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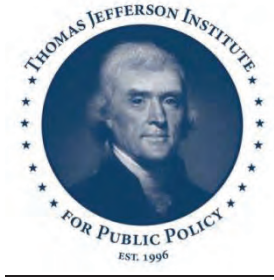
THE THOMAS JEFFERSON INSTITUTE  
FOR PUBLIC POLICY

# FISCAL IMPACT OF CIGARETTE TAX INCREASES ON VIRGINIA'S MUNICIPALITIES

NOVEMBER 2016



THIS STUDY WAS FUNDED BY ALTRIA CLIENT SERVICES, INC.  
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## INTRODUCTION BY MICHAEL THOMPSON

Each year as our counties and cities craft their annual budgets, it is not uncommon to have the idea of raising cigarette taxes come up as a way to find additional revenue. Governments at all levels would rather raise taxes – regardless of which ones – than to find efficiencies in the way they spend money or to eliminate activities and programs.

The Thomas Jefferson Institute thought it would be interesting to find out which of our counties and cities tax cigarettes, how much are these taxes, and what the impact has been on such tax increases. For instance, do the jurisdictions really raise the kind of money hoped for in the projected and approved budgets? Do increased taxes on cigarettes have a negative impact on the smaller convenience stores and “mom and pop” grocery stores? Do higher taxes encourage the smoker to shop in adjacent localities where cigarette taxes are lower? Do cigarette taxes impact these revenue streams in the long run?

Articles have been published over the years on this subject and newspapers carry stories of states and localities that propose tax increases on cigarettes, where higher taxes encourage customers to shop where cigarette prices are lower, and that illegal smuggling of cigarettes takes place when the price differentials encourage such activities.

We had not seen a really good analysis of what the situation is here in Virginia. Since localities can raise cigarette taxes on top of the federal and state tax, we thought it would appropriate to look a little deeper into this issue and see what we could find out that would be beneficial to those local government officials who craft and vote on annual budgets.

To do such a report we needed good facts and figures and wanted to work with top economists to help determine if raising cigarette taxes is a “good” public policy or not.

We started out with a clean slate, so to speak, on this public policy topic. Although being skeptical of higher taxes, the Jefferson Institute has not, and is not, automatically opposed to tax increases and we have certainly been “open” to discussing tax policy over the years as that debate has taken center stage from time to time in Richmond.

The Jefferson Institute’s dynamic tax/spending model (STAMP) has been used over the years in the tax debates that have taken place in Richmond and this model and its results during these debates has been praised by Republicans and Democrats. This model was developed for us, and has been updated as needed, by the economists at the Beacon Hill Institute in Boston, Massachusetts. At our request, it now includes the impact of spending on infrastructure improvements made available through increased taxes. Although taxes tend to have a dampening impact on the economy, when tax dollars are spent on infrastructure (building roads for instance) then the economy is positively



impacted from such expenditures. These two impacts are now part of this dynamic model and better recognizes the true impact of taxes and spending. And it is this economic model that has been used to develop the major tax restructuring plan that would allow the elimination of the dreaded BPOL and Machine & Tool Tax along with the Merchants Capital tax – a goal advocated by Republicans and Democrats but never focused on once they are elected.

We reached out to our friends at the Beacon Hill Institute in Boston to do the research on this new tax project. We asked these economists to review local budgets for several jurisdictions that had raised cigarette taxes; to go back a few years in that analysis; to see if the projected budgets from these tax increases were met; and to determine if there was a way to figure out if adjoining jurisdictions were impacted when tax increases took effect.

There is a basic policy question for local government officials to consider when it comes to cigarette taxes: should a tax aimed at a minority of the population (only 19% are smokers in our country) be used to help fund programs and projects that are available to the entire community? General taxes, it seems, should be used for general programs such as schools, libraries and public safety while taxes aimed at specific people – boaters, drivers, alcohol and tobacco users, etc.) should be used for programs specific to their needs such as marinas, roads, bridges, etc. These targeted taxes are, in reality, user fees and should be used for the benefit of the user.

We looked at locations around the state that raised cigarette taxes to see if the projected revenue was met and if there was any evidence that higher cigarette prices due to tax increases shifted buying habits to nearby, lower or no-tax-on-cigarettes, jurisdictions. And we were interested in seeing if those buying shifts seemed to take place, were smaller retailers hurt in their overall businesses.

What was found through this research and analysis is this:

- 1) Rarely does a jurisdiction meet its tax projections over the years after cigarette taxes are imposed or increased.
- 2) It is most common in the first year that cigarette tax increases produce more income to the county or city – even if the projected revenue is not attained, and then those income figures usually continue to decrease.
- 3) There are indications that convenience stores and smaller grocery stores see their overall sales on non-tobacco items decrease when cigarette taxes are increased due to customers traveling to other jurisdictions to buy less expensive cigarettes and, while buying those less expensive products, they also purchase other items.

Raising cigarette taxes is not a “cure-all” for resolving budget problems and these tax increases rarely raise the revenue that local governments project. Indeed, as this study shows, it is most often the case that revenue from an increase in cigarette taxes begins to decrease year after year soon after those taxes are raised.



And there is strong indications that smaller, “mom and pop” grocery stores and convenience stores see their overall sales decrease when a nearby jurisdiction has significantly lower taxes on cigarettes.

This study will hopefully be a benefit to local governments here in Virginia as they craft their annual budgets. Should additional revenue be needed, it is suggested from the numbers in this report that cigarette taxes are not the place to rely on. Consistently, as the tables in this study show, projected revenue is rarely met and when it is, that normally lasts only a year with rare exceptions. Total revenue from this source tends to decrease over time so reliance on a cigarette tax is not a long-term resolution to modernizing a local government’s tax system.

This study is presented in an effort to bring facts and figures to the debate on local cigarette taxes. It is a report that relies on the figures from local governments and those figures make a strong case that cigarette taxes are not a reliable source of funding for local governments.

This study relies on the budget numbers published by the local jurisdictions here in Virginia. Although this study was funded by those with an interest in selling tobacco products, the Jefferson Institute acted totally independently in its design and execution of this study. The budget and tax numbers speak for themselves. The conclusions in this study come from those numbers. Had these budget numbers shown something different, we would have published those numbers and come to conclusions based on such numbers.

We hope that local government leaders will find this report of interest as local budgets are developed and approved. There is nothing in this report that is meant to influence any specific legislation. It is presented to provide guidance to those who make public tax policy in the cities and towns of Virginia.



A handwritten signature in blue ink that reads "Michael W. Thompson". The signature is fluid and cursive.

Michael W. Thompson, Chairman and President  
Thomas Jefferson Institute for Public Policy  
November 2016



# THE FISCAL IMPACT OF CIGARETTE TAX INCREASES ON MUNICIPALITIES IN VIRGINIA

BY: PAUL BACHMAN AND FRANK CONTE

## Executive Summary

In an effort to boost revenues, several local governments in the Commonwealth of Virginia have enacted over 50 cigarette tax increases between Fiscal Year (FY) 2010 through FY 2015. Local governments have used the additional revenue to fund specific projects, match tax rates in neighboring towns and recoup falling tax revenues.

Excise taxes such as cigarette taxes are especially problematic at the local level. First, they do not raise much money mainly because they are not a major source of revenue such as property or income taxes. Second, cigarette taxes are subject to jurisdictional competition as consumers go shopping for lower priced options. More sensitive to price increases than originally presumed, consumers purchase their cigarettes in a neighboring tax friendly town, out of state, or even on the black market. As a result local small businesses suffer the consequences, intended and unintended.

How have local governments fared in their attempt to raise revenue collections through cigarette tax increases? In this study, the Thomas Jefferson Institute for Public Policy and The Beacon Hill Institute set out to answer this question by examining the fiscal effects of higher cigarette taxes. The study examined 27 geographically dispersed cities and towns from around the Commonwealth of Virginia. Several factors underlying the study include comparisons between proposed revenues, estimated revenues, pre-tax and post-tax revenues.

