Increasing the Unit Price for Tobacco

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and the National Cancer Institute
# State Cigarette Excise Taxes

April 15, 2002

Ranked by State Excise Taxes per Pack

Average State Tax = $.482

<table>
<thead>
<tr>
<th>$ .50+</th>
<th>HIGH</th>
<th>$ .25-.49</th>
<th>MED</th>
<th>&lt; $ .25</th>
<th>LOW</th>
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</thead>
<tbody>
<tr>
<td>1.50</td>
<td>New York</td>
<td></td>
<td></td>
<td></td>
<td>Delaware</td>
</tr>
<tr>
<td>1.425</td>
<td>Washington</td>
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<td>Kansas</td>
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<td>1.11</td>
<td>Connecticut</td>
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<td>Minnesota</td>
<td>.24</td>
<td>Delaware</td>
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<tr>
<td>1.00</td>
<td>Alaska</td>
<td>.44</td>
<td>North Dakota</td>
<td>.24</td>
<td>Kansas</td>
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<tr>
<td>1.00</td>
<td>Hawaii</td>
<td>.44</td>
<td>Vermont</td>
<td>.24</td>
<td>Louisiana***</td>
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<tr>
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<td>.24</td>
<td>Ohio</td>
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<tr>
<td>1.00</td>
<td>Iowa</td>
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<td>Nevada</td>
<td>.23</td>
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<tr>
<td>1.00</td>
<td>Nevada</td>
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<td>.21</td>
<td>New Mexico</td>
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<td>Maryland</td>
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<td>Mississippi</td>
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<td>California</td>
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<td>South Dakota</td>
<td>.18</td>
<td>Montana</td>
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<td></td>
<td>Alabama</td>
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<td>.75</td>
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<td>Indiana</td>
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<td>.695*</td>
<td>Utah</td>
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<td>Alabama</td>
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<tr>
<td>.68</td>
<td>Oregon</td>
<td></td>
<td></td>
<td></td>
<td>Tennessee</td>
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<tr>
<td>.65</td>
<td>District of Columbia</td>
<td></td>
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<tr>
<td>.64**</td>
<td>Nebraska**</td>
<td>.32</td>
<td>Pennsylvania</td>
<td>.07</td>
<td>South Carolina</td>
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<tr>
<td>.58</td>
<td>Arizona</td>
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<tr>
<td>.58</td>
<td>Illinois</td>
<td></td>
<td></td>
<td></td>
<td>Kentucky</td>
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<td>.52</td>
<td>New Hampshire</td>
<td></td>
<td></td>
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<td>Virginia</td>
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</table>

*Effective 07-01-02; **Effective 10-01-02

**Rescheduled to revert to 20 cents on 07-01-02; RRRescheduled to revert to 34 cents on 10-01-02

(States that have passed new cigarette increases in 2002 are in **bold type**.)

### Active State Cigarette Tax Increase Proposals

**April 16, 2002**

<table>
<thead>
<tr>
<th>States Where Tax Increase Being Seriously Considered (Current Tax cents/pack)</th>
<th>Increase Proposed by Public Health Group</th>
<th>Total Tax If Public Health Group Proposals Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>California (.87)</td>
<td>.65</td>
<td>1.52</td>
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<tr>
<td>Delaware (.24)</td>
<td>.50</td>
<td>.74</td>
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<td>Hawaii (1.00)</td>
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<tr>
<td>Illinois (.58)</td>
<td>.75</td>
<td>1.33</td>
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<tr>
<td>Indiana (.155)</td>
<td>.85</td>
<td>1.005</td>
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<td>Kansas (.24)</td>
<td>.65</td>
<td>.89</td>
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<td>Kentucky (.03)</td>
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<td>Massachusetts (.76)</td>
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<td>Minnesota (.48)</td>
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<td>Mississippi (.18)</td>
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<td>Missouri (.17)</td>
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<td>New Hampshire (.52)</td>
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<tr>
<td>New Jersey (.80)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Ohio (.24)</td>
<td>.50</td>
<td>.74</td>
</tr>
<tr>
<td>Oklahoma (.23)</td>
<td>1.00</td>
<td>1.23</td>
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<td>Oregon (.68)</td>
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<td>1.18</td>
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<tr>
<td>Rhode Island (1.00)</td>
<td>.35</td>
<td>1.35</td>
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<tr>
<td>Tennessee (.13)</td>
<td>.30</td>
<td>.43</td>
</tr>
<tr>
<td>Vermont (.44)</td>
<td>.67</td>
<td>1.11</td>
</tr>
<tr>
<td>Wisconsin (.77)</td>
<td>.85</td>
<td>1.62</td>
</tr>
</tbody>
</table>

