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Economic Research Informing Tobacco Control Policy

A Significant Cigarette Tax Rate Increase in Oklahoma Would Produce a Large, Sustained Increase in State Tobacco Tax Revenues

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Executive Summary

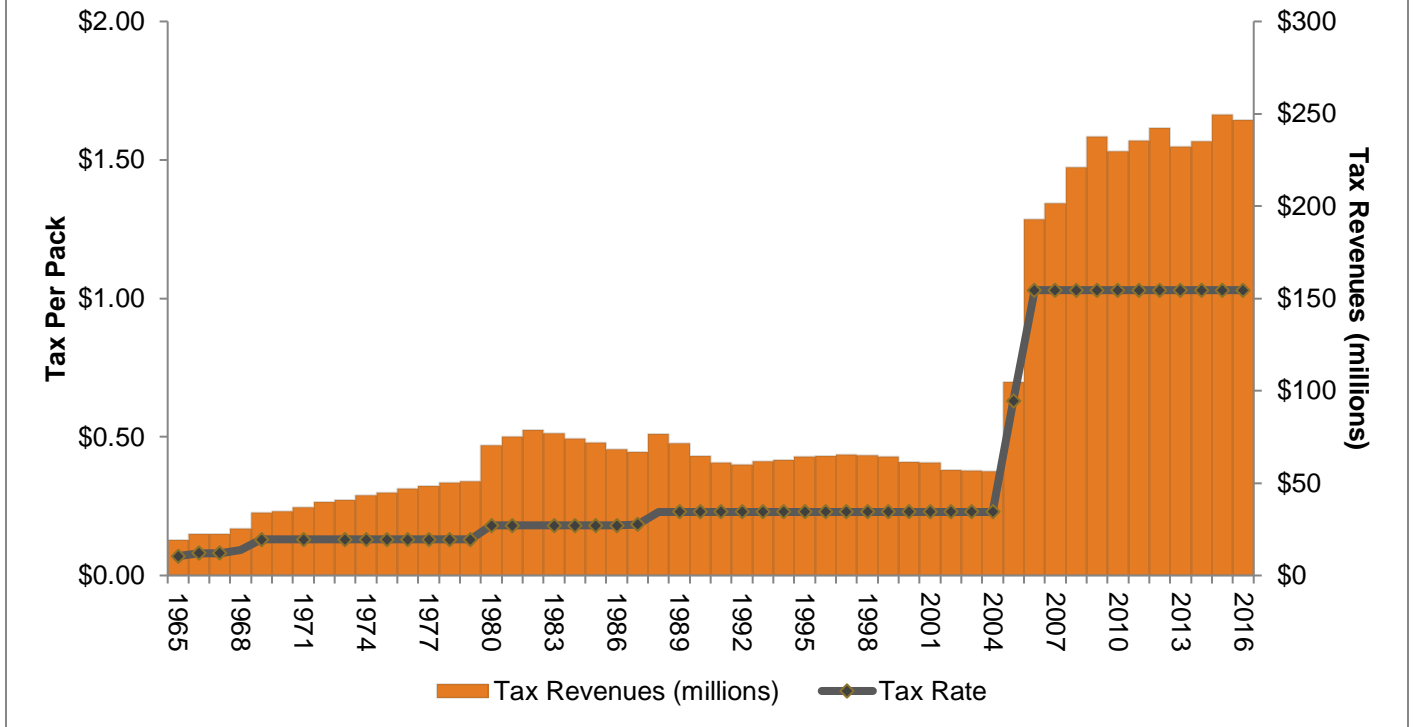
State cigarette and other tobacco tax revenues are among the most predictable, steady, and reliable revenues that states receive. While these revenues do decline gradually over time as smoking and other tobacco use declines, the reductions in revenue are modest, predictable, and more than offset by the related reductions in public and private sector health care costs and other economic costs caused by smoking.

In general, state cigarette tax revenues increase sharply following a significant increase to a state's cigarette tax rates (despite the smoking declines prompted by the tax increase and any related increases in tax avoidance or evasion), and then tend to decline slowly year to year as cigarette smoking continues to go down in response to other factors (e.g., stronger public policies targeting tobacco use). However, any decline in revenues from smoking reductions will be offset by related declines in tobacco-related health care costs burdening the state.

For instance, the Campaign for Tobacco-Free Kids, the American Cancer Society Cancer Action Network, and the Tobacconomics program project that a \$1.50 per pack cigarette tax increase in Oklahoma will prevent 28,200 youth from becoming adult smokers, encourage 30,400 adults to quit, prevent 16,700 future smoking-caused deaths, save the state \$1.22 billion in future health care costs, and generate more than \$183 million in new revenue in the first year. A \$2.00 per pack cigarette tax increase would generate even more public health and economic benefits for the state.

As shown in the chart below, Oklahoma, like other states, has enjoyed substantial revenue increases each time it has raised its cigarette tax rate, followed by years of steady revenue levels. When Oklahoma last increased its cigarette tax rate in January 2005, revenues increased sharply and have stayed at a relatively high level since then.

Cigarette Tax and Tax Revenues Oklahoma, 1965-2016



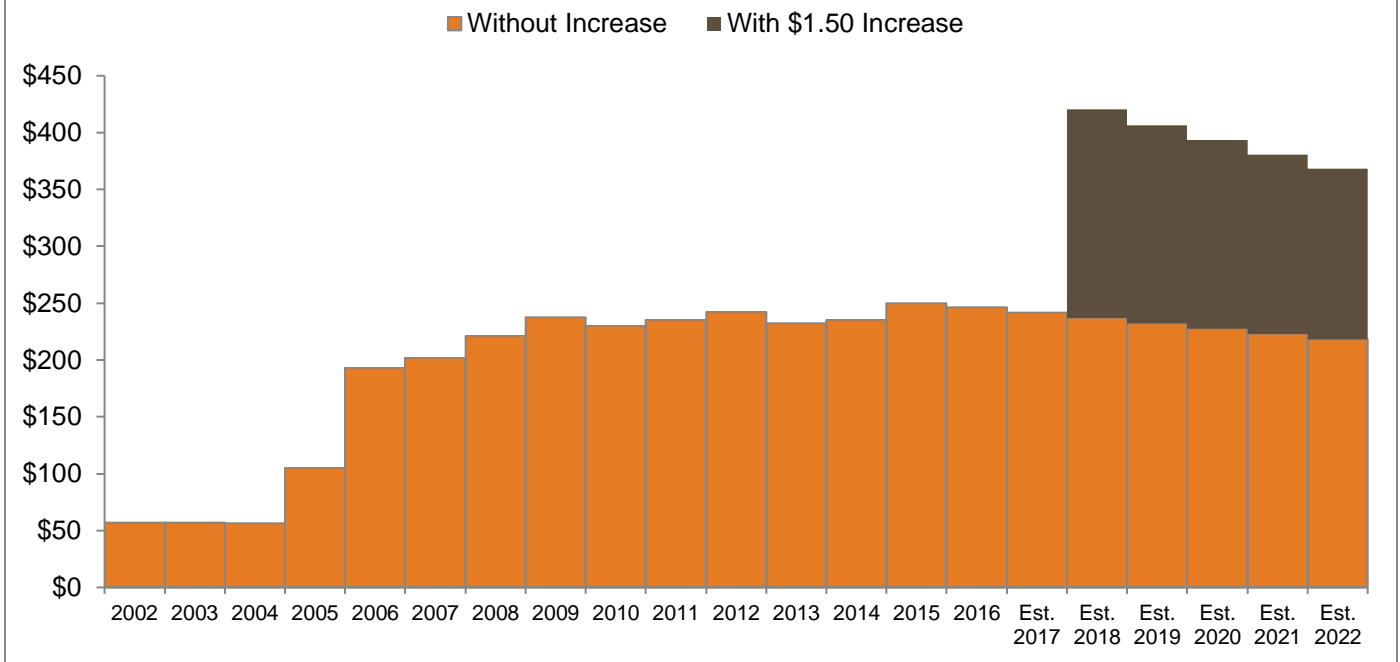
Note: Data are for fiscal years ending June 30.

Despite the year-to-year fluctuations, Oklahoma is still receiving nearly five times as much cigarette tax revenue compared to what it received right before it last increased its cigarette tax rate. That same basic pattern, with state revenues remaining at a relatively high level in future years, would occur again if Oklahoma increased its cigarette tax rate significantly in 2017 – and the new revenues would be even larger if Oklahoma also equalized all its tobacco product tax rates at the same time.

The chart below shows what the Campaign for Tobacco-Free Kids, the American Cancer Society Cancer Action Network, and the Tobacconomics

program projects that a \$1.50 per pack increase would generate in new cigarette tax revenues over each of the next five years. Even if Oklahoma’s cigarette sales declined at a relatively rapid rate of five percent a year, the state would receive an additional \$183.9 million in new revenues in the first year following the tax increase, and would still be receiving more than \$125 million in additional new annual cigarette tax revenues five years after the increase, compared to what it received in 2017. This implies that Oklahoma would have received more than \$830 million in total new annual revenues over that five year period compared to what it would receive with no rate increase.

Estimated Future Cigarette Tax Revenues, Oklahoma



Note: Data are for fiscal years ending June 30.

Finally, while there may be some tax avoidance and evasion in response to increases in cigarette and other tobacco product taxes, these tax increases will still generate significant public health and revenue gains. This is evident when comparing Oklahoma's experience following its 2005 tax increase, which raised the state cigarette tax from 23 cents to \$1.03 per pack, to the experiences of Oklahoma's neighboring states at during the same period. With the exception of Colorado, which also increased its cigarette tax at the same time (from 20 to 84 cents per pack), revenues in Oklahoma's surrounding states declined (Missouri, New Mexico) or did not exceed single digit growth (Arkansas, Kansas, Texas). At the same time, Oklahoma has been particularly successful in addressing tobacco sales in tribal smokeshops, with tribal compacts leading to higher taxes and prices, increased revenues for tribes, and a drop in the share of Oklahoma cigarette sales accounted for by tribal sales. In addition, the 2005 state tax increase and the 2009 federal tax increase contributed to a sharp decline in youth smoking rates

over the past decade, from 26.5 percent in 2003 to 18.5 percent in 2013.

If Oklahoma is concerned about the impact of tobacco tax increases on smuggling and tax evasion, there are a number of steps that the state could take to protect or even increase its tobacco tax revenues over time and to maximize the public health impact of the increases. For example, Oklahoma could implement high-tech tax stamps to ensure that taxes are paid and to reduce cigarette smuggling and tax evasion. The state could also minimize tobacco product smuggling and other tax evasion through such measures as making sure smokers understand the state's laws pertaining to tobacco tax evasion, increasing penalties for smuggling and other tax evasion, and directing a portion of all penalties to help fund expanded enforcement (which would bring in both more penalty payments and more tobacco tax revenues). Tax avoidance, particularly stockpiling cigarettes in advance of the tax increase, could be minimized by including an inventory, or floor stock, tax with the cigarette tax increase.

A Significant Cigarette Tax Rate Increase in Oklahoma Would Produce a Large, Sustained Increase in State Tobacco Tax Revenues

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, because the increased tax per pack brings in much more new revenue than is lost by the declines in the number of packs sold and taxed. Exhibits A and B show many examples from actual state cigarette tax increases.