For example, the town of Vinton (outside the city of Roanoke) provides the most striking case study of a cigarette tax increases that produced a drop in revenues. In FY 2014, Vinton doubled its cigarette tax from \$0.20 per pack to \$0.40 per pack. Its FY 2014 Budget estimated that tax revenue would increase from \$321,976 in FY 2013 to \$459,375 in FY 2014, or a 43 percent increase. However, the additional revenue never materialized and, instead, cigarette tax revenues actually plunged by 17 percent.

The city of Alexandria's cigarette tax increases produced a similar, if less dramatic, result. In FY 2014, Alexandria raised its cigarette tax by \$0.20, from \$0.80 to \$1.00 per pack, or a 25 percent increase. However, actual cigarette tax revenues increased by only 14 percent missing the targeted revenue from this source by \$ 306,875.

This study finds that the expectations for increased revenue have not been met. Moreover, this study points to these facts:

- According to the U.S. Census, Virginia's local governments collected 16.3 percent less in real cigarette tax revenue from FY 2010 to FY 2013 (the latest data available), even though individual local governments raised cigarette tax rates more than 50 times over the same period – some more than once.





- According to data from the Virginia Wholesale Distributors Association and the Virginia Auditor of Public Accounts, between 2010 and 2015 the number of localities that actually chose to levy a new tax on the sale and use of cigarettes grew from 80 to 106 – a one-third increase in just five years.
- Cigarette tax rate increases raise tax revenue collections by less than local government budget projections or that the percentage rate increase would imply;
- The tax revenue collection increases are fleeting, often turning flat or negative in the years following a tax increase;
- The revenue losses and revenue shortfalls show that the tax increases are changing consumption patterns as consumers seek alternative markets with lower taxes and therefore lower prices; and
- Cigarette consumers are important to the health of small businesses, such as convenience and small grocery stores, and increasing cigarette taxes can harm these businesses.

Excise taxes are not the result of any argument for economic efficiency but rather the result of a political process which places excess burdens on consumers, especially lower income consumers, and small business. A tax system more reliant on a general, broader-based tax would be more appropriate to fund public expenditures than taxes on cigarettes.

## Overview

Cigarettes have been viewed as an appropriate revenue source by some jurisdictions in Virginia. However, as this study shows, the revenues raised by imposing these taxes rarely meet the revenue goals and, in many cases, revenue declines either immediately or over time.

The demand for cigarettes is thought by some policy makers and tax departments to be relatively “inelastic.” That is, the decision to buy cigarettes is believed to be relatively insensitive to changes in price. Thus, a tax increase on cigarettes will not produce a significant decrease in consumption and budget projections are based on believing there will be relatively little change in purchasing habits. Even if consumption is projected to fall to some degree, it is believed that a tax increase on cigarettes will yield a large increase in tax revenue and such taxes will not distort consumers’ purchasing habits – a policy maker’s goal for an efficient tax policy.<sup>1</sup> The assumption is that an increase in cigarette taxes will have a positive revenue effect because purchases of cigarettes will not be impacted.

The changes taking place in the market place for cigarette sales is not properly taken into consideration by those advocating tax increases on cigarettes. The fact is that cigarettes sales in the United States have been dropping over the past decade. Nearly 264 billion cigarettes were sold in the United States in 2014, a decrease from approximately 273 billion sold in 2013, or a decrease in consumption of 3.6 percent.<sup>2</sup> In 2002, 391 billion cigarettes were sold showing a decrease in sales of 32.5 percent in 12 years, or a 3.1 percent compound annual rate of decline.<sup>3</sup>

The data suggests that cigarette sales are declining faster than the rate of adult smoking. Several factors could contribute to the disparity: smokers might be cutting back on the number of cigarettes they consume or cigarette smokers might be seeking alternatives to locally purchased cigarettes. Nevertheless, lower levels of cigarette consumption reduces state and local cigarette tax revenue collections.

<sup>1</sup> The inverse-elasticity rule, or the Ramsey rule, states that by levying taxes in inverse proportion to their elasticity of demand, governments raise revenue at the lowest possible social cost (minimizing the excess burden).

<sup>2</sup> Maxwell JC. The Maxwell Report: Year End & Fourth Quarter 2014 -2013 Cigarette Industry. Richmond, VA: John C. Maxwell, Jr., 2015.

<sup>3</sup> Maxwell JC. The Maxwell Report: Year End & Fourth Quarter 2002 Cigarette Industry. Richmond, VA: John C. Maxwell, Jr., 2013, <https://industrydocuments.library.ucsf.edu/tobacco/docs/#id=jhlk0179>, p.10.

Maxwell JC. The Maxwell Report: Year End & Fourth Quarter 2014 Cigarette Industry.



The decision to raise cigarette taxes is a decision for policy makers at the national, state and local levels of government. In Virginia, those localities that raise cigarette taxes view this action as sound policy since the revenues are used to fund local government activities. This study focuses on the real budget outcomes of these decisions.

The rapid increase in cigarette taxes nationally has led directly to the surge in retail cigarette prices over the last two decades and has reinvigorated cigarette tax avoidance to a scale not seen since the 1970s. During this time, as states increased their tax rates, wide disparities between adjacent jurisdictions emerged. These disparities have been bridged by a rapidly expanding alternative market for cigarettes such as cross border purchases, vaporizers and the black market which is created by a web of cigarette smugglers.

Higher taxes have led to an increase in cigarette smuggling, a term which can include both casual individual cross-border purchases as well as more highly organized but illegal commercial enterprises that truck cigarettes into high tax destinations. The Mackinac Center for Public Policy found that of all the cigarettes consumed in New York in 2013 — legal and illegal — 58 percent were smuggled in.”<sup>4</sup>

The Mackinac analysis is consistent with other research which examines the effect of cigarette taxes on municipal jurisdictions. Working with random samples in the form of littered cigarette boxes in Chicago, economist David Merriman of the University of Illinois found 75 percent of the littered packs did not display the city’s tax stamp thus showing that most were purchased outside of Chicago’s city limits.<sup>5</sup> At the time of the study, Chicago’s combined state and local rate of \$3.66 per pack were no match for Gary, Indiana’s straight state levy of \$0.555 cents. (Gary does not tax cigarettes locally and is next door to Cook County where Chicago is located).

And the Richmond Times Dispatch ran a series of articles last year focused on the problem of cigarette smuggling. The articles highlighted the growing smuggling of cigarettes from Virginia with a tax rate of \$0.30 per pack compared to that of New York State rate of \$4.35 per pack. The discrepancy make cigarette smuggling enormously profitable, that is attracting criminal gangs that have resorted to instances of armed robbery and other violent means.<sup>6</sup>

States that increase cigarette taxes are often disappointed at the actual revenues realized. In FY 2007 New Jersey raised its tax from \$2.40 to \$2.58 per pack. According to experts, “Not only did actual revenues miss projections, they also declined below FY 2006 and FY 2005 levels.”<sup>7</sup>

Washington D.C. also failed to meet its estimates of new revenue. In FY 2009, Washington D.C. collected \$37.6 million in cigarette tax revenue. The District raised the tax by \$0.50 at the end of FY 2009 and projected the FY 2010 tax revenue to increase to \$45.4 million. In fact, the FY 2010 actual revenues were \$33.4 million. After the tax increase, the D.C. government actually lost \$4.2 million from the previous year and missed projections by \$12 million.<sup>8</sup>

The recent research on tax avoidance and cross border sales calls into question earlier assumptions that smokers facing high prices have no alternatives. While the distance a smoker is willing to travel to save money remains small, neighboring towns with lower or no taxes are an obvious option for the consumer. While circumstances are different for many individuals, a smoker will find a way to lower prices.

