

The Canadian Tobacco Market Place

Estimating the volume of Contraband Sales of Tobacco in Canada in 2009

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ow tobacco use is measured in Canada.

There are a number of established ways of measuring the use of tobacco products by Canadians. Two primary measures are those for **prevalence** and **consumption**:

Prevalence is usually expressed as the percentage of Canadians over 15 years of age who smoke. Prevalence is often stated in two ways: the prevalence of daily smokers (i.e. the percentage of Canadians who smoke every day) and the prevalence of current smokers (which includes both daily smokers and Canadians who smoke on weekends or on other 'occasional' basis).

Consumption is usually expressed the number of cigarettes consumed per year per Canadian over 15 years of age. This figure is usually derived from the number of cigarettes sold divided by the number of Canadians over 15 years of age.

Prevalence measurements are considered to be unaffected by contraband activity, as Canadians are not considered to change their answers to questions about their smoking behaviour if they smoke illegally purchased cigarettes.

Consumption measurements, however, are highly affected by contraband activity, as they have relied on the sale of legal cigarettes.

In periods when levels of contraband cigarettes are considered to be significant enough to affect consumption measurements, alternative measurement tools have been derived. In the 1990s, for example, Health Canada commissioned a special report to estimate contraband tobacco consumption between 1991 and 1994.¹

In recent years, Canadian tobacco companies have established consumer research model to measure the level of contraband sales.²

¹ *Workshop Report: Trends in the Prevalence of Smoking, 1991-1994* Thomas Stephens Chronic Diseases in Canada, Volume 16, No.1 -1995.

² *Illegal Tobacco Sales: A Crisis for Canadians. National Study for the Canadian Tobacco Manufacturers' Council.* [http://www.imperialtobacco.com/onewebca/sites/IMP_5TUJVZ.nsf/vwPagesWebLive/DO65HJNQ/\\$FILE/medMD7JDHEG.pdf?openelement](http://www.imperialtobacco.com/onewebca/sites/IMP_5TUJVZ.nsf/vwPagesWebLive/DO65HJNQ/$FILE/medMD7JDHEG.pdf?openelement)

The number of smokers in Canada has remained virtually unchanged over the past 5 years.

Estimates of contraband tobacco sales can be triangulated against other measurements of smoking behaviour. If, for example, estimates of contraband suggest that these sales have doubled in a period of time, then either a commensurate dip in legal sales or an increase in reported smoking behaviour would be expected, as:

$$\text{Total tobacco use} = \text{illegal tobacco use} + \text{legal tobacco use}$$

In the past five years, Canadians report only small changes in their smoking behaviour. The number of Canadian smokers (daily and occasional), as shown in Tables 1, has fluctuated year by year, and has decreased by about a half million between 2002 and 2009.

Table 1:
Current Smokers (daily and occasional) (15 years or older), 2002-2009

a) number of smokers

	2002	2003	2004	2005	2006	2007	2008	2009
Canada	5,414,334	5,332,325	5,079,767	4,889,511	4,934,022	5,165,376	4,883,408	4,851,274
Alberta	561,409	502,480	515,310	534,875	572,118	582,274	579,678	525,235
Brit. Columbia	558,940	564,134	530,829	516,786	587,284	524,592	546,052	562,141
Manitoba	190,333	189,975	189,339	207,083	187,935	187,657	198,791	183,107
New Brunswick	129,856	150,453	150,542	134,871	140,346	132,076	125,050	134,747
Newfoundland	106,039	101,197	96,158	88,569	93,093	90,100	86,356	88,921
Nova Scotia	194,626	170,951	157,264	162,858	169,386	158,916	154,290	155,561
Ontario	1,911,472	1,932,375	1,871,234	1,668,588	1,710,132	1,899,352	1,775,449	1,652,955
PEI	25,892	24,342	24,415	22,241	21,696	20,976	22,082	20,543
Quebec	1,569,231	1,507,286	1,373,482	1,380,998	1,266,300	1,380,988	1,226,686	1,345,325
Saskatchewan	166,536	189,132	171,194	172,642	185,571	189,600	164,629	182,739

Source: Canadian Tobacco Use Monitoring Survey.

