

Legislative Costing Note

This is an independent cost estimate of a budgetary measure contained in the federal government's Budget 2021. A list of the PBO's cost estimates of components of the Budget can be viewed on [its website](#).

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Short Title: Tobacco Taxation Increase

Description: Increasing the tobacco excise duty rate by \$4 per carton of 200 cigarettes, along with corresponding increases to the excise duty rates for other tobacco products outlined in the table below:

Products	Excise Duty Rates	
	Before Budget Day	After Budget Day
Cigarettes (per carton of 200)	\$25.09	\$29.09
Tobacco Sticks (per stick)	\$0.12545	\$0.14545
Manufactured Tobacco (per 50 grams or fraction thereof)	\$7.84062	\$9.09062
Cigars	\$27.30379 per 1,000 cigars plus the greater of \$0.09814 per cigar and 88 per cent of the sale price or duty-paid value	\$31.65673 per 1,000 cigars plus the greater of \$0.11379 per cigar and 88 per cent of the sale price or duty-paid value

Inventories of cigarettes held by certain manufacturers, importers, wholesalers, and retailers at the beginning of the day after Budget Day are subject to an inventory tax of \$0.02 per cigarette, subject to certain exemptions.

Data Sources:	Variable	Source
	Historical cigarette excise duty revenues	Receiver General (Public Accounts and Monthly Statement of Financial Operations)
	Historical excise duty rates	Canada Revenue Agency
	Price elasticity of demand for legal cigarettes	Gruber et al. (2002) ¹
	Historical cigarette retail prices	Statistics Canada (Table 18-10-0002-01)
	Proposed excise duty rates	Finance Canada (Budget 2021)
	CPI inflation	PBO Economic Model
	Share of impacted tobacco revenues from non-cigarette products	Receiver General (Public Accounts)
	GST rate	Canada Revenue Agency

Estimation and
Projection Method:

PBO determined the volume of historical legal cigarettes sold by dividing cigarette excise duty revenues by the corresponding excise duty rate. This history allowed PBO to calculate the rate of secular decline in legal cigarettes sold. We applied that rate to historical sales to project future sales.

Consistent with provisions of the *Excise Act*, PBO determined future excise duty rates by growing historical and proposed rates by CPI inflation.

PBO modelled two scenarios to estimate incremental excise duty revenues. In the “status quo” scenario, PBO multiplied our projection of future legal cigarettes sold by the corresponding excise duty rates. PBO increased the resulting cigarette excise duty revenues by the share of tobacco revenues from non-cigarette products (manufactured tobacco and cigars).

In the “post-Budget” scenario, PBO reduced the projection of future legal cigarettes sold to account for consumers’ responsiveness to price changes in legal tobacco products (i.e., the price elasticity of demand). Over the projection period, PBO determined that higher excise duty rates would increase cigarette retail prices by 3.0%. Based on results in Gruber et al. (2002), PBO assumed a price elasticity of demand of -0.47. This means that the 3.0% increase in the (real) price of legal cigarettes results in a reduction in legal cigarettes sold of 1.4%. PBO multiplied these reduced sales by the higher, post-Budget excise duty rates. PBO increased the resulting cigarette excise duty revenues by the share of tobacco revenues from non-cigarette products (manufactured tobacco and cigars).

PBO calculated the difference between the “status quo” and “post-Budget” scenarios to project incremental excise duty revenue arising from the measure.

Finally, PBO determined the GST revenue impact as the difference between GST revenues (future prices multiplied by future legal cigarettes sold multiplied by the GST rate) in each scenario.

PBO did not expect any incremental administrative costs or savings.

Sources of Uncertainty:

Data on historical legal cigarettes sold, inferred from the Public Accounts, suggest that while historical sales have been subject to an overall trend of secular decline, sales in any given year have deviated from that trend by up to 10 percentage points. Future volatility in legal cigarettes sold could impact the cost estimate.

PBO assumes that historical trends in cigarette retail prices and legal cigarettes sold will continue throughout the projection period. Future price growth may differ due to provincial and territorial decisions to change or maintain their excise duty rates. Future legal cigarettes sold may differ if consumption habits, legal cigarette prices, and the relative price and availability of contraband tobacco evolve differently than what is captured in historical trends.

Future excise duty rates are indexed to CPI inflation and are sensitive to uncertainty in the economic outlook.

The share of impacted tobacco revenues from non-cigarette products (manufactured tobacco and cigars) has been relatively stable over time, and so represents a minor source of uncertainty.

PBO approximated consumers' behavioural response to higher legal tobacco prices (i.e., reduced smoking frequency and incidence, or migration to the contraband market) with a price elasticity of demand impact. Projected revenues are sensitive to the choice of price elasticity factor. The literature shows a moderate range of price elasticities for legal cigarettes. PBO's chosen price elasticity factor, from Gruber et al. (2002), was estimated excluding data from the early 1990s in Central and Atlantic Canada. Between 1990 and 1993, legal cigarette prices rose by approximately 50 per cent in real terms and contraband cigarettes flooded those markets (Gruber et al., 2002). We do not anticipate a similar increase in contraband due to this measure, but a similar effect could significantly increase the price elasticity of legal tobacco and reduce tobacco excise revenues. The price elasticity estimate may be biased if consumers' responsiveness to legal market price increases has changed since the 1980s and 1990s.

Higher legal tobacco prices may increase (decrease) consumption of substitute (complementary) goods such as alcohol and cannabis, which are subject to federal excise duties, and vaping products, which are not. These potential behavioural responses, which may have fiscal impacts, were not included in this cost estimate.

The incrementality of the GST revenues is uncertain. Though the higher price of legal cigarettes is expected to generate more GST revenue per sale, those gains may be offset by smokers reducing their consumption of other GST-taxable products to compensate for higher legal cigarette costs. GST revenues may also be overstated if tobacco companies lower product prices in reaction to the increase in excise duty rates.

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Cost of proposed measure

\$ millions	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Total cost	-401	-418	-412	-407	-402

Supplementary information

\$ millions	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Excise duties	-390	-407	-402	-397	-392
GST	-10	-10	-10	-10	-10
Total cost	-401	-418	-412	-407	-402

Notes

- Estimates are presented on an accruals basis as would appear in the budget and public accounts.
- Positive numbers subtract from the budgetary balance, negative numbers contribute to the budget balance.
- "-" = PBO does not expect a financial cost.
- Numbers may not add due to rounding.

ⁱ Gruber, Jonathan & Sen, Anindya & Stabile, Mark, 2002. "[Estimating price elasticities when there is smuggling: the sensitivity of smoking to price in Canada](#)," National Bureau of Economic Research, Working Paper 8962.