

M e m o r a n d u m

To: Mr. Ramon J. Hirsig
Executive Director

Date: February 26, 2009

From: David J. Gau, Deputy Director 
Property and Special Taxes Department

Subject: **Issue Paper 09-001**
Data Source for the Calculation of the Annual Tobacco Products Tax Rate
(March 17, 2009 Deputy Director's Report)

At the January 22, 2009 Board meeting, I provided an update to the Board Members regarding the Board's annual determination of the tobacco products tax rate required under Revenue and Taxation Code sections 30126 (Proposition 99) and 30131.5 (Proposition 10).

At that meeting, I advised the Members that on November 30, 1988, the Board adopted a staff recommendation that the tobacco products tax rate "be set at the rate of tax of one cigarette divided by the weighted average wholesale cost of a cigarette." The approved formula included the use of the USDA's *Tobacco Outlook* publication as the data source for the wholesale cost component. In the fall of 2007, the USDA notified us that they would cease publication of *Tobacco Outlook*. Since then, the Excise Taxes Division staff, in collaboration with the Board's Chief Economist, Joe Fitz, has been conducting research to locate another independent source of information for wholesale cigarette costs. To date, three possible data sources have been identified.

I asked staff to fully explore each data source and prepare a Formal Issue Paper for the Board's consideration. Attached, for final executive approval, is Issue Paper 09-001, *Data Source for the Calculation of the Annual Tobacco Products Tax Rate*, to be presented to the Board at its March 17, 2009 Sacramento Board meeting under Deputy Director's Reports .

DJG:kn
Attachment

cc: Ms. Diane Olson
Ms. Lynn Bartolo

Approved: 

Ramon J. Hirsig
Executive Director

BOARD APPROVED
at the _____ Board Meeting

Diane Olson, Chief
Board Proceedings Division

Issue Paper Number 09-001



- Board Meeting
- Business Taxes Committee
- Customer Services and Administrative Efficiency Committee
- Legislative Committee
- Property Tax Committee
- Other

Data Source for the Calculation of the Annual Tobacco Products Tax Rate

I. Issue

What data source for the wholesale cost of cigarettes should the Board use to calculate the annual tobacco products tax rate?

II. Alternative 1B - Staff Recommendation

Staff recommends that the Board annually calculate the annual tobacco products tax rate by adjusting the previous year's wholesale cigarette cost based on the Producer Price Index (PPI) as published by the U.S. Bureau of Labor Statistics for cigarette manufacturers. Alternatives 1A and 1B both utilize the PPI; however, staff recommends Alternative 1B. This alternative is more reflective of the actual cigarette market in California as it recognizes and incorporates the volume of both non-branded (generic) and premium cigarettes.

III. Other Alternative(s) Considered

- A. **Alternative 2-** Use retail cigarette prices as published in *The Tax Burden on Tobacco* with a predetermined margin from retail prices to calculate wholesale cost.
- B. **Alternative 3-** Annually survey cigarette manufacturers, distributors, or importers for wholesale prices of cigarettes, with validation of the figures to be performed by Board of Equalization (BOE) audit staff.

Issue Paper Number 09-001

IV. Background

The BOE administers the California Cigarette and Tobacco Products Tax Law. Based on the passage of Proposition 99 in 1988 and the passage of Proposition 10 in 1998, the BOE is required to annually set a tax rate to be applied to the wholesale cost of tobacco products that are distributed in this state. The requirements are set forth in Revenue and Taxation Code sections 30123(b) (Proposition 99) and 30131.2(b) (Proposition 10) as follows:

30123(b). There shall be imposed upon every distributor a tax upon the distribution of tobacco products, based on the wholesale cost of these products, at a tax rate, as determined annually by the State Board of Equalization, which is equivalent to the combined rate of tax imposed on cigarettes by subdivision (a) and the other provisions of this part.

30131.2(b). In addition to the taxes imposed upon the distribution of tobacco products by Article 1 (commencing with Section 30101) and Article 2 (commencing with Section 30121), and any other taxes in this chapter, there shall be imposed an additional tax upon every distributor of tobacco products, based on the wholesale cost of these products, at a tax rate, as determined annually by the State Board of Equalization, which is equivalent to the rate of tax imposed on cigarettes by subdivision (a).

Revenue and Taxation Code sections 30126 and 30131.5 provide that the annual determination required of the State Board of Equalization shall be made based on the wholesale cost of tobacco products as of March 1, and shall be effective during the state's next fiscal year.

