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State Cigarette Excise Taxes: Implications for Revenue and Tax Evasion

Final Report

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EXECUTIVE SUMMARY

State cigarette excise taxes have long been used to raise revenue, curb smoking, and fund tobacco prevention and smoking cessation programs. Recently, there has been a dramatic increase in the average level of taxes and the number of states increasing their tax rates. To better inform the debate over excise tax increases and their impact on revenue and tax evasion, we examine the impact of tax increases on cigarette sales and revenue from recent state experiences. The following is a summary of the key findings:

- Increasing state cigarette tax rates reduces smoking levels, especially among youth.
- States that do not increase their tobacco tax rates lose tobacco tax revenue over time because of inflation and ongoing smoking declines.
- States that significantly increase their tobacco tax rates gain tobacco tax revenue, despite related consumption declines, tax avoidance, and smuggling.
- Although cigarette tax avoidance and smuggling increase somewhat after cigarette tax increases, they do not cause state revenues to decline but only reduce the size of the states' revenue gains from the tax increases.
- Cigarette sales typically decline sharply immediately after a cigarette tax increase and then rise again to settle on a new sales level lower than the sales level before the increase. This pattern likely reflects a surge in tax avoidance efforts around the date of the tax increase, which subsequently subsides.
- Organized smuggling accounts for the largest share of evaded state cigarette taxes, with Internet sales a growing threat. Cross-border purchases by state smokers account for only a relatively small portion of all state cigarette tax revenue reductions caused by tax evasion.
- Curbing tobacco tax evasion offers states an opportunity to increase the additional revenues they receive from tobacco tax increases.
- Since the beginning of 2002, 26 new state cigarette tax increases have been implemented and five more have been passed into law to go into effect on July 1, 2003.
- The average state cigarette tax rate as of July 1, 2003 is 68.3 per pack.

Contents

1. Introduction	1
2. Brief History of Tax Evasion (1960s–1980s)	2
3. Cigarette Excise Tax Trends and Tax Evasion in Recent Years (1990–2002)	3
4. The Impact of Taxes on Cigarette Excise Tax Revenue	6
5. The Internet: A Growing Source of Low Price Cigarettes	11
6. Conclusion	12
References	12
Appendixes	
A Impact of Tax Increases on Sales and Cigarette Excise Tax Revenue	A-1
B Examples of the Impact of Taxes on Sales and Cigarette Excise Tax Revenue.....	B-1

Figures

Figure 1	State-Level Cigarette Excise Tax Rates, February 1, 2003.....	5
Figure 2	Average Tax Difference between Neighboring States	5
Figure 3	Total Fiscal Cigarette Excise Tax Revenue for Georgia, Kentucky, South Carolina, Virginia, and West Virginia.....	7
Figure 4	Total State-Level Cigarette Excise Tax Revenues.....	8
Figure 5	Monthly Cigarette Sales in New York (in millions of packs).....	10
Figure 6	Monthly Cigarette Excise Tax Revenue for New York (in millions of dollars)	10

Tables

Table 1	State-Level Sales and Cigarette Excise Tax Revenue in Response to Cigarette Excise Tax Increases	7
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1. INTRODUCTION

State cigarette excise taxes have long been used to raise revenue, curb smoking, and fund tobacco prevention and smoking cessation programs. There is convincing evidence that increases in cigarette excise taxes (and higher cigarette prices) reduce smoking rates for both adults and youth (Chaloupka and Warner, 1999). Recently, there has been a dramatic increase in the average level of taxes and the number of states increasing their tax rates. In 2002 alone, 21 states raised their cigarette tax, more states than in the past 5 years combined. This spate of tax increases may largely be in response to state budget shortfalls (Fleenor, 2003). For example, the governor of California has proposed a \$1.10 per pack increase to partially cover a deficit of more than \$34.6 billion in fiscal year 2003–2004 (California Budget Project, 2003). However, such increases rarely get passed without opponents expressing a number of concerns. Opponents' objections to cigarette excise tax increases are numerous and generally misleading. For example, opponents of tax increases often argue that they promote tax evasion¹ and may decrease cigarette excise tax revenue. However, every state that implemented a significant tax increase between 1990 and 2001 also realized a significant increase in total annual cigarette excise tax revenue. In fact, states that do not increase their cigarette tax rates lose cigarette tax revenue over time due to inflation and smoking declines. Furthermore, although cigarette tax evasion and smuggling increase somewhat after a state raises its cigarette tax rate significantly, such activities do not cause revenue declines—they only reduce the size of the state's revenue increase.

By raising cigarette prices, state cigarette tax increases provide a greater economic incentive for smokers to try to find lower-cost cigarettes by patronizing stores with lower prices, switching to cheaper brands, buying cigarettes from nearby neighboring states that have lower cigarette tax rates, or buying cigarettes free from

¹For simplicity, in this report we refer to all efforts to avoid cigarette excise taxes as tax evasion. This includes legal (e.g., crossing state boundaries to purchase limited amounts of cigarettes), illegal (e.g., smuggling large quantities of cigarettes from low tax states to high tax states, purchasing on Native American reservations), and questionably legal (i.e., Internet) means.

state taxes on Native American reservations or over the Internet.² In particular, the greater disparities between state cigarette tax rates caused by recent state increases have provided larger economic incentives for smokers to go from states with newly raised cigarette taxes to neighboring lower-tax states to obtain cheaper cigarettes and have increased the size of the illegal profits available to those who smuggle from low-tax states (or no-state-tax Native American reservations) to high-tax states. For example, a December 27, 2002, article in the *Wall Street Journal* reports that smugglers purchase cigarettes in Virginia, where the cigarette tax is 2.5 cents per pack, or in North Carolina, where it is 5 cents per pack (Fairclough, 2002). The street value of the smuggled cigarettes nearly doubles when the cigarettes cross into Manhattan, where taxes are \$3 a pack (Fairclough, 2002). Studies indicate that such long-distance or organized smuggling of cigarettes accounts for the majority of state tobacco tax evasion, with smoker purchases from neighboring lower-tax states accounting for a much smaller portion (Farrelly et al., 2002).

States contemplating cigarette excise tax increases should recognize that state excise tax revenue will increase despite related consumption declines and any related tax evasion. But curbing tax evasion offers states an opportunity to further increase their revenues. To better inform the debate over excise tax increases and their impact on revenue and tax evasion, we examine the impact of excise tax increases on cigarette sales and cigarette excise tax revenue from recent state experiences. In addition, we briefly review the history of tax evasion and discuss the role of the Internet as a source of low price cigarettes.

2. BRIEF HISTORY OF TAX EVASION (1960s–1980s)

Following the 1964 Surgeon General's report on smoking and health, many states began to increase cigarette excise taxes, leading to a significant increase in the average level of taxes during the

²It is important to note that any increase in cigarette prices, regardless of cause, provides a greater economic incentive for smokers to try to find lower-priced cigarettes – and the major cigarette companies own price increases have raised the price of a pack of cigarettes by more than \$1.20 from the beginning of 1998 to the end of 2002 (USDA Economic Research Service, <http://www.ers.usda.gov/briefing/tobacco>).

following decades. The average state tax rate increased from 5.7 cents in 1964 to 15.5 cents in 1984. However, high inflation rates in the late 1970s and early 1980s eroded the real effect of the tax increases. In inflation-adjusted terms (2002 dollars), the tax rate increased from 33 cents per pack in 1964 to 49 cents in 1972 and declined to 27 cents per pack by 1984.

