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Economic Research Informing Tobacco Control Policy

## **Cigarette Smuggling in Response to Large Tax Increase Is Greatly Exaggerated**

**Frank J. Chaloupka**

**Research Professor**

**Division of Health Policy and Administration, School of Public Health**

**Department of Economics, College of Liberal Arts & Sciences**

**Director, Health Policy Center, Institute for Health Research and Policy**

**University of Illinois at Chicago**

**1747 West Roosevelt Rd., Room 558**

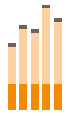
**Chicago, IL 60608**

**312-413-2287**

**[fjc@uic.edu](mailto:fjc@uic.edu)**

**[www.tobacconomics.org](http://www.tobacconomics.org)**

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## About the Author

Dr. Frank Chaloupka is a Research Professor in the University of Illinois at Chicago's School of Public Health's Division of Health Policy and Administration and its College of Liberal Arts and Sciences' Department of Economics. He also directs the University's Health Policy Center, is a Research Associate in the National Bureau of Economic Research's Health Economics Program and Children's Research Program. He is the Director of Tobacconomics, a group of economists and other policy researchers focused on the economics of tobacco and tobacco control globally. Dr. Chaloupka has written numerous studies, book chapters, and other publications that evaluate efforts to prevent and reduce tobacco use, with a special focus on the impact of cigarette and other tobacco product tax increases.

The content is solely the responsibility of the author and does not necessarily represent the official views of the University of Illinois at Chicago.

# Cigarette Smuggling in Response to Large Tax Increase Is Greatly Exaggerated

Concerns about increased tax avoidance and evasion have deterred many states from raising their cigarette and other tobacco taxes. Experiences with cigarette tax increases across states show that these concerns are greatly exaggerated. Every state that has passed a significant cigarette tax increase has enjoyed a substantial, sustained increase in its state cigarette tax revenues. This revenue increase occurs, despite the significant declines in smoking rates and tax-paid cigarette sales caused by the cigarette tax rate increase, and despite any increases in cigarette tax avoidance and evasion. Exhibit A illustrates this based on the experiences with actual state cigarette tax increases over the past decade.

Exhibit A presents a list of all significant state cigarette tax increases between 2006 and 2015 (increases of 50 cents or more per pack) and shows the amount of the tax increase, the increase in state cigarette tax revenues in the first 12 months following the tax increase, the changes in cigarette tax revenues in all neighboring states during that same 12 month period, and the total change in revenues in all neighboring states, in both absolute and percentage terms.

Several things are evident from the data presented in Exhibit A. First, states that have implemented a significant cigarette tax increase have seen a significant increase in cigarette tax revenues in the 12 months following the tax increase. Second, states that border the state that raises its tax, and that do not raise their own tax, experience minimal changes in their own cigarette tax revenues, with tax revenues falling in most of these states. Third, any increases in cigarette tax revenues in states that border a state that raises its tax are modest at best, implying that overall, any increases in sales in other states due to cross-border shopping by smokers in neighboring states or bootlegging of cigarettes from lower-tax states to a state that raises its tax are relatively small

and are far below the reductions in sales in the state that raised its tax.

The state experiences documented in Exhibit A confirm that a significant cigarette tax increase leads to a substantial increase in state cigarette tax revenues, despite any tax avoidance and tax evasion that occurs. As described further below, states that are concerned about increased cigarette smuggling in response to a tax increase can maximize the revenue gains from a tax increase by implementing measures that directly address tax avoidance and evasion.

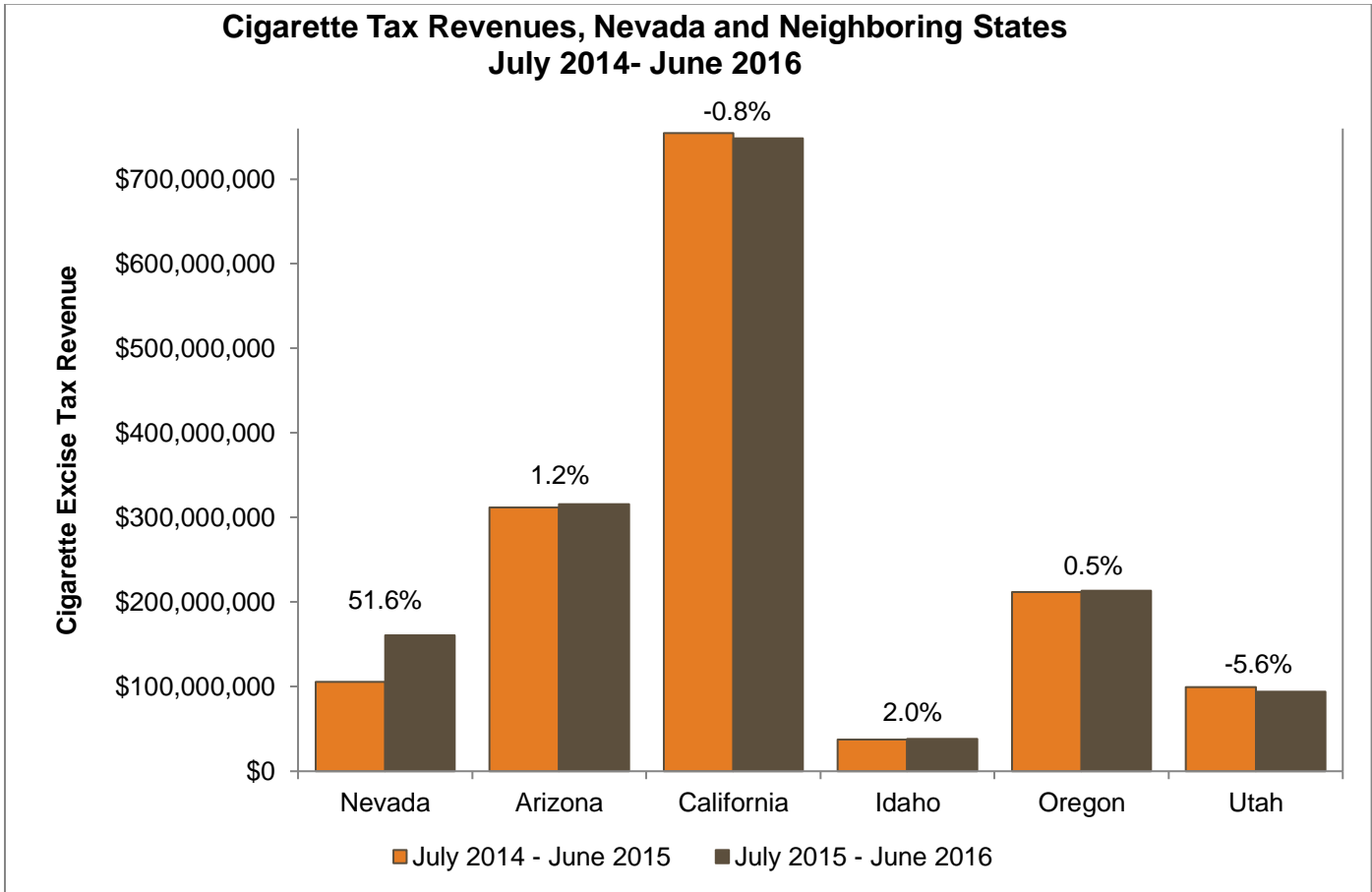
## Cigarette Tax Revenues Rise Sharply Following a Significant Cigarette Tax Increase