Tobacco products, not including cigarettes, are subject to the surtax. Tobacco products include all forms of cigars, smoking tobacco, chewing tobacco, and snuff, as well as other products containing at least 50 percent tobacco.

In fiscal year 2007-2008, tobacco products revenue was \$85.9 million. These revenues fund a variety of health programs, such as hospital services, health education, physician services, public resources, research, early childhood development, and anti-smoking campaigns for the public. Currently, the tax rate is 45.13 percent.

The current formula for determining the tobacco products tax rate was jointly developed by BOE staff and industry and approved by the Board in 1988 after the passage of Proposition 99. The rate is calculated by dividing the tax imposed by statute on one cigarette by the average wholesale cost of one cigarette, as represented in the following formula:

$$C/W = X$$

C = tax rate per cigarette

W = average wholesale cost of one cigarette

X = tax rate on tobacco products

The average wholesale cost of one cigarette (the “w” variable) has historically been calculated by using the wholesale cigarette price as of March 1st, as published in the United States Department of Agriculture (USDA) *Tobacco Outlook*¹ report, and adding a 6 percent margin, representing the average wholesale markup of these products. The 6 percent margin is added to the manufacturer's average wholesale cost of one cigarette in order to bring the wholesale cost to the distributor level, which is the same point of taxation as tobacco products. Attachment 1 explains how the formula was used to establish the current tobacco products tax rate of 45.13%.

V. Discussion

In the fall of 2007, the USDA ceased publication of the *Tobacco Outlook* report. Upon learning that the report was no longer in publication, Excise Taxes Division (ETD) staff entered into a dialogue with USDA in the hopes that the publication would be revived and continued; however, staff received confirmation from the USDA in September 2008 that the report will no longer be published. ETD staff has been conducting research to find other viable sources of information for wholesale cigarette prices, and have not found an independent source to provide the same or similar information.

BOE staff has identified three possible data sources for the wholesale cost of cigarettes that can be used in the annual determination of the tobacco products tax rate.

In addition to what data source to use for the wholesale cost of cigarettes in the annual tax rate setting process, a future increase in the federal excise tax will also impact the tobacco products tax rate calculation. In early February 2009, H.R. 2 was signed into law by President Obama. This bill funds the federal Children’s Health Insurance Program (CHIP) with increases in federal excise tax rates on cigarettes and tobacco products. Under the law, the federal cigarette tax rate will increase from \$0.39 per pack to \$1.01 per pack on April 1, 2009. If the increase in the federal excise tax rate on cigarettes from H.R. 2 were applied to the manufacturers’ prices used to calculate the fiscal year 2008-09 tobacco tax rate, it would cause the rate to decline from 45.13 percent to 37.10 percent (see Attachment 2 for revenue impact summary.) A more detailed discussion of the potential impact of this federal excise tax increase will be included as part of this spring’s tobacco product tax rate setting agenda item.

VI. Alternative 1

Annually calculate the tobacco products tax rate by adjusting the previous year’s wholesale cost of cigarettes based on the Producer Price Index (PPI) as published by the U.S. Bureau of Labor Statistics for cigarette manufacturers.

A. Description of Alternative 1

Alternative 1A

Currently, BOE staff uses the average wholesale cost of premium cigarettes in the tax rate calculation. Under this alternative, BOE staff would establish a base wholesale cost to begin the tax rate calculation and annually adjust the wholesale cost based on the PPI for the previous calendar year, using a 12-month average.

BOE staff would use the last published manufacturers’ cigarette price of premium brand cigarettes as published in the April 24, 2007 *Tobacco Outlook* (which has prices for December 2006), add a 6

¹ *Tobacco Outlook* report has also been referred to as the *Tobacco Situation and Outlook* report by the USDA. The report name has changed over the years.

percent margin to wholesale price as done previously, and then adjust the wholesale cost based on the PPI for calendar years 2007, 2008, and future years using a 12-month average of the PPI.

The PPI excludes federal excise taxes. If there are federal cigarette excise tax rate increases in future years, BOE staff would add these to the average manufacturers' price per cigarette. After adding increases in federal taxes to manufacturers' prices, BOE staff would apply the 6 percent margin for wholesale costs.