Exhibit A presents a list of significant state cigarette tax increases between 2003 and 2015 (increases of 50 cents or more per pack) and shows the amount of the tax increase, the decline in tax-paid cigarette sales, compared to the decline in sales nationally over the same time period, and the revenue change from the twelve months before the tax increase to the twelve months after the tax increase. In every state that significantly increased its tax, there were both sharp reductions in total packs sold and large increases in total net new revenues in the year following the rate increase, compared to the year before it. The longer term revenue impact of tax increases in many of these states, including Oklahoma, is often larger than what is shown in Exhibit A, given that revenues in the twelve month periods immediately preceding and following a tax increase can be significantly distorted by stockpiling cigarettes at the lower tax rate, when a tax increase is not accompanied by an inventory, or floor stock, tax.

Exhibit B is a short report that examines the sustainability of revenues generated from cigarette tax increases. This report considered every major cigarette tax increase (50 cents or more per pack) between 2000 and July 2010 and looked at state cigarette tax revenues before the tax increase and for at least five years following the increase, with analyses for states with and without well-funded comprehensive tobacco control programs. In every

state that raised its tax during that time period, cigarette tax revenues increased significantly and remained much higher than revenues prior to the tax for many years after the tax increase.

Accordingly, Exhibits A and B provide direct evidence from actual state experiences that confirms that significant cigarette tax increases have always produced substantial amounts of new revenues (compared to what the state would have received without the increase), both immediately and over extended periods of time, and despite any and all related decreases in taxed state pack sales.

Cigarette and Other Tobacco Tax Revenues Are Much More Predictable and Stable Than Many Other State Revenues

Year to year, state cigarette and other tobacco tax revenues are more predictable and less volatile than most other state revenue sources, such as state personal income taxes or corporate income taxes, which can vary considerably from year to year because of nationwide or regional recessions or state economic slowdowns.

In contrast, sharp drops in cigarette or other tobacco tax revenues from one year to the next are rare, in large part due to the addictive nature of cigarette smoking and other tobacco use. Long-term trends in tobacco use show modest declines from year to year, both nationally and at the state level. These declines can be accelerated by comprehensive tobacco prevention efforts, but will generally be no more than a few percentage points each year. The exception to this will be the large smoking declines that result from large nationwide increases in cigarette prices, such as the large cigarette company price increases prompted by the 1998 Master Settlement Agreement

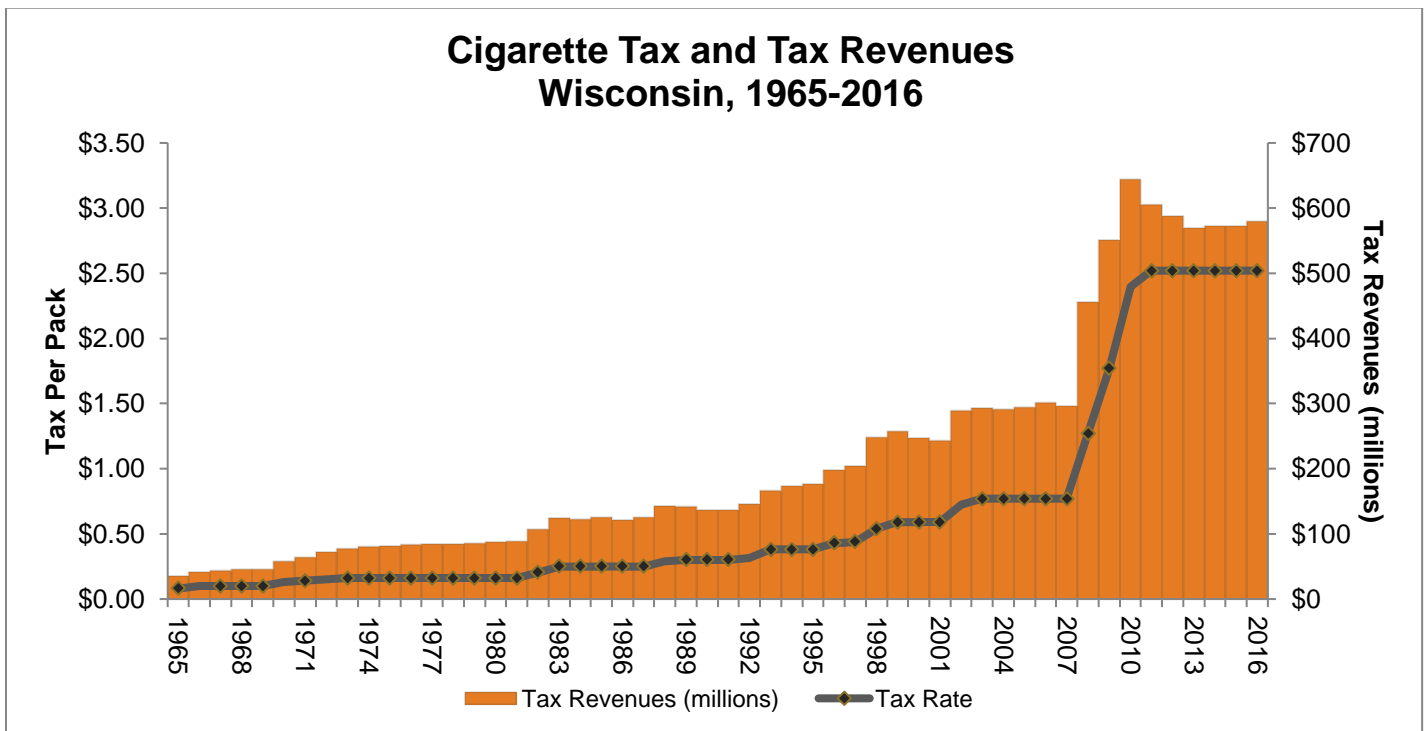
and the April 1, 2009 increase in federal excise taxes on cigarettes and other tobacco products. The only other large year-to-year changes to state cigarette tax revenues are the large revenue increases when a state significantly increases its own cigarette tax rates.

In states where taxes have been increased regularly over time, each increase in the tax leads to a significant and sustained increase in tax revenues. As shown in the figure below, for example, Wisconsin has increased its cigarette excise tax several times over the past few decades, with each increase generating new, sustained revenues.

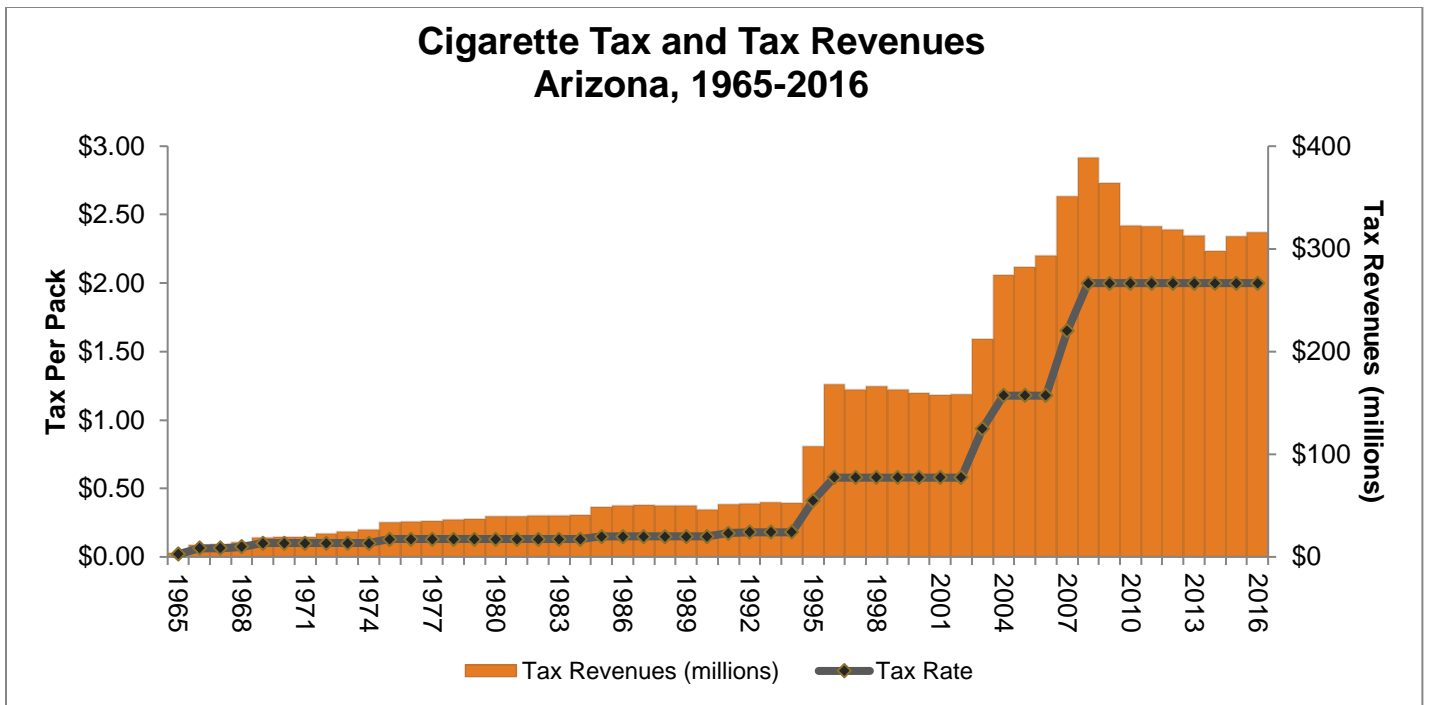
The same pattern holds even in states where a share of the new revenues generated by the tax increase is used to fund a comprehensive tobacco control

program. Arizona, for example, has increased its cigarette excise tax multiple times over the past few decades. In November 1994, Arizona voters approved the Tobacco Tax and Health Care Act that raised the cigarette tax by 40 cents per pack and dedicated a portion of the new revenues to the state's tobacco control program. As the figure below shows, each subsequent tax increase in Arizona led to a significant and sustained increase in revenues, despite the greater declines in smoking that result from the funding for the state program.

Additional examples of the relative stability of revenues from other state cigarette tax increases in states with and without well-funded tobacco control programs are contained in Exhibit B.



Note: Data are for fiscal years ending June 30.



Note: Data are for fiscal years ending June 30.

Smoking Declines Produce Enormous Public and Private Sector Savings That More Than Offset Any State Revenue Reductions from Fewer Packs Being Sold

As described above, gradual reductions in cigarette smoking and other tobacco use in the years after increases in state cigarette and other tobacco taxes will produce slow declines in state tobacco tax revenues (in the absence of additional tax increases). These declines in revenues, however, will be offset by reductions in public and private spending on health care to treat diseases caused by smoking, and by the reductions in the other economic costs caused by tobacco use. Some declines in costs, such as those resulting from smoking during pregnancy, will be seen almost immediately. Over time, these reduced costs will grow considerably, given that most of the

health and other consequences of tobacco use occur after many years.

When smoking rates decline among pregnant women and lower income smokers (among the groups whose smoking behavior is most sensitive to changes in tax and price), costs to state Medicaid programs subsequently decline. Decreasing smoking rates among workers will decrease public and private sector employee health care costs.

Increasing tobacco taxes in Oklahoma will raise revenue while also lowering the health care cost burden on the state. Each year, Oklahoma spends \$1.62 billion on health care costs caused by tobacco use, \$264 million of which is paid by the state through the Medicaid program. A decline of one percentage point in adult smoking rates will save the state \$324.5 million in health care costs, including millions in state Medicaid costs related to tobacco use over time. And preventing kids from starting to

smoke will save the state even more in health care costs.

In addition, the reductions in smoking from state cigarette and other tobacco product tax increases will produce other economic benefits for the state, including increased productivity in government and private sector workforces as fewer employees miss work because of smoking-caused sick days and cigarette breaks or have their productive work-lives interrupted or cut short by smoking-caused disability or premature death. Other economic benefits include reduced property losses from smoking-caused fires, and reduced cleaning and maintenance costs caused by smoking.