Significant increases in cigarette and other tobacco taxes lead to significant increases in tax revenues. While these tax increases do create incentives for tobacco users to avoid the tax increase by crossing state borders to buy tobacco products in nearby lower tax states or by engaging in other forms of tax avoidance such as purchasing on Native American reservations or buying on the Internet, relatively few tobacco users engage in these behaviors. Similarly, while tobacco tax increases do increase the profitability of smuggling, states that raise their tobacco taxes significantly see large increases in revenues despite any increase in smuggling of cigarettes from low-tax jurisdictions.

In Nevada, for example, the state cigarette excise tax was increased by \$1.00 per pack, from \$0.80 to \$1.80, on July 1, 2015. After the tax increase, the cigarette tax in Nevada was higher than the tax in most of its neighboring states: California (\$0.87), Idaho (\$0.57), Oregon (\$1.28), and Utah (\$1.70); only Arizona (\$2.00) had a higher tax. These differences, combined with Nevada's large population

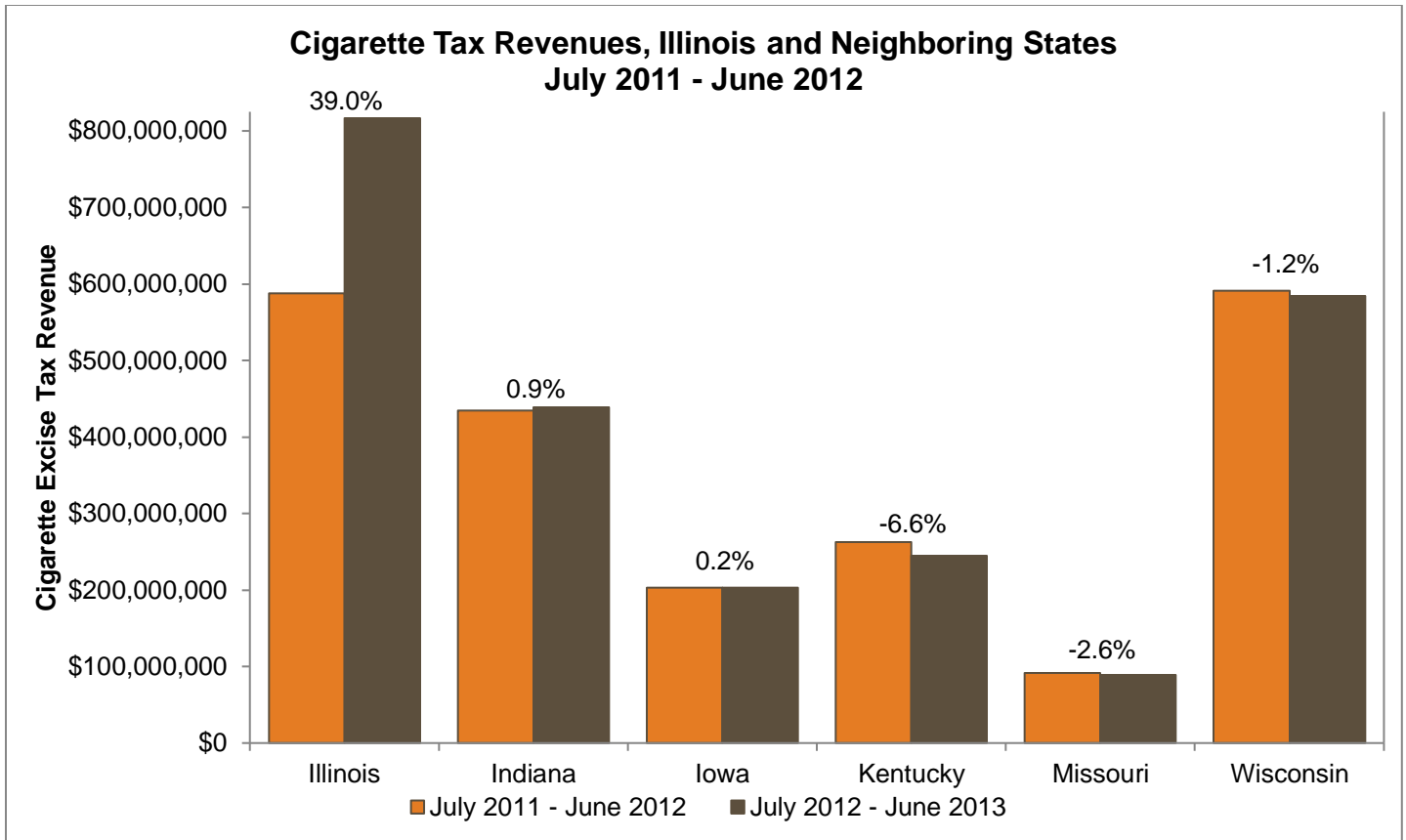
centers near state borders, particularly along the California border, raised concerns that the tax increase would not generate the expected revenues. As shown in the figure below, these concerns were greatly exaggerated, with the \$1.00 tax increase generating almost \$55 million in new tax revenues in

the first year after the tax increase, a 51.6% increase in revenues. At the same time, tax revenues in neighboring states were largely unchanged, with combined revenues falling by \$6.2 million, or about 0.4%. Revenues rose slightly in Arizona, Idaho, and Oregon, and fell somewhat in California and Utah.



