R&C

Federal Excise Tax on Tobacco

July 2007

Research & Commentary

Prepared by
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Research & Commentary on the Federal Excise Tax on Tobacco

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Introduction to a *Research & Commentary* Package on the Federal Excise Tax on Tobacco

By Steve Stanek
Research Fellow and Managing Editor, *Budget & Tax News*
July 2007

Lawmakers across the country know millions of voters are fed up with high taxes and complicated tax systems, so only a few of them have proposed raising broad-based taxes such as those on income and sales.

Instead, lawmakers have been hiking taxes on narrowly targeted segments of the population. The latest targets of this tactic are cigarette smokers and other tobacco product users.

Smokers present lawmakers with a big target because of the serious health problems smoking causes, as well as its current unpopularity. But lawmakers ignore two key facts that should affect their decisions:

- High taxes have a negative effect on economic growth and job creation, regardless of whether they are on particular products or more broadly based. Higher taxes, including taxes on tobacco products, mean lower income growth and less prosperity.

- Economic and public health research finds that smokers *already pay more* in taxes on tobacco products than any reasonable estimate of the cost they impose on society. It is unfair for taxpayers to shoulder more than their fair share of the cost of other government programs.

The increasing reliance on cigarette tax hikes also puts states and the national government in the absurd position of hoping people keep smoking (to boost tax revenues) even as state and national health officials hope people stop smoking (to reduce illness and related medical costs).

Lawmakers also are ignoring the unfairness and unintended consequences of higher excise taxes.

Excise taxes are the same regardless of the taxpayer's income, so they take a larger part of a low-income family's budget than of an upper-income family's budget. Smokers tend to have lower incomes than the general public, making taxes on cigarettes especially regressive.

Higher taxes on tobacco products also encourage tax evasion, smuggling, and counterfeiting. In 2006, 19 men were indicted in a multimillion-dollar cigarette smuggling operation based in Michigan that allegedly helped fund the Hezbollah terrorist organization.

Following this page is a collection of studies and articles we believe demonstrate many of the reasons to oppose further increases in taxes on cigarettes and other tobacco products. Policymakers interested in economic growth, tax fairness, and public safety should think twice before backing increases in tobacco excise taxes.

Talking Points on the Federal Excise Tax on Tobacco

By Erin S. Murphy
Legislative Specialist, The Heartland Institute
July 2007

- **Congress is considering increasing the federal excise tax on tobacco products.**

  - U.S. Senator Gordon Smith (R-OR) is calling for a 61-cent (156 percent) increase in the national excise tax on tobacco products to generate $50 billion in additional revenue for the State Children's Health Insurance Program (SCHIP), a program supposedly in need of additional funding.

  - The national and state governments have increased taxes on tobacco more than 76 times since 2000. In 2006, national and state governments collected $21.5 billion in excise taxes.

- **What is driving the trend toward higher excise taxes on tobacco products?**

  - Excise taxes are a convenient way to raise revenues. Increases in excise taxes on tobacco products are supported by two-thirds of the general public, many of whom believe smokers impose a net cost on the rest of society.

  - Policymakers view excise taxes on tobacco as "sin taxes" and rationalize driving up the price of cigarettes and other tobacco products as a way to discourage risky behavior.

  - Tobacco taxes, like most excise taxes, do not fund any specific government program. Therefore, revenue raised from tobacco excise taxes may be used for other popular government programs, such as health care and education.

- **Taxes on tobacco products are already high, and extremely regressive.**

  - The average tax on a pack of cigarettes is $1.05.

  - Over the course of a year, a pack-a-day smoker pays approximately $700 in national and state excise taxes. Increasing the national excise tax on tobacco by 61 cents would increase this amount to $934.

- Increasing the national excise tax by 61 cents would mean smokers earning the U.S. median income of $46,000 would pay 2 percent of their pre-tax income on cigarette taxes.

- Lower-income households disproportionately spend more disposable income on consumables, including tobacco products. A smoker earning $15,000 a year would spend 6.2 percent of disposable income on national and state excise taxes on cigarettes.

■ **Excise taxes on tobacco products are not a reliable source of revenue.**

- Congressional Budget Office statistics show for every 10 percent increase in the price of tobacco products, sales decrease by approximately 5 percent. Because a 61-cent tax increase would increase the price of cigarettes by about 14 percent, sales could fall by as much as 6 percent. As sales decline, state and federal revenue declines as well.

- Governments that have increased excise taxes on tobacco products have experienced declining revenues. For example, New York City increased taxes from 8 cents to $1.50 (a 1,775-percent increase) and New York state increased its tax from $1.11 to $1.50 (a 35-percent increase). In 2002, the city experienced a 50-percent decline in revenues from tobacco excise taxes.

- All units of government in the U.S. stand to lose an aggregate of $1.6 billion in revenue if the federal excise tax on tobacco products increases.

- As tobacco consumption in the U.S. declines due to smoking bans and public education campaigns, revenue from excise taxes on tobacco products will decline as well. Tax revenue from tobacco products are declining at the rate of 2 percent per year.

■ **Raising taxes on tobacco products to fund SCHIP expansion is not sound public policy.**

- SCHIP is a government entitlement program that provides health insurance to children whose parents do not qualify for welfare but are unable to afford private health care coverage for their children.

- Currently SCHIP is designed to aid families earning twice the poverty level to afford health coverage. However, some states choose to provide aid to families making 3 to 3.5 times the poverty level—in some cases, incomes of $72,000.

- Fourteen states have been given waivers to spend SCHIP-allotted money on adult coverage. Refocusing SCHIP solely on children would greatly reduce the amount of

money needed to fund the program.

- Congress should reform SCHIP before any additional funds are allocated to it. If states did not over-spend the federal funds allotted to them for SCHIP, an increase in tobacco tax would not be needed.

■ Raising taxes on smokers is unfair.

- Centers for Disease Control and Prevention (CDC) reports show 20.6 percent of the U.S. population consumes tobacco products. It is poor public policy to fund programs that benefit the majority of Americans on the financial shoulders of the minority.

- While smokers may impose a burden on society in terms of medical costs, smokers, on average, die seven years before non-smokers and therefore will collect less social insurance money, outweighing any burden smoking imposes on society.

- Smokers in some states annually pay more in cigarette excise taxes than they do in state income tax. This results in smokers paying twice as much annually in taxes to the individual states, and disproportionately funding a larger percentage of government-provided programs than non-smokers.

- According to Harvard Professor Kip Viscusi, "excise taxes on cigarettes equal or exceed the medical care costs associated with smoking." Using Chicago as an example, Illinois' cigarette taxes were 13 cents more per pack than the calculated social costs of smoking *before* the Master Settlement Agreement added 40 cents to the price per pack, *before* Illinois approved an additional 40-cent tax hike in 2002, and *before* Cook County instituted an 82-cent tax increase in 2004.

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Private Judgments + Public Policy = Sin Taxes

'Everything you don't want in a tax,' author says of sin taxes
An interview with Christopher Z. Mooney
Author: Steve Stanek
Published by: The Heartland Institute
Published in: Budget & Tax News
Publication date: September 2006

There's no question many government officials like "sin" taxes as a revenue source. Other lawmakers, and many of their constituents, like sin taxes because they impose a financial penalty on activities they dislike.

One person who has extensively studied how private moral judgments shape public policy is Christopher Z. Mooney, professor of political studies at the Institute of Government and Public Affairs at the University of Illinois-Springfield, editor of State Politics and Policy Quarterly, and author of The Public Clash of Private Values: The Politics of Morality Policy (Chatham House Publishers, 2001), a collection of articles by Mooney and others on the effects of private morality on public policy.

Budget & Tax News Managing Editor Steve Stanek recently spoke with Mooney on the policy questions surrounding sin taxes.

Stanek: Taxes on alcohol, cigarettes, gambling, and even gasoline seem to keep going up. What do you think when you see these tax hikes?

Mooney: People say these things are bad for public health, or they are bad for you as an individual, therefore we're going to tax you. They have a rationale that says not only are we going to do this because you're doing bad things, we're doing this to help you. It will reduce your sinful behavior.

You don't have to drink if you don't want to. You choose to smoke. You choose to gamble. So you can engage in the sinful behavior and pay the tax or not engage in the sinful behavior and not pay the tax. The voluntary nature of these decisions makes it extremely attractive to raise these taxes, whereas raising the sales tax or income tax is like poison, even though these taxes are far more efficient and far more fair.

Stanek: Does the potential effectiveness of sin taxes in reducing harmful behaviors conflict with the goal of raising tax revenue?

Mooney: It is getting to the point that it's having an impact. People are quitting smoking, smoking less, or moving to less-expensive substitutes. Big brands are losing market share, and they can cut back on what they pay the states under the Master Settlement Agreement.

[Editor's note: In 1998 major tobacco companies and 46 states signed a Master Settlement Agreement, requiring the largest tobacco companies to make annual payments to the states to cover the "societal costs" of smoking. The companies have been paying about $6 billion annually, but earlier this year an arbitrator ruled that because their share of the tobacco market has fallen as a result of people turning to substitutes from companies that are not party to the agreement, the major tobacco companies may reduce annual payments to the states by about $1.2 billion. States are appealing the ruling.]

Stanek: Earlier this year we had an article on the arrests of several people in Michigan who police say were smuggling cigarettes and other items and sending millions of dollars to Hezbollah and other Middle East terrorist groups.

Mooney: We know that high tobacco taxes increase smuggling. Tobacco taxes have a huge variation from state to state. There is also variation in taxes on alcohol and motor fuel, but tobacco easily lends itself to smuggling. First, there are the huge disparities in taxes, and a high per cubic inch dollar value. And cigarettes don't go bad quickly. It's easy for the average person to go to North Carolina, where the cigarette tax is relatively low, fill up the trunk with cigarettes, and go to New York or Michigan (where cigarette taxes are much higher) to resell them.

Stanek: You mentioned other taxes are fairer than sin taxes. Why don't politicians oppose sin taxes because of their unfairness?

Mooney: The obvious thing about sin taxes is they are easy to put on. They're not huge generators of income; they don't rise with inflation; they're regressive. They're everything you don't want in a tax.

But in the case of sin taxes, expert opinion and rational assessment of objectives and criteria come smashing into political considerations. In this case, political considerations are going to win out. Vote for an income tax increase, and that will haunt a politician for 20 years.

Gambling taxes are not as regressive as some of the other sin taxes, though there is a lot of argument on that point. We think gambling taxes fall mainly on the middle class.

Stanek: Why do you think there is so much gambling now?

Mooney: Attitudes toward gambling is a whole issue itself. We used to think it was a sin.

When I was a kid in Wisconsin, we couldn't send in for contests on the backs of cereal boxes. Now before you hit Kenosha [a Wisconsin city on Lake Michigan just north of the Illinois state line] there are casino billboards, and in Kenosha there is a greyhound racing track.

Legalized gambling was one of the biggest changes in state policy in the last 25 years of the twentieth century. State lotteries went nuts.

One of the problems, and we're seeing it in Illinois, is there apparently is a limit to the amount of revenue we can expect from gambling--and thank God for that. If people were going to be gambling unlimited amounts, that would be a scary prospect for humankind. Lottery sales are flattening. Casinos are no longer the goose that laid the golden egg. They are cannibalizing themselves in terms of market share.

States are not just allowing this to occur; they are now in the business of promoting gambling, and that raises public policy questions. Do we want state government promoting gambling? That's a question in my mind.

There are those who argue there are social problems with gambling, and even after setting aside whether that is true, the tax issues and revenue issues with legalized gambling are complex and difficult for state governments to deal with in terms of what kind of rate should we set? How should we set up licenses? Should we auction off gambling licenses? And how should we regulate the industry?

Gambling was such a big change, such a fast change, it was thought it would be like other sin taxes: Free money. It has not turned out to be that easy.

Steve Stanek (**stanek@heartland.org**) is managing editor of Budget & Tax News.

AMERICANS FOR TAX REFORM
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Key Facts All Lawmakers Need to Know About Tobacco Tax Increases

Tax increases in any form act as drains on a state's economy.
Raising taxes takes money out of the private economy and productive use. In general, tax increases discourage work, savings, and investment, leading to an economic slow down that no state can afford. As no taxes are temporary, increasing taxes allows state governments to increase spending at increasing rates.

Raising taxes is only a way to paper over the need to set budget priorities rather than a solution to all of the state's funding woes. Just as taxpayers cannot print more money when they spend more than they earn, state governments must make responsible fiscal decisions and undertake real reform.

In particular, tobacco tax increases are bad policy.

- The tobacco tax is a regressive tax. It imposes a selective and unfair burden on low-income taxpayers, those least able to shoulder the burden, for engaging in a legal behavior.

- Increasing the tobacco tax also hurts small businesses which often lean on tobacco sales to stay in business. As small businesses are the engine of job creation in the U.S., raising the tax on tobacco is destroying jobs.