Moreover, the public health benefits of a significant tax increase are substantial. The Campaign for Tobacco-Free Kids, the American Cancer Society Cancer Action Network, and the Tobacconomics program project that a \$1.50 per pack increase will prevent 28,200 youth from becoming adult smokers, encourage 30,400 adults to quit, prevent 16,700 smoking-caused deaths, and save \$1.22 billion in long-term health care costs. Larger tax increases would generate even larger public health benefits, reductions in costs, and increases in tax revenues.

States Can Implement Other Effective Strategies to Maintain and Increase Their Cigarette and Other Tobacco Tax Revenues

If gradually declining state tobacco tax revenues are a concern for Oklahoma – despite the benefits and cost savings from the related smoking and other tobacco use declines discussed above – the state can periodically increase its tobacco tax rates to offset any declines in revenue. Alternatively, Oklahoma could implement legislation that allows for administrative increases in state tobacco tax rates following any significant decline in annual state tobacco tax

revenues (or in total state tobacco revenues, including tobacco settlement payments).

Another important strategy is to make sure 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 make revenue flows even more reliable – Oklahoma will not lose revenues if cigarette smokers switch to products taxed at lower rates.

RYO cigarettes, for example, are much cheaper than manufactured cigarettes; and most state 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).

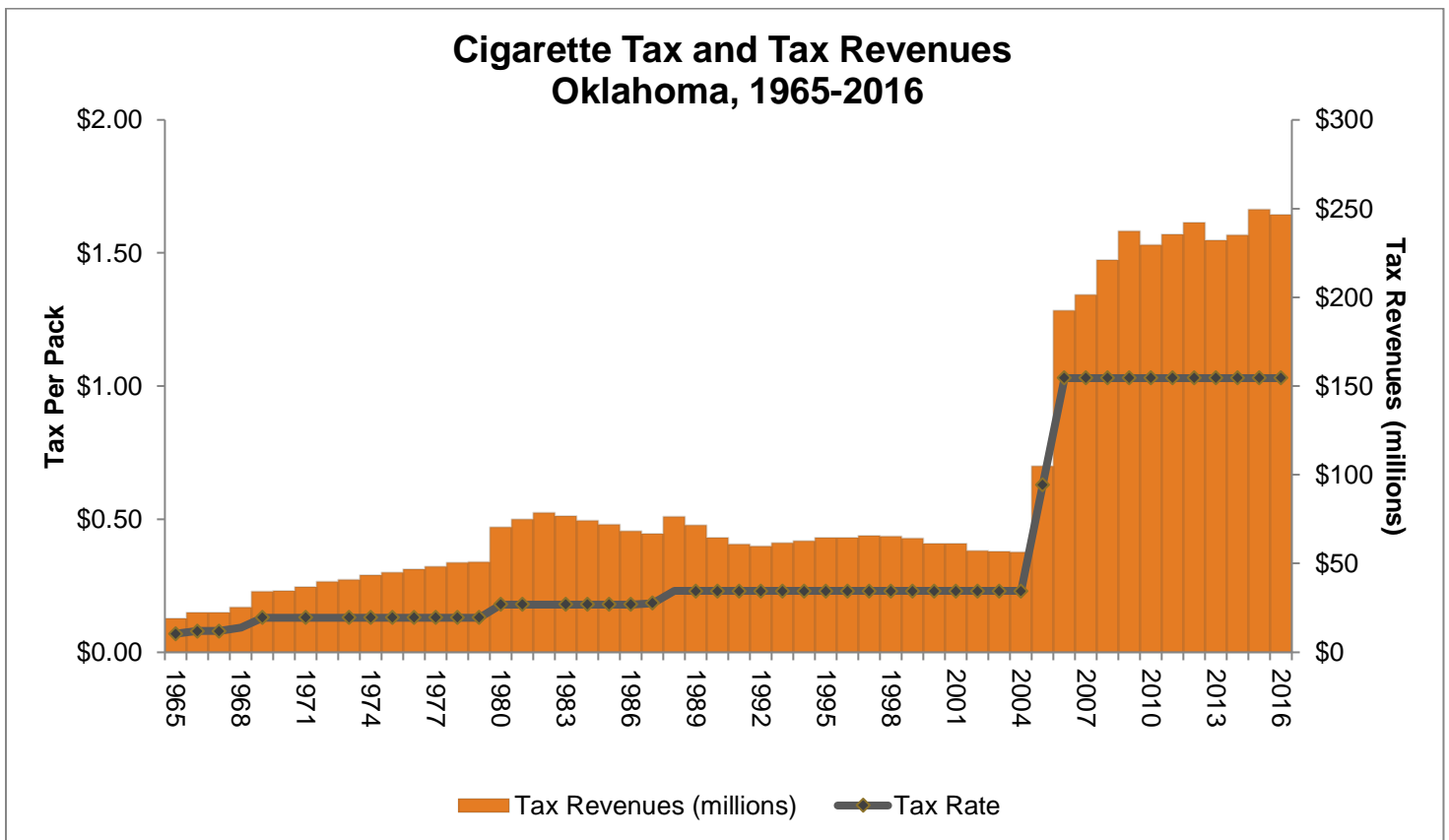
States can also protect their cigarette and other tobacco tax revenues by implementing initiatives to prevent and reduce cigarette smuggling and other forms of tobacco tax evasion – such as adopting new, high-tech tax stamps. California, the first state to adopt a high-tech tax stamp, enjoyed a \$100 million increase in cigarette tax revenues in the first 20 months after the new tax stamp was introduced.

Additional cost-effective strategies to protect tobacco tax revenues from tax evasion include increasing

penalties and fines; educating smokers about applicable state laws (such as limits on the number of packs that may be brought into the state from other states); and increasing enforcement efforts – perhaps allowing the enforcing agencies to keep half of all fines and penalties they collect to fund expanded new enforcement efforts (with general revenues receiving the other half, along with all of the recouped tax revenues). At the same time, including an inventory, or floor stock, tax will protect tobacco tax revenues from short term tax avoidance from stockpiling of tax-paid cigarettes and other tobacco products in anticipation of a tax increase.

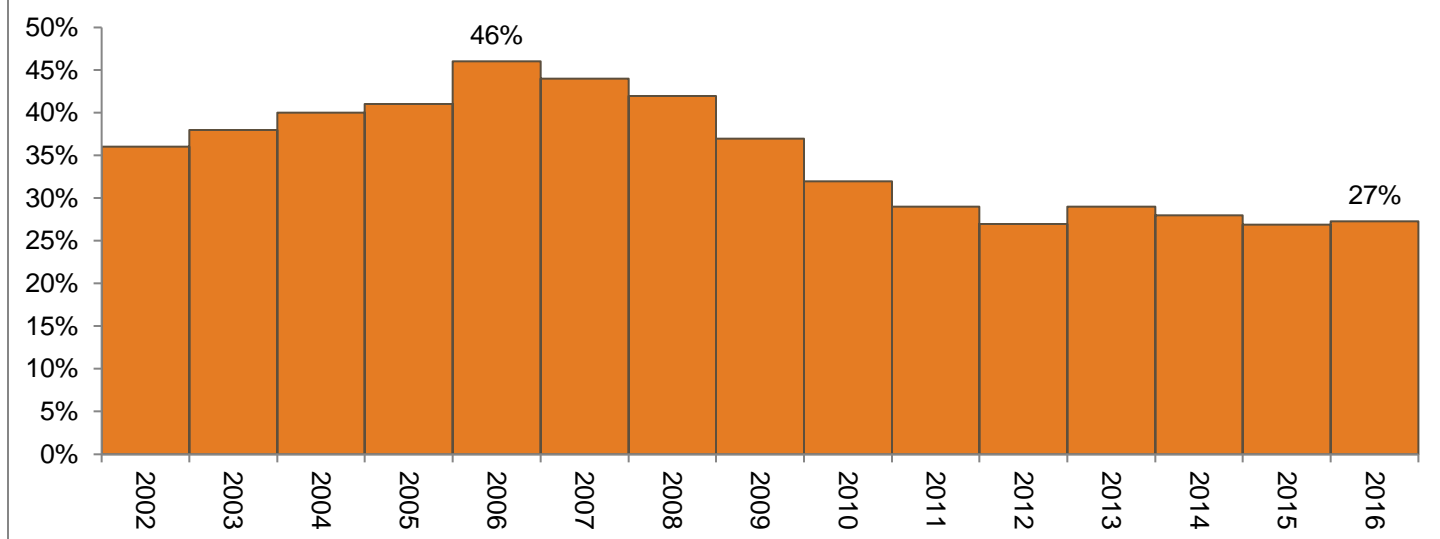
Other states have reduced tax avoidance and increased collections by targeting tax collection efforts at smokers who purchase cigarettes on the

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. Oklahoma has done particularly well in negotiating compacts with local tribes, resulting in steady increases, rather than reductions, in state cigarette tax collections as the effective tax on tribal sales has risen over time, resulting in a reversion of tribal market share to levels somewhat below what existed before Oklahoma’s 2005 tax increase. Since 2013, this has occurred at the same time that tribal revenues from cigarettes have been increasing, because of increased revenue sharing rebate percentages included in the initial years of new state-tribal compacts.



Note: Data are for fiscal years ending June 30.

Tribal Share of Overall Cigarette Sales Oklahoma, 2002-2016



Note: Data are for fiscal years ending June 30.

Oklahoma's Past Experience with Cigarette Tax Increases

Oklahoma has increased its cigarette excise tax three times since 1970, but has not raised it at all since 2005:

- July 1, 1979: 5-cent increase to 18 cents per pack
- June 1, 1987: 5-cent increase to 23 cents per pack
- January 1, 2005: 80-cent increase to \$1.03 per pack

Each of those rate increases produced significant amounts of new revenue, despite related pack sales declines. Most notably, the 2005 increase generated a very large and sustained increase in state cigarette excise tax revenues. After accounting for the stockpiling that occurred in anticipation of the tax increases, the tax rate increases more than tripled cigarette excise tax revenues in Oklahoma

(comparing fiscal year 2004 revenues of \$58.8 million to \$197.7 million collected in fiscal year 2006, the first full year after the mid-fiscal year increase).

The Wisconsin and Arizona cigarette tax rate and revenue graphs above illustrate several points. First, state cigarette tax revenues can decline somewhat in the years after the initial jump in revenues that follows a state tax increase, because of ongoing gradual declines in smoking, often driven by other policy interventions. For example, the declines in Wisconsin and Arizona revenues between 2009 and 2010 are mostly attributable to the significant federal cigarette tax increase that took effect on April 1, 2009, which significantly reduced cigarette consumption and smoking across the United States.

Second, leaving the state tax rate on other tobacco products low while increasing the state cigarette tax leaves revenues on the table and can contribute to reduced tobacco tax revenues. If other tobacco product taxes are not increased at the same time, Oklahoma could lose revenue each time a regular cigarette smoker avoids the higher cigarette tax by

switching to much lower-taxed roll-your-own cigarettes, little cigars, or other tobacco products.

Third, even with the out-year revenue declines caused by ongoing smoking reductions, state cigarette tax revenues several years after the last cigarette tax increase are still substantially larger than the revenue levels before the increase – and much higher than what the revenue levels would have been today absent any cigarette tax increase.