The same pattern was observed after Illinois raised its cigarette excise tax by \$1.00 per pack, from \$0.98 to \$1.98, in late June 2012. At that time, cigarette taxes in most of Illinois' neighboring states were considerably lower: Indiana (\$0.995), Iowa (\$1.36), Kentucky (\$0.60), and Missouri (\$0.17). Only Wisconsin (\$2.52) had a higher state tax than Illinois. In addition, there were significant local taxes in Cook

County (\$2.00) and Chicago (\$0.68). As shown in the figure below, cigarette tax revenues in Illinois rose by 39% in the 12 months following the state tax increase, while combined tax revenues in neighboring states fell by 1.4%. Indiana (0.9%) and Iowa (0.2%) saw minimal increases in tax revenues, while revenues fell modestly in Kentucky (6.6%), Missouri (2.6%), and Wisconsin (1.2%).



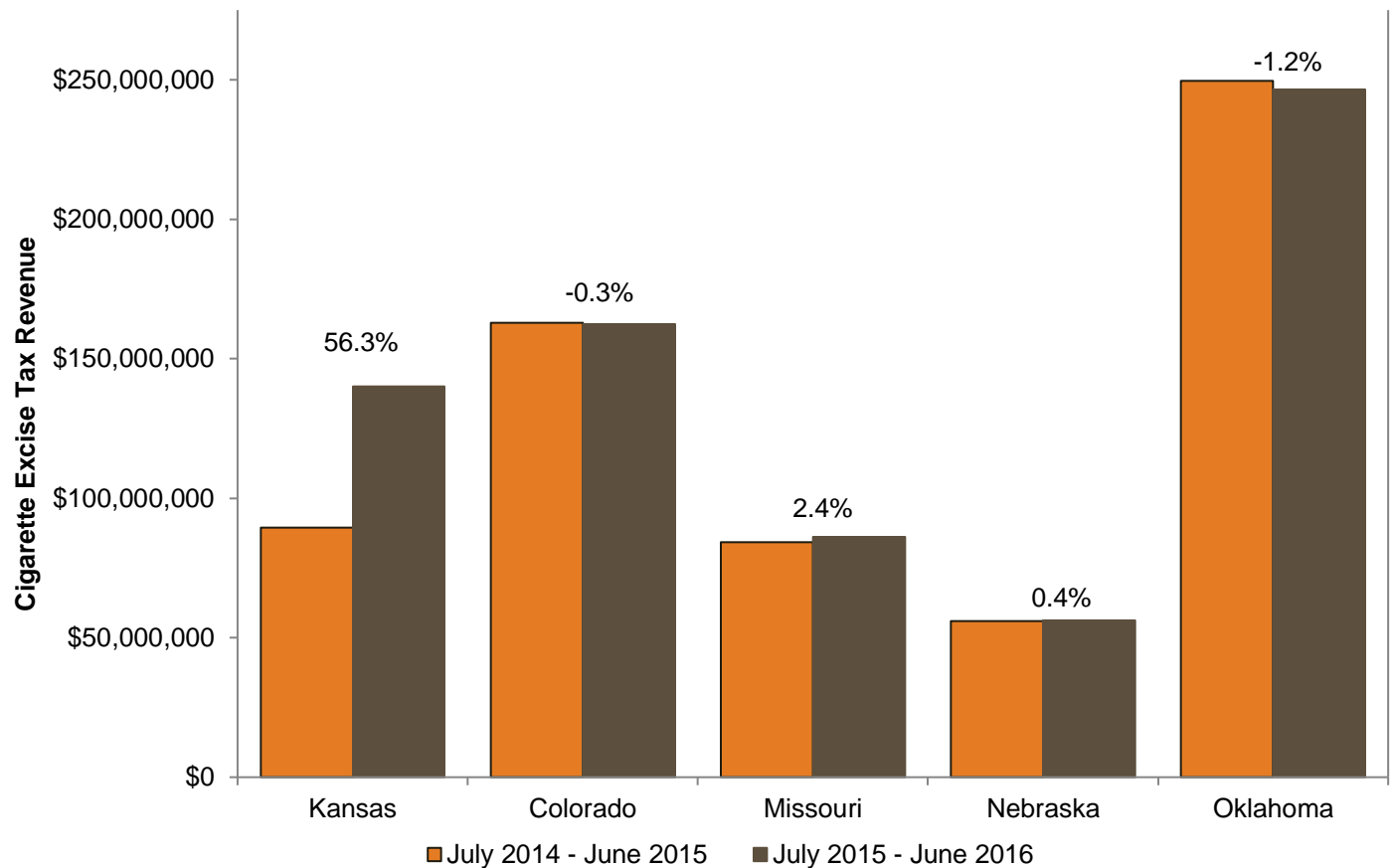
Similarly, tax revenues rose significantly in Kansas, following its July 1, 2015 tax increase which raised the state's cigarette tax from \$0.79 to \$1.29 per pack. After the increase, the Kansas tax was higher than taxes in all neighboring states: Colorado (\$0.18), Missouri (\$0.17), Nebraska (\$0.64), and Oklahoma (\$1.03). Nevertheless, Kansas saw its cigarette tax revenues rise by over \$50 million in the first 12 months following the tax increase, a 56.3% increase, while combined revenues in neighboring states fell by \$1.4 million, a 0.3% decrease.

The experiences in Nevada, Illinois and Kansas are consistent with those in other states, with cigarette tax increases generating substantial new revenue, while revenues in neighboring states are relatively

unaffected, suggesting that any increase in tax avoidance or evasion following a state cigarette tax increase is minimal. Longer distance smuggling of cigarettes from very low tax states in response to higher state cigarette taxes also appears to be limited.

Between calendar years 2006 and 2016, tax paid cigarette sales and tax revenues fell by about 18% in Missouri, the nation's lowest tax state, with a tax of 17¢ per pack. Similarly, tax paid sales and cigarette tax revenues fell by 10% in Virginia between calendar years 2006 and 2016, the second lowest tax state in the country after increasing its tax to 30¢ per pack in 2005. These declines occurred despite dozens of state cigarette tax increases across the country, including many in states near either Missouri or Virginia, suggesting that there was little large-scale bootlegging from either state.

**Cigarette Tax Revenues, Kansas and Neighboring States  
July 2014 - June 2016**



## Maximizing the Impact of Tobacco Tax Increases on Cigarette and Other Tobacco Tax Revenues

If states are concerned about a possible rise in smuggling in response to increases in their cigarette tax, they can implement measures that directly address this concern. Doing so will enhance the revenue and public health benefits of the higher tax. These measures are described briefly below; for more

details, see the 2015 report *Preventing and Reducing Illicit Tobacco Trade* from the Centers for Disease Control and Prevention, developed in collaboration with researchers from the Tobacconomics program.

