

The Canadian Tobacco Market Place

Estimating the volume of Contraband Sales of Tobacco in Canada

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Physicians *for a* Smoke-Free Canada

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How 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 1a, 1b and 1c, has remained more or less constant.

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

a) number of people over 15 years of age who smoke daily or occasionally

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

Source: Canadian Tobacco Use Monitoring Survey.

b) percentage of Canadians over 15 years of age who smoke daily or occasionally

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

Source: Canadian Tobacco Use Monitoring Survey.

c) average number of cigarettes smoked daily as reported by daily smokers

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

Source: Canadian Tobacco Use Monitoring Survey.

The number of cigarettes sold in the Canadian legal market has fallen by 25% 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 2 show that in some provinces there have been virtually no changes, but in others legal sales have declined considerably.

Table 2: Wholesale shipments of cigarettes (and equivalents) reported to Health Canada

a) by province

	2002	2003	2004	2005	2006	2007
Canada	41,441,531,460	39,663,883,599	38,650,705,606	36,334,578,343	32,647,513,194	30,820,206,382
Alberta	4,698,793,405	4,488,114,020	4,736,237,475	4,897,380,695	5,001,725,270	4,932,842,555
British Columbia	4,264,772,155	3,999,082,010	4,091,723,020	4,030,723,480	3,910,642,180	3,879,491,555
Manitoba	1,432,112,045	1,379,936,995	1,378,556,785	1,404,091,080	1,319,101,505	1,303,226,920
New Brunswick	1,137,220,850	963,544,108	1,040,765,115	959,448,455	850,321,049	808,255,940
Newfoundland	670,870,485	647,626,421	711,420,216	682,636,845	607,858,640	596,705,995
Nova Scotia	1,471,921,820	1,329,996,815	1,384,512,608	1,312,831,995	1,166,944,405	1,080,975,965
Ontario	16,744,459,308	16,215,566,720	14,933,737,095	13,600,724,635	11,570,604,604	10,411,419,051
PEI	200,935,965	184,396,620	209,571,055	187,353,795	89,258,740	83,774,665
Quebec	9,443,435,517	9,084,619,825	8,785,032,387	7,958,172,358	6,841,668,676	6,363,179,856
Saskatchewan	1,326,899,110	1,323,960,265	1,335,317,450	1,267,302,005	1,248,866,805	1,289,919,605

b) by region

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

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

The number of cigarettes sold per smoker in some Canadian provinces has fallen by more than one-third since 1999.

Tobacco companies provide Health Canada with reports on wholesale shipments to each Canadian province. Over the past nine years, the number of cigarettes shipped per smoker has not changed in the Western provinces beyond what might be expected to reflect the introduction of smoke-free spaces (which reduce the number of cigarettes that smokers are likely to consume in a given day). In Central Canada shipments have fallen by a much larger amount, where the number legally sold per smoker has fallen by more than 3,000 per year.

Table 3: Number of cigarettes legally sold per reported smoker.