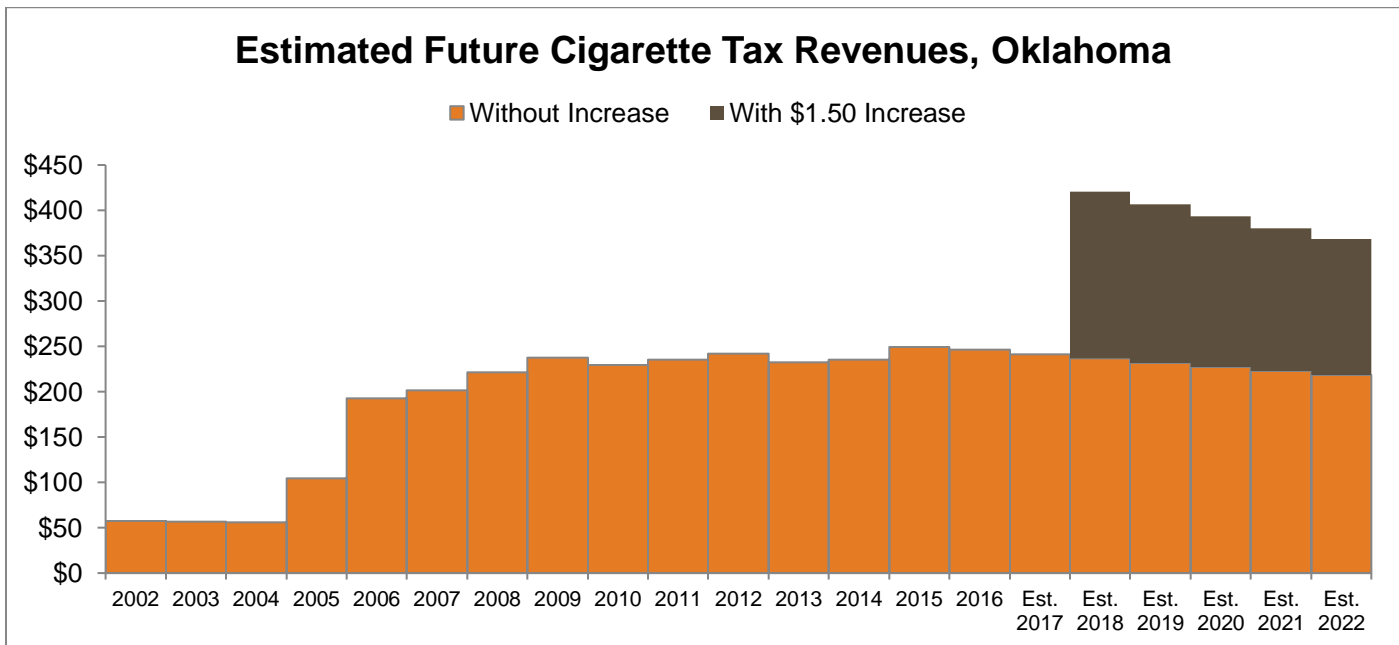
Fourth, periodic increases in a state’s cigarette tax will more than offset the revenue declines from underlying downward trends in smoking, or new smoking declines from other factors, and produce substantially more revenue.

What Oklahoma Could Expect from a Tobacco Tax Increase

If Oklahoma increases its cigarette tax significantly in 2017, its revenues should follow the same basic pattern that occurred after its last cigarette tax increase, bringing the state substantial new revenues.

For example, the Campaign for Tobacco-Free Kids, the American Cancer Society Cancer Action Network, and the Tobacconomics program project that a \$1.50 per pack increase in the cigarette tax will generate \$183.9 million in new revenues in the first 12 months of the increase, despite reductions in smoking rates as a result of the rate increase. A larger tax increase would generate even higher revenues. In addition, if Oklahoma increased its tax rate on other tobacco products to match the new cigarette tax rate at the same time, the state could collect additional revenue, while also gaining public health benefits and savings in health care costs because of reduced tobacco use.

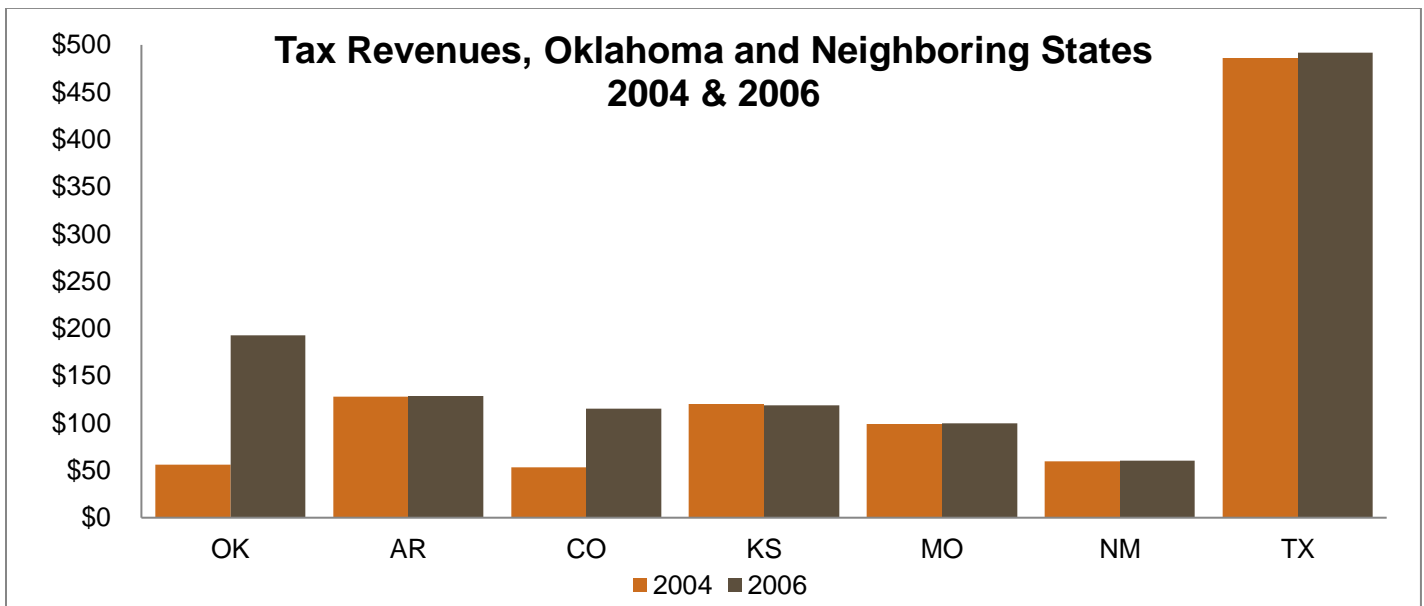
Even if Oklahoma’s cigarette sales declined by five percent a year after the initial surge in new revenues that would result from a \$1.50 rate increase, the state would still be receiving more than \$125 million in additional annual cigarette tax revenues five years after the increase compared to what it received in 2017, and would have received more than \$830 million in total new annual revenues over that five year period compared to what it would receive with no rate increase.



Note: Data are for fiscal years ending June 30.

While there may be some tax avoidance and evasion in response to increases in cigarette and other tobacco product taxes, these tax increases will still generate significant public health and revenue gains. This is evident when comparing Oklahoma's experience following its 2005 tax increase that raised the state cigarette tax from 23 cents to \$1.03 per pack to the experiences in neighboring states during the same period. As shown in the figure below, with the exception of Colorado, which increased its cigarette

tax at the same time (from 20 to 84 cents per pack), revenues in Oklahoma's neighboring states declined (Missouri, New Mexico) or saw limited, single digit growth (Arkansas, Kansas, Texas). Moreover, Oklahoma's success in negotiating compacts that raise the effective tax rate on tribal sales has been effective in controlling the share of sales that are made through tribal smokeshops and thus in protecting the state's cigarette tax revenues.



Note: Data are for the fiscal years ending June 30.

If Oklahoma is concerned about the impact of tobacco tax increases on smuggling and tax evasion, there are a number of steps that the state could take to protect or even increase its tobacco tax revenues over time and to maximize the public health impact of the increases. For example, Oklahoma could implement high-tech tax stamps to ensure that taxes are paid and to prevent cigarette smuggling and tax evasion. The state could also minimize tobacco product smuggling and other tax evasion through such measures as making sure smokers understand the state's laws pertaining to tobacco tax evasion, increasing penalties for smuggling and other tax

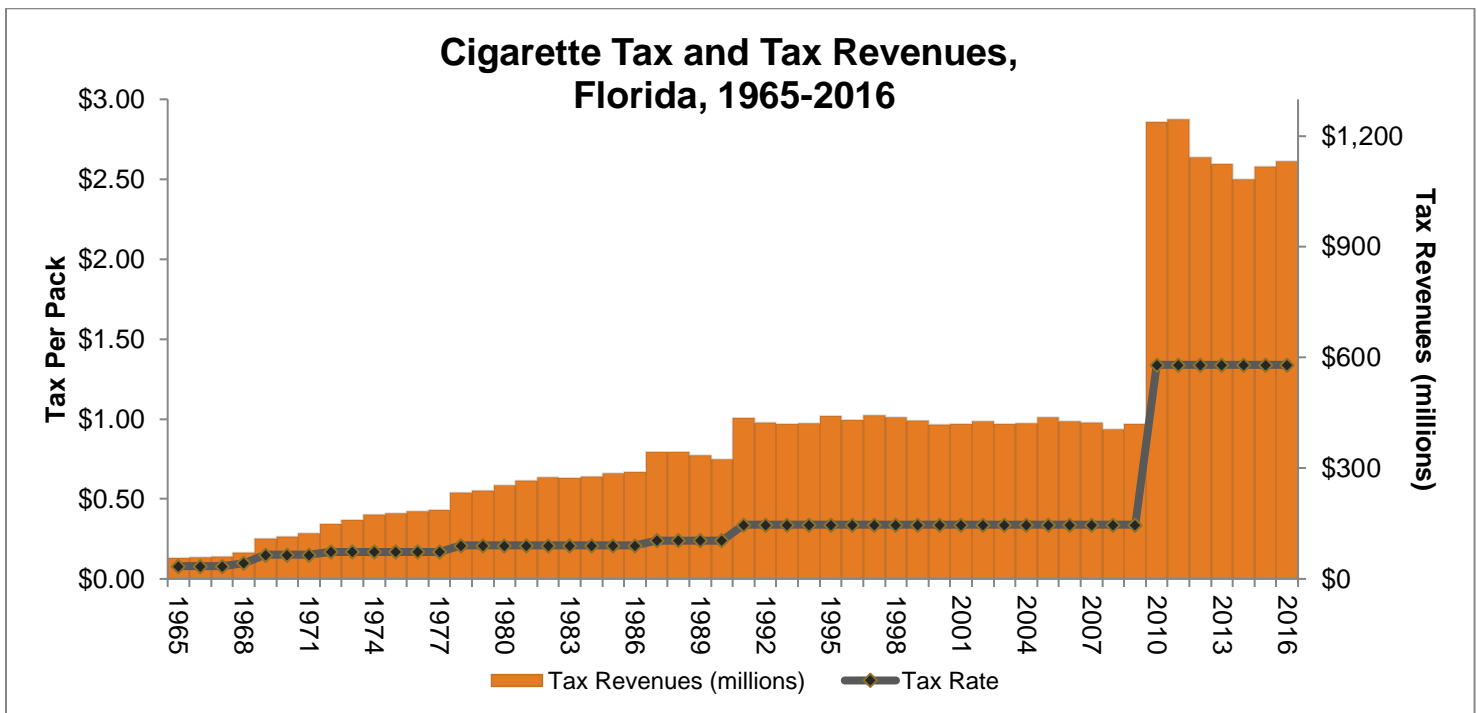
evasion, and directing a portion of all penalties to help fund expanded enforcement (which would bring in both more penalty payments and more tobacco tax revenues). Tax avoidance, particularly stockpiling cigarettes in advance of the tax increase, could be minimized by including an inventory, or floor stock, tax with the cigarette tax increase.