Effective efforts to curb illicit tobacco trade begin with a 'three-legged stool' strategy that includes:

licensing of all entities involved in tobacco product manufacturing, importing, distribution, and retailing; use of the latest generation of 'high-tech' tax stamps that include overt and covert features which are nearly impossible to counterfeit and which allow tobacco products to be tracked and traced from the point at which the stamps are applied until final retail sale to consumers; and enhanced enforcement efforts coupled with stronger penalties.

To date, only three states have implemented this strategy. California was the first to do so, beginning in 2005 with a tax stamp that featured encrypted information on the name and address of the licensed distributor that applied the stamp, the date the stamp was applied, several overt features (including the California state bear and the value of the stamp), and various covert features (such as invisible ink and a unique serial number). Additional features were added in 2011. We estimate that in the decade following the implementation of the original stamp and its eventual upgrade, coupled with its licensing and enforcement efforts, California received \$450 million more in revenues than it would have received had it continued to use its old stamp, despite not raising its cigarette tax during this period.

More recent experiences in Massachusetts and Michigan are consistent with the California experience. Massachusetts was the second state to implement a 'high-tech' stamp, in 2010, using a stamp similar to that used by California. In the first three years following full implementation, Massachusetts cigarette excise tax revenues averaged \$551 million per year, virtually identical to revenues in the last year before implementation, despite a sharp decline in smoking prevalence during this period.

Most recently, Michigan implemented a different version of the 'high-tech' tax stamp, with a variety of overt and covert security features, as well as a unique quick response (QR) code that consumers can read with a smart-phone app that provides information on the state's cessation programs, a link to a tip line to

report noncompliant packs and sales to minors, and information on the harms caused by illicit tobacco sales and purchases. Implementation began in 2014 and appears to have been highly successful. After declining by over 3% per year in the years prior to implementation, tobacco tax revenues have increased in recent years, despite a steady decline in smoking prevalence. We estimate that revenues in FY2015 and FY2016 were more than \$60 million higher than they would have been in the absence of the new stamp and related efforts.

Another important strategy to curb legal tax avoidance is to ensure that taxes on other tobacco products, particularly combustible tobacco products such as roll-your-own (RYO) cigarettes and little cigars, are set at rates that parallel the state's cigarette tax rate. Creating tax equity across these products will reduce the likelihood that tobacco users avoid a tax increase by switching to tobacco products that are taxed at a lower rate.

RYO cigarettes, for example, are much cheaper than manufactured cigarettes; and some states' percentage-of-price tax rates subject them to much lower taxes, on a per pack basis, than manufactured cigarettes. This tax inequity could be fixed by taxing a cigarette pack's worth of RYO tobacco (0.65 ounces) at the same tax rate as a regular pack of cigarettes, so as to complement the percentage-of-price basic rate.

A similar cigarette-pack amount of tax could be placed on standard packs of cigarillos, blunts and other small cigars. But the biggest tax policy concern for cigars usually comes from cigarettes being packaged and sold as "little cigars" to escape the state's higher tax on cigarettes. That problem can be eliminated by amending the state's legal definition of "cigarette" so that it covers any and all cigarette-equivalent products, no matter how they are labeled and packaged (without reaching any bona fide cigars).

Another cost-effective strategy for protecting tobacco tax revenues from tax evasion is the implementation

of a public education program that: highlights the consequences of illegal tobacco sales on law abiding businesses, youth smoking, and state tax revenues; educates smokers about applicable state laws (such as limits on the number of packs that may be brought into the state from other states); and encourages consumers to report retailers selling cigarettes with inappropriate tax stamps. Chicago's "Check the Stamps" program provides a nice example of such a program that provides rewards for tips that lead to enforcement actions against retailers selling illicit cigarettes.

Other states have reduced tax avoidance and increased collections by targeting tax collection efforts at smokers who purchase cigarettes on the Internet without paying the state tax or by entering into special tax compacts with Native American tribes located in the state so that they impose and collect equivalent taxes on all reservation cigarette sales.

Finally, including an inventory, or floor stock, tax will protect tobacco tax revenues from legal short term tax avoidance from stockpiling of tax-paid cigarettes and other tobacco products in anticipation of a tax increase.



## EXHIBIT A

### STATE EXPERIENCES WITH LARGE CIGARETTE TAX INCREASES 2005-2015

#### INCREASED REVENUES AND LITTLE IMPACT ON REVENUES IN NEIGHBORING STATES

##### *Introductory Points:*

- Cigarette consumption is generally trending down. During the period from FY2005 through FY2016, total sales for the U.S. fell by about 3.4%, on average, per year. In the absence of cigarette tax increases, revenues from cigarette taxes will also be on a downward trend given the underlying trends in cigarette consumption.
- Cigarette tax increases will generate reductions in cigarette smoking and increases in revenues. Estimates indicate that the average short run price elasticity of cigarette demand is approximately  $-0.4$ , implying that a price increase of 10% will reduce total cigarette consumption by 4% on average. New research from the Tobacconomics program suggests that price elasticity is lower at lower than average prices and higher when prices are above average, implying that the reductions in consumption for a 10% price increase will be greater in states with relatively high taxes and prices, and lower in states with relatively low taxes and prices. Because of the addictive nature of cigarette smoking, some smokers' adjustments to the tax increases will occur over time, with the effect of a permanent, inflation adjusted tax increase rising so that the reductions in consumption that result will increase over time; estimates of the average long run (after many decades) price elasticity of cigarette demand are  $-0.8$ . This implies that the gains in revenue that results from a tax increase will fall (although still be substantial) over time; however, the effects of inflation will erode the value of the tax increase, dampening the growth in the decline in smoking and lessening the drop in revenues.
- Differences in cigarette taxes between jurisdictions create incentives for tax avoidance and tax evasion. Smokers in relatively high-tax jurisdictions may cross jurisdictional boundaries to purchase cigarettes in lower-tax jurisdictions, including other states and on Native American reservations. Others may buy cigarettes from Internet vendors and fail to pay the appropriate local use tax. Cigarette smugglers may buy tax-paid cigarettes in lower-tax jurisdictions for resale in higher-tax jurisdictions (bootlegging) or engage in efforts to circumvent all taxes. According to the 2015 National Research Council and Institute of Medicine report *Understanding the U.S. Illicit Tobacco Market*, tax avoidance and tax evasion accounts for between 8.5% and 21% of cigarette consumption in the U.S., with differences in taxes across jurisdictions the key factor driving tax avoidance and evasion. The low end of the range comes from the committee's analysis of tax-paid sales and self-reported consumption data, while the higher end comes from a pack return study. The report notes that there are considerable differences in the illicit cigarette market across states, with some relatively low-tax states benefiting (the 'net exporters' of cigarettes that sell more cigarettes than are consumed by state residents), and others losing ('net importers' where cigarette consumption by state residents exceeds tax paid cigarette sales).