The tax hikes also increased tax differentials between states and provided additional incentives for tax evasion. A 1998 study by the Tax Foundation reports that in 1962 about 5.6 percent of all cigarette sales were subject to tax evasion (Fleenor, 1998). According to this study, by 1972, the percentage of smuggled cigarettes increased to 11.1 percent of all cigarette sales. During the 1970s, many states asked the federal government for assistance in preventing the loss of state tax revenue due to tax evasion. Upon the recommendation of the Advisory Commission on Intergovernmental Relations (ACIR) (1977), Congress subsequently passed the Contraband Cigarette Act (CCA) of 1978 (PL 95-575/Title 18 United States Code Chapter 114), which outlawed single sales, shipments, or purchases of more than 60,000 cigarettes not bearing the tax stamps of the state in which they are found. In the years following the CCA, interstate cigarette sales are believed to have declined significantly. In a follow-up study, the ACIR concluded that tax evasion had decreased during the 1980s, presumably because of the 1978 CCA (ACIR, 1985).

3. CIGARETTE EXCISE TAX TRENDS AND TAX EVASION IN RECENT YEARS (1990–2002)

In recent years, average state cigarette excise taxes have increased significantly from 31 cents (in 2002 dollars) in 1990 to 62 cents in early 2003. Based on taxes already passed into law, the national average will increase to 68.3 cents per pack as of July 1, 2003. Martin Feldman, a tobacco industry analyst at Merrill Lynch in New York, estimates that 21 states will raise their cigarette taxes this year and predicts the statewide average to increase to 82 cents per pack (Louis, 2003). The national average will continue to increase in

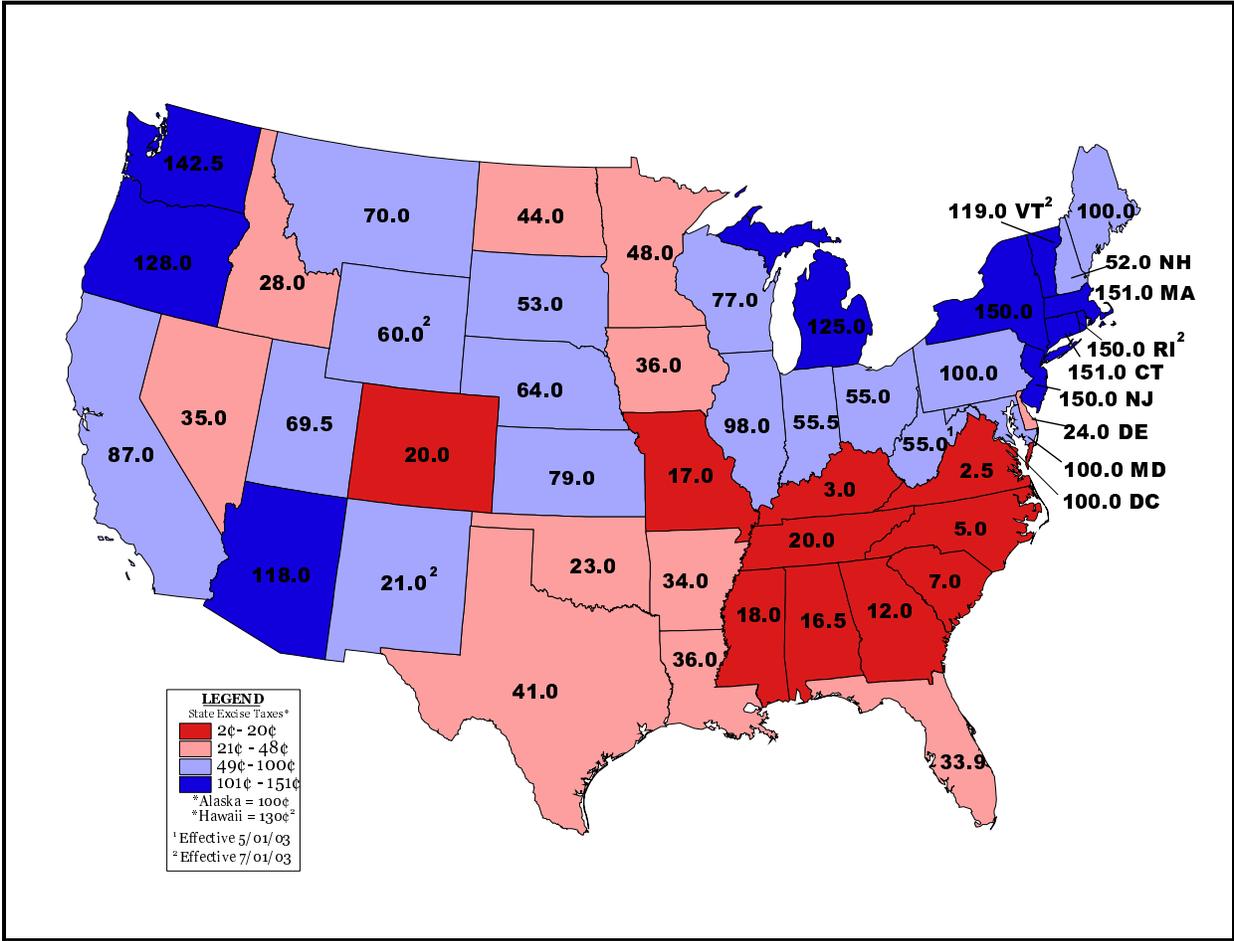
2004 due to tax increases that have already passed, which will go into effect in 2004.³

Although many states have increased cigarette excise taxes in recent years, it is noteworthy that among the seven states in the tobacco-producing regions in the southeastern United States—Georgia, Kentucky, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia—three states have not increased cigarette excise taxes since the 1970s: Georgia, Kentucky, and South Carolina. Virginia levied a 3-cent cigarette excise tax per pack in 1960 and reduced the excise tax to 2.5 cents per pack in 1966; Virginia has not increased its cigarette excise tax since 1960. North Carolina, a large tobacco-producing state, increased its tax rate from 2 cents to 5 cents per pack in 1991. Tennessee increased its cigarette excise tax rate from 13 cents to 20 cents per pack in 2002. West Virginia implemented a tax increase from 17 cents to 55 cents per pack, effective May 1, 2003.

Current state-level cigarette excise taxes vary from state to state and range from 2.5 cents per pack in Virginia to \$1.51 per pack in Massachusetts and Connecticut (Figure 1). The recent tax hikes have led to greater disparity in the level of taxes between states (Figure 2). The average cigarette excise tax in the seven southern states is 14.9 cents per pack compared with the national average of 68.3 cents per pack. The average tax difference between neighboring states increased from just 11 cents (in 2002 dollars) in 1990 to 27.7 cents in 2002. The very low rates in the southern states and the higher tax differential between neighboring states has led to renewed concern over tax evasion (Bartlett, 2002; Fleenor, 1998, 2003; Farrelly et al., 2002).