- In order to avoid paying higher and higher tobacco taxes, consumers will turn to the Internet or out of state sources for tobacco products. In fact, tax increases have led to an increase in illegal activities and smuggling. With an increase in illegal activities comes an increase in the cost states will face while trying to enforce compliance.

- Some big-spenders will claim that the tobacco tax is in fact a "user fee." However, this is inaccurate and deliberately misleading. The fact is that to qualify as a fee:
  - a charge must fund a specific service with no excess going into a general fund;
  - a charge must be paid only by those who use that specific government service; and
  - individuals must have the choice whether to purchase the service from the government (and thus pay the fee) or to purchase the service from a private business.

- A tobacco tax, like any excise tax, does not fit the description of a fee. The tobacco tax does not fund a specific service. Consumers of this product pay the tax regardless of whether they *use* ANY government service – those with private health insurance are paying a tax to subsidize Medicaid, even though they do not use Medicaid. Furthermore, the tax is imposed on products purchased in the private sector, not from the government.

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- And while the argument can be made that smokers do impose certain costs on society, these costs are not any different from the costs imposed by consumers of fast food, people who skydive, walk with their shoes untied or sit too close to the TV.

- Tax-hikers also claim that those who will benefit the most from the cigarette taxes are teenagers. But in December 2001, the Canadian Royal Mounted Police testified in the United States Senate between 1984 and 1993, when Canada doubled its tax on cigarettes, smoking of underage youths actually increased as a result of massive black market sales.

- The very reasoning behind tobacco tax increases is flawed. Proponents argue states can have increased revenues AND less smoking. It is absurd to argue that a tax hike will decrease the number of people buying tobacco and that it will increase tax revenues.

The role of government should not be to attempt to control citizens' behavior by imposing tax punishments on legal products. However, big spenders will stop at nothing to grab more and more taxpayer dollars. All tax increases assume that government can spend taxpayers' money better than the taxpayers who have earned it.

It is time for pro-taxpayer lawmakers to stand up for their constituents and refuse to bow to the calls of big spenders for tobacco tax increases.

For more information on defeating tobacco tax increases in your state, please contact Elizabeth Karasmeighan or Sandra Fabry at ekarasmeighan@atr.org or sfabry@atr.org or (202) 785-0266.

Further information can also be found in the following studies and articles:

Small Business Survival Committee, "How New York City's High Tobacco Taxes Hurt Small Businesses, Taxpayers and Consumers." http://www.sbsc.org/media/pdf/NYCStudy_Taxes.pdf

Minnesota KARE 11 Television, "Minnesota tobacco tax rise helps boost North Dakota income" http://www.kare11.com/news/news_article.aspx?storyid=112861

Pierre Lemieux, "The Economics of Smoking." http://www.econlib.org/library/Features/feature5.html

Robert E. McCormick, Robert Tollison, and Richard E. Wagner, "Smoking, Insurance, and Social Cost." http://www.cato.org/pubs/regulation/reg20n3c.html

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ATR Tax Policy Research

Special Focus: Tobacco Tax Trends

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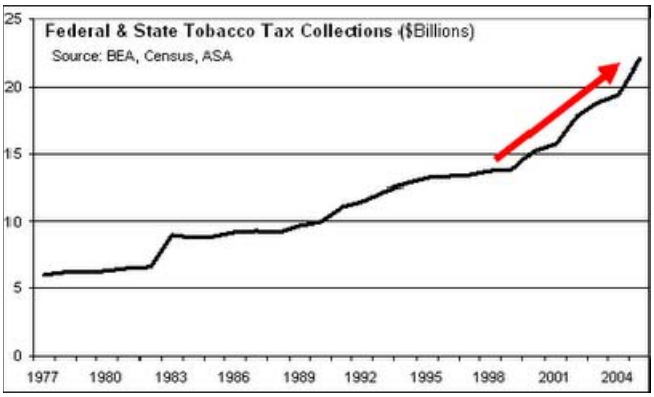
As members of Congress debate reauthorizing and expanding the State Children's Health Insurance Program, S-CHIP, some lawmakers are calling for an increase in the federal excise tax on tobacco. Proponents of the tax increase assert that the federal tax has not risen in a decade, therefore taxpayers are due for an increase.

However, only considering the federal tax rate ignores the actual tax burden on tobacco. States have steadily raised taxes on cigarettes and other tobacco products, even while surpluses made other tax cuts politically popular. According to analysis by the American Shareholders Association, over the past seven years, the average state cigarette tax rate has more than doubled from 42 cents to 92 cents per pack.

Tobacco Tax Collections Up 59 Percent since 1999, 8.1 Percent per Year

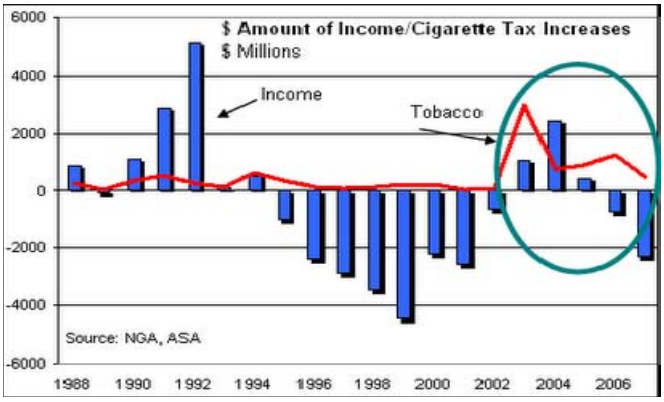


States Turn to Tobacco for Spending Growth, Revenue Collections Lower than Expected

In fact, following the taxpayers' revolts of the 1990's and political fallout from state officials raising income, sales, and corporate taxes, states adopted a new policy of targeted tax increases to fuel their spending appetite.

Tobacco became the number one target both in terms of number of tax increases and dollar amounts. Moreover, states raised more money from tobacco taxes than they did from income taxes over the past seven years. And tobacco taxes accounted for 30 percent of all state tax increases in the last recession compared to just 5 percent in the previous recession.

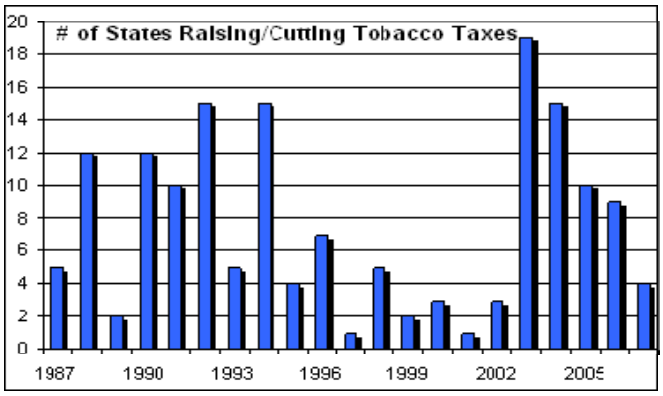
Cigarettes Are the New Cash Cow for State Governments



Even in years of surplus when states are cutting taxes, tobacco tax increases remain on the agenda. This upward trend of state tobacco taxes is likely to continue.

According to the National Association of State Budget Officers, NASBO, 12 states are proposing higher tobacco tax rates for fiscal year 2008, for a net tax increase of $1,220.9 million.

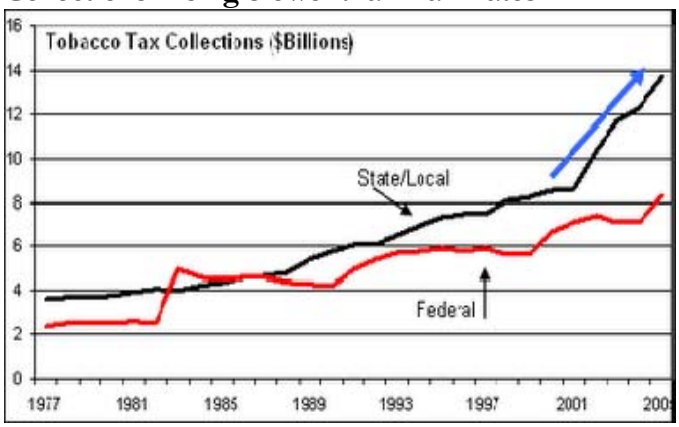
While States Cut Taxes in 2007, Tobacco Tax Increases Continued



The doubling of average state tobacco tax rates is responsible for a spike in state and local tobacco tax collections. However, while the average tax rate has doubled, tax collections have "only" increased 69 percent. States that have raised their tobacco taxes in recent years are facing diminishing revenue streams due to consumers crossing state borders, purchasing products online or on Indian reservations as well as smuggling and black market activity. Michigan, for example, has seen taxable cigarette sales drop by more than 25 percent since 2001. According to a recent quote in *The Daily Oakland Press* by Michigan's treasury spokesman Caleb Buhs, "…every time the price has been raised, the amount of packs of cigarettes has gone down."

An increase in the federal excise tax is expected to further slow state revenue growth and magnify the negative impact on small businesses which often lean on tobacco sales to stay in business.

Collections Rising Slower than Tax Rates



Even beyond the skyrocketing state and local excise tax rates and revenue growth, it is important to note that raising taxes will not cure SCHIP. Funding an expansion of the broken children's health insurance program on a declining revenue source is dangerous policy.

Instead of morphing the program into a universal entitlement, Congress should implement free market reforms that empower low-income working families and strengthen access to private health care coverage. As 70 percent of the uninsured children in this country already qualify for Medicaid or S-CHIP, an expansion of the program is the wrong direction. Rather than following the states' lead in raising the tax on tobacco products, Congress should follow the lead of states like South Carolina and Florida in creating consumer driven health care programs.

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Cigarette Trafficking Grows as Taxes Climb

Author: Steve Stanek
Published by: The Heartland Institute
Published in: *Budget & Tax News*
Publication date: June 2006

As cigarette taxes in many states have climbed, so has the illicit cigarette trade. The Bureau of Alcohol, Tobacco, Firearms, and Explosives made 35 arrests for tobacco trafficking in 2003 and 162 such arrests in 2005, according to Philip Awe, chief of the alcohol and tobacco enforcement branch.

Awe attributes the sharp rise in cigarette trafficking arrests to an increase in illegal activity and improved investigation methods. A major factor in the rise in illegal activity, he said, may be higher cigarette taxes. As taxes climb, the profit potential of smuggling grows.

Awe is from Michigan and recalls that in 1993 or 1994 the state raised its cigarette tax from 25 cents to 75 cents a pack.

Criminal Enterprises Move In

"When that happened we had mom and pop smugglers going to North Carolina, Kentucky--the low-tax states--and bringing cigarettes back to Michigan. They were taking minivans and loading them up," Awe said. "Michigan and other states have limits on how much people can bring back into the state, and Michigan started enforcing it. They have their own tobacco tax unit within the state police, and they were able to address that part of the problem.

"Then Michigan started [requiring tax stamps] on their cigarettes. That whittled out the mom and pop smuggler, but it brought in criminal enterprises dealing in contraband cigarettes," Awe said.

Counterfeit Stamps Increasing

Awe said counterfeit tax stamps are "a nationwide problem" because most states require tax stamps to sell cigarettes. "If you are diverting a legitimate product for non-payment of taxes, you now must supply a counterfeit tax stamp to reduce the chances of getting caught," Awe said.

He could not estimate how much product is sold illegally but said it must total billions of dollars.

"Contraband cigarettes are a worldwide problem. We're talking billions of dollars," Awe said. He said contraband cigarettes include counterfeit products as well as legitimately made cigarettes that are smuggled to avoid taxes.

"There are counterfeit cigarettes being made from tobacco fields in foreign countries and packaged as U.S. product or European product," Awe said. "The counterfeiters ship those cigarettes into the United States through various ports and distribute them to criminal organizations. The really bad thing with counterfeit cigarettes is there are no standards with their manufacture. They could be laced with anything."

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Are Cigarette Taxes Becoming Obsolete?

Author: Richard E. Wagner
Published by: The Heartland Institute
Published in: *Budget & Tax News*
Publication date: August 2005

Excise taxes originated centuries ago when governments were small, life was local, its pace was slow, and "capital" referred to bulky and heavy objects. We now live in an increasingly service-oriented economy, where life moves fast on a global scale and where much capital is immaterial in nature.

Social and economic changes force us to ask whether excise taxes are obsolete. If they are, governments will increasingly find that excise taxes do more harm than good.

Cigarette taxes, because states have raised them precipitously during the past 10 years, provide a good test of the obsolescence theory.

Revenue Shortfalls

Excise tax increases often generate less revenue than originally projected. As taxes rise, people turn increasingly to other channels of commerce that they did not seek out when taxes were lower. They cross state borders to shop. They use the Internet to shop. They come across vendors who are selling lower-taxed, untaxed, or counterfeit cigarettes. And they do these things with increasing intensity as the tax rate rises.