### **Data Sources:**

- Monthly tax paid cigarette tax revenues, by state, January 2005 through June 2016, were obtained from the USDA and CDC, and the Tax Burden on Tobacco monthly reports. Cigarette tax rates and dates of change were taken from the *Tax Burden on Tobacco, 2016* and from the Campaign for Tobacco-Free Kids fact sheet *Cigarette Tax Increases by State per Year, 2000-2017*.

### **Approach:**

- This Exhibit documents the changes in revenues in cigarette taxes in all states that raised their cigarette excise tax by at least 50¢ per pack from 2006 through 2015. It compares revenues in the 12 months prior to the tax increase to revenues in the 12 months following the tax increase. To be conservative, the post-increase period for tax changes that occurred mid-month includes the month in which the tax was increased. Changes in revenues are reported in both absolute and percentage terms.
- Similar figures are provided for tax revenues in all neighboring states for the same two 12 month periods.

### **Conclusions:**

- States that have implemented a significant cigarette tax increase have seen a significant increase in cigarette tax revenues in the 12 months following the tax increase.
- States that border the state that raises its tax, and that do not raise their own tax, experience minimal changes in their own cigarette tax revenues, with tax revenues falling in most of these states.
- Any increases in cigarette tax revenues in states that border a state that raises its tax are modest at best, implying that overall, any increases in sales in other states due to cross-border shopping by smokers in neighboring states or bootlegging of cigarettes from lower-tax states to a state that raises its tax are relatively small and are far below the reductions in sales in the state that raised its tax.

State	Neighboring States	Old Tax	New Tax	Tax Increase	Date of Increase	12-Month Pre-Increase Revenues	12-Month Post-Increase Revenues	Revenue Change	Percentage Change in Revenues, 12-Month Post-Increase
<b>2015 Tax Increases</b>									
Kansas	Kansas	\$0.79	\$1.29	\$0.50	7/1/15	\$89,555,352	\$139,982,444	\$50,427,092	56.3%
	Colorado	\$0.84	---	---	---	\$162,983,934	\$162,466,071	-\$517,863	-0.3%
	Missouri	\$0.17	---	---	---	\$84,214,772	\$86,197,142	\$1,982,370	2.4%
	Nebraska	\$0.64	---	---	---	\$55,938,240	\$56,137,524	\$199,284	0.4%
	Oklahoma	\$1.03	---	---	---	\$249,577,508	\$246,498,942	-\$3,078,566	-1.2%
	Total Other States	---	---	---	---	---	---	-\$1,414,775	-0.3%
Louisiana	Louisiana	\$0.36	\$0.86	\$0.50	7/1/15	\$123,449,184	\$223,492,940	\$100,043,756	81.0%
	Arkansas	\$1.15	---	---	---	\$177,322,717	\$180,293,857	\$2,971,140	1.7%
	Mississippi	\$0.68	---	---	---	\$128,151,584	\$121,759,006	-\$6,392,578	-5.0%
	Texas	\$1.41	---	---	---	\$1,275,783,629	\$1,268,961,647	-\$6,821,982	-0.5%
	Total Other States	---	---	---	---	---	---	-\$10,243,420	-0.6%
Nevada	Nevada	\$0.80	\$1.80	\$1.00	7/1/15	\$105,763,000	\$160,385,292	\$54,622,292	51.6%
	Arizona	\$2.00	---	---	---	\$311,953,623	\$315,832,112	\$3,878,489	1.2%
	California	\$0.87	---	---	---	\$754,358,766	\$748,095,754	-\$6,263,012	-0.8%
	Idaho	\$0.57	---	---	---	\$37,344,187	\$38,098,748	\$754,561	2.0%
	Oregon	\$1.28	---	---	---	\$212,174,456	\$213,270,714	\$1,096,258	0.5%
	Utah	\$1.70	---	---	---	\$99,847,460	\$94,221,263	-\$5,626,197	-5.6%
	Total Other States	---	---	---	---	---	---	-\$6,159,901	-0.4%
<b>2014 Tax Increases</b>									
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<b>2013 Tax Increases</b>									
	Massachusetts	\$2.51	\$3.51	\$1.00	7/31/13	\$539,261,760	\$625,496,857	\$86,235,097	16.0%
Massachusetts	Connecticut	\$3.40	---	---	---	\$383,014,981	\$364,190,543	-\$18,824,438	-4.9%
	New Hampshire	\$1.68	\$1.78	\$0.10	7/1/13	\$229,070,120	\$180,129,024	-\$48,941,096	-21.4%
	New York	\$4.35	---	---	---	\$1,412,158,454	\$1,320,521,202	-\$91,637,252	-6.5%
	Rhode Island	\$3.50	---	---	---	\$132,869,313	\$133,753,106	\$883,793	0.7%
	Vermont	\$2.62	\$2.75	\$0.13	7/1/14	\$68,681,770	\$68,288,977	-\$392,793	-0.6%
	Total Other States	---	---	---	---	---	---	-\$158,911,786	-7.1%
	Minnesota	\$1.23	\$2.83	\$1.60	7/1/13	\$364,632,505	\$568,797,811	\$204,165,306	56.0%
Minnesota	Iowa	\$1.36	---	---	---	\$202,980,132	\$197,953,978	-\$5,026,154	-2.5%
	North Dakota	\$0.44	---	---	---	\$22,359,047	\$24,122,656	\$1,763,609	7.9%
	South Dakota	\$1.53	---	---	---	\$54,450,165	\$54,735,609	\$285,444	0.5%
	Wisconsin	\$2.52	---	---	---	\$583,957,674	\$575,864,813	-\$8,092,861	-1.4%
	Total Other States	---	---	---	---	---	---	-\$11,069,962	-1.3%
<b>2012 Tax Increases</b>									
	Illinois	\$0.98	\$1.98	\$1.00	6/24/12	\$587,677,532	\$816,923,820	\$229,246,288	39.0%
Illinois	Indiana	\$0.995	---	---	---	\$434,515,875	\$438,605,100	\$4,089,225	0.9%
	Iowa	\$1.36	---	---	---	\$202,662,842	\$202,980,132	\$317,290	0.2%
	Kentucky	\$0.60	---	---	---	\$262,443,252	\$245,028,745	-\$17,414,507	-6.6%
	Missouri	\$0.17	---	---	---	\$91,267,311	\$88,929,944	-\$2,337,367	-2.6%
	Wisconsin	\$2.52	---	---	---	\$591,054,271	\$583,957,674	-\$7,096,597	-1.2%
	Total Other States	---	---	---	---	---	---	-\$22,441,956	-1.4%
<b>2011 Tax Increases</b>									
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2010 Tax Increases									
	New Mexico	\$0.91	\$1.66	\$0.75	7/1/10	\$55,511,740	\$93,004,340	\$37,492,600	67.5%
New Mexico	Arizona	\$2.00	---	---	---	\$328,521,825	\$326,313,689	-\$2,208,136	-0.7%
	Colorado	\$0.84	---	---	---	\$178,020,132	\$171,071,190	-\$6,948,942	-3.9%
	Oklahoma	\$1.03	---	---	---	\$235,251,213	\$241,680,174	\$6,428,961	2.7%
	Texas	\$1.41	---	---	---	\$1,319,756,947	\$1,359,518,265	\$39,761,318	3.0%
	Utah	\$0.695	\$1.70	\$1.005	7/1/10	\$55,367,470	\$102,414,275	\$47,046,805	85.0%
	Total Other States	---	---	---	---	---	---	\$84,080,006	4.0%
	Total Other States (excl. UT)	---	---	---	---	---	---	\$37,033,201	1.8%
	New York	\$2.75	\$4.35	\$1.60	7/1/10	\$1,298,924,357	\$1,543,507,143	\$244,582,786	18.8%
New York	Connecticut	\$1.00	\$3.00	\$2.00	10/1/09	\$371,189,327	\$389,782,304	\$18,592,977	5.0%
	Massachusetts	\$2.51	---	---	---	\$555,207,458	\$562,559,774	\$7,352,316	1.3%
	New Jersey	\$2.70	---	---	---	\$731,944,029	\$773,439,500	\$41,495,471	5.7%
	Pennsylvania	\$1.35	\$1.60	\$0.25	11/1/09	\$1,087,816,320	\$1,145,644,320	\$57,828,000	5.3%
	Vermont	\$2.24	---	---	---	\$66,279,221	\$67,896,109	\$1,616,888	2.4%
	Total Other States	---	---	---	---	---	---	\$126,885,652	4.5%
	Total Other States (excl. CT)	---	---	---	---	---	---	\$108,292,675	4.4%
	South Carolina	\$0.07	\$0.57	\$0.50	7/1/10	\$26,912,128	\$143,768,852	\$116,856,724	434.2%
South Carolina	Georgia	\$0.37	---	---	---	\$201,173,660	\$194,706,470	-\$6,467,190	-3.2%
	North Carolina	\$0.35	\$0.45	\$0.10	9/1/09	\$249,544,690	\$261,903,345	\$12,358,655	5.0%
	Total Other States	---	---	---	---	---	---	\$5,891,465	2.7%
	Utah	\$0.695	\$1.70	\$1.005	7/1/10	\$55,367,470	\$102,414,275	\$47,046,805	85.0%
Utah	Arizona	\$2.00	---	---	---	\$328,521,825	\$326,313,689	-\$2,208,136	-0.7%
	Colorado	\$0.84	---	---	---	\$178,020,132	\$171,071,190	-\$6,948,942	-3.9%
	Idaho	\$0.57	---	---	---	\$40,956,685	\$40,595,504	-\$361,181	-0.9%
	Nevada	\$0.80	---	---	---	\$101,862,000	\$100,448,200	-\$1,413,800	-1.4%
	New Mexico	\$0.91	\$1.66	\$0.75	7/1/10	\$55,511,740	\$93,004,340	\$37,492,600	67.5%
	Wyoming	\$0.60	---	---	---	\$23,355,267	\$23,299,745	-\$55,522	-0.2%
	Total Other States	---	---	---	---	---	---	\$26,505,019	7.2%
Total Other States (excl. NM)	---	---	---	---	---	---	-\$10,987,581	-3.2%	