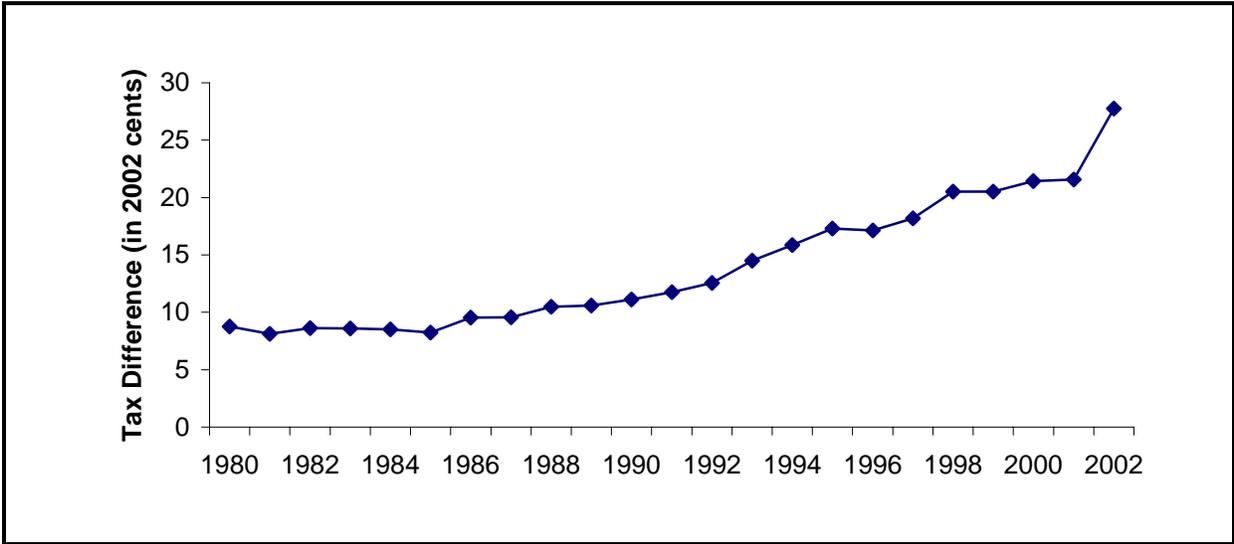
³Additional information on state cigarette tax increases can be found at the Campaign for Tobacco-Free Kids (<http://www.tobaccofreekids.org>).

Figure 1. State-Level Cigarette Excise Tax Rates, February 1, 2003



Source: RTI data.

Figure 2. Average Tax Difference between Neighboring States



While tax differentials between neighboring states encourage smokers to purchase cigarettes in lower price neighboring states, the low tax rates in the south encourage the larger problem of illegal long distance smuggling. Long distance smuggling is aided by the fact that North Carolina does not have tax stamps on cigarette packs, making it easy for smugglers to disguise the source of smuggled cigarettes. For example, a federal court has recently convicted several members of a criminal ring that smuggled cigarettes from North Carolina to Michigan to raise funds for the Hezbollah terrorist organization (Whitmire, 2003).

A study sponsored by the CDC's Office on Smoking and Health estimates that losses associated with tax evasion were less than \$170 million (in 2000 dollars) in 1990 but increased to more than \$550 million by 2000 (Farrelly et al., 2002). At the same time, however, state-level revenues from cigarette tax collection increased by more than \$900 million. States would have received \$550 million in additional revenue without tax evasion in 2000.

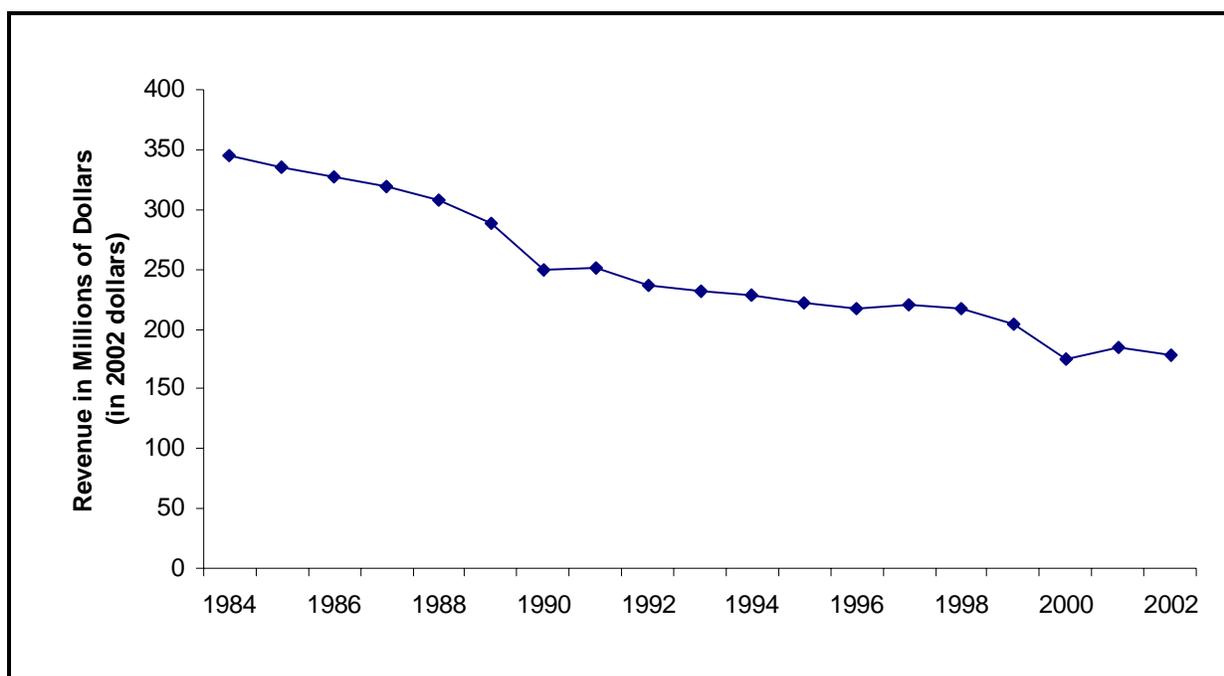
4. THE IMPACT OF TAXES ON CIGARETTE EXCISE TAX REVENUE

Revenue gains from 1990 through 2000 reflect the fact that all states that have increased their cigarette excise tax by at least 10 cents have successfully raised revenue. Although some note that increasing cigarette taxes leads to increases in tax evasion and crime associated with illegal smuggling (Bartlett, 2002; Fleenor, 1998, 2003), they fail to highlight the increase in overall cigarette excise tax revenue that results from tax increases. Table 1 provides examples from five U.S. states that increased their cigarette tax rates by 25 cents per pack or more between 1990 and 2001. In every case, the state's cigarette excise tax revenue increased in response to the tax rate increase. See Appendix A for additional examples.

Similarly, states that do not increase their cigarette tax rates see their inflation-adjusted cigarette excise tax revenue decline as smoking declines. For example, the five southern states that did not increase their cigarette excise tax rates from 1980 to 2002 experienced steady declines in their inflation-adjusted cigarette excise tax revenue (Figure 3).