[Because these estimates are derived from sampling, some of the differences shown are within the confidence intervals. More information on these estimates is provided by Health Canada].

b) percentage of Canadians over 15 years of age who are current smokers

	2002	2003	2004	2005	2006	2007	2008	2009
Canada	21.4	20.9	19.6	18.7	18.6	19.2	17.9	17.5
Alberta	22.8	20	20.1	20.6	21.3	20.9	20.4	18
British Columbia	16.5	16.4	15.2	14.7	16.4	14.4	14.7	14.9
Manitoba	21.1	20.9	20.6	22.3	20.1	19.9	20.8	18.9
New Brunswick	21.1	24.3	24.2	21.8	22.6	21.2	19.9	21.3
Newfoundland	24.1	23	21.8	20.1	21.7	21.2	20.2	20.7
Nova Scotia	25.3	22.1	20.2	21	21.8	20.4	19.7	19.8
Ontario	19.7	19.6	18.7	16.4	16.6	18.2	16.8	15.4
PEI	23.1	21.4	21.2	19.9	19.2	18.4	19.2	17.6
Quebec	25.8	24.6	22.2	22.2	20.1	21.7	19.1	20.7
Saskatchewan	21.2	24.1	21.7	22	23.7	24	20.4	22.3

Source: Canadian Tobacco Use Monitoring Survey.

Table 2:

Average number of cigarettes smoked daily as reported by daily smokers

Province	2002	2003	2004	2005	2006	2007	2008	2009
Canada	16.4	15.9	15.2	15.7	15.5	15.5	14.9	14.5
Alberta	16.4	14.6	14.4	14.9	15.9	16.1	14.2	13.9
British Columbia	16.3	15.8	14.5	15.7	15.5	14.5	14.1	13.4
Manitoba	15.7	14.7	14.9	14.1	14	14.1	13.6	12.9
New Brunswick	16.2	16.3	16.7	16.9	15.3	17.3	15.5	16.1
Newfoundland	16.2	16.1	14.6	15.5	16	14.1	14.1	15.4
Nova Scotia	17.4	15.1	14.9	15.5	16.4	15.2	15.5	15.1
Prince Edward Island	16.8	16.4	16.1	16.1	15.3	16.5	14.7	15.2
Quebec	17.6	16.8	15.5	16.5	15.6	15.8	14.9	15.4
Ontario	15.5	15.5	15.4	15.6	15.4	15.5	15.5	14.2
Saskatchewan	16.1	16	13.9	14.1	14.6	13.9	14.8	14.4

Source: Canadian Tobacco Use Monitoring Survey.

The number of cigarettes sold in the Canadian legal market has fallen by more than one-quarter in the past 5 years.

The number of cigarettes reported by tobacco companies as legally sold, however, has diminished by about 25% during the same period that the number of smokers has dropped by 9%. The data provided in Table 3 show that in some provinces sales have dropped more than in others.

Because the data provided by the companies is based on wholesale shipments, and not final destination, there may be some under or over-reporting in provinces where cigarettes are distributed to retailers from an out of province wholesaler. Grouping this data by region, as shown in Table 3b likely corrects any such variation.

Table 3: Wholesale shipments of cigarettes (and equivalents) reported to Health Canada . a) by province

	2002	2003	2004	2005	2006	2007	2008	2009
CAN	41,438,652,460	39,660,112,599	38,646,829,606	36,334,578,343	32,647,513,194	32,332,684,194	29,320,227,153	30,179,032,225
AB	4,698,793,405	4,488,114,020	4,736,237,475	4,897,380,695	5,001,725,270	4,932,842,555	4,372,352,105	4,393,217,180
BC	4,264,772,155	3,999,083,010	4,091,723,020	4,030,723,380	3,910,642,180	3,879,491,555	3,761,411,870	3,623,266,545
MB	1,432,112,045	1,379,936,995	1,378,556,785	1,404,091,080	1,319,101,505	1,303,226,920	1,280,603,425	1,308,543,525
NB	1,137,220,850	963,543,108	1,040,765,115	959,448,455	850,321,049	808,255,940	808,915,265	958,976,580
NF	670,871,485	647,626,421	711,420,216	682,636,845	607,858,640	596,705,995	617,919,620	677,986,565
NS	1,471,921,820	1,329,996,815	1,384,512,608	1,312,831,995	1,166,944,405	1,080,975,965	1,065,882,680	1,127,722,650
ON	16,744,459,308	16,215,566,720	14,933,737,095	13,600,724,635	11,570,604,604	10,411,419,051	9,462,945,683	9,849,441,100
PEI	200,935,965	184,396,620	209,571,055	187,353,795	89,258,740	83,774,665	96,921,220	116,226,660
QC	9,443,435,517	9,084,619,825	8,785,032,387	7,964,342,758	6,841,668,676	6,363,179,856	6,146,771,250	6,758,193,120
SK	1,326,900,110	1,323,960,265	1,335,317,450	1,267,303,005	1,248,866,805	1,289,919,605	1,311,180,720	1,306,161,175