Tobacco Taxes and Tobacco Use

• Higher taxes induce quitting, prevent relapse, reduce consumption and prevent starting.

• Estimates indicate that 10% rise in price reduces overall smoking by about 4%

• About half of impact of price increases is on smoking prevalence

• Recent estimates for young adult smokers indicate that 10% price rise would raise probability of quitting smoking by over 3%

• Because of addictive nature of smoking, long term effects of tax and price increases are larger

Source: Chaloupka et al., 2000
Total Cigarette Sales and Cigarette Prices, 1970-2000

- **Total Sales (million packs)**
- **Real Cigarette Price**

Year:
- 1970
- 1975
- 1980
- 1985
- 1990
- 1995
- 2000

Sales and Prices:
- 1970: 20000
- 1975: 24000
- 1980: 26000
- 1985: 28000
- 1990: 30000
- 1995: 28000
- 2000: 30000

Prices:
- 1970: $1.20
- 1975: $1.70
- 1980: $2.20
- 1985: $2.70
- 1990: $3.20
- 1995: $2.70
- 2000: $3.20

Legend:
- **Cigarette Sales (million packs)**
- **Real Cigarette Price**
Lower SES populations are more price responsive

- Growing international evidence shows that cigarette smoking is most price responsive in lowest income countries

- Evidence from U.S. and U.K. shows that cigarette price increases have greatest impact on smoking among lowest income and least educated populations

  - In U.S., for example, estimates indicate that smoking in households below median income level about 70% more responsive to price than those above median income level

Implies tax increases may be progressive

Sources: Farrelly, et al., 1999; Chaloupka et al., 2000
YOUNG PEOPLE MORE RESPONSIVE TO PRICE INCREASES

- Proportion of disposable income youth spends on cigarettes likely to exceed that for adults
- Peer influences much more important for young smokers than for adult smokers
- Young smokers less addicted than adult smokers
- Young people tend to discount the future more heavily than adults

Because kids are highly sensitive to price, and given that 90 percent of smokers start when they are 18 or younger, an increase in excise taxes is one of the best ways to achieve long run reductions in overall smoking.
CIGARETTE PRICES AND KIDS

**YOUTH**

A 10% Increase in Price Reduces Smoking Prevalence Among Youth by nearly 7%

A 10% Increase in Price Reduces Conditional Demand Among Youth by over 6%

Higher cigarette prices are associated with substantially reducing adolescents’ probability of becoming daily, addicted smokers, helping prevent moving from lower to higher stages of smoking.

- 10% price increase reduces probability of any initiation by about 3%, but reduces probability of daily smoking by nearly 9% and reduces probability of heavy daily smoking by over 10%

**YOUNG ADULTS (College Students)**

A 10% Increase in Price Reduces Smoking Prevalence Among Young Adults by about 5%

A 10% Increase in Price Reduces Conditional Demand Among Young Adults by another 5%
Cigarette Smoking Among Youth by the Average Price of a Pack of Cigarettes in 50 States and the District of Columbia, 1999

Data: 1999 NHSDA (12-17 year olds); 1999 Tax Burden On Tobacco

Source: Giovino, et al., 2001
12th Grade 30 Day Smoking Prevalence and Price

Year

Real Price Per Pack
$1.25 $1.50 $1.75 $2.00 $2.25 $2.50 $2.75 $3.00 $3.25

Smoking Prevalence

Cigarette Price 30 Day Smoking Prevalence
Tax Increases and Illinois

Based on these estimates, a 75-cent per pack increase in the Illinois cigarette tax would:

- Reduce cigarette sales by over 76 million packs per year
- Generate almost $525 million in new revenues
- Lead more than 90,000 current smokers to quit
- Prevent nearly 134,000 youth from taking up smoking
- Prevent more than 64,000 premature deaths caused by smoking
- Generate significant reductions in spending on health care to treat smoking attributable diseases
Myths About Impact of Tobacco Taxation

• REVENUE LOSSES?
  Revenues actually rise with taxes, particularly in lowest tax states where taxes comprise relatively low share of prices; average revenue increases from 10% tax increase would exceed 7%

• JOB LOSSES?
  Temporary, minimal, and gradual; most state/regions would benefit in short and long run from the reduced tobacco sales resulting from higher tobacco taxes as money once spent on cigarettes is spent on other goods and service.

• POSSIBLE SMUGGLING?
  Generally overstated; appropriate solution is to crack down on criminal activity, not forego the benefits of higher tobacco taxes.

• COST TO INDIVIDUALS, ESPECIALLY THE POOR?
  Partially offset by lower consumption; can be offset by using additional tax revenues to finance programs targeting low-income populations
Real Federal Cigarette Tax Rate and Tax Revenues

![Graph showing the real federal cigarette tax rate and tax revenues over time. The graph plots the year on the x-axis and the real federal cigarette tax rate per 1000 cigarettes on the y-axis for the years 1960 to 2000. The real federal excise tax revenues (thousands of FY00 dollars) are also plotted on the graph. The legend indicates that the pink line represents real tax and the blue line represents real revenues.](image-url)
Real Average Cigarette Excise Tax and Real Cigarette Tax Revenues

Combined State and Federal Cigarette Excise Tax (FY00 cents per pack)

Combined State and Federal Cigarette Excise Tax Revenues (millions of FY00 dollars)

Year


Real Tax   Real Revenues

![Graph showing real average state cigarette excise tax rate and real gross state cigarette excise tax revenues from 1970 to 2001. The x-axis represents the years from 1970 to 2000, while the y-axes represent the tax rates and revenues in fiscal year 2000 cents per pack and dollars, respectively. The graph includes two lines: one for average tax and another for tax revenues, which show trends over the years.]
### Studies on the employment effects of dramatically reduced or eliminated tobacco consumption

<table>
<thead>
<tr>
<th>Type of country</th>
<th>Name and year</th>
<th>Net change as % of economy in base year given</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Exporters</td>
<td>US (1993)</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>UK (1990)</td>
<td>+0.5%</td>
</tr>
<tr>
<td></td>
<td>Zimbabwe (1980)</td>
<td>-12.4%</td>
</tr>
<tr>
<td>Balanced Tobacco</td>
<td>South Africa (1995)</td>
<td>+0.4%</td>
</tr>
<tr>
<td>Economies</td>
<td>Scotland (1989)</td>
<td>+0.3%</td>
</tr>
<tr>
<td>Net Importers</td>
<td>Bangladesh (1994)</td>
<td>+18.7%</td>
</tr>
</tbody>
</table>

Source: Buck and others, 1995; Irvine and Sims, 1997; McNicoll and Boyle 1992, van der Merwe and others, background paper; Warner and others 1996
Smuggling of Cigarettes

• **Industry has economic incentive to smuggle**
  – Increase market share and decrease tax rates

• **Best estimate: 6 to 8.5% of total consumption**

• **Non-price variables important**
  – Perceived level of corruption more important than cigarette prices

• **Tax increase will lead to revenue increase, even in the event of increased smuggling**

Tobacco smuggling tends to rise in line with the degree of corruption

Smuggling as a function of transparency index

\[ y = -0.02x + 0.2174 \]

\[ R^2 = 0.2723 \]

Source: Merriman et al., 2000
Control of Smuggling

• Countries need not make a choice between higher cigarette tax revenues and lower cigarette consumption
  – Higher tax rates can achieve both
• Effective control measures of smuggling exist
  – Focus on large container smuggling
  – Prominent local language warnings and tax stamps
  – Increase penalties
  – Licensing and tracking of containers
  – Increase export duties or bonds
• Multilateral tax increases help combat smuggling