Alternative 1B - Staff Recommendation

Under this alternative, BOE staff would establish a weighted average wholesale cost using premium brand cigarette prices and "deep discount" prices of non-branded (generic) cigarettes. BOE staff would use estimates of California market shares of premium brand cigarettes and non-branded cigarettes as weights in calculating the weighted average. BOE staff would use the last published manufacturers' cigarette price of premium brand cigarettes and the "deep discount" price of non-branded cigarettes as published in the October 24, 2007 *Tobacco Outlook* (which has prices for April 2002), add a 6 percent margin factor to represent wholesale prices, and then adjust the wholesale cost based on the PPI for calendar year 2008 and future years using a 12-month average of the PPI. The federal excise tax will be added to the wholesale cost as discussed under Alternative 1A.

Based on federal data, BOE staff estimates that non-branded (generic) cigarettes represented about 30 percent of the entire California cigarette market in 2002. Therefore, the average price of premium cigarettes and non-branded cigarettes for April 2002 is weighted 70 percent of the April 2002 premium price and 30 percent of the April 2002 deep discount price. The calculated tobacco products tax rates using the April 2002 data indicate that the tobacco tax rate using the weighted average prices is about 1.25 percent higher than the tobacco tax rate using only the price for premium brands.

B. Pros of Alternatives 1A and 1B

- No need to annually locate a source for wholesale cost of cigarettes.
- PPI is readily available through the U.S. Bureau of Labor Statistics.
- Data source is free.
- Data source is from an agency of the federal government, and data is likely to be free of industry biases. (The methodology is documented in a publicly available handbook and is not published for individual industries unless minimum sample size requirements and other criteria are met.)
- Data is likely to continue to be published in the future since it is part of the PPI, an important data series for policymakers.
- Data is timely available for the spring rate setting.
- The wholesaler-manufacturer margin is smaller than the retailer-wholesaler margin, (a 6 percent margin for manufacturer to wholesaler, compared to a margin of 19 percent for retailer to wholesaler, which will be discussed under Alternative 2) and is generally less variable than retailer-wholesaler margins. Since the margin used in the calculations is much smaller, revisions in the margin rates are likely to have a smaller impact on the tax rate calculations.
- Calculations are simple and require minimal staff time.
- Calculated wholesale cost of cigarettes can be benchmarked by surveying cigarette manufacturers and distributors to address problems that may arise by using old data in perpetuity. Adjustments to the base can be made if warranted by the survey results.

Additional Pros of Alternative 1B only

- More accurately represents the cigarette market in California by including premium and "deep discount" non-branded (generic) cigarettes.

C. Cons of Alternatives 1A and 1B

- Actual wholesale margins on manufacturers' prices are unknown, and could vary widely. [However, while unknown, available data indicate that wholesale margins, when weighted by tax-paid distributions, do not vary as much as retail margins on wholesale costs.]
- Federal excise taxes are not included in the calculation of the PPI. Federal excise taxes were included in the USDA data that have been used in the past to calculate the tobacco tax rate. In our calculations, BOE staff can adjust for federal excise taxes by adding changes in the federal excise tax rate per cigarette to manufacturers' costs per cigarette.
- Uses the most recently published USDA price paid to cigarette manufacturers in perpetuity and applies changes in the PPI to the manufacturers' price for setting the tobacco products tax rate in future years. The most recently published USDA manufacturers' price remains the basis of the calculations in the future and this data is no longer published.

Additional Cons of Alternative 1B only

- BOE staff will need to estimate the California market share of non-branded (generic) cigarettes sold at the USDA "deep discount" prices in order to calculate a weighted average.
- USDA "deep discount" prices after April 2002 are not available.

D. Statutory or Regulatory Change for Alternative 1

None

E. Operational Impact of Alternative 1

None

F. Administrative Impact of Alternative 1

1. Cost Impact

Costs are minor and absorbable.

2. Revenue Impact

Under Alternative 1A, the fiscal year 2007-08 tobacco tax rate would have been 42.24 percent of wholesale costs instead of the actual rate set of 45.13 percent, 2.89 percent lower. Revenues are estimated to decrease by about \$2.2 million under Alternative 1A. Details of these tax rates and revenue estimates are provided in the Appendix Tables (Attachment 3).

Under Alternative 1B, the fiscal year 2007-08 tobacco tax rate would have been 46.38 percent of wholesale costs instead of the actual rate set of 45.13 percent, 1.25 percent higher. Revenues are estimated to increase by about \$0.9 million under Alternative 1B. Details of these tax rates and revenue estimates are also provided in the Appendix Tables (Attachment 3).