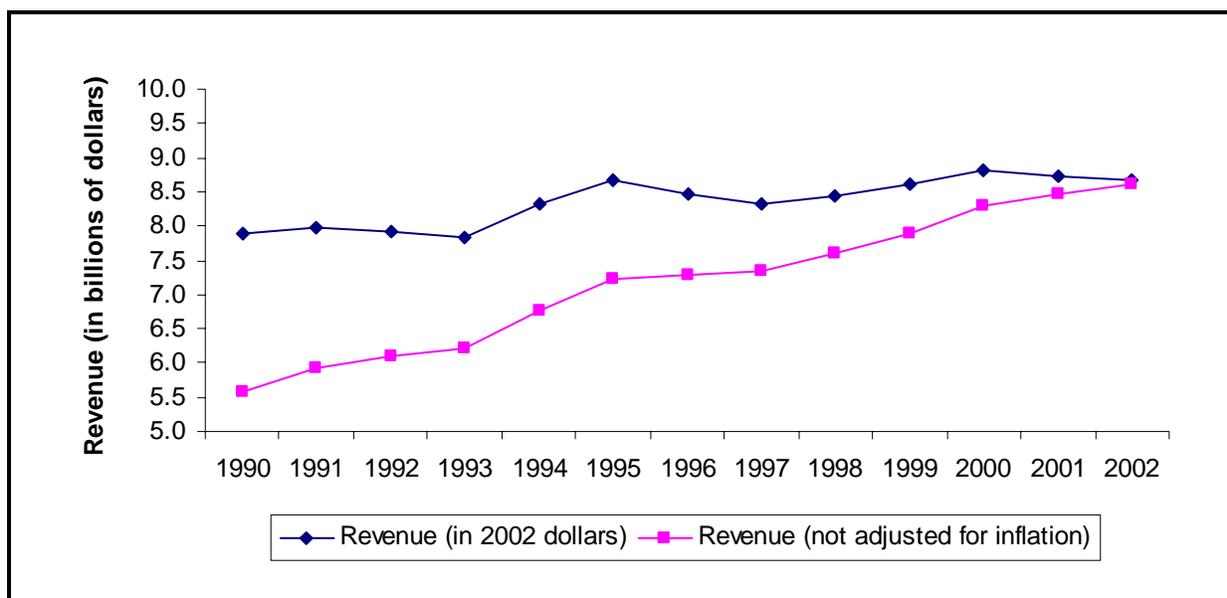
Table 1. State-Level Sales and Cigarette Excise Tax Revenue in Response to Cigarette Excise Tax Increases

State	Date	Tax Increase Per Pack (\$)	New State Tax Per Pack (\$)	State Sales Decline (%)	Revenue Increase (%)	Revenue Increase (\$)
Utah	7/1/97	\$0.25	\$0.52	-20.7%	86.2%	\$21,500,000
Maryland	7/1/99	\$0.30	\$0.66	-15.3%	52.6%	\$68,200,000
California	1/1/99	\$0.50	\$0.87	-18.9%	90.7%	\$555,000,000
Michigan	5/1/94	\$0.50	\$0.75	-20.8%	139.9%	\$341,000,000
New York	3/1/00	\$0.55	\$1.11	-20.2%	57.4%	\$365,000,000

Figure 3. Total Fiscal Year Cigarette Excise Tax Revenue for Georgia, Kentucky, South Carolina, Virginia, and West Virginia

To understand the trend in state cigarette excise tax revenues, we present total annual cigarette excise tax revenue for all states and the District of Columbia in Figure 4. The graph shows that as excise taxes increased over time,⁴ total revenue (from cigarette excise tax collections) across all states also increased. Therefore, smoking declines and cigarette tax avoidance and smuggling after state tax increases do not cause state cigarette revenue to decline but only reduce the size of the revenue increase.

Figure 4. Total State-Level Cigarette Excise Tax Revenues



The decline in cigarette sales in response to a tax increase has a short-term and a long-term component. Sales usually increase prior to a tax increase. This increase is probably driven by consumers who are hoarding cigarettes to delay the impact of the tax. Similarly, sales decline sharply following an increase in cigarette excise taxes.

The steep decline in sales following the tax increase is probably driven by consumers quitting or cutting back on smoking, and consumers who either use cigarettes that they have bought prior to the tax increase or cigarettes that they have bought from alternative low price sources, including lower price neighboring states, the

⁴The average state-level cigarette excise tax rate increased from 31.2 cents per pack in 1990 to 42.6 cents in 2001 (in 2002 dollars).

Internet, and Native American reservations. Following the steep decline in sales immediately after an increase in the cigarette excise tax, sales rise again to settle on a new sales level that is generally lower than the sales level before the tax increase. The increase in sales following the initial drop in sales is likely due to smokers returning to established cigarette purchasing habits (e.g., buying by the pack at nearby convenience stores) after using up stockpiles.

In the long run, higher cigarette taxes reduce smoking among adults and, especially, youth (Chaloupka and Warner, 1999).⁵ Declines in smoking will erode state-level cigarette tax revenue over time without additional tax increases.

To better illustrate the impact of taxes, we examine the recent 55-cent tax increase in New York. Figure 5 shows that while sales plummeted immediately following the tax increase, sales recovered to settle on a new sales level that is lower than the sales level before the tax increase. Despite the decline in sales, revenue increased dramatically (Figure 6). Additional examples of the impact of tax increases on sales and revenue for selected states are provided in Appendix B. These states represent various areas of the country and magnitude of tax increases.

⁵Besides youth, women, Africa-Americans, Hispanics, young adults, and adults with below-average incomes are the most likely to quit or cut back in response to cigarette tax increases (Farrelly et al., 2001). Accordingly, state cigarette tax increases will reduce the number and proportion of persons from these groups who are smokers or who pay cigarette taxes, which will shift the cigarette tax burden more toward higher-income smokers.

Figure 5. Monthly Cigarette Sales in New York (in millions of packs)