b) by region (billions)

	2002	2003	2004	2005	2006	2007	2008	2009
Can	41,439	39,660	38,647	36,335	32,648	32,333	29,320	30,179
West	11,723	11,191	11,542	11,599	11,480	11,405	10,726	10,631
ONT	16,744	16,216	14,934	13,601	11,571	10,411	9,463	9,849
QC	9,443	9,085	8,785	7,964	6,842	6,363	6,147	6,758
East	3,481	3,126	3,346	3,142	2,714	2,570	2,590	2,881

Source: Wholesale shipments reported to Health Canada.

<http://www.hc-sc.gc.ca/hc-ps/tobac-tabac/research-recherche/indust/sales-ventes-eng.php>

Note: The numbers presented in this report have been updated from previous years' reports in response to changes in data reported by Health Canada.

The number of cigarettes legally sold per smoker in some Canadian provinces has fallen by more than one-third since 2002.

Tobacco companies provide Health Canada with reports on wholesale shipments to each Canadian province. Since 2002, the number of cigarettes legally sold per smoker dropped significantly after 2005, although the drop was more recent in the western and eastern provinces than in Ontario and Quebec. In Central Canada the number legally sold per smoker has fallen by up to 3,000 cigarettes (about 7 cigarettes per smoker per day).

The overall decrease in the number of cigarettes legally sold per smoker is 2,000 per year (about one-hundred packages, and about 5 cigarettes per day per smoker).

**Table 4: Number of cigarettes legally sold per reported smoker.
a) by province**

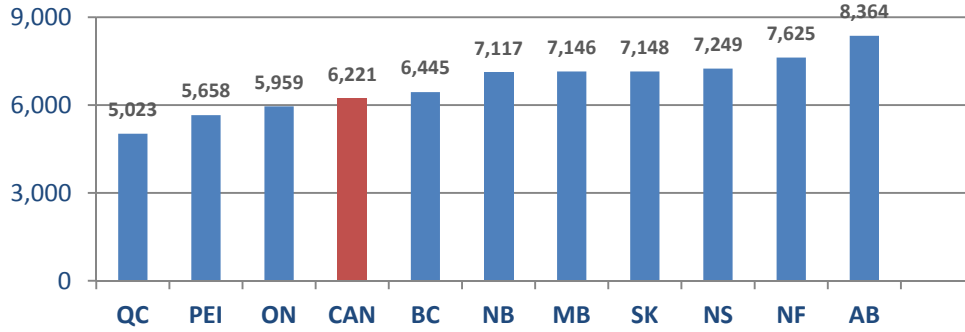
	2002	2003	2004	2005	2006	2007	2008	2009
Canada	7,654	7,438	7,608	7,431	6,617	6,260	6,004	6,221
Alberta	8,370	8,932	9,191	9,156	8,742	8,472	7,543	8,364
British Columbia	7,630	7,089	7,708	7,800	6,659	7,395	6,888	6,445
Manitoba	7,524	7,264	7,281	6,780	7,019	6,945	6,442	7,146
New Brunswick	8,758	6,404	6,913	7,114	6,059	6,120	6,469	7,117
Newfoundland	6,327	6,400	7,398	7,707	6,530	6,623	7,156	7,625
Nova Scotia	7,563	7,780	8,804	8,061	6,889	6,802	6,908	7,249
Ontario	8,760	8,392	7,981	8,151	6,766	5,482	5,330	5,959
PEI	7,761	7,575	8,584	8,424	4,114	3,994	4,389	5,658
Quebec	6,018	6,027	6,396	5,767	5,403	4,608	5,011	5,023
Saskatchewan	7,968	7,000	7,800	7,341	6,730	6,803	7,964	7,148

