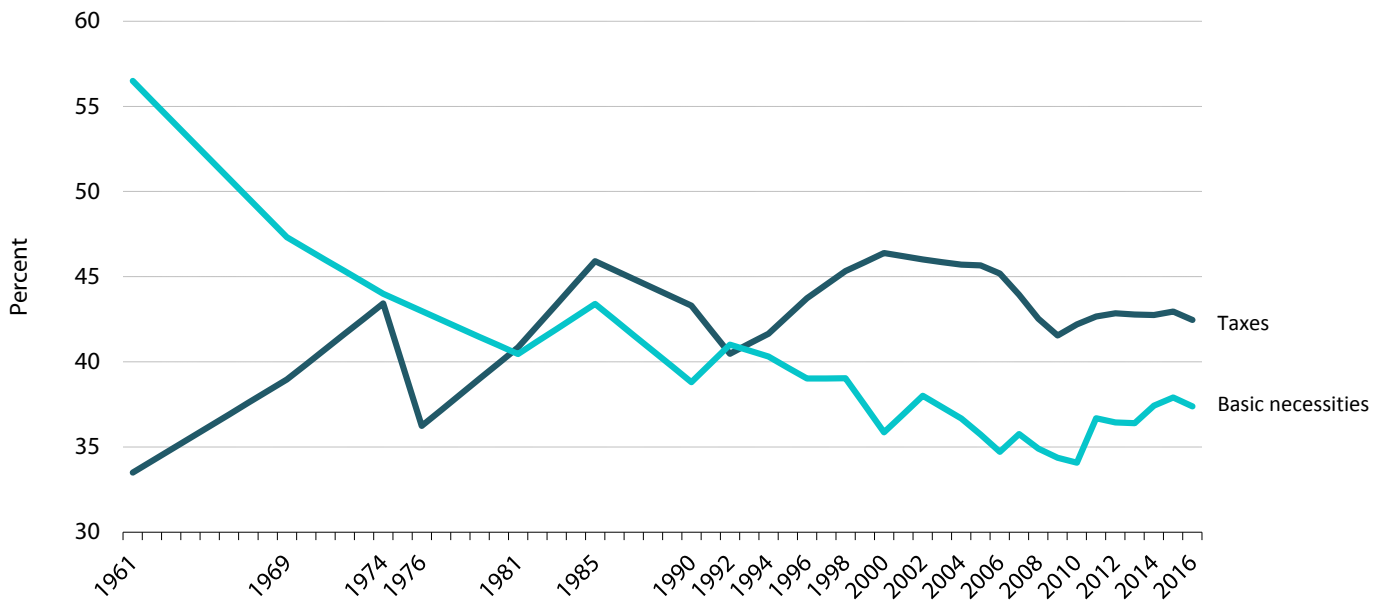
Sources: Statistics Canada (various issues), *Urban Family Expenditure*; Statistics Canada (various issues), *Family Expenditures in Canada*; Statistics Canada (various issues), *Spending Patterns in Canada*; Statistics Canada, 2011-2016, 2017a, and 2017c; The Fraser Institute's Canadian Tax Simulator, 2017; 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 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.
- (4) Expenditures for 2016 were estimated using the results of the 2015 Survey of Household Spending and adjusting final results for inflation.

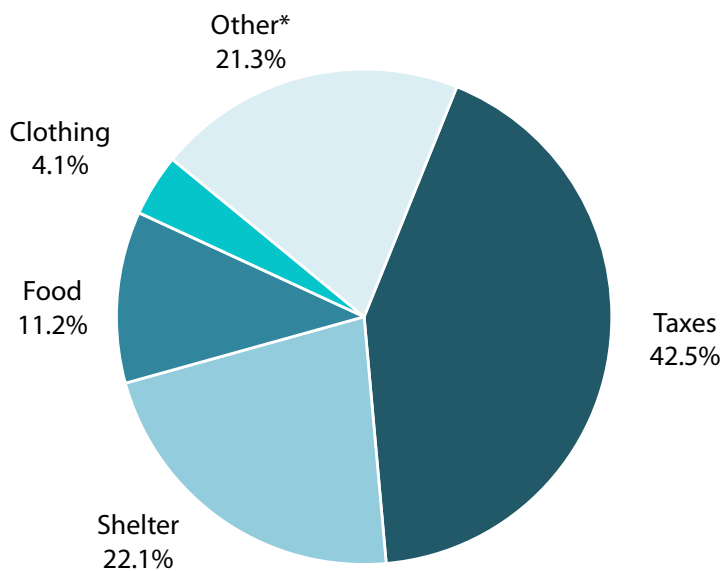
# The Canadian Consumer Tax Index, 2017

**Figure 4: Taxes and basic necessities as percentage of cash income, 1961-2016**



Source: Table 4.