G. Taxpayer/Customer Impact of Alternative 1

Under Alternative 1A, tobacco products distributors would be liable for less taxes as the tax rate would be slightly lower than the current rate. Details of these tax rates and revenue estimates are provided in the Appendix Tables (Attachment 3).

Under Alternative 1B, tobacco products distributors would be liable for more taxes as the tax rate would be slightly higher. Details of these tax rates and revenue estimates are provided in the Appendix Tables (Attachment 3).

H. Critical Time Frames of Alternative 1

In the past, BOE staff has generally approved the tobacco products tax rate in the spring in order to provide sufficient notice to taxpayers regarding the tax rate for the upcoming fiscal year (July 1st). To provide adequate time for taxpayers to implement the new rate, BOE staff recommends a new method of determining the tobacco products tax rate be determined and the new rate calculated by May 2009.

VII. Alternative 2 - Use retail cigarette prices as published in *The Tax Burden on Tobacco* with a predetermined margin from retail prices to wholesale cost.

A. Description of Alternative 2

Under this alternative, BOE staff would rely on published retail price information as published in *The Tax Burden on Tobacco* and would be tasked with making assumptions in order to “back into” the weighted wholesale cost needed for the tobacco products tax rate calculation. The formula would be established by the BOE’s Chief Economist and approved annually by the Board.

BOE staff would use the retail price for the previous year, (current prices as of November 1) published in the spring of the following year. BOE staff would estimate wholesale costs by dividing the average California retail price of all cigarettes by a retail-manufacturers’ margin rate of 25 percent, less a 6 percent margin rate for the manufacturer-wholesaler portion, resulting in a margin rate adjustment of 19 percent to be applied to retail prices. The calculations would divide the retail price by a factor of 1.19.

The 25 percent figure is calculated from data for the most recent year published in *The Changing Tobacco User's Dollar*, U.S. Department of Agriculture, Economic Research Service, TBS-257-01, October 2004. The specific data is for fiscal year 2003-04 for manufacturing costs and wholesaling and retailing costs. (Wholesaling costs are not broken out separately in this publication.)

B. Pros of Alternative 2

- Uses current market data each year rather than updating the last-published USDA data in perpetuity as is done in Alternative 1. To the extent that changes in the PPI do not accurately reflect changes in manufacturers’ prices, they will not be reflected in future rates in Alternatives 1A and 1B.
- To the extent that the data represent the market, the data accurately take into account the mix of prices for premium and non-branded (generic) cigarettes without having to make separate estimates. Changes in market shares of premium brand and non-branded cigarettes are automatically reflected in the average price data each year.
- Cigarette price data needed is widely available and free to BOE staff to obtain.
- Cigarette price data source is independent, and data is likely to be free of possible industry biases.

- Cigarette price data is available timely for the spring rate setting.
- Calculations are simple and require minimal staff time.

C. Cons of Alternative 2

- Retail margins on wholesale prices are unknown, and vary widely by type of retail outlet and degree of competition from other retailers.
- The methodology relies on retailer-wholesaler margin data for cigarettes and tobacco products from the U.S. Department of Agriculture, which may not be published in the future. [However, estimated U.S. margins have been relatively stable in recent years. Furthermore, similar margin data is occasionally published by the U.S. Bureau of Economic Analysis and the U.S. Bureau of Labor Statistics. BOE staff could periodically (for example every five years) review published margin estimates and adjust the margin data if necessary.]
- Average California retail margins on wholesale prices are unknown and may differ from average U.S. margins.
- Cigarette price data depends on survey responses and BOE staff do not know how statistically reliable the data is.
- Since data is provided by an independent consultant to the cigarette industry, there is uncertainty as to whether the data will continue to be published in the future.

D. Statutory or Regulatory Change for Alternative 2

None

E. Operational Impact of Alternative 2

None

F. Administrative Impact of Alternative 2

1. Cost Impact

Costs are minor and absorbable.

2. Revenue Impact

Under Alternative 2, the fiscal year 2007-08 tobacco tax rate would have been 48.96 percent of wholesale costs instead of the actual rate set of 45.13 percent, 3.83 percent higher. Revenues are estimated to increase by about \$2.9 million in Alternative 2. Details of these tax rates and revenue estimates are provided in the Appendix Tables (Attachment 3).

G. Taxpayer/Customer Impact of Alternative 2

Tobacco products distributors would pay more taxes as the tobacco product tax rate would be slightly higher than the current rate.