The Master Settlement Agreement of 1998 set in motion a tobacco spending frenzy where legislatures boosted appropriations on programs from A to Z. Democratic polities face strong temptations to expand spending by borrowing. The Master Settlement Agreement opened a new opportunity for deficit finance, as states increased current spending by borrowing against future settlement revenues.

However, settlement revenues have declined about 20 percent from initial projections, which has increased the interest burden on state debt.

In New Jersey, for instance, lawmakers have sold bonds based on future revenues from the master settlement. Payment on those bonds depends on high sales of taxable cigarettes, but the state has depressed those sales by raising its cigarette tax to $2.40 per pack, second highest in the nation. This creates a vicious cycle in which the state reacts to lower-than-expected revenue with sharp tax rate increases, which in turn drive down settlement revenue and drive up interest on the bonds.

Underground Economy

Smuggling is a natural consequence of high taxation. It is well-known that organized crime is heavily involved in smuggling. The logistics of such high-volume operations in the underground economy require a good deal of organization.

High taxation is a close cousin to prohibition. The U.S. experience with alcohol prohibition is thus

instructive. Prohibition did not eliminate the use of alcohol. It drove 70 percent of the market underground, where organized crime and its violent methods of resolving commercial disputes prevailed.

The antidote to the violence of the underground economy is sensible, low taxation.

Unreliable, Destructive

"Cigarette taxes are already an unreliable revenue source," said Scott Hodge, president of the Washington, DC-based Tax Foundation, "and that unreliability will surely get worse as tax rates climb and more customers are forced to shop for low-tax cigarettes from legal and illegal sources."

The growth of these destructive consequences brings state governments to a crossroads. In one direction, governments use invasive, threatening, expensive, and ultimately futile tactics to enforce high tax rates. In the other direction, innovative, service-oriented state governments know they must compete with their neighboring jurisdictions by levying reasonable taxes.

Richard E. Wagner (**rwagner@gmu.edu**) *is the Holbert R. Harris Professor of Economics at George Mason University in Fairfax, Virginia. He is the author of numerous volumes on excise taxation and tobacco taxes.*

For more information ...

Richard Wagner explored the problems with excise taxes in detail in "State Excise Taxation: Horse-and-Buggy Taxes in an Electronic Age," *Background Paper* No. 48, published in May 2005 by the Tax Foundation. The full text is available online at **http://www.taxfoundation.org/**.

January 1, 2001

Who Bears the Ancillary Cost of Tobacco Use?

by Patrick Fleenor

Background Paper No. 36

Executive Summary
Smoking appears to be a very risky behavior. Indeed, some have suggested that it is one of the riskiest activities that an individual can engage in over a lifetime. This view is reinforced repeatedly in Americans' daily lives, from ads on television to the Surgeon General's warning on cigarette packs.

Yet despite the deluge of information about the hazards of smoking, smoking has not diminished markedly since 1990. Today, approximately 50 million American adults, or roughly one quarter of the adult population, smoke cigarettes. According to data from the Centers for Disease Control, the percentage of Americans who choose to smoke has remained essentially unchanged since 1990.

While many nonsmokers can not fathom the benefits of smoking, we know that smokers freely exchange hundreds of billions of dollars of value each year for the opportunity to smoke cigarettes.

Not content to recite evidence that smoking harms individuals' health, governments and anti-smoking groups have tried to make a public finance argument that smoking inflicts costs on nonsmokers. Principally, these costs are alleged to be the expense of treating smoking-related diseases and the lost productivity attributable to smoking.

But despite the portrayal of smokers as individuals who are imposing tremendous costs on the rest of society, there is actually very little evidence to suggest that this is the case. Rather, the bulk of the public finance literature points in the opposite direction.

Not only do smokers bear the individual health costs of tobacco use, but they also bear the burden of current federal and state government fiscal regimes that transfer tens of billions of dollars from smokers to nonsmokers.

Ignoring all of the economic research showing that smokers do not impose net costs on the rest of society, state governments began filing suit against the tobacco industry in 1994. Rather than take its chances in court, the industry settled with four states individually for $36.8 billion. The remaining suits were settled for $206.0 billion in late 1998. These payments have only increased the transfer of wealth from smokers to nonsmokers. In September 1999, the federal government filed suit against the industry, nd if successful this suit would further exacerbate the existing wealth transfer.

Attached Files

- Background Paper No. 36, *PDF, 97.4 KB*
  by Patrick Fleenor

I. The Ancillary Costs of Smoking

There are generally said to be two types of cost associated with smoking in addition to the cost of cigarettes. These ancillary costs are listed in Table 1. The first type, direct costs, include medical expenses associated with treating smoking-related diseases. The second type, indirect costs, includes the cost of lost production resulting from premature death and illness attributable to smoking.

The most widely cited figure of the annual direct cost of smoking is $50.0 billion. This figure, an estimate for 1993, was calculated by researchers from the University of California and the U.S. Centers for Disease Control (CDC).[1] Of this amount, 51.9 percent was spent on hospital expenditures, 30.3 percent for physician expenditures, 9.8 percent for nursing home costs, 5.6 percent for home health care, and 2.4 percent for prescription drugs.

The CDC points out that if these direct costs were reflected in the price of cigarettes, the price would rise by approximately $2.06 per pack.[2] Using these figures, Jane Gravelle of the Congressional Research Service shows that approximately $18.1 billion of these costs were paid by the federal government, $17.8 billion by private insurance and other entities, $10.5 billion by individual smokers, and $3.6 billion by the states.[3]

Not only do smokers bear the individual health costs of tobacco use, but they also bear the burden of current federal and state government fiscal regimes that transfer tens of billions of dollars from smokers to nonsmokers.

The CDC has also estimated the indirect costs of smoking. Its latest study pegged the 1990 cost of morbidity — that is, work loss and bed-disability days — at $6.9 billion.[4] The same study also estimated the loss of productivity resulting from premature death at $40.3 billion. Such estimates, when added to the direct costs of smoking, imply that the total annual ancillary costs of smoking are roughly $100 billion. If these costs were added to the price of each pack of cigarettes sold in the United States, the price would rise by more than $4.00.

Table 1
Latest Estimates of the Ancillary Costs of Smoking
($Billions)

Direct Costs (1993)	$ 50.0
Hospital Expenditures	26.0
Physician Expenditures	15.2
Nursing Home Expenditures	4.9
Home Health Care	2.8
Prescription Drugs	1.2
Indirect Costs (1990)	$ 47.2
Work Loss and Bed Disability Days	6.9
Premature Death	40.3

Source: U.S. Centers for Disease Control

Ancillary Costs v. External Costs

Governments at all levels, anti-smoking groups and the popular press frequently treat these ancillary costs of smoking as though they were akin to what economists refer to as external costs, when in fact they are not. External costs arise when individuals are able to shift some of the costs associated with using a good on to third parties and are consequently inclined to over-consume a good. The following two sections will show that the bulk of the ancillary costs of smoking could in no way be defined as external costs since they are, in fact, borne by smokers.

II. The Decision to Smoke

Smoking appears to be a very risky behavior. Indeed, some have suggested that it is one of the riskiest activities that an individual can engage in over a lifetime.[5] This view is not unfamiliar to the American public. It is reinforced repeatedly in their daily lives. From ads on television to the Surgeon General's warning on cigarette packs, Americans are deluged with messages warning them of the hazards of smoking.

Over the past decade governments at all levels, joined by anti-smoking groups, have escalated their war on tobacco. The federal government set a goal of reducing the adult smoking rate below 15 percent by the year 2000.[6] To this end, it hiked cigarette taxes and enacted numerous measures aimed at curbing tobacco use. Likewise, state and local governments have enacted thousands of anti-smoking measures and implemented tax hikes that have sent cigarette prices soaring. These actions have been augmented by the activities of anti-smoking groups that have spent record amounts in an attempt to stamp out smoking.

Yet such efforts have largely been a failure. Today, approximately 50 million American adults, or roughly one quarter of the adult population, smoke cigarettes. According to data from the CDC, the percentage of Americans who choose to smoke has remained essentially unchanged since 1990.[7] Such figures raise the question of why, in spite of the apparent downside to smoking, tens of millions of Americans choose to smoke. The obvious reason is that for smokers, the benefits of smoking exceed its costs. While many nonsmokers may find it hard to fathom any benefits arising from smoking (which helps explain why they themselves don't choose to smoke), we know from their actions that smokers tend to feel quite differently. Each year they freely exchange hundreds of billions of dollars of value for the opportunity to smoke cigarettes.

Table 2
The Decision to Smoke

	t_1	t_2	t_3	Sum	Discounted Benefits and Costs r = 5%	Discounted Benefits and Costs r = 3%
Smoker						
Benefits	$ 600	$ 600	$ 400	$ 1,600	$ 1,461	$ 1,528
Costs	375	400	850	1,625	1,454	1,536
Cigarettes	300	300	150			
Direct	50	50	300			
Indirect	25	50	400			
Nonsmoker						
Benefits	$ 500	$ 500	$ 300	$ 1,300	$ 1,189	$ 1,242
Costs	375	400	850	1,625	1,454	1,536
Cigarettes	300	300	150			
Direct	50	50	300			
Indirect	25	50	400			

Weighing the Costs and Benefits of Smoking

The decision to smoke is made by weighing the lifetime benefits of smoking against its costs. This decision is complicated somewhat by the fact that while many of the benefits of smoking accrue early in life, many of its costs are borne in later years. Nevertheless, this decision is similar to others individuals make over a lifetime. Decisions such as whether or not to exercise, consume so-called "junk food," or sunbathe all involve similar choices.

The decision to smoke is formally illustrated in the simple three-period model presented in Table 2. The table presents two cases. In the first, the individual decides to smoke. Here, during each of the initial two periods (t_1 and t_2) the subjective valuations that he places on smoking are equal to $600. During the final period (t_3) this amount falls to $400. Therefore, over his lifetime the benefits that the individual obtains from smoking are equal to $1,600. In addition to the benefits, the individual also bears some of the costs of smoking during each of the periods. These costs include the cost of cigarettes as well as the direct and indirect costs described in the first section.

In the first period the total cost associated with smoking equals $375. In the second period it rises to $400. Finally, as a result of the high direct and indirect costs borne during the last period of the individual's life, the total cost rises sharply to $850. Therefore, over the individual's lifetime the cost associated with smoking will equal $1,625.

Since the sum of the lifetime costs of smoking exceeds the sum of the lifetime benefits in this case, it would initially appear as though the individual would choose not to smoke. Before such a determination can be made, however, something must be known about the individual's time preferences. Some individuals would be willing to trade off relatively large amounts of consumption in later periods for the ability to consume in earlier ones. Such individuals would be described as present-oriented. Others are less likely to make such trade-offs and would be described as more future-oriented.

In order to incorporate a measure of time preference into the simple model illustrated in Table 2, an interest rate is used to discount both the benefit and cost streams. Relatively high discount rates imply that the individual prefers present to future consumption. Lower discount rates imply that the individual is more future-oriented. Here it is assumed that the individual's discount rate is equal to 5 percent. The fifth column in Table 2 shows that for this individual, the discounted stream of benefits is equal to $1,461 while the discounted stream of costs is equal to $1,454. In this case the individual will choose to smoke since the value of the discounted benefits he receives from smoking exceeds the discounted cost. Note, however, that if a discount rate of 3 percent is used, implying that the individual is slightly more future-oriented, the individual's decision will be altered. At such a rate, since the discounted costs of smoking exceed the discounted benefits, the individual will choose not to smoke.

Table 2 also illustrates the case of an individual who chooses not to smoke. Here, when a discount rate of 5 percent is used, the individual's discounted stream of benefits will be equal to $1,189 while his discounted stream of costs will equal to $1,454. In this case, since the discounted costs exceed the discounted benefits, the individual will choose not to smoke. Note that when a discount rate of 3 percent is used, he becomes even less inclined to smoke.

As the subjective valuations that individuals place on smoking change over their lifetimes, they will periodically reevaluate their decision to smoke. Changes in the pre-tax price of cigarettes, excise taxes, and medical technology, as well as new information concerning the advisability of smoking, will also influence this decision.

III. Reconsidering the Costs of Smoking

While many opponents of smoking accept the cost-benefit analysis outlined above, they argue that the assumption that smokers pay the full cost of their tobacco use is incorrect. Instead, they argue that smokers are able to foist some of the costs of their habit onto nonsmokers. As a result, this line of reasoning logically leads one to conclude that smokers have an incentive to over-consume cigarettes. In order to correct this perceived situation, some proponents of this view argue for some sort of government intervention in the marketplace to actively discourage smoking.

In order to explore this topic it is necessary to examine the likelihood that smokers are able to shift each of the ancillary costs of smoking. These costs are listed in Table 3 along with a breakdown of the parties who are charged with initially paying these costs. As will be shown, the party assigned with the initial payment of these costs may be different from the one that ultimately bears the burden. The discussion will begin with those costs that would seem to be the least likely to be shifted, namely those that are paid by smokers directly. It will then examine the likelihood that smokers are able to shift some of the other ancillary costs via third party payments for health care.