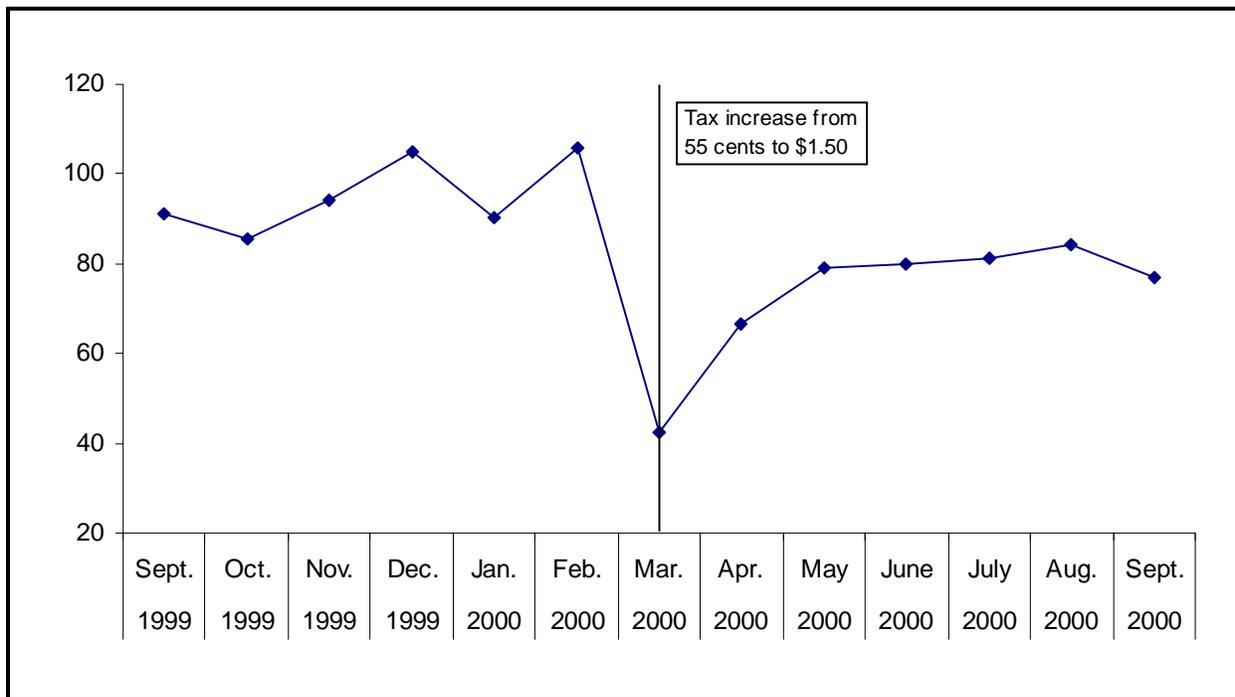
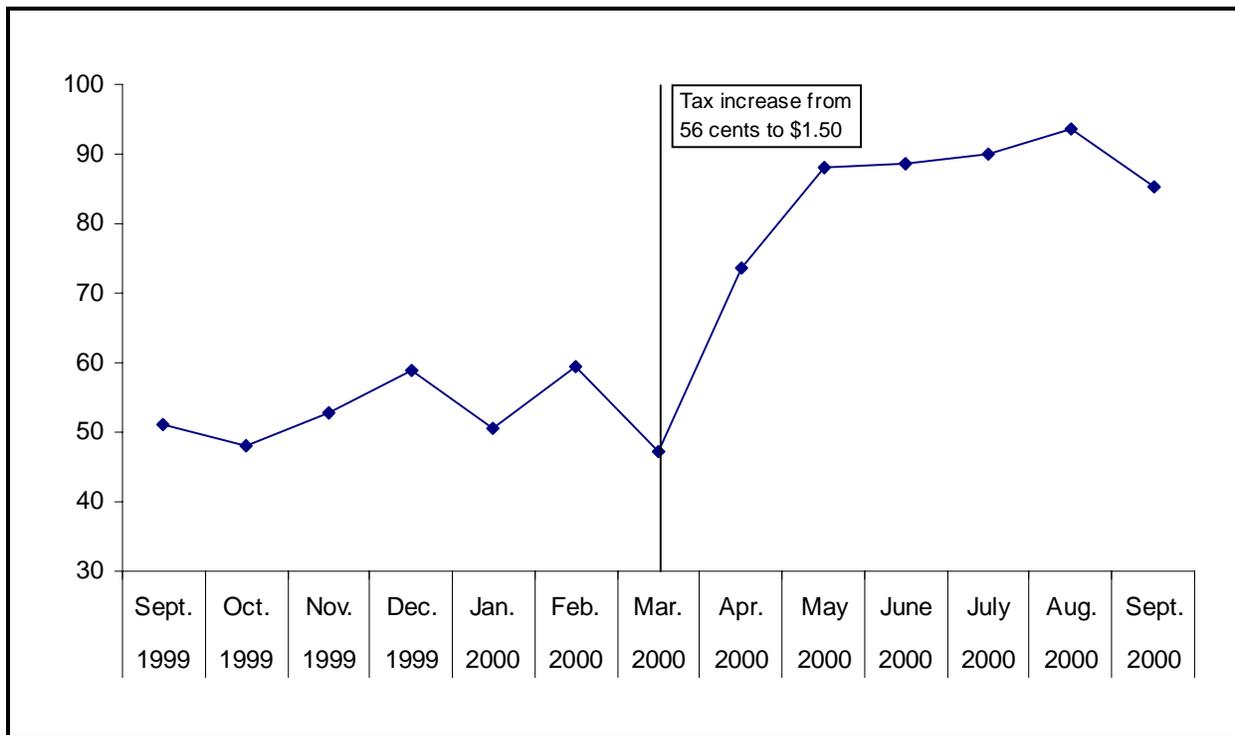


Figure 6. Monthly Cigarette Excise Tax Revenue for New York (in millions of dollars)



5. THE INTERNET: A GROWING SOURCE OF LOW PRICE CIGARETTES

While tax evasion has been shown to have only a limited effect on sales and revenue, growing Internet sales may indeed contribute to tax evasion and youth access to cigarettes. The Internet offers individual smokers access to low price cigarettes from Native American reservations and low tax states (Ribisl, Kim, and Williams, 2001). In addition, many Internet cigarette vendors lack adequate measures to control youth access to cigarettes. The Jenkins Act requires cigarette vendors who sell and ship cigarettes across state lines to report the sales to the buyer's state tax administrator, allowing states to collect cigarette tax due. However, a U.S. General Accounting Office report found that 78 percent of Internet cigarette vendors probed are ignoring federal law and are not reporting sales to state tax agencies (GAO, 2002).

The popularity of the Internet as a convenient and easy medium for purchasing cigarettes is growing. In 2001, there were 147 Internet cigarette vendors, up from 40 Internet cigarette vendors in February 2000 (GAO, 2002; Bryant, Cody, and Murphy, 2002). A recent study by Prudential Financial (2002) reports that Internet sales accounted for nearly 2 percent of industry volume in 2002 and that this number could triple by 2005. The growth of Internet cigarette vendors is being fueled by prices that are consistently lower than those of traditional brick and mortar vendors. Most Internet cigarette vendors are located in New York, North Carolina, and Virginia, with more than half located on Native American reservations (Ribisl, Kim, and Williams, 2001).

Some state and federal officials are concerned that the growth of online cigarette sales will result in lost tax revenue (GAO, 2002). Forrester Research estimates that states lost \$200 million in tax revenue during 2001, and that number could be in excess of \$1.4 billion by 2005 (Rubin, Charron, and Dorsey, 2001, as cited by the Campaign for Tobacco-Free Kids, 2002). On the federal level, in November 2002, representatives Meehan (D-MA) and Hansen (R-UT) introduced the Tobacco Free Internet for Kids Act of 2002 (H.R. 5724)⁶ to curb youth access to cigarettes and to limit tax evasion via

⁶See <http://www.house.gov/meehan/legislation.htm>. Additional information on state efforts to curb tax evasion can be found at the Campaign for Tobacco-Free Kids at <http://www.tobaccofreekids.org>.

the Internet. On the state level, a recent decision by a federal court (Docket Nos. 01-7806, 017813) upheld a New York State ban (section 1399-11 of New York's Public Health Law) on Internet and mail-order cigarette sales into the state (*New York Times*, 2003). California, Rhode Island, and a growing number of other states have also passed new laws to curb cigarette sales to children via the Internet and to limit tax evasion (<http://tobaccofreekids.org/reports/Internet/>).

6. CONCLUSION

Between 1990 and 2001, states that increased cigarette excise taxes by at least 10 cents experienced a net overall increase in cigarette excise tax revenue despite smoking declines prompted by the tax increases and despite possible revenue losses from related tax evasion activities, including Internet sales. To further increase cigarette excise tax revenue, state and federal efforts should be stepped up to control tax evasion and Internet sales. To this end, we need to better understand the effectiveness and cost-effectiveness of controlling tax evasion and Internet sales.