H. Critical Time Frames of Alternative 2

In the past, the Board has generally approved the tobacco products tax rate in the spring in order to provide sufficient notice to taxpayers regarding the tax rate for the upcoming fiscal year (July 1st). To provide adequate time for taxpayers to implement the new rate, BOE staff recommend a new method of determining the tobacco products tax rate be determined and the new rate calculated by May 2009.

VIII. Alternative 3 - Annually survey cigarette manufacturers, distributors, and importers for wholesale prices of cigarettes by BOE audit staff.

A. Description of Alternative 3

Under this alternative, the BOE staff would annually survey cigarette manufacturers, distributors, and importers to determine wholesale costs of cigarettes. Currently, there are 18 registered cigarette manufacturers and 119 cigarette distributors/importers. BOE staff would mail an annual survey requesting information regarding their wholesale prices of cigarettes. To ensure survey responses that accurately represent the California market, ETD would only use this survey data to set tobacco products tax rates if BOE staff received usable survey responses from companies representing at least 75 percent of all tax-paid distributions for the most recently completed fiscal year. The information provided to ETD would be further validated by auditing the information. ETD would audit a majority of the larger companies and a percentage of the smaller companies.

B. Pros of Alternative 3

- Wholesale information is provided by the sellers and the buyers of cigarettes.
- Target group is a small population.

C. Cons of Alternative 3

- Requires taxpayers' time and resources to complete the survey.
- Requires BOE resources to prepare and conduct the survey.
- Requires BOE resources to audit and validate the survey responses.
- Rate could be challenged if some surveys were not returned.
- Survey participation is voluntary and the expected response rate to the survey is unknown.
- If ETD does not receive usable survey responses representing 75 percent of tax-paid distributions, staff would need to either encourage more taxpayers to respond to the survey or develop an alternative method to set the tobacco products tax rate.

D. Statutory or Regulatory Change for Alternative 3

None

E. Operational Impact of Alternative 3

The adoption of this alternative would create a new administrative workload on the ETD and Research and Statistics Section. The new workload would include preparing and conducting the annual surveys; processing and following up on survey responses; and validating the survey responses.

F Administrative Impact of Alternative 3

1. Cost Impact

ETD estimates that it will cost \$34,000 annually to perform the survey and validate responses. This estimate includes overtime hours at the Business Taxes Specialist I classification and related travel expenses.

2. Revenue Impact

Unknown

G. Taxpayer/Customer Impact of Alternative 3

This alternative would require cigarette manufacturers, distributors, and importers to complete an annual survey regarding their wholesale price of cigarettes. Additionally, some of the cigarette manufacturers, distributors, and importers would be selected for audit to validate their responses. This alternative would require the taxpayer to complete a survey and accommodate ETD auditors in gathering and providing books and records to validate their responses.

H. Critical Time Frames of Alternative 3

In the past, the Board has generally approved the tobacco products tax rate in the spring in order to provide sufficient notice to taxpayers regarding the tax rate for the upcoming fiscal year (July 1st). To provide adequate time for taxpayers to implement the new rate, BOE staff recommend a new method of determining the tobacco products tax rate be determined and the new rate calculated by May 2009.

**STATE OF CALIFORNIA
TOBACCO PRODUCTS RATE CALCULATION
July 1, 2008 to June 30, 2009**

Type:	Manufacturer's List Cigarette Prices	Price*
Standard		\$ 143.20
King Size		\$ 143.20
Filter Tips		\$ 143.20
100 mm		\$ 143.20

* USDA Tobacco Situation and Outlook report at <http://www.ers.usda.gov/Briefing/Tobacco/tables.htm>

Wholesale Cost Per Cigarette	
Computation:	
1. Avg. Mfg. Price Per 1,000 Cigarettes	\$ 143.20
2. Add: Wholesale Markup @ 6% (line 1 x 0.06)	<u>\$ 8.59</u>
3. Avg. Wholesale Price (line 1 + line 2)	\$ 151.79
4. Avg. Wholesale Price (line 3 / 1,000)	<u><u>\$ 0.1518</u></u>