Individual Costs

There is little doubt that nearly 60 percent of the ancillary costs attributed to smoking is borne directly by smokers. These include the $10.5 billion in direct costs paid by individual smokers as well as the $47.2 billion in indirect costs associated with smoking. When a smoker pays for medical expenses out-of-pocket, he alone bears the cost. Similarly, when smokers forgo wages and retirement benefits in later life for the opportunity to smoke cigarettes in early years, it is the smokers – not members of society at large -- who bear these costs because they simply do not have the opportunity to shift these burdens to others.

Third-party Payers

Approximately 83 percent of health care expenses in the United States are currently paid by third parties.[8] These third-party payers include both private health insurance as well as government programs. Approximately 41.0 percent of the ancillary costs of smoking were paid by third parties. On the surface, the existence of such third-party payment would appear to create opportunities for smokers to shift some of the costs of their tobacco use onto nonsmokers.

Private Insurance Companies

Private insurance companies and other entities paid approximately $17.8 billion of the direct costs of smoking. One possibility is that these costs are passed onto smokers and nonsmokers alike in the form of higher insurance premiums. Such a scenario would allow smokers to transfer some of the costs of their tobacco use to nonsmokers. The problem with this scenario is that a competitive insurance market offers very strong incentives for firms to prevent this from happening by charging policyholders

Table 3
The Ancillary Costs of Smoking

	$Billions	Percentage of Total
Total	$ 97.2	100.0%
Direct Costs (1993)	$ 50.0	51.4%
Federal Government	18.1	18.6
Private Insurance and Other Entities	17.8	18.3
Individual Smokers	10.5	10.8
State Governments	3.6	3.7
Indirect Costs (1990)	$ 47.2	48.6%
Individual Smokers	47.2	48.6

Sources: Gravelle & Tax Foundation

premiums based on risk.

To illustrate this point, consider the case of an insurance company that offers the same insurance to two classes of individuals with different risk profiles. On average it costs the company $110 per year to insure a member of Group A and $100 to insure a member of Group B. Assume that the company decides to combine 50 members of each group into a common insurance pool and sell policies for a $105 annual premium. For simplicity, assume that there are no administrative costs associated with issuing these policies. Such a premium would cover the expected costs of the insurance. Under such a plan $250 of wealth would be transferred from members of Group B to Group A via the private health insurance system.

The problem with this scenario is that, given a competitive market, it is not sustainable over the long run. This is because it would create a situation where competing firms could enter the market and offer low-risk individuals the same coverage at a lower price. In this example, a competing firm could draw members of Group B out of the insurance pool by offering the same insurance coverage for less cost. In this case a premium of $100 per year would cover the expected costs of members of this group. As members of Group B leave the insurance pool, the original company would be forced to raise premiums until it covered the expected costs of the remaining members of the pool. Eventually one would expect to see two insurance pools, each with its own premium based on the projected medical costs of individuals in the pool. Therefore, risk-based insurance prevents the shifting of costs and performs the desirable function of forcing individuals engaging in risky activities to bear the full cost of their actions.

If it is true that the workings of a competitive insurance market would prevent cost shifting, why is there so little segregation of smokers and nonsmokers into different risk pools in the U.S. insurance market? Only about 15 percent of health insurers offer discounts to nonsmokers and these discounts tend to be rather small, generally running only 10 to 15 percent.[9] This is in sharp contrast to the market for life insurance, where approximately 90 percent of the companies in the marketplace offer nonsmoker discounts, which can be substantial. This lack of a differential in health insurance premiums is likely a result of smokers having either the same or slightly lower lifetime medical costs than nonsmokers. This conclusion has been reached by several studies on this topic. One of the most interesting studies was conducted by Robert E. Leu and Thomas Schaub.[10] In this study the authors simulated what would have happened to health care expenses in Switzerland in 1976 if smoking had ceased in that country after 1876. Under this scenario the authors found that aggregate health care expenses would have been roughly equal to what they actually were that year. In a 1997 study of the Dutch population published in the New England Journal of Medicine researchers found that the lifetime medical costs of smokers were actually lower than those of nonsmokers.[11]

Government Programs

The prior section illustrated how the private marketplace accommodates a variety of lifestyles by offering risk-based insurance. The existence of such insurance prevents individuals who engage in risky activities from foisting some of the costs of these activities on to individuals who choose to live more sedate lives. Government programs lack such dynamism. Funds are collected in the form of taxes. General services are then provided universally and selective benefits are doled out in accordance with eligibility requirements. Consequently, even if it were the case that smokers placed higher overall demands on government programs than nonsmokers, these programs would have no mechanism for preventing the shifting of costs. It doesn't matter whether an individual smokes or not — his tax obligations and the benefits that he is entitled to are the same.

The lack of any actuarial basis underlying these programs means that, to some de-

gree, wealth will be transferred between smokers and nonsmokers. Conceptually, determining the direction and magnitude of this transfer involves comparing the discounted lifetime tax payments and government expenditures for smokers with those for nonsmokers. While in theory this is a fairly straightforward process, conducting credible research in this area is a difficult task. To illustrate what it entails the next section presents a simple model of wealth transfer via government taxation and spending. The findings of some empirical research in this area will then be presented.

A Simple Model of Wealth Transfer Via Government Health and Retirement Programs

The mechanics involved in determining who receives net benefits under a given tax and spending regime are illustrated in Table 4.[12] Here nonsmokers are assumed to live for three periods. Because of the adverse health effects assumed to be associated with smoking, smokers live for two periods. In this example the government provides health and retirement benefits. During the initial two periods of a nonsmoker's life, it costs $50 per period to provide health benefits. During the final period these costs rise to $75. During this period nonsmokers also receive $75 in retirement benefits. Because of the adverse health effects assumed to be associated with smoking, it costs $100 per period to provide health benefits to smokers. As a result of premature death smokers draw no retirement benefits. Therefore, in this example, while it costs the government $250 to provide health and retirement benefits over the span of a nonsmokers life, it costs just $200 to provide these benefits to smokers.

While it is tempting to simply compare the lifetime costs of providing health and retirement benefits to nonsmokers with those of providing these benefits to smokers, doing so would be inappropriate. Because of the time value of money, funds expended during early periods are worth more than those expended in later ones. Therefore, all of the figures used in the analysis need to be discounted before being compared. This is done in the final three columns of Table 4 using three different interest rates.

In the initial case where a discount rate of 20 percent is used, the discounted costs that the government incurs providing benefits to nonsmokers ($163) exceed those associated with providing benefits to smokers ($153). In this case, assuming that the tax payments of nonsmokers and smokers are similar, government health and retirement programs transfer wealth ($10) from smokers to nonsmokers. At a discount rate of 30 percent the cost of providing benefits to nonsmokers ($136) is equal to what it costs to provide benefits to smokers ($136). In this case there is no wealth transfer between the two groups. At a discount rate of 40 percent it costs more to provide benefits to smokers ($123) than it does to provide benefits to nonsmokers ($116). In this case government programs transfer wealth ($7) from nonsmokers to smokers.

Cigarette excise taxes can eliminate or exacerbate a wealth transfer. In the case where government fiscal policies transfer wealth from nonsmokers to smokers, this transfer could be eliminated by the application of a 7 cent per pack excise tax (assuming smokers consume 100 packs per period). Application of such a tax in the case where the fiscal regime transfers wealth from smokers to nonsmokers, however, would exacerbate the transfer. In this case the net transfer from smokers to nonsmokers would rise from $10 per period to $17. In the case where government fiscal policies do not transfer income between the two groups, application of the tax would alter this situation and transfer wealth ($7) from smokers to nonsmokers.

Empirical Analysis of the Effects of Smoking on Government Budgets

Determining the direction and magnitude of the wealth transfer under a given fiscal regime is therefore a function of both the amounts and timing of tax and benefit

payments, as well as the discount rate used. Several researchers have built sophisticated models that attempt to determine who benefits and who pays under the current federal and state fiscal regimes in the United States. One of the first models of this type was constructed by a team of researchers led by Willard G. Manning of the Rand Corporation. Research using this model was published in the Journal of the American Medical Association in 1989.[13] In 1994 this model was substantially refined and updated by W. Kip Viscusi of Harvard University.[14]

As was evident from the example presented in Table 4, the results of these models are highly dependent on the discount rate used. In general, before taking into account the effect of federal and state cigarette excise taxes, these models show that when a discount rate of 4 percent or less is used government fiscal policies transfer wealth from smokers to nonsmokers. Above this amount the reverse is true. When Viscusi used a rate of 3 percent, which he said corresponded to the U.S. economy's long-run rate of return, he found that, depending on whether lost income tax revenue was considered a cost, the current federal and state fiscal regimes transferred anywhere from 23 to 53 cents per pack from smokers to nonsmokers. These findings suggest that in 1994, the year in which Viscusi published his findings, government fiscal policies were transferring between $5.3 and $12.2 billion from smokers to nonsmokers even before considering the effects of cigarette excise taxes. Viscusi concluded that "[a]t reasonable rates of discount … the cost savings that results because of premature deaths of smokers … will more than compensate for the added costs imposed by [them]." He went on to note that "[o]n balance there is a net cost savings to society even excluding consideration of the current cigarette taxes paid by smokers."[15]

As would be expected, inclusion of federal and state excise taxes exacerbates the wealth transfer from smokers to nonsmokers. In 1994, at a time when federal and state cigarette excise taxes accounted for approximately one third of the price of cigarettes, research conducted by Jane Gravelle and

Table 4
A Simple Model of Income Tax Transfer Via Government Health and Retirement Programs

	Expenditures				Present Value		
	t_1	t_2	t_3	Sum	r = 20%	r = 30%	r = 40%
Nonsmoker Cost	$ 50	$ 50	$ 150	$ 250	$ 163	$ 136	$ 116
Health	50	50	75	175	120	102	89
Retirement	0	0	75	75	43	34	27
Smoker Cost	$ 100	$ 100	$ 0	$ 200	$ 153	$ 136	$ 123
Health	100	100	0	200	153	136	123
Retirement	0	0	0	0	0	0	0
Net Transfer (from smokers to nonsmokers)					$ 10	$ 0	$ (7)
Health					(33)	(34)	(34)
Retirement					43	34	27
Effect of a 7-cent cigarette excise tax on the transfer (assuming 100 packs consumed per period)					$ 17	$ 7	$ 0

Dennis Zimmerman of the Congressional Research Service estimated that when cigarette excise taxes were considered, the discount rate at which smokers begin transferring income from nonsmokers rose to around 10 percent.[16] When federal and state cigarette excise tax collections are added to the mix, Viscusi's research suggests that during 1994 somewhere between $17.7 and $24.6 billion was transferred from smokers to nonsmokers.

The Effects of Smoking on the Federal Budget

Table 3 shows that the federal government pays $18.1 billion of the direct costs of smoking. The bulk of these costs are said to be borne by the Medicare and Medicaid programs. Medicare is the federal program that pays the medical expenses of Social Security recipients. Medicaid is administered by both the federal and state governments and pays the medical costs of the indigent. Other federal programs, including those administered by the Departments of Veterans Affairs and Health and Human Services also incur smoking-related costs.

In her research on the effects of smoking on the federal budget Gravelle uses a slightly different methodology than that employed by Manning et al. and Viscusi. She points out that in order to produce numbers which are comparable to those produced by the CDC (i.e., those which would reflect the annual budgetary effects of smoking) a growth rate rather than a discount rate should be used. While no comprehensive study has been conducted using this methodology, Viscusi's findings do contain estimates for a discount rate of zero. Using these, Gravelle calculates that, as a result of smoking, the federal government enjoys net savings of approximately $29.0 billion in health and retirement costs annually. In addition to these savings the federal government collects approximately $5.6 billion annually in cigarette taxes. As Gravelle points out, these figures "imply that smokers (past and present) currently save the federal government almost $35 billion per year."[17] Such results further support the notion that smokers do not impose net costs on nonsmokers via the existing federal fiscal regime. To the contrary, it implies that the current regime transfers tens of billions of dollars from smokers to nonsmokers.

The Effects of Smoking on State Budgets

Table 3 shows that the states incur roughly $3.6 billion annually in medical costs treating smoking related ailments, mostly in the form of state Medicaid payments. Viscusi's research includes comprehensive estimates of the effect of tobacco use on state budgets. He finds that even if one ignores cigarette excise tax collections, in every state, state programs transfer income from smokers to nonsmokers. When excise taxes are added to this calculation this effect becomes even more pronounced.[18] Gravelle's analysis using a discount rate of zero as a proxy for a growth rate produces similar findings. Her analysis shows that states save approximately $2.1 billion annually as a result of tobacco use. When the $7.6 billion that states collect annually in cigarette taxes is added to this figure it rises to almost $10 billion annually.[19] As is the case with the existing federal fiscal regime, such findings support the notion that smokers do not impose net costs on nonsmokers via the existing state fiscal regimes. To the contrary, these regimes transfer billions of dollars from smokers to nonsmokers.