a) by region

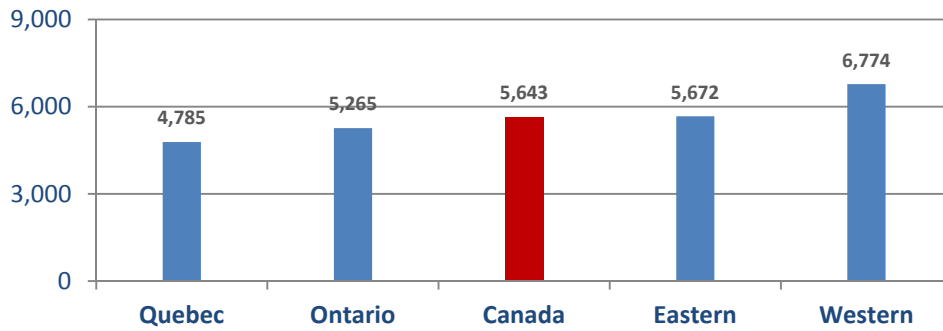
	2002	2003	2004	2005	2006	2007	2008	2009
Canada	7,654	7,438	7,608	7,431	6,617	6,260	6,004	6,221
Western	7,936	7,741	8,205	8,104	7,489	7,685	7,202	7,316
Ontario	8,760	8,392	7,981	8,151	6,766	5,482	5,330	5,959
Quebec	6,018	6,027	6,396	5,767	5,403	4,608	5,011	5,023
Eastern	7,627	6,993	7,811	7,691	6,394	6,391	6,678	7,206

Source: Derived from smoking prevalence data (Canadian Tobacco Use Monitoring Survey) and wholesale shipments reported to Health Canada.

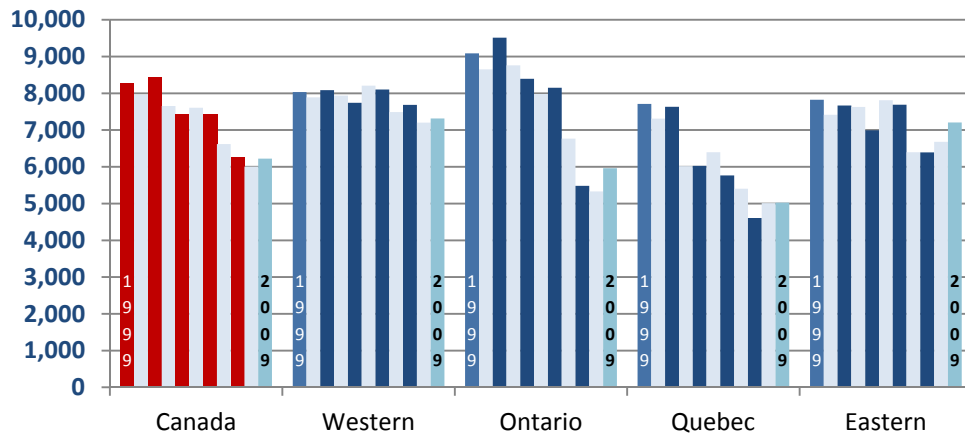
Figure 2: Number of cigarettes legally sold per reported smoker
a) 2009, by province



b) 2009, by region



c) 1999 to 2009 by region



Estimates of actual tobacco consumption (including both legal and illegal sales) can be derived from existing data.

If we know what the ‘average’ number of cigarettes smoked by a Canadian actually is, we can measure the difference between the amount of cigarettes smoked and the amount legally sold, and attribute the remainder to contraband.

We can calculate an ‘actual’ value of cigarettes smoked based on information provided in 1999-2001, when there was annual data each province on the number of smokers and also a small volume of illegal sales. This figure is shown on a regional basis in Table 5.