	Washington	\$2.025	\$3.025	\$1.00	5/1/10	\$364,848,837	\$426,916,247	\$62,067,410	17.0%
Washington	Idaho	\$0.57	---	---	---	\$41,710,574	\$40,831,704	-\$878,870	-2.1%
	Oregon	\$1.18	---	---	---	\$209,504,416	\$206,271,274	-\$3,233,142	-1.5%
	Total Other States	---	---	---	---	---	---	-\$4,112,012	-1.3%
<b>2009 Tax Increases</b>									
	Arkansas	\$0.59	\$1.15	\$0.56	3/1/09	\$138,824,002	\$158,811,537	\$19,987,535	14.4%
	Louisiana	\$0.36	---	---	---	\$132,889,320	\$123,308,002	-\$9,581,318	-7.2%
Arkansas	Mississippi	\$0.18	\$0.68	\$0.50	5/15/09	\$50,366,707	\$116,598,588	\$66,231,881	131.5%
	Missouri	\$0.17	---	---	---	\$99,839,997	\$94,082,602	-\$5,757,395	-5.8%
	Oklahoma	\$1.03	---	---	---	\$238,908,648	\$232,588,286	-\$6,320,362	-2.6%
	Texas	\$1.41	---	---	---	\$1,308,429,022	\$1,258,939,649	-\$49,489,373	-3.8%
	Total Other States	---	---	---	---	---	---	-\$4,916,567	-0.3%
	Total Other States (excl. MS)	---	---	---	---	---	---	-\$71,148,448	-4.0%
	Connecticut	\$2.00	\$3.00	\$1.00	10/1/09	\$310,172,278	\$396,210,510	\$86,038,232	27.7%
	Massachusetts	\$2.51	---	---	---	\$553,027,264	\$558,724,251	\$5,696,987	1.0%
Connecticut	New York	\$2.75	---	---	---	\$1,315,883,651	\$1,354,591,621	\$38,707,970	2.9%
	Rhode Island	\$2.46	\$3.46	\$1.00	4/10/09	\$128,948,901	\$137,073,066	\$8,124,165	6.3%
	Total Other States	---	---	---	---	---	---	\$52,529,122	0.4%
	Total Other States (excl. RI)	---	---	---	---	---	---	\$44,404,957	2.8%
	D.C.	\$2.00	\$2.50	\$0.50	10/1/09	\$34,233,749	\$33,320,638	-\$913,111	-2.7%
D.C.	Maryland	\$2.00	---	---	---	\$397,678,000	\$398,813,600	\$1,135,600	0.3%
	Virginia	\$0.30	---	---	---	\$165,746,400	\$162,976,200	-\$2,770,200	-1.7%
	Total Other States	---	---	---	---	---	---	-\$1,634,600	-0.5%
	Florida	\$0.339	\$1.339	\$1.00	7/1/09	\$429,051,920	\$1,257,851,503	\$828,799,583	193.2%
Florida	Alabama	\$0.425	---	---	---	\$149,740,671	\$143,144,383	-\$6,596,288	-4.4%
	Georgia	\$0.37	---	---	---	\$211,984,399	\$201,173,660	-\$10,810,739	-5.1%
	Total Other States	---	---	---	---	---	---	-\$17,407,027	-3.0%