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**Appendix A:
Impact of Tax
Increases on Sales
and Cigarette
Excise Tax Revenue**

Table A-1. Sales and Cigarette Excise Tax Revenue

State	Tax Increase Per Pack (\$)	Date	New State Tax Per Pack (\$)	State Sales Decline (%)	Revenue Increase (%)	Revenue Increase (\$)
Delaware	\$0.10	1/1/91	\$0.24	-3.0%	67.4%	\$7,715,000
Idaho	\$0.10	7/1/94	\$0.28	-11.1%	45.6%	\$7,423,000
Rhode Island	\$0.10	7/1/97	\$0.71	-3.7%	13.3%	\$7,090,000
South Dakota	\$0.10	7/1/95	\$0.33	-8.2%	31.5%	\$4,786,000
New Hampshire	\$0.12	7/1/97	\$0.37	-0.6%	45.5%	\$22,500,000
Rhode Island	\$0.12	7/1/94	\$0.56	-6.3%	29.9%	\$12,100,000
	\$0.13	7/1/91	\$0.30			
DC ^a	\$0.20	6/1/92	\$0.50	-17.1%	148.0%	\$11,900,000
New Jersey	\$0.13	7/1/90	\$0.40	-11.9%	32.1%	\$65,300,000
Pennsylvania	\$0.13	8/19/91	\$0.31	-7.5%	59.0%	\$130,000,000
Illinois	\$0.14	7/14/93	\$0.44	-8.6%	36.7%	\$114,000,000
Illinois	\$0.14	12/16/97	\$0.58	-8.9%	19.0%	\$77,400,000
DC	\$0.15	7/1/93	\$0.65	-19.0%	0.9%	\$185,000
Nevada	\$0.15	7/1/89	\$0.35	-2.6%	70.3%	\$19,900,000
New Hampshire	\$0.15	7/1/99	\$0.52	-16.5%	21.4%	\$15,400,000
North Dakota	\$0.15	7/1/93	\$0.44	-3.0%	47.4%	\$7,245,000
Texas	\$0.15	7/1/90	\$0.41	-8.6%	40.3%	\$153,000,000
Wisconsin	\$0.15	11/1/97	\$0.59	-6.5%	25.8%	\$52,900,000
New York	\$0.17	6/1/93	\$0.56	-12.6%	24.8%	\$143,000,000
Hawaii	\$0.20	9/1/97	\$0.80	-33.6%	21.6%	\$6,906,000
Hawaii	\$0.20	7/1/98	\$1.00	-4.5%	23.5%	\$7,631,000
Maryland	\$0.20	5/1/92	\$0.36	-15.3%	130.4%	\$79,100,000
Washington	\$0.20	7/1/93	\$0.54	-9.1%	49.5%	\$65,500,000
Vermont	\$0.24	9/1/95	\$0.44	-19.4%	81.7%	\$11,300,000
Massachusetts	\$0.25	1/1/93	\$0.51	-14.7%	68.1%	\$95,700,000
Massachusetts	\$0.25	10/1/96	\$0.76	-14.3%	28.0%	\$64,100,000
Utah	\$0.25	7/1/97	\$0.52	-20.7%	86.2%	\$21,500,000
Washington	\$0.25	7/1/95	\$0.82	-13.6%	28.3%	\$56,100,000
Maryland	\$0.30	7/1/99	\$0.66	-15.3%	52.6%	\$68,200,000
Oregon	\$0.30	2/1/97	\$0.68	-8.3%	77.0%	\$79,800,000
Maine	\$0.37	11/1/97	\$0.74	-15.5%	66.7%	\$30,800,000
Arizona	\$0.40	11/29/94	\$0.58	-2.1%	221.6%	\$116,000,000
New Jersey	\$0.40	1/1/98	\$0.80	-16.8%	68.5%	\$167,000,000
California	\$0.50	1/1/99	\$0.87	-18.9%	90.7%	\$555,000,000
Michigan	\$0.50	5/1/94	\$0.75	-20.8%	139.9%	\$341,000,000
New York	\$0.55	3/1/00	\$1.11	-20.2%	57.4%	\$365,000,000
Alaska	\$0.71	10/1/97	\$1.00	-13.5%	201.8%	\$28,700,000

^aDC implemented two tax increases in fiscal year 1992 (13 cents on 7/1/91 and 20 cents on 6/1/92).

Note: Data are based on fiscal year data starting in July and ending in June (Orzechowski and Walker, 2001). Decline in sales and increase in revenue are based on the fiscal year preceding and following the fiscal year of the tax increase. The data are limited to states that increased taxes by 10 cents or more.

Appendix B: Examples of the Impact of Taxes on Sales and Cigarette Excise Tax Revenue

Figures B-1 through B-8 present examples of the impact of tax increases on revenue and sales. These examples were selected based on the size of the tax increase and geographic location.

Figure B-1. Monthly Cigarette Excise Tax Revenue for California

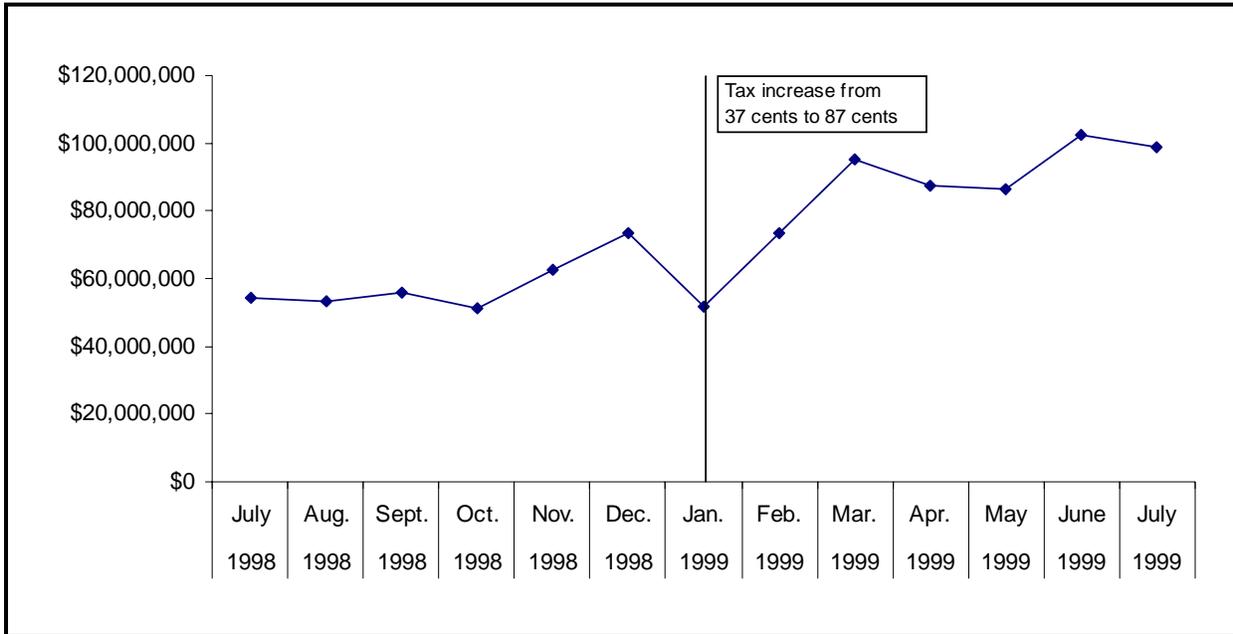


Figure B-2. Monthly Sales for California (in packs)