Before taking into account the effect of federal and state cigarette excise taxes, these models show that when a discount rate of 4 percent or less is used, government fiscal policies transfer wealth from smokers to nonsmokers. Above this rate, the reverse is true.

IV. Conclusion

There is little doubt that the bulk of the ancillary costs of smoking are borne by smokers. Nearly 60 (59.4) percent of these costs are borne by smokers in the form of direct costs associated with treating smoking-related diseases and indirect costs related to lost productivity. There are also very strong theoretical and empirical reasons for believing that another 18.3 percent of the ancillary costs are borne by smokers in the form of insurance premiums. Federal and state governments pay the balance of these costs. The lack of any actuarial basis underlying government fiscal policies means that, to some degree, government fiscal policies will transfer wealth between smokers and nonsmokers. Much of the empirical research on this topic shows that, on net, federal and state fiscal policies transfer wealth from smokers to nonsmokers. Consequently, under the existing tax and spending regimes smokers can not be said to impose net costs on nonsmokers. To the contrary, these regimes transfer tens of billions of dollars from smokers to nonsmokers.

Tobacco settlement payments have only increased the transfer of wealth from smokers to nonsmokers. In September 1999, the federal government filed suit against the industry, and if successful this suit would further exacerbate the existing wealth transfer.

Ignoring all of the economic research using comprehensive cost models that showed that smokers do not impose net costs on the rest of society, state governments began filing suit against the tobacco industry in 1994. Rather than taking its chances in court, the industry settled with four states individually for $36.8 billion. The remaining suits were settled for $206.0 billion as part of the Masters Settlement Agreement on November 23, 1998. As would be expected, these payments will only increase the transfer of wealth from smokers to nonsmokers. In similar fashion the federal government filed suit against the industry on September 27, 1999 seeking potentially hundreds of billions of dollars. If successful this suit would further exacerbate the existing wealth transfer.

Endnotes

[1] United States Centers for Disease Control, "Medical-Care Expenditures Attributable to Cigarette Smoking – United States, 1993" *Morbidity and Mortality Weekly Report,* Volume 43, Number 26, July 8, 1994, p. 470.

[2] United States Centers for Disease Control, "Medical-Care Expenditures Attributable to Cigarette Smoking – United States, 1993" p. 470.

[3] Jane G. Gravelle, "Burning Issues in the Tobacco Settlement Payments: An Economic Perspective" *National Tax Journal,* Volume 51, Number 3, September 1998, p. 441.

[4] United States Centers for Disease Control, "Cigarette Smoking-Attributable Mortality and Years of Potential Life Lost – United States 1990" *Morbidity and Mortality Weekly Report,* Volume 42, Number 33, August 27, 1993, pp. 645.

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[8] Health Care Financing Administration, "National Health Expenditures Projections," http://www.hcfa.gov/stats/NHE-Proj/proj1998/tables/table3a.htm.

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[12] Figure adapted from that in Robert E. McCormick, Robert D. Tollison, and Richard E. Wagner, "Smoking, Insurance, and Social Cost" *Regulation,* Volume 20, Number 3, Summer 1997, p. 34.

[13] Willard G. Manning, Emmett B. Keeler, Joseph P. Newhouse, Elizabeth M. Sloss, and Jeffrey Wasserman, "The Taxes of Sin: Do Smokers and Drinkers Pay Their Way?" *Journal of the American Medical Association,* Volume 261, March 17, 1989. For more information on this model, see Willard G. Manning, Emmett B. Keeler, Joseph P. Newhouse, Elizabeth M. Sloss, and Jeffrey Wasserman, *The Costs of Poor Health Habits,* A RAND study, Cambridge, MA: Harvard University Press.

[14] W. Kip Viscusi, "Cigarette Taxation and the Social Consequences of Smoking," *Working Paper Number 4891,* National Bureau of Economic Research, October 1994.

[15] Viscusi, "Cigarette Taxation and the Social Consequences of Smoking," pp. 31-33.

[16] See Jane G. Gravelle and Dennis Zimmerman, *Cigarette Taxes to Fund Health Care Reform: An Economic Analysis,* Congressional Research Service, 1994.

[17] Gravelle, "Burning Issues in the Tobacco Settlement Payments: An Economic Perspective" p. 443.

[18] W. Kip Viscusi, "From Cash Crop to Cash Cow: How Tobacco Profits State Governments," *Regulation,* Volume 20, Number 3, Summer 1997, p. 30-32.

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March 30, 2007

Tax Fairness Would Suffer under Senator Smith's Cigarette Tax Hike

by Patrick Fleenor

Fiscal Fact No. 82

On March 23 Senator Gordon Smith (R-OR) proposed raising the federal cigarette tax from 39 cents to $1.00 per pack. This amendment to the budget resolution would force cigarette smokers to directly fund increases to the SCHIP program, a large government health program that buys insurance coverage for the children of families that earn too much to qualify for Medicaid.

Of course, all children should have health insurance, but the funding source that Senator Smith has chosen--cigarette taxes--is far and away the federal government's most unfair tax.

Tax Equity: How Fair Are Cigarette Taxes?

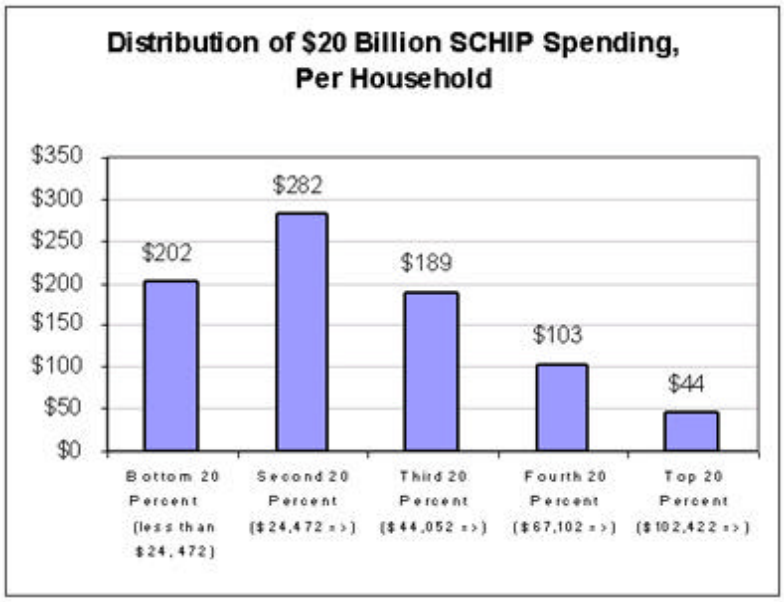
Economists usually evaluate tax equity, or fairness, in two dimensions: "horizontal" equity and "vertical" equity. A tax is considered horizontally equitable if people who earn similar incomes pay similar amounts of the tax. The reasoning behind this notion is straightforward: funds spent on a broad swath of the general public should likewise come from taxes levied on a broad swath of the population, and people with similar means should pay similar taxes. By this standard, cigarette taxes are an unfair tax because they fall only on the small share--about 23 percent--of the public that smokes. Nonsmokers pay nothing.

"Vertical" equity calls for tax burdens to rise as individuals' incomes rise. This notion is more controversial than horizontal equity because many Americans believe taxes should take the same percentage from all income levels. But on one point most agree: tax burdens should not rise as incomes fall. Yet existing federal taxes on tobacco do exactly that. In fact, under current law, individuals in the lowest-earning 20 percent of households--the first "quintile"--bear cigarette tax burdens that are 7.5 times higher than those in the top quintile.[1] Senator Smith's plan would only exacerbate this unfair distribution of the tax burden.

Fiscal Incidence of the Gordon Plan

Figure 1 shows how $20 billion in additional SCHIP spending would flow to households in different quintiles. Households in the lowest quintile would receive $202 in additional spending while those in the top quintile would receive $44.

Figure 1. Distribution of $20 Billion SCHIP Spending, Per Household



Source: Analysis conducted using the Tax Foundation's fiscal incidence methodology. See Chamberlain and Prante (footnote 1).

Although the spending varies across income groups, it seems that everyone is a winner, but that is only the spending side of the fiscal coin. If we also consider the cigarette tax payments, the picture changes considerably.[2] The benefits in the middle quintile and the top two are wiped out entirely, as taxes exceed SCHIP spending. Even at the low end of the income spectrum, the net gains are much lower than spending because of the high cigarette taxes paid by low-income people. The net gain is reduced to $50 per household for the lowest quintile and to $89 for the next lowest.

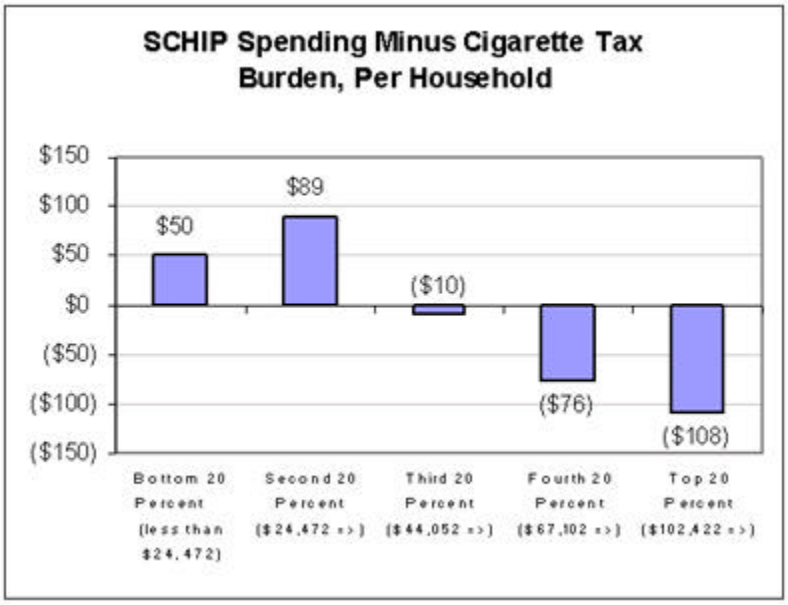
Compensating Nonsmokers

The punishing effect of cigarette taxes on the poor is well known, so why would Senator Smith propose a higher tax on the poor? The most common rationalization is that cigarette taxes aren't really "taxes" but more like fees to compensate nonsmokers for the high economic costs that smoking imposes on society. Frequently, $7.18 per pack is cited as the cost to society, but this is an erroneous figure that has gained currency only because smoking is so unpopular.[3]

Over the past couple decades evidence has accumulated showing that smokers cost society only a small amount more than nonsmokers. Peer-reviewed studies throughout the 1990s from economists such as Harvard's Kip Viscusi and Willard Manning Jr. from the University of Chicago demonstrate that nearly all the costs of smoking--healthcare, higher insurance premiums, lower productivity at work--are borne by smokers themselves.

Most studies find that over their lifetimes, smokers impose an extra cost on society that amounts to about 32 cents per pack of cigarettes. That's far below the current tax level on cigarettes. The average combined federal and state tax rate is currently $1.34 cents a pack, so any increase in the federal cigarette tax would certainly add to the already unfair tax burden that low-income smokers already face.

Figure 2. SCHIP Spending Minus Cigarette Tax Burden, Per Household



Source: Analysis conducted using the Tax Foundation's fiscal incidence methodology. See Chamberlain and Prante (footnote 1).

Conclusion

The SCHIP program is a popular government program, but earmarking tobacco taxes to fund it is highly inequitable. Smokers should not be required to fund the lion's share of a program that provides broad public benefits. Federal cigarette taxes are already a disproportionate burden on low-income households, and we should not exacerbate that problem by raising the tax.

Notes

1. Andrew Chamberlain and Gerald Prante, "Who Pays Taxes and Who Receives Government Spending? An Analysis of Federal, State and Local Tax and Spending Distributions, 1991-2004," *Tax Foundation Working Paper*, No. 1, p. 42, 2007.

2. Analysis conducted using the Tax Foundation's fiscal incidence methodology. See Chamberlain and Prante, *ibid.*

3. Patrick Fleenor, "Who Bears the Ancillary Cost of Tobacco Use?" *Tax Foundation Background Paper*, No. 36, 2001.

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Very creative welfare economics is being used to justify government intervention.

The World Bank's Tobacco Economics

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Economists have argued for two decades that smokers do not incur larger health care costs than non-smokers. That is because non-smokers, statistically, live longer than smokers and reach ages in which they incur large health care costs. What is more, smokers pay heavy tobacco taxes and draw less from public pensions than non-smokers. So, if we look at transfers between groups, smokers subsidize non-smokers, not the other way around.

But simple transfers within society cancel out each other: What one group looses, another one gains. The real issue, from an economic point of view, is whether production and consumption of tobacco leaves us with net social benefits or net social costs.