	Mississippi	\$0.18	\$0.68	\$0.50	5/15/09	\$47,201,204	\$136,085,236	\$88,884,032	188.3%
Mississippi	Alabama	\$0.43	---	---	---	\$150,534,144	\$145,859,277	-\$4,674,867	-3.1%
	Arkansas	\$0.59	\$1.15	\$0.56	3/1/09	\$135,431,297	\$201,937,567	\$66,506,270	49.1%
	Louisiana	\$0.36	---	---	---	\$133,266,240	\$123,879,124	-\$9,387,116	-7.0%
	Tennessee	\$0.62	---	---	---	\$298,495,208	\$291,777,722	-\$6,717,486	-2.3%
	Total Other States	---	---	---	---	---	---	\$45,726,801	6.4%
	Total Other States (excl. AR)	---	---	---	---	---	---	-\$20,779,469	-3.6%
Rhode Island	Rhode Island	\$2.46	\$3.46	\$1.00	4/10/09	\$117,524,721	\$135,318,593	\$17,793,872	15.1%
	Connecticut	\$2.00	\$3.00	\$1.00	10/1/09	\$299,345,588	\$349,119,956	\$49,774,368	16.6%
	Massachusetts	\$2.51	---	---	---	\$530,256,726	\$545,844,656	\$15,587,930	2.9%
	Total Other States	---	---	---	---	---	---	\$65,362,298	1.9%
Wisconsin	Wisconsin	\$1.77	\$2.52	\$0.75	9/1/09	\$547,477,578	\$668,373,864	\$120,896,286	22.1%
	Illinois	\$0.98	---	---	---	\$563,553,440	\$554,842,680	-\$8,710,760	-1.5%
	Iowa	\$1.36	---	---	---	\$216,735,042	\$207,667,276	-\$9,067,766	-4.2%
	Michigan	\$2.00	---	---	---	\$1,022,601,368	\$949,026,727	-\$73,574,641	-7.2%
	Minnesota	\$1.485	---	---	---	\$384,635,156	\$378,371,112	-\$6,264,044	-1.6%
	Total Other States	---	---	---	---	---	---	-\$97,617,211	-4.5%
<b>2008 Tax Increases</b>									
D.C.	D.C.	\$1.00	\$2.00	\$1.00	10/1/08	\$23,099,825	\$34,233,749	\$11,133,924	48.2%
	Maryland	\$1.00	\$2.00	\$1.00	1/1/08	\$379,755,157	\$397,678,000	\$17,922,843	4.7%
	Virginia	\$0.30	---	---	---	\$173,652,300	\$165,746,400	-\$7,905,900	-4.6%
	Total Other States	---	---	---	---	---	---	\$10,016,943	-1.4%
Maryland	Maryland	\$1.00	\$2.00	\$1.00	1/1/08	\$276,731,172	\$403,604,000	\$126,872,828	45.8%
	Delaware	\$0.55	\$1.15	\$0.60	7/31/07	\$102,137,795	\$127,836,840	\$25,699,045	25.2%
	D.C.	\$1.00	\$2.00	\$1.00	10/1/08	\$22,568,078	\$26,500,052	\$3,931,974	17.4%
	Pennsylvania	\$1.35	---	---	---	\$1,025,840,117	\$1,032,309,199	\$6,469,082	0.6%
	Virginia	\$0.30	---	---	---	\$169,997,000	\$176,735,700	\$6,738,700	4.0%
	West Virginia	\$0.55	---	---	---	\$110,348,700	\$109,657,079	-\$691,621	-0.6%
	Total Other States	---	---	---	---	---	---	\$42,147,180	2.9%
Total Other States (excl. DE, DC)	---	---	---	---	---	---	\$12,516,161	1.0%	

	Massachusetts	\$1.51	\$2.51	\$1.00	7/1/08	\$425,596,218	\$562,776,156	\$137,179,938	32.2%
Massachusetts	Connecticut	\$2.00	---	---	---	\$314,271,331	\$297,886,597	-\$16,384,734	-5.2%
	New Hampshire	\$1.08	\$1.33	\$0.25	10/15/08	\$161,251,760	\$188,230,787	\$26,979,027	16.7%
	New York	\$1.50	\$2.75	\$1.25	6/3/08	\$959,415,322	\$1,335,105,694	\$375,690,372	39.2%
	Rhode Island	\$2.46	---	---	---	\$116,050,328	\$123,443,967	\$7,393,639	6.4%
	Vermont	\$1.79	\$1.99	\$0.20	7/1/08	\$55,648,613	\$61,849,368	\$6,200,755	11.1%
	Total Other States	---	---	---	---	---	---	\$399,879,059	24.9%
	Total Other States (CT, RI only))	---	---	---	---	---	---	-\$8,991,095	-2.1%
	New York	\$1.50	\$2.75	\$1.25	6/3/08	\$945,213,521	\$1,320,583,592	\$375,370,071	39.7%
New York	Connecticut	\$2.00	---	---	---	\$310,123,261	\$294,707,787	-\$15,415,474	-5.0%
	Massachusetts	\$1.51	\$2.51	\$1.00	7/1/08	\$425,496,558	\$549,250,326	\$123,753,768	29.1%
	New Jersey	\$2.575	---	---	---	\$766,410,121	\$730,869,096	-\$35,541,025	-4.6%
	Pennsylvania	\$1.35	---	---	---	\$1,029,291,932	\$1,009,834,938	-\$19,456,994	-1.9%
	Vermont	\$1.79	\$1.99	\$0.20	7/1/08	\$56,544,582	\$61,734,877	\$5,190,295	9.2%
	Total Other States	---	---	---	---	---	---	\$58,530,570	2.3%
	Total Other States (excl. MA)	---	---	---	---	---	---	-\$65,223,198	-3.0%
	Wisconsin	\$0.77	\$1.77	\$1.00	1/1/08	\$304,467,520	\$590,509,326	\$286,041,806	93.9%
Wisconsin	Illinois	\$0.98	---	---	---	\$620,199,030	\$576,803,620	-\$43,395,410	-7.0%
	Iowa	\$0.36	\$1.36	\$1.00	4/1/07	\$196,895,743	\$234,985,367	\$38,089,624	19.3%
	Michigan	\$2.00	---	---	---	\$1,068,714,252	\$1,032,909,245	-\$35,805,007	-3.4%
	Minnesota	\$1.485	---	---	---	\$400,743,835	\$400,169,888	-\$573,947	-0.1%
	Total Other States	---	---	---	---	---	---	-\$41,684,740	-1.8%
Total Other States (excl. IA)	---	---	---	---	---	---	-\$79,774,364	-3.8%	
<b>2007 Tax Increases</b>									
	Delaware	\$0.55	\$1.15	\$0.60	7/31/07	\$90,449,300	\$122,207,280	\$31,757,980	35.1%
Delaware	Maryland	\$1.00	\$2.00	\$1.00	1/1/08	\$271,899,915	\$353,765,157	\$81,865,242	30.1%
	New Jersey	\$2.75	---	---	---	\$775,694,281	\$761,460,738	-\$14,233,543	-1.8%
	Pennsylvania	\$1.35	---	---	---	\$1,031,732,142	\$1,030,205,200	-\$1,526,942	-0.1%
	Total Other States	---	---	---	---	---	---	\$66,104,757	3.2%
	Total Other States (excl. MD)	---	---	---	---	---	---	-\$15,760,485	-0.9%