The pattern predicted for Oklahoma directly parallels what has happened in other states that have significantly increased their cigarette tax rates. For example, Florida increased its cigarette tax rate by \$1.00 per pack, effective July 1, 2009, from a starting cigarette tax of 33.9 cents per pack. As shown in the

chart below, Florida's gross tax revenues increased by 193 percent in the first year after the increase and have stayed at the much higher level since, while pack sales declined by 27 percent in the first year after the increase in Florida's tax revenues would have been even larger in the absence of the significant increase in the federal cigarette tax implemented in April 2009.

This Florida chart also provides another example of how state cigarette taxes provide a stable source of

funding, with no major changes year-to-year, except when revenues go up sharply because of significant rate increases. Over time, cigarette tax revenues will decline slowly as smoking rates continue to fall, but revenues will remain considerably higher for many years and the declines will be gradual and predictable. Moreover, the substantial health benefits that result from the declines in smoking caused by the tax increase and the resulting reductions in health care costs should be considered.



Note: Data are for fiscal years ending June 30.

As noted earlier, every state that has significantly increased its cigarette taxes has, like Oklahoma, seen substantial new cigarette tax revenues. Indeed, every

state cigarette tax increase has produced an increase in state revenues that is well above what the state would have received with no tax increase.¹

¹ In rare cases, a small state increase might not bring in enough new revenue to make up for state pack sales and revenue declines caused by other factors. For example, after New Jersey increased its \$2.40 per pack cigarette tax by 17.5¢ in 2006 (only a 3% increase in the average pack price), its cigarette tax revenues declined somewhat. This decline almost certainly resulted from ongoing smoking declines in the state and additional reductions in consumption caused by the state's Smoke-Free Air Act that went into effect in April 2006. Without the small tax increase, the state's tax revenues would have dropped much more sharply. In every other instance, state cigarette tax rate increases have been followed by significant net increases to annual state tax revenues – despite any ongoing or new smoking declines unrelated to the cigarette tax increase – and in every instance, including New Jersey, the state cigarette tax increase has brought the state more revenues than it would have received without any rate increase. See, e.g., Exhibits A and B.

EXHIBIT A

STATE EXPERIENCES WITH LARGE CIGARETTE TAX INCREASES 2003-2015

REDUCED PACK SALES AND INCREASED REVENUES

State	Effective Date	Tax Increase Amount (per pack)	New State Tax Rate (per pack)	State Pack Sales Decline	Nationwide Pack Sales Trend	Revenue Increase	Gross New Revenues (millions)
<i>Alaska</i>	1/1/05	60¢	\$1.60	- 23.2%	- 4.2%	+ 22.8%	+ \$9.3
<i>Arizona</i>	12/8/06	82¢	\$2.00	- 32.5%	- 4.4%	+ 13.6%	+ \$44.5
<i>Arkansas</i>	3/1/09	56¢	\$1.15	- 27.8%	- 10.2%	+ 33.5%	+ \$46.5
<i>Colorado</i>	1/1/05	64¢	84¢	- 24.3%	- 4.2%	+ 220.2%	+ \$131.0
<i>Delaware</i>	7/31/07	60¢	\$1.15	- 35.1%	- 4.9%	+ 35.1%	+ \$31.8
<i>Washington, DC</i>	10/1/08	\$1.00	\$2.00	- 25.9%	- 7.0%	+ 57.3%	+ \$13.2
<i>Florida</i>	7/1/09	\$1.00	\$1.339	- 27.4 %	- 8.4%	+ 193.2%	+ \$828.8
<i>Hawaii</i>	7/1/09	60¢	\$2.60	- 11.3%	- 8.4%	+ 14.5%	+ \$15.1
<i>Illinois</i>	6/24/12	\$1.00	\$1.98	- 31.2%	-2.3%	+ 39.0%	+ \$229.2
<i>Iowa</i>	3/15/07	\$1.00	\$1.36	- 30.6%	- 4.7%	+ 140.2%	+ \$128.0
<i>Kansas</i>	7/1/15	50¢	\$1.29	-6.4%	-1.3%	+56.3%	+ \$50.4
<i>Louisiana</i>	7/1/15	50¢	86¢	-23.9%	-1.3%	+81.0%	+ \$100.0
<i>Maine</i>	9/19/05	\$1.00	\$2.00	- 12.3%	- 1.8%	+ 76.5%	+ \$71.5
<i>Maryland</i>	1/1/08	\$1.00	\$2.00	- 27.1%	- 4.2%	+ 45.8%	+ \$126.9
<i>Massachusetts</i>	7/1/08	\$1.00	\$2.51	- 20.3%	- 5.3%	+ 32.2%	+ \$137.2
<i>Massachusetts</i>	7/1/13	\$1.00	\$3.51	- 15.0%	- 4.7%	+ 15.3%	+ \$81.9
<i>Michigan</i>	7/1/04	75¢	\$2.00	- 15.2%	- 1.7%	+ 28.1%	+ \$238.9
<i>Minnesota</i>	8/1/05	75¢	\$1.23	- 16.1%	- 1.8%	+ 160.7%	+ \$258.4
<i>Minnesota</i>	7/1/13	\$1.60	\$2.83	- 24.0%	- 4.7%	+ 56.0%	+ \$204.1
<i>Mississippi</i>	5/15/09	50¢	\$0.68	- 22.8%	- 9.5%	+ 188.3%	+ \$88.9

Montana	5/1/03	52¢	\$0.70	- 7.3%	- 2.9%	+ 259.8%	+ \$30.5
Montana	1/1/05	\$1.00	\$1.70	- 42.0%	- 4.2%	+ 36.5%	+ \$18.8
Nevada	7/1/15	\$1.00	\$1.80	-33.1%	-1.3%	+51.6%	+\$54.6
New Jersey	7/1/03	55¢	\$2.05	- 9.0%	- 2.3%	+ 26.6%	+ \$157.4
New Mexico	7/1/03	70¢	\$0.91	- 32.3%	- 2.3%	+ 191.8%	+ \$39.2
New Mexico	7/1/10	\$0.75	\$1.66	- 7.8%	- 2.6%	+ 67.5%	+ \$37.5
New York	6/3/08	\$1.25	\$2.75	- 15.2%	- 5.8%	+ 40.3%	+ \$377.4
New York	7/1/10	\$1.60	\$4.35	- 24.8%	- 2.6%	+ 18.8%	+ \$244.6
Ohio	7/1/05	70¢	\$1.25	- 20.6%	- 1.6%	+ 78.9%	+ \$437.6
Oklahoma	1/1/05	80¢	\$1.03	- 34.7%	- 4.2%	+ 98.2%	+ \$81.6
Rhode Island	7/1/04	75¢	\$2.46	- 18.7%	- 1.7%	+ 16.9%	+ \$18.7
Rhode Island	4/10/09	\$1.00	\$3.46	- 14.7%	- 11.1%	+ 15.1%	+ \$17.8
South Carolina	7/1/10	50¢	\$0.57	+ 7.8% ¹	- 2.6%	+ 434.2%	+ \$116.8
South Dakota	1/1/07	\$1.00	\$1.53	- 25.8%	- 4.9%	+ 115.4%	+ \$31.8
Texas	1/1/07	\$1.00	\$1.41	- 21.0%	- 4.9%	+ 191.7%	+ \$1,003.7
Utah	7/1/10	\$1.005	\$1.70	- 24.5%	- 2.6%	+ 85.0%	+ \$47.0
Vermont	7/1/06	60¢	\$1.79	- 15.2%	- 3.0%	+ 27.9%	+ \$13.2
Washington	7/1/05	60¢	\$2.025	- 8.4%	- 1.6%	+ 29.1%	+ \$95.5
Washington	5/1/10	\$1.00	\$3.025	- 20.5%	- 3.9%	+ 17.0%	+ \$62.0
Wisconsin	1/1/08	\$1.00	\$1.77	- 15.0%	- 4.2%	+ 93.9%	+ \$286.0

Sources: Orzechowski & Walker, *Tax Burden on Tobacco* monthly data. U.S. Alcohol and Tobacco Tax and Trade Bureau. Consumption declines and revenue increases are for the 12 months before and after the tax increase, using monthly data because some tax rate increases are implemented in the middle of the fiscal year. Only gross tax revenues are available on a monthly basis, therefore to be consistent, the chart above reflects gross tax revenues for all tax increases. Nationwide consumption declines are for the 50 states and DC. Trends for rate increases after January 2008 include the impact of the 61.66-cent federal cigarette tax increase (effective April 1, 2009).

¹ The increased pack sales are largely due to a surge in pack sales in July 2010 because SC's new tax rate was not implemented until August 2010.

EXHIBIT B

SUSTAINABILITY OF CIGARETTE TAX REVENUES OVER TIME FOLLOWING CIGARETTE TAX RATE INCREASES

Introductory Points:

- Cigarette consumption is generally trending down. During the period from 1990 to 2014, total sales for the U.S. fell by 2.8 percent, on average, per year. During this same period, sales in Oklahoma fell by an average of 0.5 percent 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 percent will reduce total cigarette consumption by 4 percent 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 percent 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, 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.
- In states that use some of the revenues from tax increases to fund comprehensive tobacco control programs, these efforts lead to further reductions in smoking beyond those resulting from the tax increase. The implications for revenues are that the revenues generated from the tax increase will be lower in years after the comprehensive program is implemented compared to before.
- Historically, every significant state cigarette excise tax increase has resulted in a significant increase in cigarette tax revenues.

Data Sources:

Monthly tax paid cigarette tax revenues, by state, 1999-2014, provided by USDA and CDC, Tax Burden on Tobacco monthly reports; cigarette tax rates and dates of change, *Tax Burden on Tobacco*, 2014. Note that the revenues for later periods described below (post November 1998) are lower relative to the general trend because of sharp reductions in smoking resulting from industry initiated cigarette price increases in the wake of the Master Settlement Agreement and, more recently, the significant increase in the federal cigarette excise tax in 2009. Tobacco control funding and CDC recommended funding amounts from CDC and the Campaign for Tobacco-Free Kids.

Approach:

- Analyzed significant tax changes – those that increased the state tax cigarette excise tax rate by at least 50 cents per pack over the period from 2000 through July 2010.
- Computed tax revenues for the 12 months preceding tax change and for as many 12 month periods as possible after tax change, for a minimum of five years; if tax was changed mid-month, then the last 12 full months and subsequent 12 full month periods were examined.