Smuggling and Tax Revenue

SOUTH AFRICA, 1990s
• Increased excise tax from 38 to 50% of retail price
  – Smuggling rose from 0 to 6%
  – Sales fell 20%
  – Revenue went up 2 fold

CANADA, 1993-94
• Lowered tax in response to organized smuggling
  – Retail price fell by half
  – Total consumption rose 48%, more so in young
  – Average revenue per capita fell by 35%

Source: Abedian, 1998; Sweanor, 1998
NEW YORK: $1.11 Per Pack

Preliminary Findings on the Impact of March 2000 55-Cent Increase in Cigarette Excise Tax

- Cigarette Price Increases
  NY: Marlboro - $1.00 (30.7%); Newport - $1.00 (31.0%)
  US: Marlboro - 33 cents (11.5%); Newport 31 cents (10.2%)

- Cigarette Sales
  Sales have dropped about 20 percent since the increase.
  Cigarette tax revenues up sharply

- Youth Smoking Prevalence
  (NY matched schools, after 4/1; US all schools after 4/1)
  8th Grade - NY: -17.8%; US: -11.2%
  10th Grade - NY: -18.9%; US: -1.0%
CALIFORNIA: 87-Cents Per Pack

California’s tobacco control program began in January 1989, when the excise tax was increased from $0.10 to $.35 per pack of cigarettes. On November 3, 1998 California voters approved Proposition 10, a measure that increased the state tax on cigarettes by 50 cents per pack starting January 1, 1999, to a total of 87 cents tax per pack. The increase made California's tax per pack of cigarettes the fourth highest amongst the states - only New York’s, Hawaii’s, and Alaska’s taxes are greater.

Initially, Consumption Decreased Rapidly
Initially, following the 1989 excise tax increase, consumption decreased rapidly.

Further Decline Throughout the 1990’s
Overall tobacco use in California declined throughout the 1990s at a rate two or three times faster than that in the rest of the country. Between 1988 and 1999, per capita cigarette use in California declined by almost 50%, while in the rest of the country it declined by only about 20%.

Prevalence Among Youth Declined
Between 1995 and 1999, the prevalence of cigarette use among youth dropped by 43% in California.

Tobacco-Related Deaths Reduced
By virtue of its duration and intensity, the California program also has the distinction of being the first program to demonstrate a reduction in tobacco-related deaths.

Source: Investment in Tobacco Control: State Highlights 2001; U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease prevention and health Promotion, Office on Smoking and Health.
Per Capita Consumption Trends
California versus Projected Trend, 1984-1997

Pack Sold Per Capita

July 1 - June 30 Fiscal Year

Tax Increase

Program Implementation

Source: CDC
The Massachusetts Tobacco Control Program (MTCP) was created through a statewide referendum held in November 1992 and is entirely funded by a tax on cigarettes and smokeless tobacco products. Since its introduction through June 1999, program successes include:

- Massachusetts has seen more rapid declines than states without tobacco control programs in the overall prevalence of tobacco use among adults.
- Rates of smoking among Massachusetts youth have declined sharply, with current smoking dropping 70% among 6th graders from 1996 to 1999.
- Cigarette consumption has fallen by 33%, while consumption in the rest of the country declined just 10%.
- The number of adult smokers has declined.
- Smoking during pregnancy dropped sharply, from 25% to 13%.
- Youth smoking rates in Massachusetts from 1996-1999 have declined at a greater rate than the rest of the country.
- The number of smokers planning to quit has increased, and those who try to quit are more successful.

Source: State of Massachusetts, Department of Public Health
Per Capita Consumption Trends
Massachusetts versus Projected Trend, 1984-1997

Source: CDC
Change in Per Capita Cigarette Consumption Before and After an Excise Tax Increase and an Antismoking Campaign California & Massachusetts versus Other 48 States, 1986 to 1996

Source: CDC
Conclusions

Substantial increases in cigarette and other tobacco product prices, including those resulting from significant increases in tobacco excise taxes, lead to large reductions in tobacco use and, in the long run, reduce the public health toll caused by tobacco use.

Earmarking revenues generated from increased tobacco taxes for comprehensive tobacco control programs leads to significant reductions in overall smoking and in the prevalence of youth smoking.

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