	Iowa	\$0.36	\$1.36	\$1.00	3/15/07	\$96,211,904	\$223,675,199	\$127,463,295	132.5%
Iowa	Illinois	\$0.98	---	---	---	\$611,461,230	\$613,945,400	\$2,484,170	0.4%
	Minnesota	\$1.485	---	---	---	\$412,859,134	\$396,916,850	-\$15,942,284	-3.9%
	Missouri	\$0.17	---	---	---	\$103,128,627	\$101,694,965	-\$1,433,662	-1.4%
	Nebraska	\$0.64	---	---	---	\$67,110,720	\$71,538,240	\$4,427,520	6.6%
	South Dakota	\$0.53	\$1.53	\$1.00	1/1/07	\$32,529,054	\$63,466,146	\$30,937,092	95.1%
	Wisconsin	\$0.77	\$1.77	\$1.00	1/1/08	\$303,958,491	\$388,713,097	\$84,754,606	27.9%
	Total Other States	---	---	---	---	---	---	\$105,227,442	6.9%
	Total Other States (excl. SD, WI)	---	---	---	---	---	---	-\$10,464,256	-0.9%
	South Dakota	\$0.53	\$1.53	\$1.00	1/1/07	\$27,542,647	\$59,332,373	\$31,789,726	115.4%
South Dakota	Iowa	\$0.36	\$1.36	\$1.00	3/15/07	\$90,635,256	\$196,895,743	\$106,260,487	117.2%
	Minnesota	\$1.485	---	---	---	\$416,897,541	\$400,743,835	-\$16,153,706	-3.9%
	Montana	\$1.70	---	---	---	\$84,692,343	\$86,556,008	\$1,863,665	2.2%
	Nebraska	\$0.64	---	---	---	\$66,640,320	\$71,350,080	\$4,709,760	7.1%
	North Dakota	\$0.44	---	---	---	\$21,363,997	\$21,018,965	-\$345,032	-1.6%
	Wyoming	\$0.60	---	---	---	\$23,771,000	\$25,800,200	\$2,029,200	8.5%
	Total Other States	---	---	---	---	---	---	\$98,364,374	14.0%
	Total Other States (excl. IA)	---	---	---	---	---	---	-\$7,896,113	-1.3%
	Texas	\$0.41	\$1.41	\$1.00	1/1/07	\$523,436,915	\$1,527,119,671	\$1,003,682,756	191.7%
Texas	Louisiana	\$0.36	---	---	---	\$132,653,346	\$134,215,200	\$1,561,854	1.2%
	New Mexico	\$0.91	---	---	---	\$64,241,220	\$62,331,364	-\$1,909,856	-3.0%
	Oklahoma	\$1.03	---	---	---	\$203,106,759	\$218,520,658	\$15,413,899	7.6%
	Total Other States	---	---	---	---	---	---	\$15,065,897	3.8%

2006 Tax Increases									
	Arizona	\$1.18	\$2.00	\$0.82	12/8/06	\$325,946,790	\$370,437,424	\$44,490,634	13.6%
Arizona	California	\$0.87	---	---	---	\$1,040,167,866	\$986,926,730	-\$53,241,136	-5.1%
	Colorado	\$0.84	---	---	---	\$208,215,334	\$203,168,271	-\$5,047,063	-2.4%
	Nevada	\$0.80	---	---	---	\$134,131,196	\$127,434,362	-\$6,696,834	-5.0%
	New Mexico	\$0.91	---	---	---	\$64,945,960	\$62,322,264	-\$2,623,696	-4.0%
	Utah	\$0.695	---	---	---	\$55,206,283	\$58,369,716	\$3,163,433	5.7%
	Total Other States	---	---	---	---	---	---	-\$64,445,296	-4.3%
	Vermont	\$1.19	\$1.79	\$0.60	7/1/06	\$47,545,323	\$60,787,679	\$13,242,356	27.9%
Vermont	Massachusetts	\$1.51	---	---	---	\$426,435,045	\$420,880,488	-\$5,554,557	-1.3%
	New Hampshire	\$0.80	---	---	---	\$138,448,800	\$138,573,080	\$124,280	0.1%
	New York	\$1.50	---	---	---	\$940,612,929	\$936,289,972	-\$4,322,957	-0.5%
	Total Other States	---	---	---	---	---	---	-\$9,753,234	-0.6%

## About Tobacconomics

Tobacconomics is a collaboration of leading researchers who have been studying the economics of tobacco control policy for nearly 30 years. The team is dedicated to helping researchers, advocates and policymakers access the latest and best research about what's working—or not working—to curb tobacco consumption and the impact it has on our economy. As a program of the University of Illinois at Chicago, Tobacconomics is not affiliated with any tobacco manufacturer. Visit [www.tobacconomics.org](http://www.tobacconomics.org) or follow us on Twitter [www.twitter.com/tobacconomics](http://www.twitter.com/tobacconomics).



**tobacconomics**

Economic Research Informing Tobacco Control Policy

University of Illinois at Chicago  
Institute for Health Research and Policy

Attn: Tobacconomics  
1747 W. Roosevelt Road  
5th Floor (Room 558)  
Chicago, IL 60608

[tobacconomics@uic.edu](mailto:tobacconomics@uic.edu)  
[@tobacconomics](https://twitter.com/tobacconomics)

[www.tobacconomics.org](http://www.tobacconomics.org)