Findings:

States with at Least 5 Years of Post-Tax Increase Data Available, and the Average State Tobacco Control Funding As a Percent of the CDC Recommendation Less Than 50%

- Arizona – tax increases from 58 cents to 118 cents per pack, 11/26/2002, and to 200 cents per pack, 12/8/2006:
 - Revenues 12/1/2001 – 11/30/2002: \$177.7 million
 - Revenues 12/1/2002 – 11/30/2003: \$244.8 million
 - Revenues 12/1/2003 – 11/30/2004: \$280.5 million
 - Revenues 12/1/2004 – 11/30/2005: \$286.2 million
 - Revenues 12/1/2005 – 11/30/2006: \$325.9 million
 - Revenues 12/1/2006 – 11/30/2007: \$370.4 million
 - Revenues 12/1/2007 – 11/30/2008: \$391.4 million
 - Revenues 12/1/2008 – 11/30/2009: \$348.3 million
 - Revenues 12/1/2009 – 11/30/2010: \$324.5 million

- Revenues 12/1/2010 – 11/30/2011: \$323.6 million
- Revenues 12/1/2011 – 11/30/2012: \$319.2 million
- Revenues 12/1/2012 – 11/30/2013: \$310.7 million
- Revenues 12/1/2013 – 11/30/2014: \$309.1 million
- Average annual revenues, 12/2002 – 11/2014: \$319.6 million

❖ Arizona – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 39.9%

• California – tax increase from 37 cents to 87 cents per pack, 1/1/1999:

- Revenues 1/1/1998 – 12/31/1998: \$646.6 million
- Revenues 1/1/1999 – 12/31/1999: \$1,115.7 million
- Revenues 1/1/2000 – 12/31/2000: \$1,125.7 million
- Revenues 1/1/2001 – 12/31/2001: \$1,105.2 million
- Revenues 1/1/2002 – 12/31/2002: \$1,068.9 million
- Revenues 1/1/2003 – 12/31/2003: \$1,024.4 million
- Revenues 1/1/2004 – 12/31/2004: \$1,030.2 million
- Revenues 1/1/2005 – 12/31/2005: \$1,036.2 million
- Revenues 1/1/2006 – 12/31/2006: \$1,031.3 million
- Revenues 1/1/2007 – 12/31/2007: \$984.6 million
- Revenues 1/1/2008 – 12/31/2008: \$952.3 million
- Revenues 1/1/2009 – 12/31/2009: \$870.1 million
- Revenues 1/1/2010 – 12/31/2010: \$849.4 million
- Revenues 1/1/2011 – 12/31/2011: \$829.4 million
- Revenues 1/1/2012 – 12/31/2012: \$813.1 million
- Revenues 1/1/2013 – 12/31/2013: \$768.6 million
- Revenues 1/1/2014 – 12/31/2014: \$746.4 million
- Average annual revenues, 1/1999 – 12/2014: \$959.5 million

❖ California – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 23.4%

• Colorado – tax increase from 20 cents to 84 cents per pack, 1/1/2005:

- Revenues 1/1/2004 – 12/31/2004: \$59.5 million
- Revenues 1/1/2005 – 12/31/2005: \$190.5 million
- Revenues 1/1/2006 – 12/31/2006: \$208.1 million
- Revenues 1/1/2007 – 12/31/2007: \$203.2 million
- Revenues 1/1/2008 – 12/31/2008: \$195.1 million
- Revenues 1/1/2009 – 12/31/2009: \$180.0 million

- Revenues 1/1/2010 – 12/31/2010: \$175.5 million
- Revenues 1/1/2011 – 12/31/2011: \$172.0 million
- Revenues 1/1/2012 – 12/31/2012: \$172.6 million
- Revenues 1/1/2013 – 12/31/2013: \$165.7 million
- Revenues 1/1/2014 – 12/31/2014: \$162.1 million
- Average annual revenues, 1/2005 – 12/2014: \$182.5 million

❖ Colorado – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 47.7%

- Connecticut – tax increases from 50 cents to 111 cents per pack, 4/3/2002, to 151 cents per pack, 3/15/2003, to 200 cents per pack, 7/1/2007, to 300 cents per pack, 10/1/2009, to 340 cents per pack, 7/1/2011, and to 365 cents per pack, 10/1/2015:

- Revenues 4/1/2001 – 3/31/2002: \$115.8 million
- Revenues 4/1/2002 – 3/31/2003: \$234.7 million
- Revenues 4/1/2003 – 3/31/2004: \$280.9 million
- Revenues 4/1/2004 – 3/31/2005: \$269.4 million
- Revenues 4/1/2005 – 3/31/2006: \$268.6 million
- Revenues 4/1/2006 – 3/31/2007: \$269.5 million
- Revenues 4/1/2007 – 3/31/2008: \$301.2 million
- Revenues 4/1/2008 – 3/31/2009: \$299.3 million
- Revenues 4/1/2009 – 3/31/2010: \$349.1 million
- Revenues 4/1/2010 – 3/31/2011: \$394.0 million
- Revenues 4/1/2011 – 3/31/2012: \$412.7 million
- Revenues 4/1/2012 – 3/31/2013: \$384.2 million
- Revenues 4/1/2013 – 3/31/2014: \$370.9 million
- Revenues 4/1/2014 – 3/31/2015: \$355.5 million
- Average annual revenues, 4/2002 - 3/2015: \$322.3 million

❖ Connecticut – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 7.9%

- District of Columbia – tax increases from 100 cents to 200 cents per pack, 10/1/2008, and to 250 cents per pack, 10/1/2009:

- Revenues 10/1/2007 – 9/30/2008: \$23.1 million
- Revenues 10/1/2008 – 9/30/2009: \$34.2 million
- Revenues 10/1/2009 – 9/30/2010: \$33.3 million
- Revenues 10/1/2010 – 9/30/2011: \$33.5 million
- Revenues 10/1/2011 – 9/30/2012: \$37.7 million

- Revenues 10/1/2012 – 9/30/2013: \$32.1 million
 - Revenues 10/1/2013 – 9/30/2014: \$32.9 million
 - Average annual revenues, 10/2008 – 9/2014: \$33.9 million
- ❖ DC – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 14.3%
- Florida – tax increase from 33.9 cents per pack to 133.9 cents per pack, 7/1/2009:
 - Revenues 7/1/2008 – 6/30/2009: \$429.1 million
 - Revenues 7/1/2009 – 6/30/2010: \$1,257.9 million
 - Revenues 7/1/2010 – 6/30/2011: \$1,246.0 million
 - Revenues 7/1/2011 – 6/30/2012: \$1,164.9 million
 - Revenues 7/1/2012 – 6/30/2013: \$1,142.7 million
 - Revenues 7/1/2013 – 6/30/2014: \$1,109.4 million
 - Revenues 7/1/2014 – 6/30/2015: \$1,117.6 million
 - Average annual revenues, 7/2009 – 6/2015: \$1,173.1 million
- ❖ Florida – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 33.3%
- Iowa – tax increase from 36 cents to 136 cents per pack, 3/15/2007:
 - Revenues 3/1/2006 – 2/28/2007: \$91.3 million
 - Revenues 3/1/2007 – 2/29/2008: \$219.3 million
 - Revenues 3/1/2008 – 2/28/2009: \$230.8 million
 - Revenues 3/1/2009 – 2/28/2010: \$206.1 million
 - Revenues 3/1/2010 – 2/28/2011: \$207.6 million
 - Revenues 3/1/2011 – 2/29/2012: \$200.6 million
 - Revenues 3/1/2012 – 2/28/2013: \$202.3 million
 - Revenues 3/1/2013 – 2/28/2014: \$205.2 million
 - Revenues 3/1/2014 – 2/28/2015: \$193.8 million
 - Average annual revenues, 3/2007 – 2/2015: \$208.2 million
- ❖ Iowa – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 24.2%
- Maryland – tax increase from 100 cents to 200 cents per pack, 1/1/2008:
 - Revenues 1/1/2007 – 12/31/2007: \$276.7 million

- Revenues 1/1/2008 – 12/31/2008: \$403.6 million
- Revenues 1/1/2009 – 12/31/2009: \$394.0 million
- Revenues 1/1/2010 – 12/31/2010: \$401.3 million
- Revenues 1/1/2011 – 12/31/2011: \$401.1 million
- Revenues 1/1/2012 – 12/31/2012: \$394.3 million
- Revenues 1/1/2013 – 12/31/2013: \$380.9 million
- Revenues 1/1/2014 – 12/31/2014: \$366.1 million
- Average annual revenues, 1/2008 – 12/2014: \$389.6 million

❖ Maryland – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 23.6%

- Massachusetts – tax increases from 76 cents to 151 cents per pack, 7/25/2002, to 251 cents per pack, 7/1/2008, and to 351 cents per pack, 7/31/2013:

- Revenues 8/1/2001 – 7/31/2002: \$279.4 million
- Revenues 8/1/2002 – 7/31/2003: \$438.4 million
- Revenues 8/1/2003 – 7/31/2004: \$422.3 million
- Revenues 8/1/2004 – 7/31/2005: \$406.2 million
- Revenues 8/1/2005 – 7/31/2006: \$422.5 million
- Revenues 8/1/2006 – 7/31/2007: \$426.2 million
- Revenues 8/1/2007 – 7/31/2008: \$440.2 million
- Revenues 8/1/2008 – 7/31/2009: \$557.7 million
- Revenues 8/1/2009 – 7/31/2010: \$555.9 million
- Revenues 8/1/2010 – 7/31/2011: \$562.7 million
- Revenues 8/1/2011 – 7/31/2012: \$550.7 million
- Revenues 8/1/2012 – 7/31/2013: \$539.3 million
- Revenues 8/1/2013 – 7/31/2014: \$676.1 million
- Average annual revenues, 8/2002 – 7/2014: \$499.9 million

❖ Massachusetts – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 11.0%

- Michigan – tax increases from 75 cents to 125 cents per pack, 8/1/2002 and to 200 cents per pack, 7/1/2004:

- Revenues 8/1/2001 – 7/31/2002: \$556.9 million
- Revenues 8/1/2002 – 7/31/2003: \$815.6 million
- Revenues 8/1/2003 – 7/31/2004: \$1,124.4 million
- Revenues 8/1/2004 – 7/31/2005: \$1,138.2 million
- Revenues 8/1/2005 – 7/31/2006: \$1,092.8 million

- Revenues 8/1/2006 – 7/31/2007: \$1,043.9 million
- Revenues 8/1/2007 – 7/31/2008: \$1,028.6 million
- Revenues 8/1/2008 – 7/31/2009: \$957.5 million
- Revenues 8/1/2009 – 7/31/2010: \$916.0 million
- Revenues 8/1/2010 – 7/31/2011: \$918.3 million
- Revenues 8/1/2011 – 7/31/2012: \$896.1 million
- Revenues 8/1/2012 – 7/31/2013: \$896.1 million
- Revenues 8/1/2013 – 7/31/2014: \$877.0 million
- Average annual revenues, 8/2002 – 7/2014: \$975.4 million

❖ Michigan – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 2.1%

- Minnesota – tax increases from 48 cents to 123 cents per pack, 8/1/2005, to 283 cents per pack, 7/1/2013, to 290 cents per pack, 1/1/2015, and to 300 cents per pack, 1/1/2016:

- Revenues 8/1/2004 – 7/31/2005: \$160.8 million
- Revenues 8/1/2005 – 7/31/2006: \$419.1 million
- Revenues 8/1/2006 – 7/31/2007: \$401.5 million
- Revenues 8/1/2007 – 7/31/2008: \$404.5 million
- Revenues 8/1/2008 – 7/31/2009: \$390.4 million
- Revenues 8/1/2009 – 7/31/2010: \$382.3 million
- Revenues 8/1/2010 – 7/31/2011: \$383.6 million
- Revenues 8/1/2011 – 7/31/2012: \$357.0 million
- Revenues 8/1/2012 – 7/31/2013: \$377.2 million
- Revenues 8/1/2013 – 7/31/2014: \$570.7 million
- Average annual revenues, 8/2005 – 7/2014: \$409.6 million

❖ Minnesota – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 44.6%

- Mississippi – tax increase from 18 cents to 68 cents per pack, 5/15/2009:

- Revenues 5/1/2008 – 4/30/2009: \$47.2 million
- Revenues 5/1/2009 – 4/30/2010: \$136.1 million
- Revenues 5/1/2010 – 4/30/2011: \$139.5 million
- Revenues 5/1/2011 – 4/30/2012: \$135.4 million
- Revenues 5/1/2012 – 4/30/2013: \$132.0 million
- Revenues 5/1/2013 – 4/30/2014: \$127.6 million
- Revenues 5/1/2014 – 4/30/2015: \$126.9 million