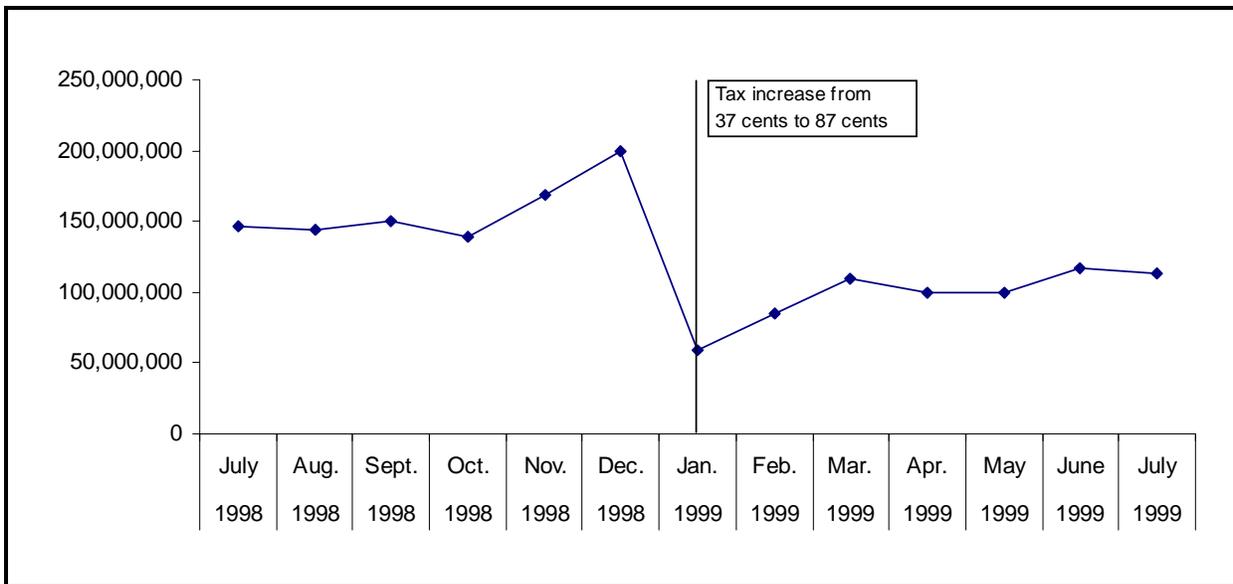


Figure B-3. Monthly Cigarette Excise Tax Revenue for Maryland

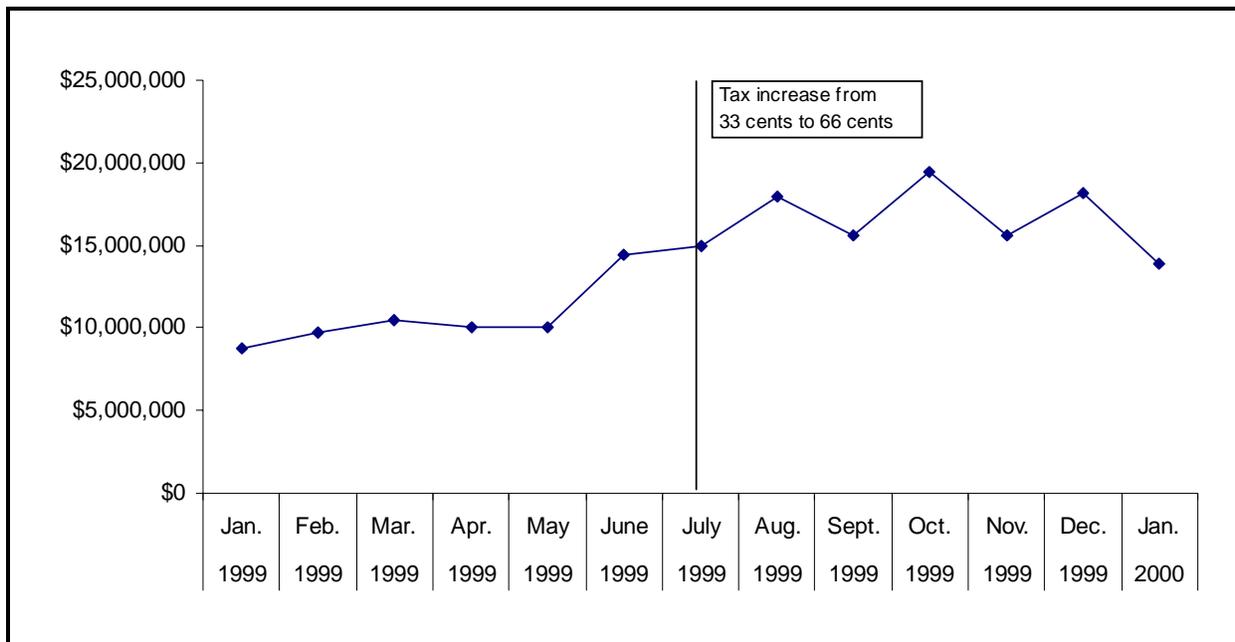


Figure B-4. Monthly Sales for Maryland (in packs)