**Figure 5: The average Canadian family's expenditures as percentage of cash income, 2016**



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

Source: Table 4.



# The Canadian Consumer Tax Index, 2017

**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	902	1,221	582	859	465	469
2000	1,053	1,458	608	921	500	503
2002	1,097	1,507	637	1,026	549	537
2004	1,174	1,602	667	1,069	565	538
2006	1,299	1,753	695	1,125	589	556
2008	1,407	1,786	727	1,221	627	656
2010	1,441	1,815	742	1,273	597	607
2012	1,517	1,941	775	1,458	639	719
2014	1,589	2,028	797	1,511	718	835
2016	1,662	2,106	818	1,627	739	777
Percentage increase 1961-2016	1,562	2,006	718	1,527	639	677

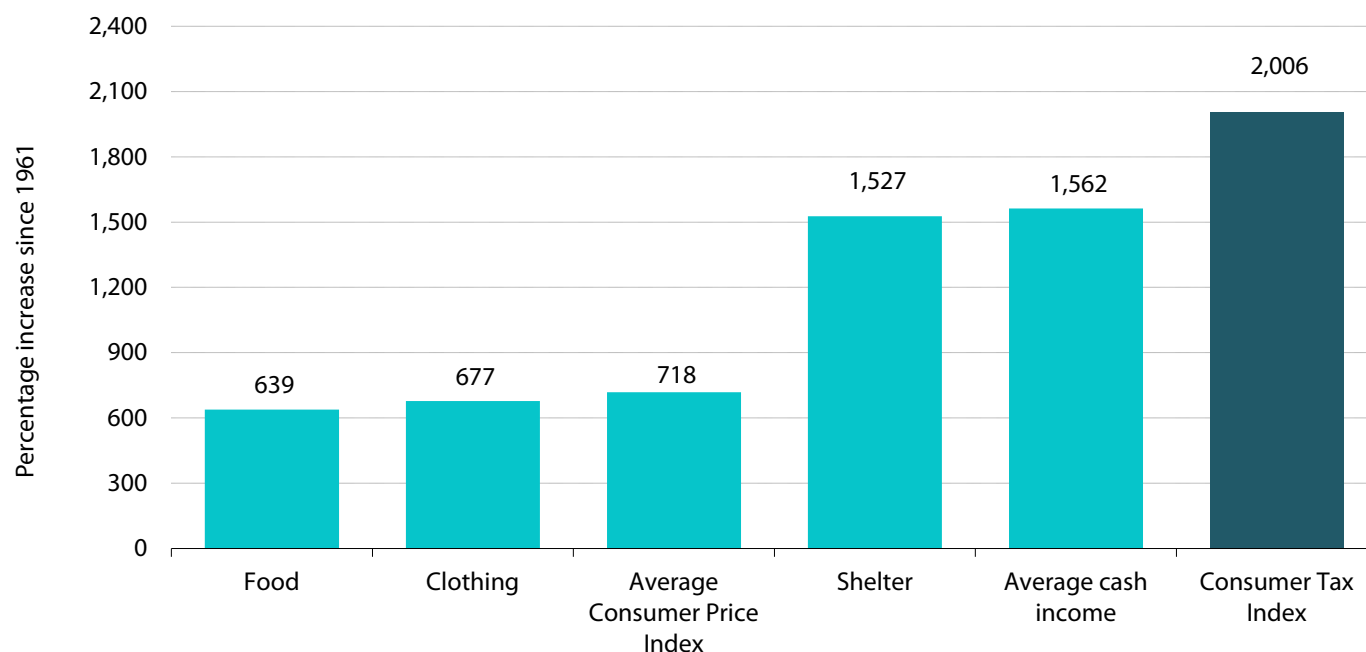
Source: Table 4.

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.

**Figure 6: Increase in the Canadian Consumer Tax Index relative to other indices, 1961-2016**



Source: Table 5.

all types of taxes, has increased by 2,006% since 1961, and the tax bill has grown more rapidly than any other single expenditure item.

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