- Average annual revenues, 5/2009 – 4/2015: \$132.9 million
- ❖ Mississippi – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 26.1%
- New Jersey – tax increases from 80 cents to 150 cents per pack, 7/1/2002, to 205 cents per pack, 7/1/2003, to 240 cents per pack, 7/1/2004, to 257.5 cents per pack, 7/15/2006, and to 270 cents per pack, 7/1/2009:
 - Revenues 7/1/2001 – 6/30/2002: \$390.7 million
 - Revenues 7/1/2002 – 6/30/2003: \$612.1 million
 - Revenues 7/1/2003 – 6/30/2004: \$760.8 million
 - Revenues 7/1/2004 – 6/30/2005: \$782.2 million
 - Revenues 7/1/2005 – 6/30/2006: \$788.7 million
 - Revenues 7/1/2006 – 6/30/2007: \$766.5 million
 - Revenues 7/1/2007 – 6/30/2008: \$764.7 million
 - Revenues 7/1/2008 – 6/30/2009: \$728.1 million
 - Revenues 7/1/2009 – 6/30/2010: \$731.9 million
 - Revenues 7/1/2010 – 6/30/2011: \$773.4 million
 - Revenues 7/1/2011 – 6/30/2012: \$758.3 million
 - Revenues 7/1/2012 – 6/30/2013: \$733.1 million
 - Revenues 7/1/2013 – 6/30/2014: \$704.7 million
 - Revenues 7/1/2014 – 6/30/2015: \$685.2 million
 - Average annual revenues, 7/2002 – 6/2015: \$737.7 million
- ❖ New Jersey – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 6.4%
- New Mexico – tax increases from 21 cents to 91 cents per pack, 7/1/2003, and to 166 cents per pack, 7/1/2010:
 - Revenues 7/1/2002 – 6/30/2003: \$21.0 million
 - Revenues 7/1/2003 – 6/30/2004: \$61.8 million
 - Revenues 7/1/2004 – 6/30/2005: \$61.3 million
 - Revenues 7/1/2005 – 6/30/2006: \$62.9 million
 - Revenues 7/1/2006 – 6/30/2007: \$64.4 million
 - Revenues 7/1/2007 – 6/30/2008: \$61.7 million
 - Revenues 7/1/2008 – 6/30/2009: \$59.0 million
 - Revenues 7/1/2009 – 6/30/2010: \$55.5 million
 - Revenues 7/1/2010 – 6/30/2011: \$93.0 million
 - Revenues 7/1/2011 – 6/30/2012: \$92.4 million

- Revenues 7/1/2012 – 6/30/2013: \$91.5 million
- Revenues 7/1/2013 – 6/30/2014: \$85.2 million
- Revenues 7/1/2014 – 6/30/2015: \$89.0 million
- Average annual revenues, 7/2003 – 6/2015: \$73.1 million

❖ New Mexico – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 36.6%

• New York – tax increases from 56 cents to 111 cents per pack, 3/1/2000, to 150 cents per pack, 4/3/2002, to 275 cents per pack, 6/3/2008, and to 435 cents per pack, 7/1/2010:

- Revenues 3/1/1999 – 2/29/2000: \$645.4 million
- Revenues 3/1/2000 – 2/28/2001: \$973.2 million
- Revenues 3/1/2001 – 2/28/2002: \$999.2 million
- Revenues 3/1/2002 – 2/28/2003: \$1,072.6 million
- Revenues 3/1/2003 – 2/29/2004: \$974.6 million
- Revenues 3/1/2004 – 2/28/2005: \$948.3 million
- Revenues 3/1/2005 – 2/28/2006: \$939.0 million
- Revenues 3/1/2006 – 2/28/2007: \$944.2 million
- Revenues 3/1/2007 – 2/29/2008: \$936.2 million
- Revenues 3/1/2008 – 2/28/2009: \$1,240.9 million
- Revenues 3/1/2009 – 2/28/2010: \$1,273.1 million
- Revenues 3/1/2010 – 2/28/2011: \$1,472.3 million
- Revenues 3/1/2011 – 2/29/2012: \$1,552.5 million
- Revenues 3/1/2012 – 2/28/2013: \$1,467.3 million
- Revenues 3/1/2013 – 2/28/2014: \$1,360.2 million
- Revenues 3/1/2014 – 2/28/2015: \$1,269.9 million
- Average annual revenues, 3/2000 – 2/2015: \$1,161.6 million

❖ New York – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 34.5%

• Ohio – tax increase from 55 cents to 125 cents per pack, 7/1/2005, and to 160 cents per pack, 7/1/2015:

- Revenues 7/1/2004 – 6/30/2005: \$567.9 million
- Revenues 7/1/2005 – 6/30/2006: \$996.7 million
- Revenues 7/1/2006 – 6/30/2007: \$985.8 million
- Revenues 7/1/2007 – 6/30/2008: \$927.9 million
- Revenues 7/1/2008 – 6/30/2009: \$884.1 million

- Revenues 7/1/2009 – 6/30/2010: \$968.0 million
- Revenues 7/1/2010 – 6/30/2011: \$819.8 million
- Revenues 7/1/2011 – 6/30/2012: \$804.9 million
- Revenues 7/1/2012 – 6/30/2013: \$779.7 million
- Revenues 7/1/2013 – 6/30/2014: \$771.6 million
- Revenues 7/1/2014 – 6/30/2015: \$759.2 million
- Average annual revenues, 7/2005 – 6/2015: \$869.8 million

❖ Ohio – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 17.0%

- Oregon – tax increase from 68 cents to 128 cents per pack, 11/1/2002, tax reduced to 118 cents per pack, 1/1/04, to 131 cents per pack, 1/1/2014, and to 132 cents per pack, 1/1/2016:

- Revenues 11/1/2001 – 10/31/2002: \$162.1 million
- Revenues 11/1/2002 – 10/31/2003: \$259.6 million
- Revenues 11/1/2003 – 10/31/2004: \$231.7 million
- Revenues 11/1/2004 – 10/31/2005: \$229.2 million
- Revenues 11/1/2005 – 10/31/2006: \$236.7 million
- Revenues 11/1/2006 – 10/31/2007: \$238.1 million
- Revenues 11/1/2007 – 10/31/2008: \$225.9 million
- Revenues 11/1/2008 – 10/31/2009: \$210.9 million
- Revenues 11/1/2009 – 10/31/2010: \$204.0 million
- Revenues 11/1/2010 – 10/31/2011: \$208.0 million
- Revenues 11/1/2011 – 10/31/2012: \$199.7 million
- Revenues 11/1/2012 – 10/31/2013: \$198.1 million
- Revenues 11/1/2013 – 10/31/2014: \$207.0 million
- Average annual revenues, 11/2002 – 10/2014: \$220.7 million

❖ Oregon – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 21.8%

- Pennsylvania – tax increases from 31 cents to 100 cents per pack, 7/15/2002, and to 135 cents per pack, 1/7/2004, to 160 cents per pack, 11/1/2009:

- Revenues 7/1/2001 – 6/30/2002: \$329.8 million
- Revenues 7/1/2002 – 6/30/2003: \$888.8 million
- Revenues 7/1/2003 – 6/30/2004: \$989.4 million
- Revenues 7/1/2004 – 6/30/2005: \$1,052.8 million
- Revenues 7/1/2005 – 6/30/2006: \$1,050.4 million

- Revenues 7/1/2006 – 6/30/2007: \$1,031.2 million
- Revenues 7/1/2007 – 6/30/2008: \$1,032.4 million
- Revenues 7/1/2008 – 6/30/2009: \$1,004.7 million
- Revenues 7/1/2009 – 6/30/2010: \$1,087.8 million
- Revenues 7/1/2010 – 6/30/2011: \$1,145.6 million
- Revenues 7/1/2011 – 6/30/2012: \$1,122.1 million
- Revenues 7/1/2012 – 6/30/2013: \$1,080.8 million
- Revenues 7/1/2013 – 6/30/2014: \$1,038.3 million
- Revenues 7/1/2014 – 6/30/2015: \$1,001.9 million
- Average annual revenues, 7/2002 – 6/2015: \$1,040.5 million

❖ Pennsylvania – average tobacco control funding as a percent of the CDC recommendation, 2006 – 2015: 21.8%

- Rhode Island – tax increase from 171 cents to 246 cents per pack, 7/1/2004, to 346 cents per pack, 4/10/2009, to 350 cents per pack, 7/1/2012, and to 375 cents per pack, 8/1/2015:

- Revenues 7/1/2003 – 6/30/2004: \$112.4 million
- Revenues 7/1/2004 – 6/30/2005: \$132.5 million
- Revenues 7/1/2005 – 6/30/2006: \$119.0 million
- Revenues 7/1/2006 – 6/30/2007: \$119.5 million
- Revenues 7/1/2007 – 6/30/2008: \$116.1 million
- Revenues 7/1/2008 – 6/30/2009: \$123.4 million
- Revenues 7/1/2009 – 6/30/2010: \$136.6 million
- Revenues 7/1/2010 – 6/30/2011: \$134.3 million
- Revenues 7/1/2011 – 6/30/2012: \$131.2 million
- Revenues 7/1/2012 – 6/30/2013: \$132.3 million
- Revenues 7/1/2013 – 6/30/2014: \$133.1 million
- Revenues 7/1/2014 – 6/30/2015: \$136.3 million
- Average annual revenues, 7/2004 – 6/2015: \$128.6 million

❖ Rhode Island – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 4.9%

- South Carolina – tax increase from 7 cents per pack to 57 cents per pack, 7/1/2010:

- Revenues 7/1/2009 – 6/30/2010: \$26.9 million
- Revenues 7/1/2010 – 6/30/2011: \$143.8 million
- Revenues 7/1/2011 – 6/30/2012: \$163.2 million
- Revenues 7/1/2012 – 6/30/2013: \$163.6 million

- Revenues 7/1/2013 – 6/30/2014: \$156.8 million
- Revenues 7/1/2014 – 6/30/2015: \$153.7 million
- Average annual revenues, 7/2010 – 6/2015: \$156.2 million

❖ South Carolina – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 7.3%

• South Dakota – tax increase from 53 cents to 153 cents per pack, 1/1/2007:

- Revenues 1/1/2006 – 12/31/2006: \$27.5 million
- Revenues 1/1/2007 – 12/31/2007: \$59.3 million
- Revenues 1/1/2008 – 12/31/2008: \$64.1 million
- Revenues 1/1/2009 – 12/31/2009: \$58.6 million
- Revenues 1/1/2010 – 12/31/2010: \$57.7 million
- Revenues 1/1/2011 – 12/31/2011: \$56.4 million
- Revenues 1/1/2012 – 12/31/2012: \$54.2 million
- Revenues 1/1/2013 – 12/31/2013: \$55.0 million
- Revenues 1/1/2014 – 12/31/2014: \$53.9 million
- Average annual revenues, 1/2007 – 12/2014: \$57.4 million

❖ South Dakota – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 36.7%

• Texas – tax increase from 41 cents to 141 cents per pack, 1/1/2007:

- Revenues 1/1/2006 – 12/31/2006: \$523.4 million
- Revenues 1/1/2007 – 12/31/2007: \$1,527.1 million
- Revenues 1/1/2008 – 12/31/2008: \$1,348.8 million
- Revenues 1/1/2009 – 12/31/2009: \$1,246.0 million
- Revenues 1/1/2010 – 12/31/2010: \$1,342.4 million
- Revenues 1/1/2011 – 12/31/2011: \$1,339.8 million
- Revenues 1/1/2012 – 12/31/2012: \$1,363.5 million
- Revenues 1/1/2013 – 12/31/2013: \$1,312.0 million
- Revenues 1/1/2014 – 12/31/2014: \$1,250.1 million
- Average annual revenues, 1/2007 – 12/2014: \$1,341.2 million