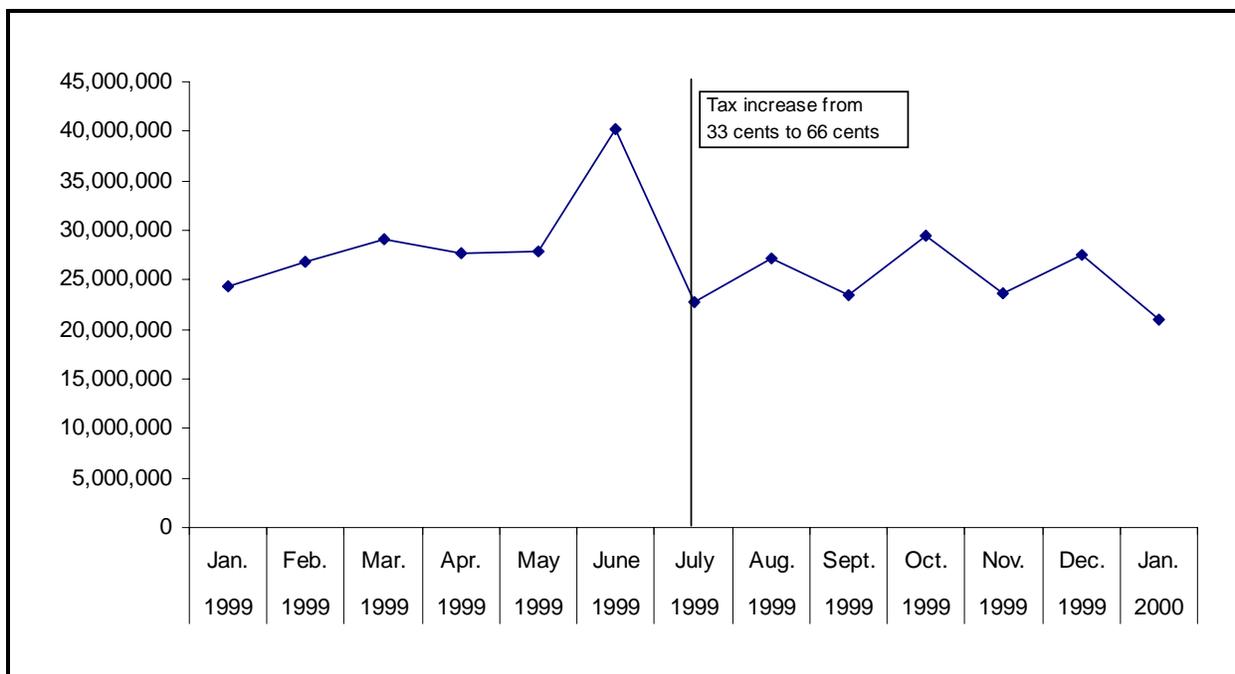


Figure B-5. Monthly Cigarette Excise Tax Revenue for Michigan

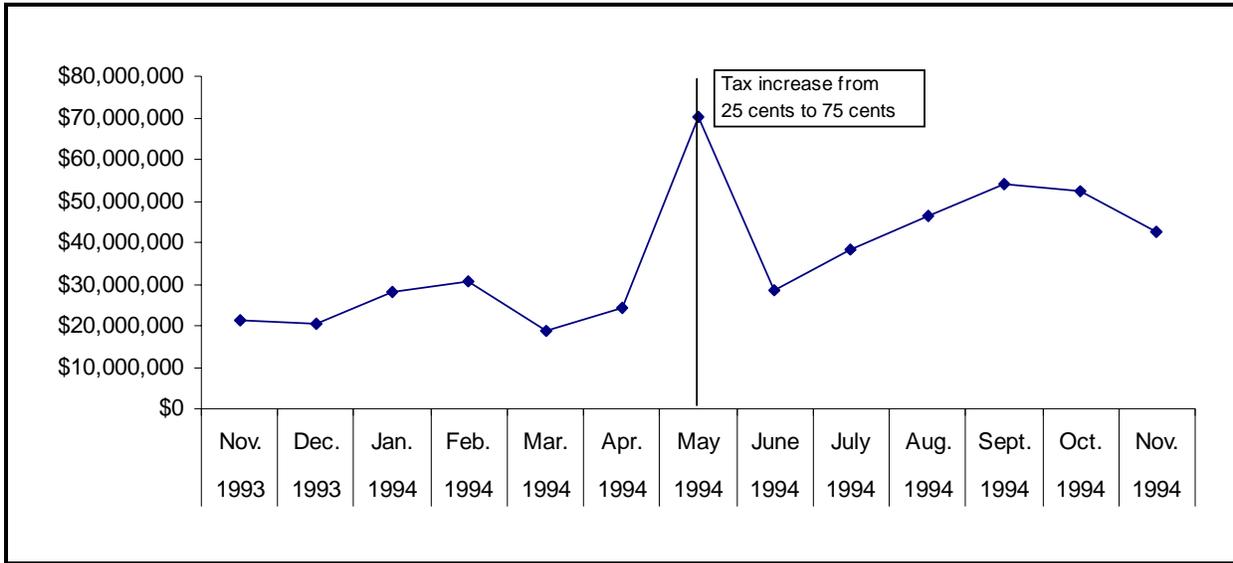


Figure B-6. Monthly Sales for Michigan (in packs)

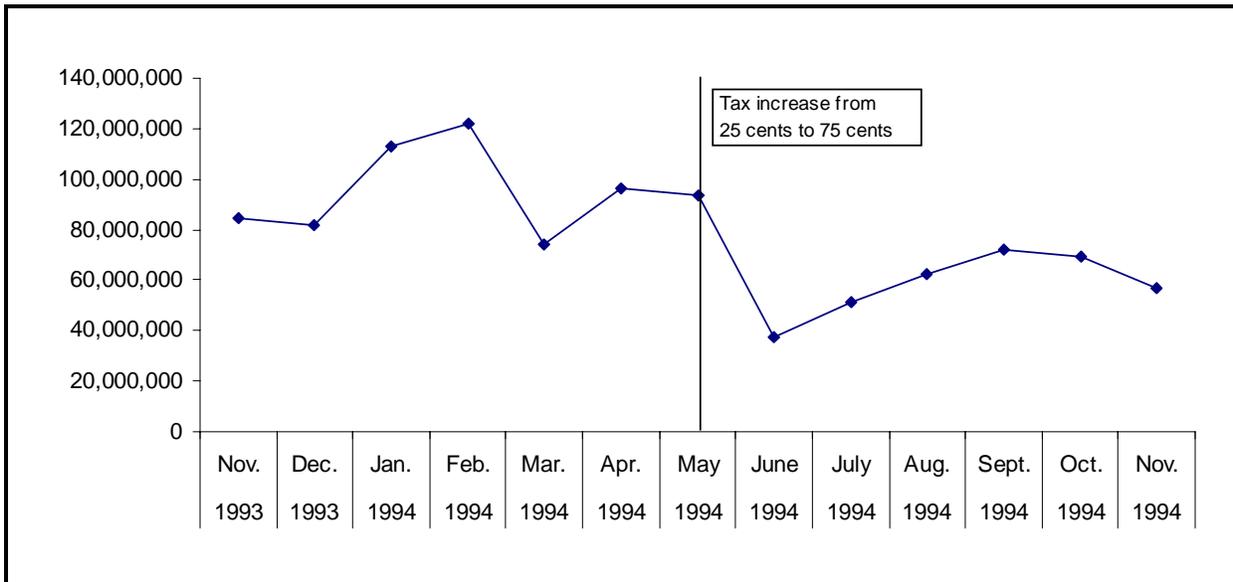


Figure B-7. Monthly Cigarette Excise Tax Revenue for Utah

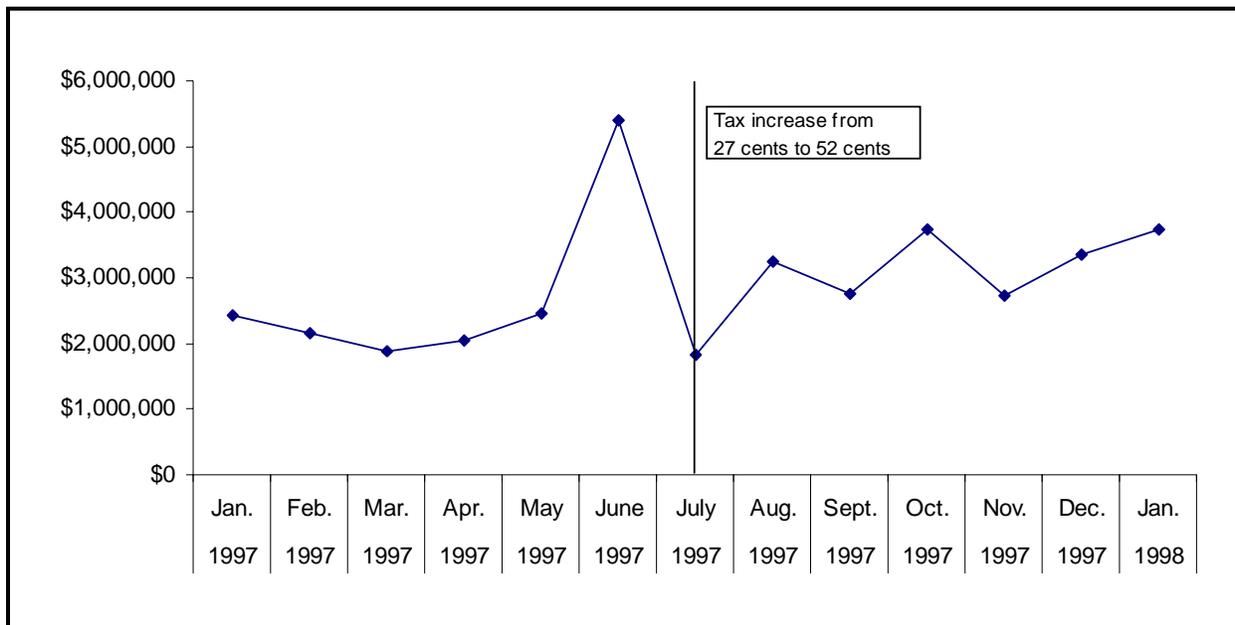


Figure B-8. Monthly Sales for Utah (in packs)

