The Canadian Tobacco Market Place

Estimating the volume of Contraband Sales of Tobacco in Canada

Updated – April 2010

Physicians for a Smoke-Free Canada

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

he 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:

Total tobacco use = illegal tobacco use + 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, but has dropped by 9% in this period (3 percentage points in prevalence).

Table 1: Current Smokers (daily and occasional) (15 years or older), 2002-2007 a) number of smokers

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

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

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

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

Source: Canadian Tobacco Use Monitoring Survey.

he 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 hardly changed. 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
CAN	41,441,531,460	39,663,883,599	38,650,705,606	36,334,578,343	32,647,513,194	30,820,206,382	27,559,382,153
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
BC	4,264,772,155	3,999,082,010	4,091,723,020	4,030,723,480	3,910,642,180	3,879,491,555	3,468,952,870
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	1,114,324,425
NB	1,137,220,850	963,544,108	1,040,765,115	959,448,455	850,321,049	808,255,940	679,915,265
NF	670,870,485	647,626,421	711,420,216	682,636,845	607,858,640	596,705,995	537,010,620
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	902,372,680
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	9,346,911,683
PEI	200,935,965	184,396,620	209,571,055	187,353,795	89,258,740	83,774,665	80,207,220
QC	9,443,435,517	9,084,619,825	8,785,032,387	7,958,172,358	6,841,668,676	6,363,179,856	5,869,091,250
SK	1,326,899,110	1,323,960,265	1,335,317,450	1,267,302,005	1,248,866,805	1,289,919,605	1,132,169,720

b) by region

	2002	2003	2004	2005	2006	2007	2008
Can	41,441,531,460	39,663,883,599	38,650,705,606	36,334,578,343	32,647,513,194	30,820,206,382	27,559,382,153
West	11,722,576,715	11,191,093,290	11,541,834,730	11,599,497,260	11,480,335,760	11,405,480,635	10,087,799,120
ONT	16,744,459,308	16,215,566,720	14,933,737,095	13,600,724,635	11,570,604,604	10,411,419,051	9,346,911,683
QC	9,443,435,517	9,084,619,825	8,785,032,387	7,958,172,358	6,841,668,676	6,363,179,856	5,869,091,250
East	3,480,949,120	3,125,563,964	3,346,268,994	3,142,271,090	2,714,382,834	2,569,712,565	2,199,505,785

Source: Wholesale shipments reported to Health Canada. Source: www.gosmokefree.ca.

he 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 and Eastern Canada the number legally sold per smoker has fallen by up to 3,000 per year. 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

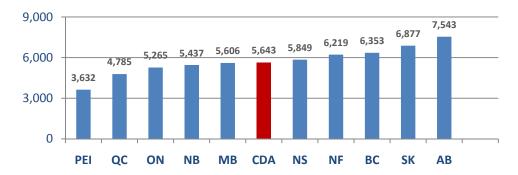
	2002	2003	2004	2005	2006	2007	2008
Canada	7,654	7,438	7,609	7,431	6,617	5,967	5,643
Alberta	8,370	8,932	9,191	9,156	8,742	8,472	7,543
British Columbia	7,630	7,089	7,708	7,800	6,659	7,395	6,353
Manitoba	7,524	7,264	7,281	6,780	7,019	6,945	5,606
New Brunswick	8,758	6,404	6,913	7,114	6,059	6,120	5,437
Newfoundland	6,327	6,400	7,398	7,707	6,530	6,623	6,219
Nova Scotia	7,563	7,780	8,804	8,061	6,889	6,802	5,849
Ontario	8,760	8,392	7,981	8,151	6,766	5,482	5,265
PEI	7,761	7,575	8,584	8,424	4,114	3,994	3,632
Quebec	6,018	6,027	6,396	5,763	5,403	4,608	4,785
Saskatchewan	7,968	7,000	7,800	7,341	6,730	6,803	6,877

a) by region

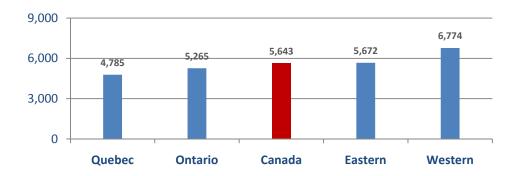
	2002	2003	2004	2005	2006	2007	2008
Canada	7,654	7,438	7,609	7,431	6,617	5,967	5,643
Western	7,936	7,741	8,205	8,104	7,489	7,685	6,774
Ontario	8,760	8,392	7,981	8,151	6,766	5,482	5,265
Quebec	6,018	6,027	6,396	5,763	5,403	4,608	4,785
Eastern	7,627	6,993	7,811	7,691	6,394	6,391	5,672

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

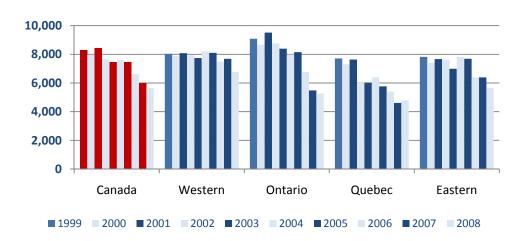
Figure 2: Number of cigarettes legally sold per reported smoker a) 2008, by province



b) 2008, by region



c) 1999 to 2008 by region



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

If we assume that the 'average' number of cigarettes smoked by Canadian smokers has not changed markedly since 1999-2001, we can extrapolate and estimate what the actual tobacco market currently is, including both legal and illegal sales. 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