a) by province

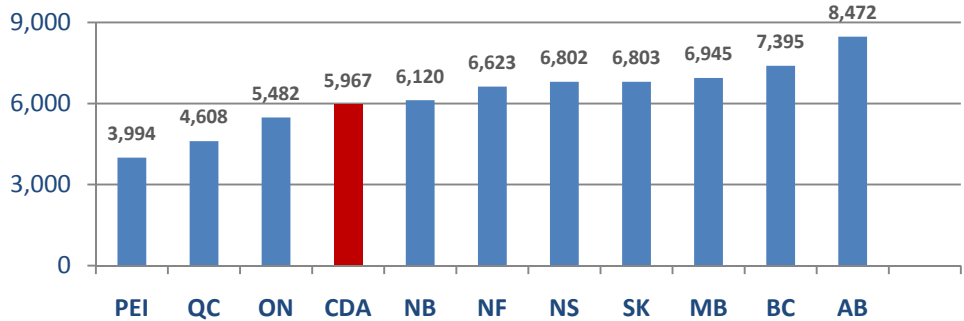
	1999	2000	2001	2002	2003	2004	2005	2006	2007
Canada	8,287	7,962	8,430	7,654	7,438	7,609	7,431	6,617	5,967
Alberta	9,124	10,018	8,932	8,370	8,932	9,191	9,156	8,742	8,472
British Columbia	7,158	6,881	8,009	7,630	7,089	7,708	7,800	6,659	7,395
Manitoba	7,841	6,851	6,699	7,524	7,264	7,281	6,780	7,019	6,945
New Brunswick	8,005	7,917	7,947	8,758	6,404	6,913	7,114	6,059	6,120
Newfoundland	6,491	5,895	6,076	6,327	6,400	7,398	7,707	6,530	6,623
Nova Scotia	8,328	7,729	8,392	7,563	7,780	8,804	8,061	6,889	6,802
Ontario	9,088	8,653	9,513	8,760	8,392	7,981	8,151	6,766	5,482
PEI	8,858	8,547	7,628	7,761	7,575	8,584	8,424	4,114	3,994
Quebec	7,711	7,310	7,633	6,018	6,027	6,396	5,763	5,403	4,608
Saskatchewan	7,794	6,793	7,335	7,968	7,000	7,800	7,341	6,730	6,803

a) by region

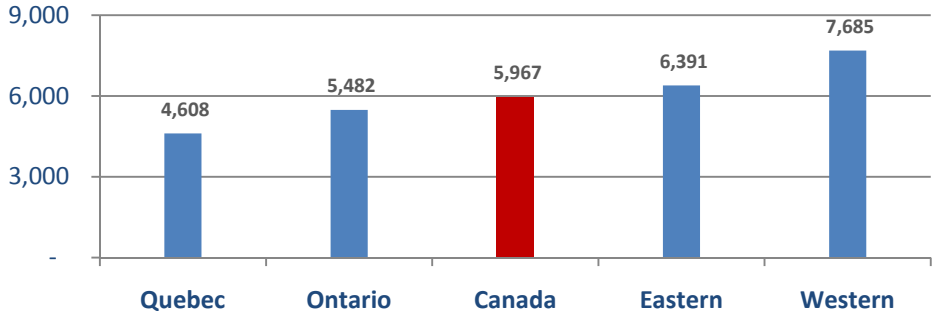
	1999	2000	2001	2002	2003	2004	2005	2006	2007
Canada	8,287	7,962	8,430	7,654	7,438	7,609	7,431	6,617	5,967
Western	8,031	7,889	8,083	7,936	7,741	8,205	8,104	7,489	7,685
Ontario	9,088	8,653	9,513	8,760	8,392	7,981	8,151	6,766	5,482
Quebec	7,711	7,310	7,633	6,018	6,027	6,396	5,763	5,403	4,608
Eastern	7,826	7,413	7,667	7,627	6,993	7,811	7,691	6,394	6,391

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

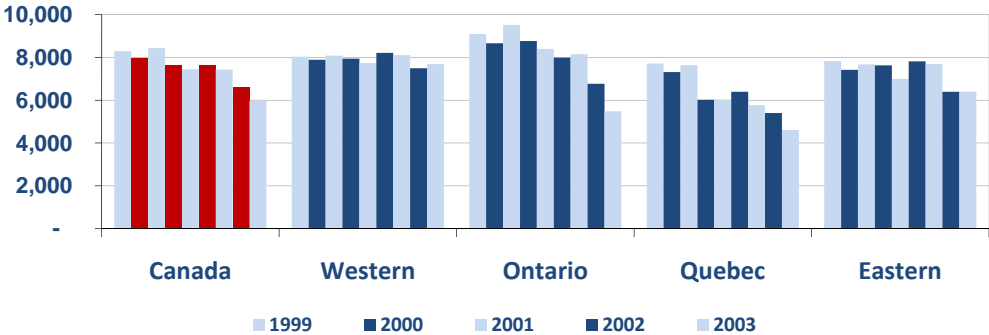
Figure 2: Number of cigarettes legally sold per reported smoker
a) 2007, by province



b) 2007, by region



c) 1999 to 2007 by region



Estimates 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 4 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 4: Estimates of actual cigarette consumption by region