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<sup>4</sup> Michael D. LaFaive, Todd Nesbit, and Scott Drenkard, “Cigarette Smugglers Still Love New York and Michigan, but Illinois Closing In” (Jan. 14, 2015) <http://www.mackinac.org/20900>.

<sup>5</sup> David Merriman, “The Micro-Geography of Tax Avoidance: Evidence from Littered Cigarette Packs in Chicago,” *American Economic Journal: Economic Policy*, 2(2): 61-84. DOI: 10.1257/pol.2.2.61.

<sup>6</sup> John Reid Blackwell, Series: Cigarette Smuggling, *Richmond Times Dispatch*, March through May 2015, [http://www.richmond.com/collection\\_6e320aa8-04d0-11e5-b14e-93bff5f373fc.html](http://www.richmond.com/collection_6e320aa8-04d0-11e5-b14e-93bff5f373fc.html).

<sup>7</sup> Bill Orzechowski and Rob Walker, *The Tax Burden of Tobacco* (49) funded in part by Altria Client Services. Inc (January 20, 2015).

<sup>8</sup> According to Altria calculations based on data from Natwar M. Gandhi, Office of the Chief Financial Officer, District of Columbia February 2011 Revenue Estimates and Orzechowski and Walker (note 6).



## Fiscal Effects of Raising Local Cigarette Taxes

In the 1970's, the cities and towns across Virginia lobbied the General Assembly to expand their ability to raise local revenues. Leaders argued that municipalities were providing more core services than county governments, and thus needed additional sources of revenues.

Policymakers eventually decided to give the authority to tax cigarettes to the cities and towns, but not counties, since counties did not provide the same level of services. Moreover, policymakers felt that the absence of a cigarette tax in the counties would provide effective "checks and balances" on the cities and towns to keep them from raising their cigarette taxes too high. The counties of Fairfax and Arlington were allowed to tax cigarettes, because they were almost indistinguishable from a city or town due to their surging population growth that required them to provide the very same services as cities and towns.

Local governments in Virginia have enacted over 50 cigarette tax increases since FY 2010 in an effort to boost revenues. Local governments have used the additional revenue to fund specific projects, match tax rates in neighboring towns and recoup falling tax revenues.

How have local governments fared in their attempt to raise revenue collections through cigarette tax increases?

The U.S. Census Bureau's State and Local Government Finances provides survey data on tax revenue and expenditures for all fifty states, including tobacco products, which are mostly cigarette taxes. According to the Census data, in inflation adjusted dollars, Virginia's local governments collected \$74,066,182 in cigarette tax revenues in 2010 and they only collected \$61,962,389 in cigarette tax revenues in 2013 (the latest data available.)<sup>9</sup> Virginia's local governments collected 16.3 percent less in cigarette tax revenue over this period, even though these governments raised cigarette tax rates more than 50 times over the same period.<sup>10</sup>

The Beacon Hill Institute collected data on cigarette tax revenues and tax increases for 27 of Virginia's local governments since FY 2010 to provide evidence from the experiences of individual municipalities.<sup>11</sup> As one might expect, the experience of local governments in raising revenue through cigarette tax increases is mixed.

The following four tables present the results organized by the timing of the tax change (earlier or later in the period) and success in raising additional or projected revenue. These tables display the local cigarette tax rate increase if any, the cigarette tax rate, the percentage change in the rate, the budgeted revenue collections and the actual revenue collections for each local government.

For those cigarette tax increases, we analyze the difference between the percentage change in tax rate and the percentage change in the revenue collection. If these percentage changes are equal, then the tax change produced a static effect, or no effect on consumer behavior.

Static estimates assume that there is no change in underlying consumer behavior in response to a change in tax law. For example, a static estimate of an increase in the cigarette tax, from \$1.00 per pack to \$1.20 per pack would cause revenues to increase by 20 percent ( $(\$1.20 - \$1.00)/\$1.00$ ).

On the other hand, dynamic tax revenue change would show a smaller increase in revenue because it would capture the negative effects on the tax base of capturing more money dedicated to consumption spending

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<sup>9</sup> Inflated using U.S Department of Labor, Consumer Price Index for all Urban Consumers, <http://data.bls.gov/pdq/SurveyOutputServlet>.

<sup>10</sup> The U.S. Census Bureau, State and Local Government Finances, 2013, 2010 State and Local Government, <http://www.census.gov/govs/local/>.

<sup>11</sup> We gathered the data from local budget, Comprehensive Financial Annual Reports documents online and contacting the municipal governments directly. The Northern Virginia Tax Board provided data for Fairfax and Manassas.



through tax increases and leaving less money in consumers' pockets for spending. Moreover, excise tax changes, especially on consumer goods such as gasoline and cigarettes, drive consumers to make purchases in other jurisdictions that have lower or no tax, and, thus, lower prices.<sup>12</sup> In other words, as a result of higher taxes, consumers would have less money to purchase goods and services and thus localities would see retail sales, and, in turn, tax collections fall or grow more slowly.

The four tables below group cities and towns that increased cigarette taxes by the revenue results from such increases. The reader can easily see the actual results of such tax increases.



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<sup>12</sup> Mehmet S. Tosun and Mark L. Skidmore, Cross-Border Shopping and the Sales Tax: An Examination of Food Purchases in West Virginia, The B.E. Journal of Economic Analysis & Policy, Volume 7, Issue 1, Article 63, <http://home.wlu.edu/~gusej/econ398/articles/westVABorders.pdf> (2007).

Fleener, Patrick W. The Effect of Excise Tax Differentials on the Interstate Smuggling and Cross-Border Sales of Cigarettes in the United States. Background Paper No. 16. Tax Foundation. October 1996.



## Table 1 – Tax Increases Reduce Revenue

Table 1 displays the experience of Vinton, Ashland, Hampton, Smithfield, Bluefield, Colonial Beach and Virginia Beach for which a cigarette tax increase produced a decrease in cigarette tax revenues.

Table 1: Tax Increases Reduce Revenue

Municipality	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
<b>Vinton</b>						
Rate Increase (\$, per pack)	0	0	0	0	0.20	-0.15
Rate (\$, per pack)	0.20	0.20	0.20	0.20	0.40*	0.25
Percent Increase	0	0	0	0	100	(38)
Budgeted Revenue	255,000	325,000	325,000	300,000	459,375	310,000
Percent Increase	na	(6)	6	1	43	16
Actual Revenue	346,886	306,799	296,309	321,976	266,367	196,383
Percent Increase	na	(12)	(3)	9	(17)	(26)
<b>Ashland</b>						
Rate Increase (\$, per pack)	0.19	0	0	0	0.03	0
Rate (\$, per pack)	0.19	0.19	0.19	0.19	0.22	0.22
Percent Increase	100	0	0	0	16	0
Budgeted Revenue	70,000	280,000	300,000	315,000	364,737	260,000
Percent Increase	na	(18)	(3)	(14)	20	3
Actual Revenue	343,191	309,554	367,417	303,298	252,709	234,217
Percent Increase	na	(10)	19	(17)	(17)	(7)
<b>Hampton</b>						
Rate Increase (\$, per pack)	0	0	0.10	0.05	0	0
Rate (\$, per pack)	0.65	0.65	0.75	0.80	0.80	0.80
Percent Increase	0	0	15	7	0	0
Budgeted Revenue	3,900,000	3,700,000	3,965,000	4,232,500	4,300,000	4,300,000
Percent Increase	na	5	8	(3)	1	(4)
Actual Revenue	3,538,042	3,680,981	4,363,663	4,263,998	4,421,113	4,077,120
Percent Increase	na	4	19	(2)	4	(8)
<b>Smithfield</b>						
Rate Increase (\$, per pack)	0	0	0	0	0	0.10
Rate (\$, per pack)	0.25	0.25	0.25	0.25	0.25	0.35
Percent Increase	0	0	0	0	0	40
Budgeted Revenue	na	na	120,000	130,000	130,000	130,000
Percent Increase	na	na	(10)	(9)	(5)	(22)
Actual Revenue	118,332	132,698	143,582	136,665	166,913	153,317
Percent Increase	na	12	8	(5)	22	(8)
<b>Bluefield</b>						
Rate Increase (\$, per pack)	0	0	0.04	0	0	0
Rate (\$, per pack)	0.06	0.06	0.10	0.10	0.10	0.10
Percent Increase	0	0	67	0	0	0
Budgeted Revenue	na	na	na	an	na	na
Percent Increase	na	na	na	na	na	na
Actual Revenue	173,552	238,858	205,781	220,730	210,231	178,920
Percent Increase	na	38	(14)	7	(5)	(15)
<b>Colonial Beach</b>						
Rate Increase (\$, per pack)	0	0	0	0	0.05	0
Rate (\$, per pack)	0.25	0.25	0.25	0.25	0.30	0.30
Percent Increase	0	0	0	0	20	0
Budgeted Revenue	na	na	na	an	na	na
Percent Increase	na	na	na	na	na	na
Actual Revenue	81,260	80,514	80,514	88,715	83,639	85,882
Percent Increase	na	(1)	0	10	(6)	3
<b>Virginia Beach</b>						
Rate Increase (\$, per pack)	0	0.04	0	0	0.05	0
Rate (\$, per pack)	0.61	0.65	0.65	0.65	0.70	0.70
Percent Increase	0	7	0	0	8	0
Budgeted Revenue	12,935,527	11,742,780	10,872,856	11,218,625	12,109,969	12,148,649
Percent Increase	na	(6)	(2)	3	10	12
Actual Revenue	12,468,847	12,063,516	12,182,212	11,953,020	11,693,536	13,707,486
Percent Increase	Na	(3)	1	(2)	(2)	17