There is an economic presumption that a good freely produced and consumed on the market produces a net social benefit. Using creative economic analysis, World Bank researchers have attempted to show that this is not true for tobacco — that an optimal world is a world with no smoking. Although much better grounded in economic methodology than the previous public health literature, their efforts use creative welfare economics to bring us back to the old public health conclusion that the optimal consumption of tobacco is zero.

WORLD BANK STUDIES OF TOBACCO

The World Bank's efforts to establish a net social cost of tobacco using welfare economics began about a decade ago. Welfare economics is the field of economic theory that is concerned with evaluating social benefits and social costs. More recently, the Bank has expended considerable resources on more extended welfare analyses involving some reputed economists. As we shall see, the analyses are still based on naïve hypotheses about markets and political processes.

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Barnum's numbers In the early 1990s, a World Bank economist named Howard Barnum began publishing a series of articles on the benefits and costs of tobacco. Barnum argued that the benefits of tobacco—the sum of consumer surplus (the value that consumers receive over and above what they pay for tobacco) and producer surpluses (the profits producers earn over and above the minimum remuneration to factors of production)—were more than offset by direct and indirect morbidity and mortality costs from tobacco use. The costs were treated like externalities, i.e, costs that have to be deducted from private benefits.

In a 1993 study that was later described in an article in *Tobacco Control*, Barnum estimated the costs and benefits of a 1,000-ton increase in the world tobacco producing capacity. He then extrapolated his estimate to total tobacco production. His back-of-envelope calculations produced an implicit estimate of some $20 billion per year (in 1990 dollars) for the sum of consumer and producer surpluses in the world.

Barnum argued that the sum should not be thought of as a net social benefit. Because "most smokers start young, become addicted, and then lose much of the power of choice after addiction," he assumed that "only 25 percent of tobacco starts [are] made by well informed consumers." Thus, in Barnum's perspective, some 75 percent of public health care costs and of lost production from smokers' diseases should be treated as external costs. Barnum estimated that the annual total of the two types of external costs were $21 billion and $173 billion, respectively. Deducting those numbers from the $20-billion surplus (and making some adjustments), he got roughly $200 billion a year in net social cost of smoking for the whole world.

Barnum's estimates imply not only that reducing tobacco production and consumption would increase social welfare, but also that the optimal consumption of tobacco is zero. That is because, given his estimates, any use of tobacco generates direct and indirect costs many times greater than the sum of the corresponding consumer and produc-

er surpluses. Thus, a total worldwide ban on tobacco would increase social welfare, provided that enforcement costs were not too high.

The Peck group In preparation for its 1999 report *Curbing the Epidemic: Governments and the Economics of Tobacco Control,* the World Bank commissioned a large number of background studies on the costs and benefits of tobacco production and use. Those studies have recently been published in a volume titled *Tobacco Control in Developing Countries*. (The title is a misnomer because the 18 studies deal with all aspects of smoking, in developed as well as underdeveloped countries.) The book likely will become the economic bible of the anti-smoking movement because it contains the most serious—and, on many topics, the only serious—anti-smoking economic analysis to date.

One of the studies, "A Welfare Analysis of Tobacco Use" by a group of researchers headed by Richard Peck, pursues and improves the cost-benefit work started by Barnum. Like Barnum, the Peck group uses estimated elasticities of demand and supply (i.e., ratios between proportional change in quantity and proportional change in market price) to calculate world tobacco consumer and producer surpluses. Assuming linear supply and demand curves, their base case implies a consumer surplus of $119 billion, and a producer surplus of $43 billion, for a total net private benefit estimate of $162 billion per year in the world. (The large difference between that estimate and Barnum's much smaller net private benefit estimate appears to come mainly from Barnum's use of only raw tobacco production in his calculation of consumer surplus rather than all tobacco products.)

VASSIL DONEV/AFP

NO VALUE? Moslem women prepare tobacco leaves in the village of Kraiste, Bulgaria.

Standard welfare or cost-benefit analysis would inquire whether externalities reduce (or increase) the "net" private benefits. The first candidate for external cost would come from the health effects of secondhand smoke – assuming that such effects do exist. Although the World Bank and its analysts do affirm that secondhand smoke is an external cost, Peck and his colleagues' welfare analysis does not take it into account.

Instead, they argue that social benefits are reduced by "uninformed costs" that "arise from consumers' lack of information about the health risks of tobacco. Most smokers start young, become addicted, and then face significant adjustment costs when trying to stop their addiction." Because they are not taken into account by consumer choices, the "uninformed costs" play the same role as consumption externalities in standard welfare analysis: They create a divergence between the marginal social benefit curve and the consumers' demand curve (which represents consumers' marginal valuation). In a sense, uninformed consumers are imposing an externality on themselves by bringing to the market more demand than would exist if they were fully informed or not addicted.

Evaluating uninformed costs requires two types of estimates:

- The value of what consumers unwillingly lose when they make uninformed choices.
- The extent of the uninformed choices.

Peck and his colleagues make the first estimate in much the same way that Barnum did—they assume that the reduced income (or GDP per capita) of smokers, resulting from illness and early death, measures the losses of smokers. One can then project the estimated losses for every year in the future, multiply those values by the proportion of uninformed smokers, and calculate a discounted stream of uninformed costs.

Concerning the second estimate, the Peck group was more sophisticated than Barnum, who simply stipulated his 75 percent figure. Peck and his colleagues estimated how large the extent of uninformed choices must be, if the costs of the uniformed consumers are to exactly cancel the total value of consumer and producer surpluses ($162 billion per year in the base case) so that the net social benefits of smoking are zero.

The Peck group's empirical estimates suggest that as long as the proportion of uninformed smokers is greater than 23 percent, smoking generates a net social cost given the actual level of tobacco consumption in the world. The authors do not provide us with the data necessary to calculate what level of uninformed smokers would lead to the optimal level of tobacco consumption being zero—i.e., what level of uninformed smokers would lead to a net social cost at any level of consumption. Using Peck et al.'s estimated linear demand and supply and making back-of-envelope calculations in the same manner as Barnum, we can estimate that that proportion is even lower than Barnum's assumed 75 percent. So, if we accept Barnum's assumed proportion of uninformed smokers, there is still, in the Peck analysis, no level of tobacco consumption that would generate a net social benefit.

That becomes even more obvious if, following a footnote suggestion by the authors, we take the value of a life to be equivalent to 14 times the gross national product per capita, which implies that any proportion of uninformed smokers greater than three percent would generate a net social cost at the actual level of tobacco consumption. Then, of course, a smaller proportion of uninformed smokers is required to bring the optimal tobacco consumption to zero. Thus, despite claims to the contrary made elsewhere in World Bank background studies, the results reached by Peck and his colleagues suggest that the "socially-optimal level of consumption of tobacco" is indeed zero. In other words, they implicitly agree with the Barnum assessment that the world would be better off with no production or use of tobacco.

World Bank economists are faced with a difficult question: If tobacco ultimately proves costly to its users, why do people continue to use it?

BAD ECONOMICS

In presenting studies indicating that the world would be better off without any tobacco use, World Bank economists are faced with a difficult question: If tobacco ultimately proves costly to its users, why do people continue to use it? The Bank economists attempt to answer that question by making strange assumptions about information, addiction, and political processes.

Perfect information The World Bank studies argue, in fact, that if people had perfect information about tobacco, there would be no tobacco use. In other words, they assume that perfect information is optimal, and that only perfectly informed consumers make choices with normative standing.

Obviously, that argument is problematic. Information is a good that is produced with the utilization of resources (if only time), and information provides a net benefit only if the value of its advantages outweighs the cost of the resources. We seldom if ever pursue perfect knowledge as consumers—we do not get an advanced degree in computer science when we want to purchase a computer, or a doctorate in finance before buying life insurance, or an M.D. in orthopedics before skiing—because the benefits of that knowledge would be outweighed by the cost of obtaining it. What we do want is an optimal amount of information—the amount that yields the most net benefits, i.e., benefits minus costs.

Moreover, we cannot argue that consumers are broadly ignorant of the health risk of smoking. For many decades, the press, public authorities, and competing tobacco companies that advertise "less tar" in their cigarettes have bombarded consumers with the message of tobacco's dangers. In fact, the message has probably gone out too much; according to research, U.S. smokers greatly overestimate the probability of smoking-related diseases.

Free choice and consumption externalities World Bank analysts also argue that smokers often start too young to make a sovereign decision, and become addicted by the time they realize their risks. The analysts embrace what Jacob Sullum calls the "voodoo pharmacology" conception of addiction as destructive of free will. That idea is contradicted by much evidence: Some quitters start to smoke again long after any pharmacological effect is gone, smokers appear to prefer cigarettes to nicotine gums or patches, and 50 percent of nonsmokers are former smokers. Obviously, there is much more in smoking than addiction to nicotine: Smoking is just one of many individual lifestyle choices.

Even if the philosophical concerns about the meaning of free will are put aside and the costs that the uninformed

impose on themselves are treated as a sort of negative consumption externality, once we start second-guessing consumers, where do we stop? Although some consumption externalities—related to "public goods"—have good standing in neoclassical economics, the notion is almost indefinitely flexible.

What is more, if we are to consider negative externalities, should we not also consider the positive externalities of smoking? The use of tobacco is well known for enhancing meals, friendly conversations, and activities in public places such as shopping centers, office buildings, dance clubs, and lounges. If we want to be creative in finding negative externalities, we should at least look as hard for positive ones.

The perfect state According to World Bank economists, another reason that tobacco use persists is because imperfect markets make decisions that should be made by perfect governments. A telling illustration is given in the World Bank background study "The Economic Rationale for Intervention in the Tobacco Market":

> *A priori, parents would ideally always be willing and able to protect children from tobacco themselves. If this happened, there would be little need for government to duplicate such efforts ... Perfect parents, however, are rare.*

That perspective assumes that political leaders should make welfare decisions for their constituents just as parents do for their children. What is more, it assumes that the leaders will choose optimal solutions as calculated by omniscient bureaucrats and recommended by disinterested experts.

Such a notion of an all-knowing, impartial government conflicts with Public Choice theory. Public Choice theory has shown that political and bureaucratic processes are often more imperfect than the market. To justify government intervention, it is not enough to show that market failures exist, but also that the cost of a public policy will not exceed its benefits. The World Bank's economists do not make that demonstration in regard to tobacco use.

World Bank analysts justify government intervention with so-called "existence values," a sort of consumption externality felt by whoever defines what social welfare means. According to the analysts, "Part of the external cost of tobacco smoking may arise because of the value placed on the existence of human life, that is, so called existence value." Such a viewpoint leads us to ask why paternalistically guided human life has an "existence value," but individual liberty does not. Such issues put us outside the realm of economics, but they should be acknowledged as such, and not be unquestionably left for the World Bank to decide.

Private property Alternatives to public policy solutions to market failures are private-property solutions. Externalities are inseparable from social interaction, and property rights are generally the most efficient way to bring decision-makers to incorporate externalities into their choices.

In non-technical parlance, private property minimizes clashes in social interactions. Consider smoking regulations or bans on smoking in public places. To the extent that many "public places" such as restaurants are actually private property, regulations or bans are equivalent to nationalization, and prevent property owners from responding in diversified ways, and with the right incentives, to conflicting preferences.

CONCLUSION

However incomplete, questionable, or biased its arguments are, the World Bank feels obliged to use economics to justify government intervention in smoking. To their credit, the World Bank and its analysts do acknowledge much economic theory and evidence that the public health literature has tried to suppress for decades, such as that "smokers clearly receive benefits from smoking," or that addiction is not necessarily irrational.

Yet, the World Bank has continued to move in the camp of the anti-smoking movement. Its analysts may dig even deeper into welfare economics to find justifications for government intervention. But that is politics and bureaucracy, not good economics. R

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CRS Report for Congress

The Cigarette Tax Increase to Finance SCHIP

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Summary

The Senate Budget Resolution, S.Con.Res. 21, 110th Congress, permits an increase in the cigarette tax to pay for the State Children's Health Insurance Program (SCHIP). Current federal taxes are 39 cents per pack, and taxes imposed at all levels of government account for about a third of the price of cigarettes. A 50 cent increase, for example, would raise nearly $7 billion a year, but would cost state and local governments about $1 billion. (An original proposal to raise the tax by 61 cents was not adopted, so the likelihood of a tax increase and its potential size is uncertain.) A justification for the tax is to discourage smoking, particularly by teenagers. Most evidence suggests there is likely to be a reduction, but that the response may be small. One reservation about the tax is that the burden falls heavily on low-income individuals.

Introduction

The Senate Budget Resolution, S.Con.Res. 21, 110th Congress, allows the cigarette tax to be raised to help pay for re-authorization of the State Children's Health Insurance Program. An original proposal would have mandated a 61 cent tax increase per pack, but the resolution makes such a tax possible but not mandatory and does not set the level. This report describes current taxes, discusses potential revenue gains, and discusses some of the basic issues surrounding a tax increase.