		2002	2003	2004	2005	2006	2007
Canada	8,227	44,542,004,011	43,867,342,047	41,789,627,697	40,224,452,088	40,590,629,930	42,493,905,715
Western	8,001	11,819,221,218	11,567,213,721	11,254,782,672	11,452,519,386	12,264,796,908	11,874,468,123
Ontario	9,084	17,364,722,032	17,554,614,840	16,999,180,876	15,158,248,097	15,535,653,579	17,254,618,180
Quebec	7,551	11,849,827,369	11,382,058,407	10,371,656,305	10,428,412,322	9,562,286,494	10,428,336,809
Eastern	7,635	3,484,713,255	3,412,409,805	3,270,673,665	3,119,195,265	3,241,217,835	3,069,789,180

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. The estimates of contraband derived in this fashion are consistent with those prepared using different methodologies.^{3 4} A comparison of these estimates is shown in Table 6.

Table 5: Estimates of contraband cigarette sales

a) estimated number of contraband cigarettes

	2002	2003	2004	2005	2006	2007
Canada	3,100,472,551	4,203,458,448	3,138,922,091	3,889,873,745	7,943,116,736	11,673,699,333
Western	96,644,503	376,120,431			784,461,148	468,987,488
Ontario	620,262,724	1,339,048,120	2,065,443,781	1,557,523,462	3,965,048,975	6,843,199,129
Quebec	2,406,391,852	2,297,438,582	1,586,623,918	2,470,239,964	2,720,617,818	4,065,156,953
Eastern	3,764,135	286,845,841			526,835,001	500,076,615

b) estimated percentage of total cigarette sales that are contraband

	2002	2003	2004	2005	2006	2007
Canada	7%	10%	8%	10%	20%	27%
Western	1%	3%			6%	4%
Ontario	4%	8%	12%	10%	26%	40%
Quebec	20%	20%	15%	24%	28%	39%
Eastern		8%			16%	16%

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

³ *Illegal Tobacco Sales: A Crisis for Canadians. National Study for the Canadian Tobacco Manufacturers' Council.* [http://www.imperialtobacco.com/onewebca/sites/IMP_5TUJYZ.nsf/vwPagesWebLive/DO65HJNQ/\\$FILE/medMD7JDHEG.pdf?openelement](http://www.imperialtobacco.com/onewebca/sites/IMP_5TUJYZ.nsf/vwPagesWebLive/DO65HJNQ/$FILE/medMD7JDHEG.pdf?openelement)

⁴ *Contraband Cigarettes in Ontario. Ontario Tobacco Research Unit. November 2007.* http://www.otru.org/pdf/special/special_nov_2007.pdf.

Table 6: Comparison of estimates of contraband cigarette sales

	2005		2006		2007		2008
	PSC	GFK	PSC	GFK	PSC	GFK	GFK
Canada	10		20	17	27	22	33
Western			6	2	4	3	3
Ontario	10		26	24	40	32	49
Quebec	24		28	22	39	31	40
Eastern			16	5	16	7	10

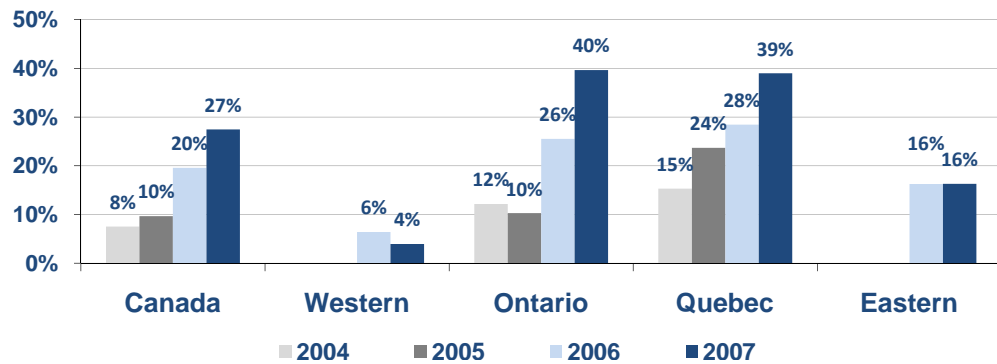
Note: PSC data based on annualized estimates; GFK based on 'snapshot' surveys taken in May-June.