We expect that the ‘average’ number of cigarettes smoked by Canadian smokers has decreased somewhat since 1999 as a result of (a) increased smoking bans in public places, like bars and restaurants), (b) increased number of smoke-free homes and (c) tax increases during this period and (d) an increased proportion of smokers who are not daily smokers. We expect then that the three-year average shown below is an UPPER estimate of the amount smoked, and will put upward pressure on any estimates of contraband.

Table 5 shows calculations derived by multiplying the number of reported smokers in each region by the three year ‘average’ of cigarettes consumed per smoker during 1999-2001. .

Regional figures are used because wholesale shipments are not necessarily to the province of final destination (sales to Prince Edward Island, for example, might be managed by wholesalers in Newfoundland, or Northern British Columbia might be serviced by wholesalers in Edmonton).

Table 5: Estimates of actual cigarette consumption by region (billions of cigarettes, except for average per smoker)

	3 yr avg	2003	2004	2005	2006	2007	2008	2009
Canada	8,227	43,869	43,869	41,791	40,226	40,592	42,496	40,176
Western	8,001	11,567	11,255	11,453	12,265	11,874	11,915	11,627
Ontario	9,084	17,554	16,998	15,157	15,535	17,254	16,128	15,015
Quebec	7,551	11,382	10,371	10,428	9,562	10,428	9,263	10,159
Eastern	7,635	3,412	3,270	3,119	3,241	3,067	2,960	3,052

Source: Derived from smoking prevalence data (Canadian Tobacco Use Monitoring Survey) and wholesale shipments reported to Health Canada.

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evels of contraband tobacco sales can be inferred from available prevalence estimates and reports on legal sales.

The difference between the number of cigarettes that smokers are expected to consume and the number of cigarettes legally sold is a useful estimate of the size of the contraband market.

Regional figures are again used to adjust for the variance in wholesale shipment data and actual province of sale.

Table 6: Estimates of contraband cigarette sales

a) estimated number of contraband cigarettes

	2003	2004	2005	2006	2007	2008	2009
Canada	4,208,925,176	3,144,413,503	3,891,428,654	7,944,685,800	10,162,864,158	10,855,569,081	9,732,398,973
Western	376,119,431	(287,052,058)	(146,978,774)	784,461,148	468,987,488	1,189,133,693	996,040,797
Ontario	1,338,127,780	2,064,552,561	1,556,728,757	3,964,234,484	6,842,294,517	6,665,230,271	5,166,002,120
Quebec	2,296,896,761	1,586,130,195	2,463,573,140	2,720,162,624	4,064,660,532	3,115,933,596	3,400,355,955
Eastern	286,846,841	-75,595,329	-23,075,825	526,835,001	500,076,615	371,038,282	171,346,765

b) estimated percentage of total cigarette sales that are contraband

	2003	2004	2005	2006	2007	2008	2009
Canada	10%	7%	9%	20%	25%	26%	24%
Western	3%	-3%	-1%	6%	4%	10%	9%
Ontario	8%	12%	10%	26%	40%	41%	34%
Quebec	20%	15%	24%	28%	39%	34%	33%
Eastern	8%	-2%	-1%	16%	16%	13%	6%

Source: Derived from smoking prevalence data (Canadian Tobacco Use Monitoring Survey) and wholesale shipments reported to Health Canada.

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igher tax rates are not associated with higher levels of contraband cigarette sales.

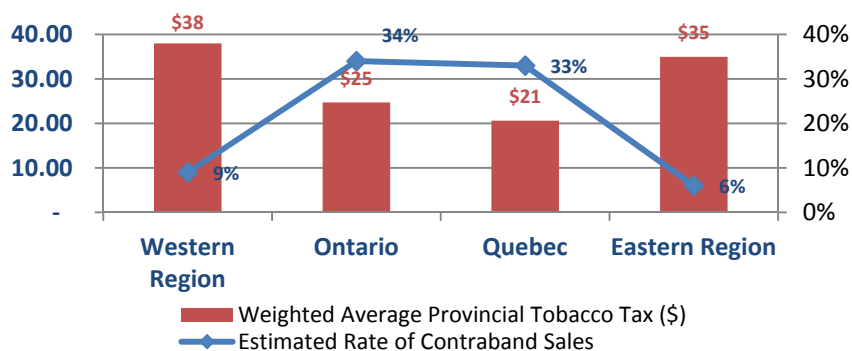
Tobacco tax rates vary considerably across Canadian jurisdictions. Those with the highest rates of tobacco specific taxes (Alberta, British Columbia, Prince Edward Island), have had different experiences with tobacco smuggling. As shown in Figure 3, there is no consistent relationship between tax rates and levels of contraband sales.