Rate Calculation

c = Tax rate per cigarette \$0.0685
(includes (i) the tax rate per cigarette of \$0.0435,
plus (ii) the Prop. 10 increase per cigarette of \$0.025 effective
7/1/99)

w = Weighted average wholesale cost of one cigarette \$0.1518

x = Tax rate on tobacco products

$$\frac{c}{w} = x \quad \text{or} \quad \$0.0685 / \$0.1518 = \mathbf{45.13\%}$$

Projected 2009-10 Tobacco Product Revenue Impacts With Estimated Federal CHIP² Tobacco Products Excise Tax Changes Added to the Tax Base and CHIP Increases in Cigarette Tax Rates Added to Average Wholesale Costs of Cigarettes

Revenue Impact Summary - Alternative 1A

	Tobacco Tax Rates Without Additional CHIP Cigarette Taxes Added to Wholesale Costs 40.57%	Tobacco Tax Rates With Additional CHIP Cigarette Taxes Added to Wholesale Costs 33.35%	Difference -7.22%
Tobacco Products Tax Revenues	\$Millions	\$Millions	\$Millions
Proposition 99	\$54.49	\$44.79	-\$9.70
Proposition 10	\$31.32	\$25.74	-\$5.57
Totals	\$85.81	\$70.54	-\$15.27

Revenue Impact Summary - Alternative 1B

	Tobacco Tax Rates Without Additional CHIP Cigarette Taxes Added to Wholesale Costs 41.82%	Tobacco Tax Rates With Additional CHIP Cigarette Taxes Added to Wholesale Costs 34.60%	Difference -7.22%
Tobacco Products Tax Revenues	\$Millions	\$Millions	\$Millions
Proposition 99	\$55.16	\$45.46	-\$9.70
Proposition 10	\$31.70	\$26.13	-\$5.57
Totals	\$86.85	\$71.58	-\$15.27

Revenue Impact Summary - Alternative 2

	Tobacco Tax Rates Without Additional CHIP Cigarette Taxes Added to Wholesale Costs 47.67%	Tobacco Tax Rates With Additional CHIP Cigarette Taxes Added to Wholesale Costs 38.80%	Difference -8.87%
Tobacco Products Tax Revenues	\$Millions	\$Millions	\$Millions
Proposition 99	\$58.12	\$47.59	-\$10.53
Proposition 10	\$33.40	\$27.35	-\$6.05
Totals	\$91.52	\$74.94	-\$16.59

² H.R. 2, signed by President Obama, raises the federal excise taxes effective April 1, 2009, as part of the Children's Health Insurance Program (CHIP).

Appendix Tables
Revenue Impacts Summaries For All Alternatives

Revenue Impacts Summary - Alternative 1A

	Current Total (Tobacco Products Tax Rate 45.13%)	Proposed Total (Tobacco Products Tax Rate 42.24%)	Difference -2.89%
Tobacco Products Tax Revenues	(\$Millions)	(\$Millions)	
Proposition 99	\$54.56	\$53.14	-\$1.42
Proposition 10	\$31.36	\$30.54	-\$0.82
Totals	\$85.92	\$83.68	-\$2.24

Revenue Impacts Summary - Alternative 1B

	Current Total (Tobacco Products Tax Rate 45.13%)	Proposed Total (Tobacco Products Tax Rate 46.38%)	Difference 1.25%
Tobacco Products Tax Revenues	(\$Millions)	(\$Millions)	
Proposition 99	\$54.56	\$55.16	\$0.60
Proposition 10	\$31.36	\$31.70	\$0.34
Totals	\$85.92	\$86.86	\$0.94

Revenue Impacts Summary - Alternative 2

	Current Total (Tobacco Products Tax Rate 45.13%)	Proposed Total (Tobacco Products Tax Rate 48.96%)	Difference 3.83%
Tobacco Products Tax Revenues	(\$Millions)	(\$Millions)	
Proposition 99	\$54.56	\$56.38	\$1.81
Proposition 10	\$31.36	\$32.40	\$1.04
Totals	\$85.92	\$88.77	\$2.86

Major Assumptions Common to Alternatives 1A, 1B and 2:

Fiscal year 2007-08 revenues are used to estimate wholesale sales. The fiscal year 2007-08 tobacco tax rate is used as the current rate.

All tax changes are assumed to be passed on to consumers.

The price elasticity of demand is assumed to be -0.6, and the arc elasticity formula is used to estimate changes in quantity demanded at different tax rates.^{1/}

^{1/} The general price elasticity of demand formula is: $e_p = (Q_1 - Q_2) / ((Q_1 + Q_2) / 2) / (P_1 - P_2) / ((P_1 + P_2) / 2)$, where P = price, and Q = sales.

Preparer/Reviewer Information

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