\*Vinton reduced the rate to \$0.25 on March 14, 2014.



Vinton provides the most striking example of a cigarette tax increases that produced a drop in revenues. In FY 2014, Vinton doubled its cigarette tax from \$0.20 per pack to \$0.40 per pack. The FY 2014 Budget estimated that tax revenue would increase from \$321,976 in FY 2013 to \$459,375 in FY 2014, or a 43 percent increase. The FY 2014 Adopted Budget states that the additional revenue “will be earmarked to fund our capital improvement program.”<sup>13</sup> However, the additional revenue never materialized and, instead, cigarette tax revenues plunged by 17 percent.

The town’s 2014 Comprehensive Annual Financial Report (CAFR) provides an explanation of the revenue shortfall. It states that, “Cigarette tax was 82.7% of the budget [projection] due to a rate increase from \$.20 per pack to \$.40 per pack which decreased revenue as a result of decreased cigarette sales in the Town.” In response, the “rate was decreased to \$.25 per pack in March 2014 as a result of working with local merchants to regain their sales.”<sup>14</sup> However, this 38 percent drop in the rate actually produced an additional 26 percent loss of revenue for FY 2015.

The town’s 2015 CAFR provides more detail behind the revenue loss:

“Cigarette tax collection continues to decrease as a result of \$0.20 increase in tax rate effective July 2013. Although the tax rate was reduced by \$0.15 in March 2014 to encourage buyers, the market has not recovered. In addition to this negative impact, there has been a loss of two (2) retailers and a cigarette outlet opened outside of the Town limits. Another effect on this revenue is the sale of vapors.”<sup>15</sup>

The Vinton experience provides a textbook example of tax policy affecting economic behavior. The price differential between two adjacent jurisdictions produced cross-border sales that produced the opposite effect of the intended tax increases: revenues fell instead of increasing after the tax increase. As a result, Vinton not only raised less revenue for its “capital improvement plan,” but lost revenue that was dedicated to other areas of its budget.

Ashland, just north of Richmond, follows a pattern similar to Vinton. Ashland first adopted a \$0.19 per pack cigarette tax in FY 2010. As Table 1 shows, the local budget writers were not fully aware of the level of cigarette sales in town, since they budgeted \$70,000 in cigarette tax revenue that year and actual revenue was \$343,191 for FY 2010. For the next three years revenues were volatile, increasing in FY 2012, while declining in both FY 2011 and FY 2013.

In FY 2014, Ashland again raised the cigarette tax, this time by \$0.03, or about 16 percent, to \$0.22 per pack and the budget anticipated revenue collections would rise by 20 percent. However, revenues plunged by 17 percent in FY 2014 and another 7 percent in FY 2015. The FY 2015 budget notes the revenue drop by stating, “Interestingly, some sources such as the Cigarette tax have dropped significantly, while the others, such as the Sales tax have increased significantly.”<sup>16</sup> Unlike Vinton, neither the budget nor the CAFR seek to explain why.

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<sup>13</sup> Town of Vinton, VA FY 2013-2014 Budget, (vi) <http://www.vintonva.gov/ArchiveCenter/ViewFile/Item/537>

<sup>14</sup> Town of Vinton, Virginia, Comprehensive Annual Financial Report Year Ended June 30, 2014 <http://www.vintonva.gov/ArchiveCenter/ViewFile/Item/687>, 8.

<sup>15</sup> Town of Vinton, Virginia, Comprehensive Annual Financial Report Year Ended June 30, 2015 <http://www.vintonva.gov/ArchiveCenter/ViewFile/Item/822>, 8.

<sup>16</sup> Town of Ashland, VA “2015 – 2016 Adopted Budget,” (June 16, 2015), <http://www.town.ashland.va.us/ArchiveCenter/ViewFile/Item/354>, p. 3.



In FY 2012, Hampton raised its cigarette tax by \$0.10 to \$0.75 per pack, for a 15 percent increase. Cigarette tax revenues actually increased by 19 percent, which is higher than the town budgeted for and higher than the 15 percent increase in the tax rate.

Hampton's second bite at the apple in FY 2013 provided different results. Hampton raised the cigarette tax again by \$0.05 or a 7 percent increase, but cigarette tax revenue fell by 2 percent that year. The town was expecting the tax increase to raise an additional \$267,500 for the fiscal year, which did not materialize. However, since revenues from FY 2012 were stronger than anticipated, the FY 2013 cigarette tax revenue collections, which was enacted before FY 2012 revenues were fully realized, were actually higher than the FY 2013 budget projection. However, the FY 2015, Hampton received \$223,000 less in cigarette taxes than budgeted and \$344,000 less than in FY 2014.

Smithfield raised its cigarette tax from \$0.10 or 40 percent in FY 2015, -- from \$0.25 to \$0.35 per pack -- yet tax revenues fell by 8 percent. Ironically, Smithfield budgeted cigarette tax revenue at \$130,000, the same level as FY 2013 and FY 2014. Like Vinton, the Smithfield CAFR postulates about the link between the cigarette tax increase and retail sales. The report states, "[The] rate increase could have contributed to the decrease in sales, but this tax historically fluctuates up and down because revenues are recognized when stamps are purchased by wholesalers who buy in bulk not when consumers purchase the individual packs."<sup>17</sup>

Bluefield and Colonial Beach also raised their cigarette taxes by 67 percent and 20 percent respectfully. In Bluefield tax revenues fell by 14 percent that year, while in Colonial Beach revenues fell by 6 percent. In both towns revenues climbed slightly in the following year, but in Bluefield revenues fell in the following two years.

Virginia Beach raised the cigarette two times over the period with mixed results. In FY 2011, Virginia Beach raised the tax by 7 percent and revenues fell by 3 percent. The FY 2014 tax increase of 8 percent also produced a decrease in tax revenues by 2 percent in FY 2014 but revenue increased in FY 2015 by 17%.

## **Table 2 – Tax Increases Don't Meet Expectations**

**Table 2 displays data for another set of Virginia municipalities that enacted one or more cigarette tax increases since FY 2010. However, they did not experience immediate drops in cigarette tax revenues, but rather, the tax increases initially produced revenue gains that did not meet expectations. Moreover, cigarette tax revenues fell in several municipalities in at least one fiscal year following the tax increase.**

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<sup>17</sup> "Financial Report Year Ended June 30, 2015," Town of Smithfield Virginia, <http://www.smithfieldva.gov/images/uploads/Audit%20Report%20Smithfield%202015.pdf>, p.8.