	3 yr av	2003	2004	2005	2006	2007	2008
Canada	8,227	43,869,037,775	43,869,037,775	41,791,243,109	40,226,006,997	40,592,198,994	42,495,548,352
Western	8,001	11,567,213,721	11,254,782,672	11,452,519,386	12,264,796,908	11,874,468,123	11,914,681,813
Ontario	9,084	17,553,694,500	16,998,289,656	15,157,453,392	15,534,839,088	17,253,713,568	16,128,175,954
Quebec	7,551	11,381,516,586	10,371,162,582	10,427,915,898	9,561,831,300	10,427,840,388	9,262,704,846
Eastern	7,635	3,412,409,805	3,270,673,665	3,119,195,265	3,241,217,835	3,069,789,180	2,960,677,067

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

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
Canada	4,205,154,176	3,140,537,503	3,891,428,654	7,944,685,800	11,675,341,970	12,616,414,081
Western	376,120,431	(287,052,058)	(146,977,874)	784,461,148	468,987,488	1,826,882,693
Ontario	(317,917,595)	460,905,023	126,748,841	2,498,651,360	5,214,549,853	6,781,264,271
Quebec	3,315,822,097	2,514,604,027	3,403,298,188	3,576,181,424	4,998,208,420	3,393,613,596
Eastern	286,845,841	(75,595,329)	(23,075,825)	526,835,001	500,076,615	761,171,282

b) estimated percentage of total cigarette sales that are contraband

	2003	2004	2005	2006	2007	2008
Canada	10%	8%	10%	20%	27%	31%
Western	3%	-3%	-1%	6%	4%	15%
Ontario	-2%	3%	1%	18%	33%	42%
Quebec	27%	22%	30%	34%	44%	37%
Eastern	8%	-2%	-1%	16%	16%	26%

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

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

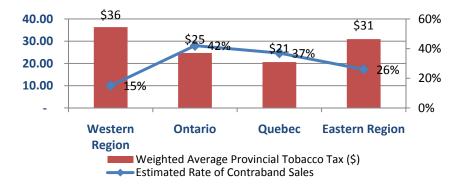
Tobacco tax rates vary considerably across Canadian jurisdictions. Those with the highest rates of tobacco specific taxes (Alberta, British Columbia, Prince Edward Island), have had different experiences with tobacco smuggling. As shown in Figure 3, there is no consistent relationship between tax rates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

Table 7: Taxes applied on cigarettes in Canada, April 2008. (\$)

	Federal Excise Duty	Provincial Tobacco Taxes	Provincial Sales Tax	Federal GST
Alberta	16.41	37.00	0%	6%
British Columbia	16.41	35.80	0%	6%
Manitoba	16.41	35.00	7%	6%
New Brunswick	16.41	23.50	8%	6%
Newfoundland	16.41	36.00	8%	6%
Northwest Territories	16.41	42.00	0%	6%
Nova Scotia	16.41	33.04	8%	6%
Nunavut	16.41	42.00	0%	6%
Ontario	16.41	24.70	0%	6%
Prince Edward Island	16.41	39.90	0%	6%
Quebec	16.41	20.60	0%	6%
Saskatchewan	16.41	36.60	5%	6%
Yukon	16.41	26.40	0%	6%

Source: Non Smokers Rights Association, Tax Map at www.nsra-adnf.ca

Figure 4: Provincial tax rates and estimated contraband market, 2008.



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

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

Some provincial governments (like Prince Edward Island), which have seen significant reductions in legal tobacco sales, have not seen decreases in tobacco revenues because they have introduced concurrent tobacco tax increases. Recent increases to tobacco taxes in recent fiscal periods reported below include those in 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). Prince Edward Island increased its taxes in April 2008 by \$5 per carton.

Table 8: Tobacco tax revenues, 2003 to 2009

	2003-04	2004-05	2005-06	2006-07	2007-2008	2008-2009
CDA	\$3,349,877,973	3,029,139,958.00	2,773,826,877.00	\$2,492,359,786	\$2,663,914,023	\$2,530,655,522
AB	\$670,502,000	\$697,655,000	\$719,091,000	\$780,000,000	\$890,000,000	\$828,000,000
BC	\$647,000,000	\$699,000,000	\$709,000,000	\$726,000,000	\$692,000,000	\$708,000,00
MB	\$190,400,000	\$203,469,448	\$191,637,419	\$201,576,342	\$190,412,000	\$189,632,718
NB	\$97,000,000	\$96,500,000	\$90,500,000	\$81,900,000	\$79,900,000	\$103,700,000
NF	\$92,500,000	\$102,800,000	\$116,400,000	\$110,000,000	\$108,800,000	\$111,953,000
NS	\$161,715,000	\$178,285,000	\$163,617,000	\$145,091,000	\$150,948,000	\$147,654,000
ON	\$1,350,000,000	\$1,453,000,000	\$1,379,000,000	\$1,236,000,000	\$1,217,000,000	\$1,044,000,000
PEI	\$26,000,000	\$29,261,700	\$28,183,000	\$24,265,000	\$27,100,000	\$27,867,600
QC	\$889,000,000	\$901,235,000	\$751,591,000	\$678,439,000	\$646,819,000	\$593,735,000
SK	\$176,747,000	\$187,029,000	\$171,107,000	\$150,776,000	\$130,734,000	\$199,072,000
Prov. total	\$4,300,864,000	\$4,548,235,148	\$4,320,126,419	\$4,134,047,342	\$4,133,713,000	\$3,953,614,318
All	\$7,650,741,973	\$7,577,375,106	\$7,093,953,296	\$6,626,407,128	\$6,797,627,023	\$6,484,269,840