Current Federal Taxes on Tobacco

Tobacco excise tax rates vary by tobacco product, but the vast majority of these taxes are on cigarettes, which account for 90% of sales of tobacco products, and totaled $88 billion in 2005.[1] Federal cigarette taxes are $0.39 per pack, and account for 97% of federal tobacco tax revenue. There is a 4 cent tax on small cigars. Large cigars carry a tax of 20.719% of sales price, not to exceed $48.75 per 1,000 units, leading to a maximum tax

[1] *Standard and Poor's Industry Surveys: Alcoholic Beverages and Tobacco*, November 30, 2006.

of 5 cents per cigar. Per ounce, the tax is 7 cents on pipe tobacco; 1 cent on chewing tobacco; 4 cents on snuff; and 7 cents on roll-your-own tobacco. There are also taxes on cigarette paper and cigarette tubes.

Tobacco tax receipts in the United States include $7.8 billion in federal tax, $13.6 billion in state and local taxes, and $7.5 billion in payments from the Master Tobacco Settlement.[2] State and local taxes, therefore, are roughly 68 cents per pack and the tobacco settlement payment is approximately the same as the federal tax, 39 cents per pack. Although the tobacco settlement payments resulted from negotiations between the tobacco companies and the states to settle state lawsuits, the payments function as if they were a national tobacco excise tax that is allocated to the states, and any changes that alter consumption would affect these payments. Some of the states have securitized their payments (exchanged the stream of payment for a fixed up-front amount). According to estimates, about a quarter of payments are made to private investors, rather than to state and local governments.[3] As a percentage of sales revenues, the federal, state and local, and tobacco settlement payments are respectively 8.8%, 15.5% and 8.5%, for a total of 32.5%.

Revenue Gain from Tax Changes and Effects on the State and Local Governments

In their 2005 Budget Options study, the Congressional Budget Office estimated that a 50 cent increase in the cigarette tax would result in a revenue gain of $6.7 billion. This gain may appear low, since a 50 cent increase is 1.28 times the current tax of 39 cents per pack, and would appear to raise around $10 billion. That is, the revenue could be roughly estimated as 1.28 times $7.8 billion. But the projected gain is only $6.7 billion. The most important reason for this difference is the interaction between the corporate income tax and the excise tax. Since excise taxes are deducted from income taxes by manufacturers, there is a revenue loss from the income tax, and a rule of thumb is typically that about 25% is lost, making the estimate $7.5 billion.

The second reason is that the increased tax raises the price and reduces consumption. Consider the case where the price elasticity (capturing the response of consumers' purchases to a change in price) is 0.4, a typical assumption for smoking. That means that a 10% increase in price will reduce quantity consumed by 4%. In the example considered

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[2] Data on federal tax revenues from Alcohol and Tobacco Tax and Trade Bureau, Cumulative Summary, Fourth Quarter FY2006. Data on state and local taxes from U.S. Census Bureau tables: *State Government Tax Collections: 2005* and *State and Local Government Finances by Level of Government and by State: 2003-04*. Data on tobacco settlement payments for 2005 are from Nieman Watchdog, "Not Much Tobacco Settlement Money Goes to Reducing Smoking," December 6, 2006, at[http://niemanwatchdog.org/index.cfm?fuseaction=ask_this.view&askthisid=00156].

[3] Payments received by the states are estimated at $5.8 billion in FY2005 and $5.4 billion in FY2006, because many states have securitized their tobacco settlement payments. Data on tobacco payments received by the states are from Government Accountability Office, *Tobacco Settlement: States' Allocation of FY2005 and Expected FY2006 Payments*, GAO-06-502, April 2006.

here, given the tax as a share of price, the price increase would be 11.3% (1.28 times 8.8), and the quantity consumed would fall by 4.5%. That reduction in quantity (considered before the excise tax interaction) is applied to both the old ($7.8 billion) and the new ($10 billion), to yield a fall in revenues of approximately $0.8 billion. Thus, the net excise tax gain is not $10 billion, but $9.2 billion. The number should also be multiplied by 0.97 to eliminate the 3% of the tax levied on other tobacco products. The net yield is therefore projected at $9.2 billion times 0.97 times 0.75 (to account for the excise tax effect), for a net gain to the federal government of $6.7 billion. This same method could be applied to any tax change.

This behavioral response from a federal tax increase would reduce state and local taxes — by 4.5% in the case of the 50 cent tax increase. Therefore, state and local revenues of $13.6 billion would fall by $0.61 billion, and tobacco settlement payments of $7.8 billion would fall by $0.35 billion, for a total of almost $1 billion, unless states and local governments also raised their taxes.

Issues Surrounding Tobacco Taxes

There are many alternative sources of revenue (or offsetting spending) for funding the child health program. Are tobacco taxes the most desirable source of revenue? Compared to other taxes, the incentive effects may be desirable. At the same time, the burden falls heavily on lower income people, which may be of concern. Thus, there is generally a trade-off between the objective of discouraging smoking, and particularly discouraging youth smoking, and the distributional effects of the tax. The remaining issue involves an economic efficiency question relating to arguments that have been made that additional taxes are appropriate to cover costs smokers impose on others. A number of economic studies have questioned that proposition. There is also a question of the degree to which, having covered these costs, government policies should interfere in private decisions that create health risks. The following sections discuss these issues.

Effect on Smoking and Health

A large body of literature has suggested that increases in the price of tobacco reduce smoking. However, this response is not very large (in economists' parlance, the response is relatively "inelastic"). Most of the evidence has found the price elasticity to be between 0.3 and 0.5 in absolute value, meaning that a 10% increase in price would cause a 3% to 5% decrease in the number of cigarettes smoked.[4] For older adult smokers, about half of this effect was due to fewer smokers (a participation response) and about half due a reduction in smoking (a quantity response). For younger smokers, the participation response was more important. There is some evidence that the response declines with age

[4] For a review of the literature on price elasticities for cigarettes, See CRS Report 94-214, *Cigarette Taxes to Fund Health Care Reform: An Economic Analysis*, by Jane G. Gravelle and Dennis Zimmerman, and CRS Report 97-995, *The Proposed Tobacco Settlement: Effects on Prices, Smoking Behavior, and Income Distribution*, by Jane G. Gravelle (out of print and available from the author). For a review, see also Badi H. Baltagi and Rageev K. Goel, "State Tax Changes and Quasi-Experimental Price Elasticities of U.S. Cigarette Demand: An Update," *Journal of Economics and Finance*, vol. 28, fall 2004, pp. 422-429.

and that it rises with income, and that it is higher for women, African-Americans, and Hispanics.[5] A recent study, however, found no variation with income.[6]

Some recent studies suggest that the response may be less, or that the benefits of reducing smoking may be less. There is some evidence that the response has been declining, an outcome that might not be surprising, since, given a decline in smoking, the remaining smokers are more resistant to price signals. In addition, there is evidence that elasticities might be overstated in studies that compare state smoking levels because states with higher taxes may also have populations more hostile to smoking.[7] Also, recent studies found that smokers may respond to price increases by increasing the intensity of smoking by buying cigarettes with more nicotine and tar, inhaling more deeply and smoking closer to the filter, which could have deleterious effects since more intensive smoking can be more harmful.[8]

Due to the limited effects on adult smoking, some arguments have been made that the increased taxes on adults are necessary over the interim to discourage teenage smoking. Evidence has suggested that teenage smoking is more responsive to price; the original responses were estimated at elasticities over one, but subsequent analysis led to an estimate of around 0.7 and a number of recent studies have confirmed this general range.[9] Other studies have found smaller responses,[10] or a very small response by younger

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[5] The previous CRS reports cited provide evidence of the age effect; see also Matthew C. Farrelly, Jeremy W. Bray, Terry Pechacek, and Trevor Woolery, "Response by Adults to Increases in Cigarette Prices by Sociodemographic Characteristics," *Southern Economic Journal*, vol. 38, July 2001, pp. 156-165.

[6] Greg Colman and Dahlia K. Remler, *Vertical Equity Consequences of Very High Cigarette Tax Increases: If the Poor are the Ones Smoking: How Could Cigarette Tax Increases be Progressive?*, National Bureau of Economic Research Working Paper 10906, November 2004.

[7] Baltagi and Goel, "State Tax Changes and Quasi-Experimental Price Elasticities of U.S. Cigarette Demand: An Update;" Theodore E. Keeler, The-wei Hu, Williard G. Manning, and Hai-Yen Sung, "State Tobacco Taxation, Education and Smoking: Controlling for the Effects of Omitted Variables," *National Tax Journal*, vol. 54, March, 2001, pp. 83-102. Both studies found a decline over time and the latter study found an overstatement of elasticities because of state effects. Another study found variations in elasticities across states; Macki Aissoko, "Cigarette Consumption in Different U.S. States, 1955-1998: An Empirical Analysis of the Potential Use of Excise Taxation to Reduce Smoking," *Journal of Consumer Policy*, vol. 25, March 2002, pp. 89-106.

[8] Jerome Adda and Grancesca Cornaglia, "Taxes, Cigarette Consumption, and Smoking Intensity," *American Economic Review*, vol. 96, September 2006, pp. 1013-1028. This study reviews other studies that also found smoking intensity effects.

[9] Jonathan Gruber and Jonathan Zinman, *Youth Smoking in the U.S.: Evidence and Implications*, National Bureau of Economic Research Working Paper 7780, July 2000; John A. Tauras, Patrick M. O'Malley, and Lloyd D. Johnston, *Effects of Price and Access Laws on Teenage Smoking Initiation: A National Longitudinal Analysis*, National Bureau of Economic Research Working Paper 8331, June 2001; Hana Ross and Frank Chaloupka, *The Effect of Cigarette Prices on Youth Smoking*, ImpacTeen, Research Paper Series No. 7, February 2001.

[10] William Evans and Lynn Huang, *Cigarette Taxes and Teen Smoking: New Evidence from Panels of Repeated Cross Sections*, Working Paper, University of Maryland, April 15, 1998.

teenagers.[11] One recent study replicated the 0.7 elasticity using one statistical approach, but in using another the authors consider superior, they found essentially no response of the initiation of smoking to price.[12] Another paper found a weak and insignificant effect after controlling for anti-smoking sentiment.[13] While much evidence suggests that teenagers are more responsive to prices, these recent studies raise some questions about the effectiveness of tax increases on teenage smoking, especially among young teenagers.

The evidence on smoking indicates that higher prices will decrease smoking participation and quantity. It is possible, however, that other types of interventions, such as stricter regulations on sales to teenagers, counseling, education, and assistance with smoking cessation might be more effective.

Distributional Effects

It is generally recognized that cigarette taxes are one of the most regressive taxes, that is, a tax that falls more heavily on lower income individuals as a percentage of income. Indeed, it is probably the most regressive of the federal taxes. Smokers tend to smoke a fixed amount of cigarettes, so that they pay a fixed amount of tax. (Since the tax is a fixed amount per pack, lower income individuals who buy cheaper brands still pay the same amount of tax.) In addition, smoking is more prevalent among lower income individuals.

To illustrate, in 1998 the Joint Committee on Taxation estimated that a 76 cent tax increase (brought about through a proposed federal tobacco settlement) would raise the effective tax rate on average by 0.3% of income, but would increase the burden of those with incomes below $10,000 by 2% of income and the burden of those in the $10,000-$20,000 income by 0.6% of income.[14] Since this rate applies to all families, those families with smokers would pay more. For example, a family with one smoker who smokes 1.5 packs a day would pay, with a 76 cent tax, an additional $417 in taxes, which is 4.2% of a $10,000 income and 8.4% of a $5,000 income.

To the extent the burden of the tax falls on low-income families and the individuals in those families continue to smoke, low-income children in some families could be harmed even though the child health care provision helps low-income children in general.

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[11] Jonathan Gruber, *Youth Smoking in the U.S.: Prices and Policies*, National Bureau of Economic Research Working Paper 7506, January 2000.

[12] Philip DeCicca, Donald Kenkel, and Alan Mathios, "Putting Out the Fires: Will Higher Taxes Reduce the Onset of Teenage Smoking?," *Journal of Political Economy*, vol. 110, February 2002, pp. 144-169.

[13] Philip DeCicca, Donald Kenkel, Alan Mathios, Yoon-Jeong Shin, and Jae-Young Lim, *Youth Smoking, Cigarette Prices, and Anti-smoking Sentiment*, National Bureau of Economic Research Working Paper 12548, August 2006.

[14] Joint Committee on Taxation, *Description and analysis of revenue-related provisions of S. 1415 relating to the national tobacco policy as modified by the manager's amendment*, JCX-45-98, June 3, 1998.

Economic Efficiency

A final issue that may arise relevant to cigarette taxes is the argument that higher taxes should be imposed on smokers because they impose costs on others largely through higher health care costs that may be paid for through insurance plans, both government and private, and because of lost days at work, and some other costs. Some economists have questioned this argument, however, because smokers' premature deaths, while harmful to smokers and their families, reduce costs of certain government programs such as Social Security, Medicare, and Medicaid.[15] These calculations do not account for more subjective effects such as irritation to others, although such problems might be better addressed through private market mechanisms (provision of smoking and non-smoking commercial establishments) and regulation. Some disputes about the magnitude of environmental tobacco smoke remain.