**Table 2: Tax Increases Don't Meet Expectations**

<b>Municipality</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<b>Winchester</b>						
Rate Increase (\$, per pack)	0	0.15	0	0	0	0.1
Rate (\$, per pack)	0.10	0.25	0.25	0.25	0.25	0.35
Percent Increase	na	150	0	0	0	40
Budgeted Revenue	230,000	530,000	530,000	530,000	580,000	812,600
Percent Increase	na	110	15	(7)	9	63
Actual Revenue	252,108	461,608	572,964	530,667	498,544	663,752
Percent Increase	12	83	24	(7)	(6)	33
<b>Fairfax City</b>						
Rate Increase (\$, per pack)	0.25	0.10	0	0	0	0
Rate (\$, per pack)	0.75	0.85	0.85	0.85	0.85	0.85
Percent Increase	25*	13	0	0	0	0
Budgeted Revenue	702,317	1,185,848	1,060,732	980,000	975,000	975,000
Percent Increase	na	43	3	7	0	0
Actual Revenue	829,555	1,028,992	918,341	975,457	924,350	862,776
Percent Increase	7	24	(11)	6	(5)	(7)
<b>Leesburg</b>						
Rate Increase (\$, per pack)	0	0	0.25**	0	0	0
Rate (\$, per pack)	0.50	0.50	0.75	0.75	0.75	0.75
Percent Increase	0	0	50	0	0	0
Budgeted Revenue	na	800,000	1,150,000	1,150,000	1,150,000	1,047,206
Percent Increase	na	na	32	1	10	7
Actual Revenue	805,298	872,047	1,133,071	1,047,206	980,759	934,508
Percent Increase	na	8	30	(8)	(6)	(5)
<b>Newport News</b>						
Rate Increase (\$, per pack)	0	0	0.10	0.10	0	0
Rate (\$, per pack)	0.65	0.65	0.75	0.85	0.85	0.85
Percent Increase	0	0	15	12	0	0
Budgeted Revenue	4,225,000	4,119,000	4,600,000	5,400,000	5,200,000	5,200,000
Percent Increase	na	(1)	8	13	(1)	2
Actual Revenue	4,160,343	4,269,564	4,799,234	5,228,287	5,102,091	4,949,954
Percent Increase	1	3	12	9	(2)	(3)
<b>Manassas</b>						
Rate Increase (\$, per pack)	0	0	0.15	0	0	0
Rate (\$, per pack)	0.50	0.50	0.65	0.65	0.65	0.65
Percent Increase	0	0	43	0	0	0
Budgeted Revenue	na	741,156	750,124	968,381	923,138	886,092
Percent Increase	na	0	0	0	0	0
Actual Revenue	741,156	750,124	968,381	923,138	884,092	842,283
Percent Increase	na	1	29	(5)	(4)	(5)
<b>Purcellville</b>						
Rate Increase (\$, per pack)	0	0	0.15	0	0	0
Rate (\$, per pack)	0.50	0.50	0.65	0.65	0.65	0.65
Percent Increase	0	0	30	0	0	0
Budgeted Revenue	230,000	212,000	260,000	245,000	260,633	242,371
Percent Increase	na	5	35	1	5	(3)
Actual Revenue	202,844	192,198	243,622	247,976	249,236	238,433
Percent Increase	na	(5)	27	2	1	(4)

\*tax increase effective for half of FY 2010 and we split the 50 percent increase across FY 2010 and FY 2011.

\*\*tax increase effective May 1, 2011, we allocate the tax change to FY 2012 since it effects the entire FY.





In FY 2011, Winchester increased its cigarette tax by 150 percent and expected revenues to increase by 110 percent. However, revenues only increased 83 percent, well below the estimated increase. Winchester officials can take solace in the fact that FY 2012 cigarette tax revenues increased by 24 percent. However, the cigarette tax revenues fell over the next two fiscal years until the FY 2015 tax hike of \$0.10 per pack, or 40 percent. The FY 2015 Budget documents projected a 63 percent increase in cigarette tax revenues, even though the rate increase was only 40 percent. In reality, tax revenues only increase 33 percent, a little over half of the projected increase.

Fairfax City, a jurisdiction completely surrounded by Fairfax County that imposes only a 30 cent per pack tax on cigarettes, raised its cigarette tax by 50 percent half way through FY 2010 and again by 13 percent in FY 2011, to a total of 85 cents per pack. The FY 2010 tax increase represents a 25 percent increase in the tax if it were spread over the entire fiscal year. However, cigarette tax revenues only grew by 7 percent over FY 2009. Fairfax City followed up with a 13 percent cigarette tax increase in FY 2011 and the estimated budget revenues would increase by 43 percent. However, revenues only increased by 24 percent that fiscal year and fell by 11 percent in FY 2012. In FY 2013, Cigarettes tax revenues rose by 6 percent, before falling again by 5 percent in FY 2014 and 7 percent in FY 2015.

Leesburg, Newport News and Manassas initially saw cigarette tax revenues rise in response to tax increases only to fall in subsequent years. In FY 2012, Leesburg increased its cigarette tax rate by \$0.25 per pack, or 50 percent, and revenues increased by 30 percent.<sup>18</sup> Over the next three fiscal years, cigarette tax revenues fell by 8, 6 and 5 percent respectively. Newport News experienced steady increases in cigarette tax revenues prior to its FY 2012 and FY 2013 tax increases of \$0.10 per pack, or 15 percent and 12 percent, which boosted revenues by 12 percent and 9 percent respectively. However, cigarette tax revenues fell in each of the two fiscal years following the FY 2013 increase. Similarly, Manassas raised its cigarette tax rate by 43 percent in FY 2012, from \$0.50 to \$0.65 per pack and tax revenues rose by 29 percent in the first year, but revenues fell by nearly 5 percent in each year thereafter.

Purcellville hiked the cigarette tax rate by 30 percent in FY 2012, but revenues fell slightly short of expectations, rising only 27 percent that year. Revenues held steady over the next two fiscal years – increasing 1 percent and 2 percent - and then fell by 4 percent in FY 2015.

### **Table 3 – Tax Increases Miss Budget Projections**

**Table 3 displays municipalities that hiked cigarette taxes in FY 2015 (except for Salem in FY 2014 and Alexandria in FY 2014 and FY 2015), yet saw revenue increases that were significantly below expectations. Also, revenue collections for subsequent years are not yet available to see a longer term effect of the tax increases.**

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<sup>18</sup> The tax increase was effective May 1, 2011, with two months left in FY 2011.