❖ Texas – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 4.6%

• Utah – tax increase from 69.5 cents per pack to 170 cents per pack, 7/1/2010:

- Revenues 7/1/2009 – 6/30/2010: \$55.4 million
- Revenues 7/1/2010 – 6/30/2011: \$102.4 million
- Revenues 7/1/2011 – 6/30/2012: \$110.3 million
- Revenues 7/1/2012 – 6/30/2013: \$103.9 million
- Revenues 7/1/2013 – 6/30/2014: \$97.6 million
- Revenues 7/1/2014 – 6/30/2015: \$99.9 million
- Average annual revenues, 7/2010 – 6/2015: \$102.8 million

❖ Utah – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 36.0%

- Vermont – tax increase from 119 cents to 179 cents per pack, 7/1/2006, to 199 cents per pack, 7/1/2008, to 224 cents per pack, 7/1/2009, to 262 cents per pack, 7/1/2011, to 275 cents per pack, 7/1/2014, to 308 cents per pack, 7/1/2015:

- Revenues 7/1/2005 – 6/30/2006: \$47.5 million
- Revenues 7/1/2006 – 6/30/2007: \$60.8 million
- Revenues 7/1/2007 – 6/30/2008: \$55.6 million
- Revenues 7/1/2008 – 6/30/2009: \$61.8 million
- Revenues 7/1/2009 – 6/30/2010: \$66.3 million
- Revenues 7/1/2010 – 6/30/2011: \$67.9 million
- Revenues 7/1/2011 – 6/30/2012: \$74.4 million
- Revenues 7/1/2012 – 6/30/2013: \$68.5 million
- Revenues 7/1/2013 – 6/30/2014: \$66.9 million
- Revenues 7/1/2014 – 6/30/2015: \$69.6 million
- Average annual revenues, 7/2006 – 6/2015: \$65.8 million

❖ Vermont – average tobacco control funding as a percent of the CDC recommendation, 2007– 2016: 47.7%

- Washington – tax increase from 82.5 cents to 142.5 cents per pack, 1/1/2002, to 202.5 cents per pack, 7/1/2005, and to 302.5 cents per pack, 5/1/2010:

- Revenues 1/1/2001 – 12/31/2001: \$244.0 million
- Revenues 1/1/2002 – 12/31/2002: \$344.5 million
- Revenues 1/1/2003 – 12/31/2003: \$327.0 million
- Revenues 1/1/2004 – 12/31/2004: \$331.2 million
- Revenues 1/1/2005 – 12/31/2005: \$384.9 million
- Revenues 1/1/2006 – 12/31/2006: \$426.5 million
- Revenues 1/1/2007 – 12/31/2007: \$426.9 million

- Revenues 1/1/2008 – 12/31/2008: \$407.1 million
- Revenues 1/1/2009 – 12/31/2009: \$381.0 million
- Revenues 1/1/2010 – 12/31/2010: \$409.7 million
- Revenues 1/1/2011 – 12/31/2011: \$425.4 million
- Revenues 1/1/2012 – 12/31/2012: \$415.4 million
- Revenues 1/1/2013 – 12/31/2013: \$403.1 million
- Revenues 1/1/2014 – 12/31/2014: \$397.8 million
- Average annual revenues, 1/2002 – 12/2014: \$390.8 million

❖ Washington – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 25.6%

• Wisconsin – tax increase from 77 cents to 177 cents per pack, 1/1/2008, and to 252 cents per pack, 9/1/2009:

- Revenues 1/1/2007 – 12/31/2007: \$304.5 million
- Revenues 1/1/2008 – 12/31/2008: \$590.5 million
- Revenues 1/1/2009 – 12/31/2009: \$596.8 million
- Revenues 1/1/2010 – 12/31/2010: \$643.3 million
- Revenues 1/1/2011 – 12/31/2011: \$589.6 million
- Revenues 1/1/2012 – 12/31/2012: \$583.2 million
- Revenues 1/1/2013 – 12/31/2013: \$592.8 million
- Revenues 1/1/2014 – 12/31/2014: \$565.4 million
- Average annual revenues, 1/2008 – 12/2014: \$594.5 million

❖ Wisconsin – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 17.0%

States With At Least 5 years of Post-Tax Increase Data Available, and the Average State Tobacco Control Funding as a Percent of the CDC Recommendation more than 50%:

• Alaska – tax increase from 100 cents to 160 cents per pack, 1/1/2005, to 180 cents per pack, 7/1/2006, and to 200 cents per pack, 7/1/2007:

- Revenues 1/1/2004 – 12/31/2004: \$41.1 million
- Revenues 1/1/2005 – 12/31/2005: \$50.5 million
- Revenues 1/1/2006 – 12/31/2006: \$52.7 million
- Revenues 1/1/2007 – 12/31/2007: \$63.1 million
- Revenues 1/1/2008 – 12/31/2008: \$63.3 million
- Revenues 1/1/2009 – 12/31/2009: \$63.6 million

- Revenues 1/1/2010 – 12/31/2010: \$63.1 million
- Revenues 1/1/2011 – 12/31/2011: \$60.3 million
- Revenues 1/1/2012 – 12/31/2012: \$57.3 million
- Revenues 1/1/2013 – 12/31/2013: \$57.3 million
- Revenues 1/1/2014 – 12/31/2014: \$54.7 million
- Average annual revenues, 1/2005 – 12/2014: \$58.6 million

❖ Alaska – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 90.8%

• Arkansas – tax increase from 59 cents to 115 cents per pack, 3/1/2009:

- Revenues 3/1/2008 – 2/29/2009: \$138.8 million
- Revenues 3/1/2009 – 2/28/2010: \$185.3 million
- Revenues 3/1/2010 – 2/28/2011: \$196.3 million
- Revenues 3/1/2011 – 2/29/2012: \$196.6 million
- Revenues 3/1/2012 – 2/28/2013: \$188.4 million
- Revenues 3/1/2013 – 2/28/2014: \$183.4 million
- Revenues 3/1/2014 – 2/28/2015: \$175.7 million
- Average annual revenues, 3/2009 – 2/2015: \$187.6 million

❖ Arkansas – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 51.1%

• Delaware – tax increase from 55 cents to 115 cents per pack, 7/31/2007:

- Revenues 8/1/2006 – 7/31/2007: \$90.4 million
- Revenues 8/1/2007 – 7/31/2008: \$122.2 million
- Revenues 8/1/2008 – 7/31/2009: \$125.5 million
- Revenues 8/1/2009 – 7/31/2010: \$124.8 million
- Revenues 8/1/2010 – 7/31/2011: \$126.8 million
- Revenues 8/1/2011 – 7/31/2012: \$122.7 million
- Revenues 8/1/2012 – 7/31/2013: \$113.0 million
- Revenues 8/1/2013 – 7/31/2014: \$105.0 million
- Average annual revenues, 8/2007 – 7/2014: \$120.0 million

❖ Delaware – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 76.2%

• Hawaii – tax increase from 200 cents per pack to 260 cents per pack, 7/1/2009, to 300

cents per pack, 7/1/2010, to 320 cents per pack, 7/1/2011:

○ Revenues 7/1/2008 – 6/30/2009:	\$104.4 million
○ Revenues 7/1/2009 – 6/30/2010:	\$119.6 million
○ Revenues 7/1/2010 – 6/30/2011:	\$135.7 million
○ Revenues 7/1/2011 – 6/30/2012:	\$130.6 million
○ Revenues 7/1/2012 – 6/30/2013:	\$120.1 million
○ Revenues 7/1/2013 – 6/30/2014:	\$114.1 million
○ Revenues 7/1/2014 – 6/30/2015:	\$117.3 million
○ Average annual revenues, 7/2009 – 6/2015:	\$122.9 million

❖ Hawaii – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 65.3%

• Maine – tax increase from 100 cents to 200 cents per pack, 9/19/2005:

○ Revenues 9/1/2004 – 8/31/2005:	\$93.5 million
○ Revenues 9/1/2005 – 8/31/2006:	\$165.1 million
○ Revenues 9/1/2006 – 8/31/2007:	\$153.8 million
○ Revenues 9/1/2007 – 8/31/2008:	\$147.9 million
○ Revenues 9/1/2008 – 8/31/2009:	\$137.5 million
○ Revenues 9/1/2009 – 8/31/2010:	\$136.9 million
○ Revenues 9/1/2010 – 8/31/2011:	\$137.9 million
○ Revenues 9/1/2011 – 8/31/2012:	\$135.9 million
○ Revenues 9/1/2012 – 8/31/2013:	\$130.7 million
○ Revenues 9/1/2013 – 8/31/2014:	\$127.0 million
○ Average annual revenues, 9/2005 – 8/2014:	\$141.4 million

❖ Maine – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 69.7%

• Montana – tax increase from 18 cents to 70 cents per pack, 5/1/2003 and to 170 cents per pack, 1/1/2005:

○ Revenues 5/1/2002 – 4/30/2003:	\$12.0 million
○ Revenues 5/1/2003 – 4/30/2004:	\$43.1 million
○ Revenues 5/1/2004 – 4/30/2005:	\$51.8 million
○ Revenues 5/1/2005 – 4/30/2006:	\$79.6 million
○ Revenues 5/1/2006 – 4/30/2007:	\$84.7 million
○ Revenues 5/1/2007 – 4/30/2008:	\$87.2 million
○ Revenues 5/1/2008 – 4/30/2009:	\$80.8 million

- Revenues 5/1/2009 – 4/30/2010: \$81.0 million
- Revenues 5/1/2010 – 4/30/2011: \$78.1 million
- Revenues 5/1/2011 – 4/30/2012: \$77.2 million
- Revenues 5/1/2012 – 4/30/2013: \$76.2 million
- Revenues 5/1/2013 – 4/30/2014: \$74.9 million
- Revenues 5/1/2014 – 4/30/2015: \$73.4 million
- Average annual revenues, 5/2003 – 4/2015: \$74.0 million

❖ Montana – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 53.1%

• Oklahoma – tax increase from 23 cents to 103 cents per pack, 1/1/2005:

- Revenues 1/1/2004 – 12/31/2004: \$83.1 million
- Revenues 1/1/2005 – 12/31/2005: \$164.7 million
- Revenues 1/1/2006 – 12/31/2006: \$203.1 million
- Revenues 1/1/2007 – 12/31/2007: \$218.5 million
- Revenues 1/1/2008 – 12/31/2008: \$235.7 million
- Revenues 1/1/2009 – 12/31/2009: \$235.4 million
- Revenues 1/1/2010 – 12/31/2010: \$235.8 million
- Revenues 1/1/2011 – 12/31/2011: \$246.0 million
- Revenues 1/1/2012 – 12/31/2012: \$244.5 million
- Revenues 1/1/2013 – 12/31/2013: \$228.8 million
- Revenues 1/1/2014 – 12/31/2014: \$244.2 million
- Average annual revenues, 1/2005 – 12/2014: \$225.7 million

❖ Oklahoma – average tobacco control funding as a percent of the CDC recommendation, 2007 – 2016: 50.2%

Conclusions:

- Significant cigarette excise tax increases generate significant increases in cigarette tax revenues.
- Revenues several years after the tax increase remain significantly higher than revenues prior to the tax increase and changes over time after the increase are consistent with changes that would result from underlying downward trends in cigarette smoking.
- Revenues in states that dedicate some revenues for comprehensive tobacco control programs in the years following the implementation of these programs are still significantly higher than revenues prior to the tax increase and program implementation.

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 or follow us on Twitter [www.twitter.com/tobacconomics](https://twitter.com/tobacconomics).



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Economic Research Informing Tobacco Control Policy

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