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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.