**Table 3: Tax Increases Miss Budget Projections**

<b>Municipality</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<b>Salem</b>						
Rate Increase (\$, per pack)	0	0	0	0	0.3	0
Rate (\$, per pack)	0.15	0.15	0.15	0.15	0.45	0.45
Percent Increase	0	0	0	0	200	0
Budgeted Revenue	na	na	na	na	375,000	575,000
Percent Increase	na	na	na	na	(20)	(4)
Actual Revenue	378,409	374,529	345,136	465,943	596,250	763,024
Percent Increase	na	(1)	(8)	35	28	28
<b>Charlottesville</b>						
Rate Increase (\$, per pack)	0	0	0	0	0	0.2
Rate (\$, per pack)	0.35	0.35	0.35	0.35	0.35	0.55
Percent Increase	0	0	0	0	0	57
Budgeted Revenue	695,000	695,000	615,000	615,000	585,000	850,000
Percent Increase	na	13	(3)	(4)	(13)	26
Actual Revenue	614,725	634,572	640,588	672,397	674,571	802,021
Percent Increase	na	3	1	5	0	19
<b>Portsmouth</b>						
Rate Increase (\$, per pack)	0	0	0	0	0	0.3
Rate (\$, per pack)	0.60	0.60	0.60	0.60	0.60	0.90
Percent Increase	0	0	0	0	0	50
Budgeted Revenue	na	3,165,833	2,950,000	2,813,250	2,900,000	3,912,350
Percent Increase	na	10	4	(5)	22	41
Actual Revenue	2,884,253	2,849,698	2,948,418	2,373,203	2,781,446	3,625,687
Percent Increase	0	(1)	3	(20)	17	30
<b>Bristol</b>						
Rate Increase (\$, per pack)	0	0	0	0	0	0.07
Rate (\$, per pack)	0.04	0.04	0.04	0.04	0.04	0.11
Percent Increase	0	0	0	0	0	175
Budgeted Revenue	175,000	175,000	180,000	180,000	150,000	350,000
Percent Increase	Na	(6)	2	5	(3)	134
Actual Revenue	187,064	176,058	170,956	154,988	140,382	346,317
Percent Increase	0	(6)	(3)	(9)	(9)	147
<b>Staunton</b>						
Rate Increase (\$, per pack)	0	0	0	0	0	0.15
Rate (\$, per pack)	0.15	0.15	0.15	0.15	0.15	0.30
Percent Increase	0	0	0	0	0	100
Budgeted Revenue	310,000	310,000	300,000	275,000	290,000	464,100
Percent Increase	na	5	3	(5)	5	75
Actual Revenue	294,875	290,878	290,430	276,657	264,948	453,323
Percent Increase	Na	(1)	(0)	(5)	(4)	71
<b>Alexandria</b>						
Rate Increase (\$, per pack)	0	0	0	0	0.20	0.15
Rate (\$, per pack)	0.80	0.80	0.80	0.80	1.00	1.15
Percent Increase	0	0	0	0	25	15
Budgeted Revenue	3,100,000	2,900,000	2,900,000	2,600,000	3,234,000	3,060,000
Percent Increase	na	(0)	4	(3)	26	(5)
Actual Revenue	2,910,382	2,777,052	2,674,157	2,567,249	2,927,125	3,020,469
Percent Increase	na	(5)	(4)	(4)	14	3



In FY 2014, Salem increased the cigarette tax from \$0.15 to \$0.45, or a whopping 200 percent. However, tax revenue collections only increased by 28 percent. That represents the largest short-fall in our entire dataset for this study.

Charlottesville and Portsmouth, after raising cigarette taxes in FY 2015, experienced revenues collections that were 7.3 percent and 5.6 percent below budget projections. Moreover, the differences between the percentages of tax rate increases and the subsequent tax revenue increases – 20 percentage points for Charlottesville and 38 percentage points for Portsmouth – indicate that the tax increases are driving significant changes in the cigarette consumer’s purchasing behavior. As stated in the earlier discussion on static and dynamic revenue changes, had consumers not changed their behavior by either purchasing fewer cigarettes or purchasing them outside the taxing jurisdiction, tax revenue collections would have increased by the same percentage as the tax rate: 20 percent for Charlottesville and 38 percentage points for Portsmouth.

Cigarette tax revenue forecasts for Bristol and Stanton missed actual revenues by a mere 1.1 percent and 2.3 percent respectively. Again, the difference between the percentages of tax rate increases and the subsequent percentage tax revenue increases – 29 points in Stanton and 28 percentage points in Bristol -- show consumers are shifting their spending patterns in response to the tax increases.

In FY 2014 Alexandria raised its cigarette tax by \$0.20 from \$0.80 to \$1.00 per pack, or a 25 percent increase. However, actual cigarette tax revenues increased by only 14 percent. In FY 2015, Alexandria doubled-down and raised the cigarette tax again by \$0.15 to \$1.15 per pack, for a 15 percent increase. This time revenues only rose by 3 percent.

The FY 2015 budgeters learned their lesson and forecasted a 5 percent decrease in cigarette tax revenues for FY 2015. FY 2016 Budget documents acknowledge the reality by stating future tax revenues will be flat due to “historical trends of stable to decreasing cigarette use.”<sup>19</sup>

#### **Table 4 – Tax Increases Show Mixed Results**

**Table 4 displays data for municipalities that had at least one instance of cigarette tax rate hike that increased revenues by more than the rate increase would imply. Poquoson City and Franklin City are the cleanest example of this experience.**

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<sup>19</sup> City of Alexandria, “Revenue Summary,” FY2014-2016, from Budget 2016, <http://www.alexandriava.gov/uploadedFiles/budget/info/budget2016/Section%209%20-%20Revenues%20Summary.pdf>. See page 9.12. <http://www.hampton.gov/DocumentCenter/View/1455>, p. 4-9.



**Table 4: Tax Increases Show Mixed Results**

Municipality	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
<b>Poquoson City</b>						
Rate Increase (\$, per pack)	0	0	0	0.10	0	0
Rate (\$, per pack)	0.10	0.10	0.10	0.20	0.20	0.20
Percent Increase	0	0	0	100	0	0
Budgeted Revenue	75,000	70,000	60,000	136,500	136,500	120,000
Percent Increase	na	3	19	126	(4)	4
Actual Revenue	68,192	50,548	60,293	142,520	115,793	100,873
Percent Increase	Na	(26)	19	136	(19)	(13)
<b>Franklin City</b>						
Rate Increase (\$, per pack)	0	0	0	0.10	0	0
Rate (\$, per pack)	0.50	0.50	0.50	0.60	0.60	0.60
Percent Increase	0	0	0	20	0	0
Budgeted Revenue	250,000	230,000	239,000	262,900	300,000	300,000
Percent Increase	na	0	15	7	(16)	(12)
Actual Revenue	230,469	208,592	244,959	356,358	342,433	373,904
Percent Increase	Na	(9)	17	45	(4)	9
<b>Norfolk</b>						
Rate Increase (\$, per pack)	0	0	0.05	0	0	0.10
Rate (\$, per pack)	0.65	0.65	0.75	0.75	0.75	0.80
Percent Increase	0	0	8	0	0	14
Budgeted Revenue	7,900,000	6,850,000	7,580,000	7,708,000	7,675,000	7,995,000
Percent Increase	na	(5)	6	(5)	(3)	8
Actual Revenue	7,175,660	7,160,873	8,096,678	7,926,006	7,408,785	7,820,751
Percent Increase	Na	0	13	(2)	(7)	6
<b>Haymarket</b>						
Rate Increase (\$, per pack)	0	0	0.20	0	0	0.25
Rate (\$, per pack)	0.30	0.30	0.50	0.50	0.50	0.75
Percent Increase	0	0	67	0	0	50
Budgeted Revenue	144,416	154,000	143,277	250,000	250,000	250,000
Percent Increase	na	na	(7)	(7)	7	26
Actual Revenue	na	153,342	267,796	232,817	199,049	250,635
Percent Increase	na	na	75	(13)	(15)	26
<b>Williamsburg</b>						
Rate Increase (\$, per pack)	0	0	0	0.05	0	0
Rate (\$, per pack)	0.25	0.25	0.25	0.30	0.30	0.30
Percent Increase	0	0	0	20	0	0
Budgeted Revenue	170,000	160,000	160,000	180,000	180,000	165,000
Percent Increase	na	1	8	22	(2)	11
Actual Revenue	158,460	148,032	147,870	183,155	148,320	156,911
Percent Increase	na	(7)	(0)	24	(19)	6
<b>Wise</b>						
Rate Increase (\$, per pack)	0	0	0	0.05	0	0
Rate (\$, per pack)	0.05	0.05	0.05	0.10	0.10	0.10
Percent Increase	0	0	0	100	0	0
Budgeted Revenue	na	na	34,000	68,000	75,000	70,000
Percent Increase	na	na	(9)	87	(9)	(5)
Actual Revenue	42,227	37,482	36,300	82,765	73,535	60,625
Percent Increase	na	(11)	(3)	128	(11)	(18)
<b>Woodstock</b>						
Rate Increase (\$, per pack)	0	0	0	0.15	0	0
Rate (\$, per pack)	0.10	0.10	0.10	0.25	0.25	0.25
Percent Increase	0	0	0	150	0	0
Budgeted Revenue	110,000	100,000	85,000	185,000	200,000	248,000
Percent Increase	na	na	(5)	75	(22)	4
Actual Revenue	98,658	89,186	105,627	257,618	239,386	214,232
Percent Increase	na	(10)	18	144	(7)	(11)
<b>Covington</b>						
Rate Increase (\$, per pack)	0	0.10	0	0	0	0
Rate (\$, per pack)	0.20	0.30	0.30	0.30	0.30	0.30
Percent Increase	0	50	0	0	0	0.0
Budgeted Revenue	na	na	na	120,000	115,000	115,000
Percent Increase	na	na	na	na	(5)	11
Actual Revenue	76,437	117,397	127,247	120,879	103,649	107,369
Percent Increase	na	54	8	(5)	(14)	4