Sources:

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

GFK: *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)

Figure 3: Estimated Market Share of Contraband Tobacco



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

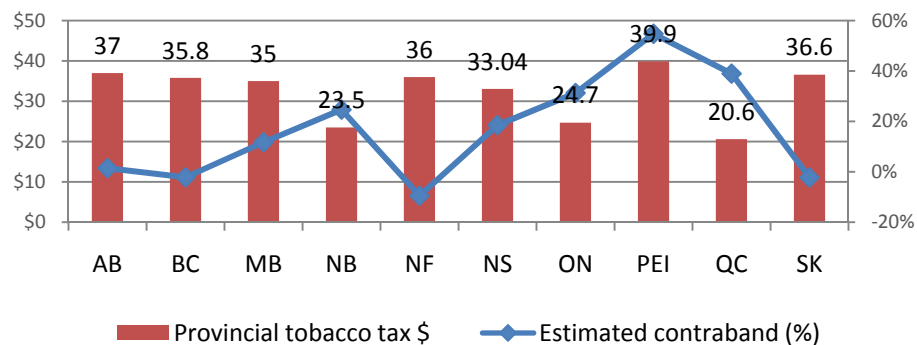
Tobacco tax rates vary considerably across Canadian jurisdictions. Those with the highest rates of tobacco specific taxes (Alberta, British Columbia, Prince Edward Island), have had different experiences with tobacco smuggling. As shown in Figure 3, there is no consistent relationship between tax rates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

Table 6: 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 size of contraband market.



Governments 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.

These tax increases have contributed to some jurisdictions (like PEI) being able to maintain tobacco tax revenues, even though contraband sales are increasing. In 2007, tobacco tax revenues were \$850 million lower than at their peak during this period in 2003-2004 (a fall from \$7.65 billion in 2003-2004 to \$6.80 billion in 2007-2008)

Table 7: Tobacco tax revenues, 2002 to 2007

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-2008
CDA	\$3,111,054,391	\$3,349,877,973	3,029,139,958.00	2,773,826,877.00	\$2,492,359,786	\$2,663,914,023
AB	\$618,474,000	\$670,502,000	\$697,655,000	\$719,091,000	\$780,000,000	\$890,000,000
BC	\$606,000,000	\$647,000,000	\$699,000,000	\$709,000,000	\$726,000,000	\$692,000,000
MB	\$178,000,000	\$190,400,000	\$203,469,448	\$191,637,419	\$201,576,342	\$190,412,000
NB	\$91,912,000	\$97,000,000	\$96,500,000	\$90,500,000	\$81,900,000	\$79,900,000
NF	\$90,500,000	\$92,500,000	\$102,800,000	\$116,400,000	\$110,000,000	\$108,800,000
NS	\$145,420,000	\$161,715,000	\$178,285,000	\$163,617,000	\$145,091,000	\$150,948,000
ON	\$1,183,000,000	\$1,350,000,000	\$1,453,000,000	\$1,379,000,000	\$1,236,000,000	\$1,217,000,000
PEI	21,838,000	\$26,000,000	\$29,261,700	\$28,183,000	\$24,265,000	\$27,100,000
QC	\$867,000,000	\$889,000,000	\$901,235,000	\$751,591,000	\$678,439,000	\$646,819,000
SK	\$158,472,000	\$176,747,000	\$187,029,000	\$171,107,000	\$150,776,000	\$130,734,000
Prov. total	\$3,938,778,000	\$4,300,864,000	\$4,548,235,148	\$4,320,126,419	\$4,134,047,342	\$4,133,713,000
Combined	\$7,049,832,391	\$7,650,741,973	\$7,577,375,106	\$7,093,953,296	\$6,626,407,128	\$6,797,627,023