If smokers are not imposing costs on others, or imposing costs that are less than existing taxes, and if they are making rational decisions to engage in an activity which, while damaging to their health, is nevertheless pleasurable, then an additional tax would not increase economic efficiency. It is not clear, however, whether young smokers, where smoking is generally initiated, are able to fully assess the costs of smoking.

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[15] For a discussion, see W. Kip Viscusi, "Tobacco Taxes," In *The Encyclopedia of Taxation and Tax Policy*, Ed. Joseph J. Cordes, Robert D. Ebel, and Jane G. Gravelle, Washington, DC, Urban Institute, 2005.

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The Truth About SCHIP Shortfalls

Nina Owcharenko

Congress should not reward state officials' irresponsibility. Lawmakers should take a hard look at efforts to bail out those states facing funding shortfalls in their State Children's Health Insurance Programs (SCHIP). Policymakers must consider the underlying issues contributing to these shortfalls—specifically, some states' chronic fiscal mismanagement, excessive income eligibility limits, and extensive coverage of adults. Congress should resist rewarding states that have ignored the program's intent and exceeded the program's scope.

Shortfalls. Unlike Medicaid, the entitlement program for the indigent and poor, SCHIP was designed as a block grant program. The 1997 law appropriated $40 billion over 10 years to assist states in helping low-income, uninsured children with health care coverage. States receive a fixed federal contribution each year. State allotments are based on a formula that includes the number of low-income, uninsured children and the cost of health care in the state. Each state can access its annual allotment for three years. After the three-year period, any unused funds are subject to a redistribution process, whereby unused funds are reallocated to states that have exhausted their original allotments.

Shortfall states are those states expected to exhaust all their available funds. According to the Congressional Research Service, 14 states are projected to have a shortfall in fiscal year 2007: Alaska, Georgia, Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, Rhode Island, and Wisconsin.[1]

Previous Bailouts. State overspending of allotments is not a new phenomenon, but it was less obvious in the past because shortfall states usually received unspent funds from other states. Today, however, fewer states are leaving funds unspent, resulting in a smaller pool of funds to be redistributed. In FY 2001, 39 states had unspent allotments, while 12 had spent their original allotments.[2] In FY 2006, only 11 states had unspent allotments, compared to 40 states that had exhausted their allotments.[3] Moreover, in FY 2001, over $2 billion in unused allotments was available for redistribution, compared to $173 million in FY 2006.[4] Shortfall states are repeatedly requesting additional federal dollars to bail them out.

FY 2006: To address FY 2006 shortfalls, Congress recently approved $283 million in new spending in the Deficit Reduction Act for bailouts of 12 projected shortfall states.[5] At the end of FY 2006, the unused funds from FY 2003 also became available for redistribution. Four of the 12 states expecting shortfalls received an additional bailout of $172 million through the redistribution process.[6]

FY 2007: Congress has also already acted to address projected shortfalls for FY 2007. The

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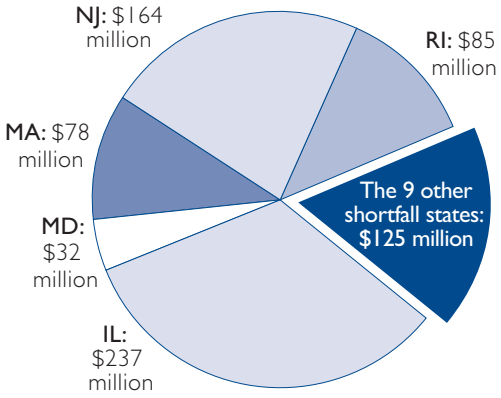
National Institutes of Health Reform Act, passed in the waning days of the 109th Congress, released FY 2004 funds that will soon expire and part of unspent FY 2005 funds to bail out some of the 14 states facing shortfalls in FY 2007.[7] These funds, however, were not distributed under the usual procedure of redistributing funds among all shortfall states. The legislation instead directed the Secretary of Health and Human Services to distribute these funds to those states facing shortfalls earlier in the fiscal year. Five of the 14 states projected to face shortfalls in FY 2007 received redistributed FY 2004 funds, and six (including the five states receiving FY 2004 funds) received the partial FY 2005 funds.[8] Even with this infusion of additional funds, all 14 states expect to face shortfalls for FY 2007.[9]

Analyzing the bailouts from FY 2006 and FY 2007 reveals a pattern. Besides possible flaws in its formula, SCHIP's funding structure encourages states to exceed their original allotments at the expense of more fiscally prudent states and, as recent activity has proven, can lead to pressure for Congress to bail out states with shortfalls.

Illinois, New Jersey, and Rhode Island have all received more funding in each of the four bailouts, and Maryland and Massachusetts are not much further behind, receiving funds three of the four times. In addition, these states have also received the lion's share of the funds: Illinois has received $236.6 million; New Jersey, $164.4 million; Rhode Island, $84.9 million; Maryland, $31.5 million; and Massachusetts, $77.8 million.[10] Eighty-three percent of all bailout funding has gone to these five states.[11]

Chart 1 WM 1381

FY 2007 Shortfall States: Bailouts for FY 2006 and FY 2007



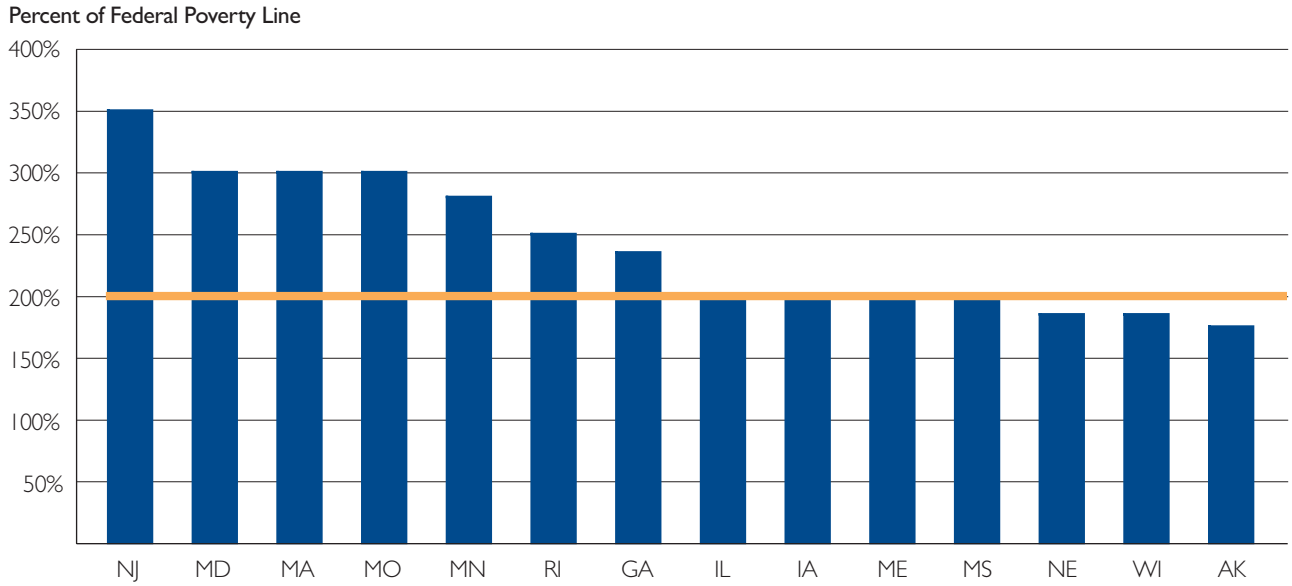
Total bailout for all shortfall states: $720 million

Source: Heritage Foundation calculations based on Chris Peterson, "SCHIP Financing: Funding Projections and States Redistribution Issues," Congressional Research Service Report for Congress RL32807, May 8, 2006, p.11, and Chris Peterson, "SCHIP Provisions of H.R. 6164 (NIH Reform Act of 2006)," Congressional Research Service *Report for Congress* RS22553, December 13, 2006, p. 5.

1. Chris Peterson, "SCHIP Provisions of H.R. 6164 (NIH Reform Act of 2006)," Congressional Research Service *Report for Congress* RS22553, December 13, 2006, p. 5.
2. Kathryn G. Allen, "Children's Health Insurance: States' SCHIP Enrollment and Spending Experiences in Implementing SCHIP and Considerations for Reauthorization," United States Government Accountability Office Testimony GAO-07-447T, February 17, 2007, p. 29, at *www.gao.gov/new.items/d07501t.pdf*.
3. Figure includes shortfall states that exhausted *all* their allotments. *Ibid.*
4. Chris Peterson, "Federal SCHIP Financing: Testimony Before the Senate Finance Health Subcommittee," Congressional Research Service, July 25, 2006, p. 1.
5. DRA funds were limited to removing shortfalls for children, but redistributed FY 03 funds were allocated to states that also cover adults. Chris Peterson, "SCHIP Financing: Funding Projections and State Redistribution Issues," Congressional Research Service *Report for Congress* RL32807, May 8, 2006, p. 11.
6. *Ibid.*
7. Peterson, "SCHIP Provisions of H.R. 6164."
8. *Ibid,* p. 5.
9. *Ibid.*
10. Calculations based on Peterson, "SCHIP Financing: Funding Projections and States Redistribution Issues," p. 11 and "SCHIP Provisions of H.R. 6164," p. 5.

Chart 2 WM 1381

SCHIP Eligibility Levels in Shortfall States as a Percentage of the Federal Poverty Line



Source: Shortfall states based on projections in Chris Peterson, "SCHIP Provisions of H.R. 6164 (NIH Reform Act of 2006)," Congressional Research Service *Report for Congress* RS22553, December 13, 2006, and eligibility data (as of July 2006) provided by the U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, Centers for Medicaid and State Operations, October 5, 2006.

Other Characteristics of the Shortfall States. Two other characteristics should also be examined when considering further bailouts of shortfall states.

Income Eligibility. The original intent of SCHIP was to help low-income, uninsured children whose families earned too much for Medicaid but not enough to purchase private coverage. The law defines as "low income" those children whose family's income is below 200 percent of the Federal poverty line (FPL), or $40,000 for a family of four.[12] Of the 14 projected shortfall states, seven have set SCHIP eligibility above 200 percent of the FPL.[13] Of those seven, four states (Maryland, Massachusetts, Missouri, and New Jersey) are at or above 300 percent of FPL, or $60,000 for a family of four.[14] Four states are at 200 percent of the FPL, and three states (Alaska, Nebraska, and Wisconsin) are below 200 percent of the FPL.[15]

Adult Eligibility. Moreover, some of the projected FY 2007 shortfall states use SCHIP funds to cover adults.[16] Five of the 14 shortfall states—Illinois, Minnesota, New Jersey, Rhode Island, and Wisconsin—cover parents, pregnant women, or childless adults.[17] According to the General Accountability Office, "Adults accounted for an average of 55% of

11. Of the remaining shortfall states, Mississippi has received the most, with a one-time infusion of $73.6 million through the Deficit Reduction Act.
12. U 42 U.S.C. § 1397jj. An exception was made for states with Medicaid eligibility levels at or close to 200 percent of FPL by allowing them to expand SCHIP coverage to children in families earning 50 percent above the state's Medicaid eligibility level.
13. Based on shortfall projections in Peterson, "SCHIP Provisions of H.R. 6164," p. 5, and eligibility data (as of July 2006) provided by the U.S. Health and Human Services, Centers for Medicare and Medicaid Services, Centers for Medicaid and States Operations, October 5, 2006.
14. *Ibid.*
15. *Ibid.*
16. As of January 2007, 15 states cover adults through waivers. See Allen, "Children's Health Insurance," p. 21.

enrollees in the shortfall states" in FY 2005.[18] While the Deficit Reduction Act prohibited the Secretary of Health and Human Services from approving any *new* state waivers to cover childless adults, existing waiver states are exempt. As a way to prioritize those shortfall states that remained focused on children, states were prohibited from applying DRA redistribution funds toward coverage of non-pregnant adults, but the redistributions since then have not been limited in this way.[19]

Conclusion. SCHIP was not designed to be an entitlement program with an open-ended commitment from the federal government. The redistribution process and recent infusions of additional federal funding rewards overreaching, fiscally irresponsible states that exceed SCHIP guidelines.

Before Congress provides another bailout, federal policymakers should consider its effects. At the very least, Congress should differentiate between shortfall states that remain within the original intent of the law and those states that exploit its funding structure and the scope of the program at the expense of federal taxpayers.

States know their federal SCHIP contributions and should plan accordingly. If they choose to exceed these fiscal allocations or the boundaries of the program, they should be prepared to use their own dollars to pay for it.

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17. *Ibid,* p. 22.

18. Allen, "Children's Health Insurance," p. 32.

19. Peterson, "SCHIP Financing," p. 8.