In FY 2013, Poquoson City raised its cigarette tax rate by 100 percent, from \$0.10 to \$0.20 per pack and tax revenue rose by 136 percent or 36 percentage points above the tax rate increase and 4.4 percent above the FY 2013 budget projections. Franklin City raised its cigarette tax rate by 20 percent in FY 2013, from \$0.50 to \$0.60 per pack, and tax revenue collections increased by 45 percent.

However, for both local governments the fiscal good fortune did not last. Cigarette tax revenues fell in the years following the tax increase. Tax revenues in Poquoson City fell by 19 percent and 13 percent in the two fiscal years following the rate hike. Franklin City saw revenues drop a more modest 4 percent in the year following rate hike.

Norfolk and Haymarket each enacted two cigarette tax increases over the period, with the revenue for one tax increase exceeding the static estimate and the other failing to meet the static revenue estimates. In the years between these tax increases, Norfolk and Haymarket experienced falling tax revenues.

Williamsburg, Wise, Woodstock and Covington each enacted a single tax over the period and tax revenue collections exceeded the static revenue estimate. However, true to the pattern, cigarette tax revenue collections fell in at least one fiscal year following the tax increase. Woodstock and Wise experienced two years of cigarette tax revenue declines following a tax increases.

## Review of Tables

While the cigarette tax increases for each municipality in the four tables above have their differences, some common patterns emerge:

1. Municipal cigarette tax revenue collections have been flat or falling since FY 2010;
2. Cigarette tax rate hikes increase tax revenue collections by less than municipal budgets projections or the percentage rate increase would imply;
3. The tax revenue collection increases are fleeting, often turning flat or negative in the years following a tax increase; and
4. The revenue losses and revenue shortfalls show that the tax increases are changing consumption patterns as consumers seek alternative markets with lower taxes and therefore lower prices. Consumers have either bought fewer packs, as has been happening for over a decade or more, have bought less-taxed packs outside the jurisdiction through cross border sales, through smuggling that is a serious problem, or because of the purchase of vaporizers.



## The Tax Impact on Retail Sales and Small Businesses

The revenue shortfalls outlined in the section above indicates the tax revenues have usually fallen short of expectations. The lower tax revenues directly reflect lower sales of cigarettes within the jurisdiction of each municipality. A main driver of slumping cigarette sales is that consumers cross municipal lines to make purchases and, as a consequence, retail sales in convenience stores and small grocery stores suffer under cigarette sales tax increases.

It is this unintended consequence of cigarette tax increases that is most often left out of the discussion by local government officials who only see cigarette taxes as a source of revenue for general fund projects. Yet, the economic consequences on smaller employers can be significant.

*According to 2014 data from the National Association of Convenience Stores, cigarette sales comprise 37.4 percent of an average convenience store's monthly merchandise sales, and comprise 18 percent of an average store's gross profit. Cigarette sales are certainly important to the convenience store. However, stores not only lose the sale of cigarettes, but also the other purchases consumers make with their cigarettes.<sup>20</sup>*

*Management Science Associates used data from over 3,400 shopping visits to convenience stores to estimate the spending patterns of customers. Tobacco was the fourth most often purchased item out of 15, as buyers purchased tobacco on 21 percent of their visits. Tobacco consumers, almost exclusively comprising cigarettes consumers, made purchases over ten dollars 52 percent of the time compared to 33 percent of the time for non-tobacco consumers.*

*It is likely that a portion of the increased spending could be attributed to the cost of cigarettes. However, tobacco consumers also made purchases from a variety of other categories within the store during their visits to purchase tobacco. Consumers added a purchase of gasoline on 52 percent of their visits to purchase tobacco, packaged beverages on 35 percent of trips, candy, gum and mints on 17 percent of trips and lottery/gaming tickets on 15 percent of their trips. Moreover, tobacco consumers visit convenience stores on a regular basis, 16 percent of tobacco consumers making daily visits and 55 percent making multiple trips per week.<sup>21</sup>*

The cigarette consumer is an important source of sales to convenience stores and small grocery stores. The tobacco sales account for a large portion of total sales at these stores; and tobacco consumers tend to visit the stores more often and make larger purchases. If cigarette tax increases are driving sales to other jurisdictions, as is the case with Vinton, this portion of the local economy will suffer disproportionately.

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<sup>20</sup> 2015 NACS Overview. National Association of Convenience Stores, <http://www.nacsonline.com/NACSShow/Coaching/Documents/Industry-Overview.pdf>.

<sup>21</sup> Melissa Vonder Harr, "The True Value of the Tobacco Consumer," originally published in Tobacco E-News, <http://www.cspnet.com/industry-news-analysis/marketing-strategies/articles/true-value-tobacco-consumer> (April 21, 2013).



# CONCLUSION

Every year, cities and towns across the Commonwealth of Virginia consider raising additional revenue by increasing the local excise tax on cigarettes. But, as this study shows, such tax increases have their own costs.

After reviewing the real life results of raising cigarette taxes in town and cities across Virginia, it is clear to the authors that policy makers most often misjudge the income they expect to see from increases on cigarette taxes, and the unintended consequences to the smaller retail stores that see their overall sales decrease.

Any short-term revenue gain often times comes at the expense of a long term decline in sales and diminished economic activity. These cigarette taxes are regressive taxes that fall hardest on low income consumers and also harm smaller businesses that rely on smoking customers who have a propensity to spend on other items while in those retail stores.

Moreover, the recent experience of Washington D.C. and New Jersey, as well as in the cities and towns reviewed in this study, suggests that cigarette tax revenues may well decline in subsequent years after a tax increase, as cigarette sales decline and customers migrate to nearby jurisdictions where they find lower priced cigarettes or turn to such products as smokeless tobacco or vaporizers.

Excise taxes are problematic since they are not a major source of revenue for local municipalities. Thus, a large increase in the local cigarette tax does not provide a sustainable long-term solution to any immediate funding shortfall facing cities and towns in the Commonwealth of Virginia.