Table 7: Taxes applied on cigarettes in Canada, December 2009. (\$)

	Federal Excise Duty	Provincial Tobacco Taxes
Alberta	17.00	37.00
British Columbia	17.00	40.00
Manitoba	17.00	37.00
New Brunswick	17.00	23.50
Newfoundland	17.00	36.00
Northwest Territories	17.00	53.60
Nova Scotia	17.00	43.04
Nunavut	17.00	42.00
Ontario	17.00	24.70
Prince Edward Island	17.00	44.90
Quebec	17.00	20.60
Saskatchewan	17.00	36.60
Yukon	17.00	42.00

Source: Provincial budgets

Figure 4: Provincial tax rates and estimated contraband market, 2009.



Regional tax rates are calculated by weighting the average by volume of cigarettes.

Some Governments have maintained tobacco tax revenues, even though contraband tobacco sales have grown.

Some provincial governments (like Prince Edward Island and Nova Scotia) , which have seen significant reductions in legal tobacco sales, have not commensurate decreases in tobacco revenues because they have introduced concurrent tobacco tax increases.

Recent increases to tobacco taxes in the period of increased contraband include:

2007: Nova Scotia (\$2 per carton in March 2007), Alberta (\$5 per carton in April 2007), and across Canada (\$0.59 on two occasions to replace GST reductions with excise tax increases).

2009: Prince Edward Island (\$6 per carton in April), British Columbia (\$1.2 in February), Manitoba (\$2.00 in March), Alberta (\$3.00 in March), PEI by \$6.00, Nova Scotia (\$10.00 in June).

Table 8: Tobacco tax revenues, 2003 to 2009

	2003-04	2004-05	2005-06	2006-07	2007-2008	2008-2009	2009-2010
CDA	\$3,349,877,973	\$3,029,139,958	\$2,773,826,877	\$2,492,359,786	\$2,663,914,023	\$2,530,655,522	\$2,629,538,912
AB	\$697,655,000	\$719,091,000	\$780,000,000	\$845,000,000	\$828,000,000	\$864,000,000	\$697,655,000
BC	\$699,000,000	\$709,000,000	\$776,000,000	\$692,000,000	\$708,000,000	\$682,000,000	\$699,000,000
MB	\$203,469,448	\$191,637,419	\$201,576,342	\$190,627,400	\$189,632,718	\$215,500,000	\$203,469,448
NB	\$96,500,000	\$90,500,000	\$81,900,000	\$79,900,000	\$103,700,000	\$102,600,000	\$96,500,000
NF	\$102,800,000	\$116,400,000	\$110,000,000	\$107,758,000	\$111,953,000	\$113,000,000	\$102,800,000
NS	\$178,285,000	\$163,617,000	\$145,091,000	\$145,573,000	\$147,654,000	\$199,149,000	\$178,285,000
ON	\$1,453,000,000	\$1,379,000,000	\$1,236,000,000	\$1,127,000,000	\$1,044,000,000	\$1,083,000,000	\$1,453,000,000
PEI	\$29,261,700	\$28,183,000	\$24,265,000	\$23,951,000	\$27,957,000	\$31,000,000	\$29,261,700
QC	\$901,235,000	\$751,591,000	\$678,439,000	\$646,819,000	\$593,735,000	\$663,470,000	\$901,235,000
SK	\$187,029,000	\$171,107,000	\$150,776,000	\$190,412,000	\$199,072,000	\$196,868,000	\$187,029,000
Prov.	\$4,300,864,000	\$4,548,235,148	\$4,320,126,419	\$4,184,047,342	\$4,049,040,400	\$3,953,703,718	\$4,150,587,000
All	\$7,650,741,973	\$7,577,375,106	\$7,093,953,296	\$6,676,407,128	\$6,712,954,423	\$6,484,359,240	\$6,780,125,912