# APPENDIX

Table A-1: Local Cigarette Taxing Jurisdictions in Virginia (\$ per pack)

CITIES/TOWNS	Federal Rate	State Rate	Local Rate	Total
Alexandria	1.01	0.3	1.15	2.46
Portsmouth	1.01	0.3	0.90	2.21
Fairfax City	1.01	0.3	0.85	2.16
Hampton*	1.01	0.3	0.85	2.16
Newport News	1.01	0.3	0.85	2.16
Falls Church	1.01	0.3	0.75	2.06
Herndon	1.01	0.3	0.75	2.06
Leesburg	1.01	0.3	0.75	2.06
Norfolk	1.01	0.3	0.75	2.06
Suffolk*	1.01	0.3	0.75	2.06
Vienna	1.01	0.3	0.75	2.06
VA Beach*	1.01	0.3	0.75	2.06
Manassas	1.01	0.3	0.65	1.96
Manassas Park*	1.01	0.3	0.65	1.96
Purcellville	1.01	0.3	0.65	1.96
Franklin City	1.01	0.3	0.60	1.91
Charlottesville	1.01	0.3	0.55	1.86
Dumfries	1.01	0.3	0.55	1.86
Middleburg	1.01	0.3	0.55	1.86
Roanoke	1.01	0.3	0.54	1.85
Chesapeake	1.01	0.3	0.50	1.81
Haymarket	1.01	0.3	0.50	1.81
Mt. Jackson*	1.01	0.3	0.45	1.76
Salem	1.01	0.3	0.45	1.76
Christiansburg	1.01	0.3	0.40	1.71
Lovettsville	1.01	0.3	0.40	1.71
Lynchburg	1.01	0.3	0.35	1.66
Scottsville	1.01	0.3	0.35	1.66
Fredericksburg	1.01	0.3	0.31	1.62
Bedford City	1.01	0.3	0.30	1.61
Blacksburg	1.01	0.3	0.30	1.61
Clifton	1.01	0.3	0.30	1.61
Colonial Beach	1.01	0.3	0.30	1.61
Covington	1.01	0.3	0.30	1.61
Eastville*	1.01	0.3	0.30	1.61
Harrisonburg	1.01	0.3	0.30	1.61
Kilmarnock	1.01	0.3	0.30	1.61
Staunton	1.01	0.3	0.30	1.61
Williamsburg	1.01	0.3	0.30	1.61





CITIES/TOWNS	Federal Rate	State Rate	Local Rate	Total
Arlington County	1.01	0.3	0.30	1.61
Fairfax County	1.01	0.3	0.30	1.61
Appomattax	1.01	0.3	0.27	1.58
Farmville	1.01	0.3	0.27	1.58
Middletown	1.01	0.3	0.25	1.56
Norton*	1.01	0.3	0.25	1.56
Pulaski	1.01	0.3	0.25	1.56
Smithfield	1.01	0.3	0.25	1.56
Stephens City	1.01	0.3	0.25	1.56
Strasburg	1.01	0.3	0.25	1.56
Vinton	1.01	0.3	0.25	1.56
Warsaw	1.01	0.3	0.25	1.56
Winchester	1.01	0.3	0.25	1.56
Windsor	1.01	0.3	0.25	1.56
Woodstock	1.01	0.3	0.25	1.56
Ashland	1.01	0.3	0.22	1.53
Blackstone	1.01	0.3	0.22	1.53
Appalachia	1.01	0.3	0.20	1.51
Broadway*	1.01	0.3	0.20	1.51
Elkton	1.01	0.3	0.20	1.51
Glen Lyn	1.01	0.3	0.20	1.51
Haysi	1.01	0.3	0.20	1.51
Martinsville	1.01	0.3	0.20	1.51
New Market	1.01	0.3	0.20	1.51
Poquoson City	1.01	0.3	0.20	1.51
Shenandoah*	1.01	0.3	0.20	1.51
Stanley	1.01	0.3	0.20	1.51
Timberville*	1.01	0.3	0.20	1.51
Waynesboro	1.01	0.3	0.20	1.51
Coeburn	1.01	0.3	0.15	1.46
Grottoes	1.01	0.3	0.15	1.46
Luray	1.01	0.3	0.15	1.46
Radford	1.01	0.3	0.15	1.46
Roundhill	1.01	0.3	0.15	1.46
Tappahannock	1.01	0.3	0.15	1.46
Warrenton	1.01	0.3	0.15	1.46
White Stone	1.01	0.3	0.15	1.46
Wytheville	1.01	0.3	0.15	1.46
Bristol*	1.01	0.3	0.14	1.45
Marion	1.01	0.3	0.12	1.43
Orange	1.01	0.3	0.12	1.43
Abingdon	1.01	0.3	0.10	1.41
Big Stone Gap*	1.01	0.3	0.10	1.41



CITIES/TOWNS	Federal Rate	State Rate	Local Rate	Total
Bluefield	1.01	0.3	0.10	1.41
Bridgewater	1.01	0.3	0.10	1.41
Clintwood	1.01	0.3	0.10	1.41
Culpeper	1.01	0.3	0.10	1.41
Damascus	1.01	0.3	0.10	1.41
Gordonsville	1.01	0.3	0.10	1.41
Honaker	1.01	0.3	0.10	1.41
Iron Gate	1.01	0.3	0.10	1.41
Petersburg	1.01	0.3	0.10	1.41
Pound	1.01	0.3	0.10	1.41
Rich Creek*	1.01	0.3	0.10	1.41
Rocky Mount	1.01	0.3	0.10	1.41
Saltville	1.01	0.3	0.10	1.41
Stuart	1.01	0.3	0.10	1.41
Tazewell	1.01	0.3	0.10	1.41
Wise	1.01	0.3	0.10	1.41
Chilhowie	1.01	0.3	0.06	1.37
Clincho	1.01	0.3	0.05	1.36
Grundy	1.01	0.3	0.05	1.36
Hillsboro	1.01	0.3	0.05	1.36
St. Paul	1.01	0.3	0.05	1.36
Claremont	1.01	0.3	0.05	1.355
Clifton Forge	1.01	0.3	0.04	1.35

Source: various see notes tab. \*As of July 1, 2015



Table A2- Cities and Towns without local cigarette taxes (\$ per pack)

CITIES/TOWNS	Federal Rate (\$ per pack)	State Rate	Local Rate	Total
Buena Vista	1.01	0.3	0.00	1.31
Colonial Heights	1.01	0.3	0.00	1.31
Danville	1.01	0.3	0.00	1.31
Emporia	1.01	0.3	0.00	1.31
Galax	1.01	0.3	0.00	1.31
Hopewell	1.01	0.3	0.00	1.31
Lexington	1.01	0.3	0.00	1.31
Richmond	1.01	0.3	0.00	1.31
Accomac	1.01	0.3	0.00	1.31
Alberta	1.01	0.3	0.00	1.31
Altavista	1.01	0.3	0.00	1.31
Amherst	1.01	0.3	0.00	1.31
Belle Haven	1.01	0.3	0.00	1.31
Bloxom	1.01	0.3	0.00	1.31
Boones Mill	1.01	0.3	0.00	1.31
Bowling Green	1.01	0.3	0.00	1.31
Boyce	1.01	0.3	0.00	1.31
Boydton	1.01	0.3	0.00	1.31
Boykins	1.01	0.3	0.00	1.31
Branchville	1.01	0.3	0.00	1.31
Brodnax	1.01	0.3	0.00	1.31
Brookneal	1.01	0.3	0.00	1.31
Buchanan	1.01	0.3	0.00	1.31
Burkeville	1.01	0.3	0.00	1.31
Cape Charles	1.01	0.3	0.00	1.31
Capron	1.01	0.3	0.00	1.31
Cedar Bluff	1.01	0.3	0.00	1.31
Charlotte Court House	1.01	0.3	0.00	1.31
Chase City	1.01	0.3	0.00	1.31
Chatham	1.01	0.3	0.00	1.31
Cheriton	1.01	0.3	0.00	1.31
Chincoteague	1.01	0.3	0.00	1.31
Clarksville	1.01	0.3	0.00	1.31
Cleveland	1.01	0.3	0.00	1.31
Clinchport	1.01	0.3	0.00	1.31
Columbia	1.01	0.3	0.00	1.31
Courtland	1.01	0.3	0.00	1.31
Craigsville	1.01	0.3	0.00	1.31
Crewe	1.01	0.3	0.00	1.31
Dayton	1.01	0.3	0.00	1.31
Dendron	1.01	0.3	0.00	1.31



CITIES/TOWNS	Federal Rate (\$ per pack)	State Rate	Local Rate	Total
Dillwyn	1.01	0.3	0.00	1.31
Drakes Branch	1.01	0.3	0.00	1.31
Dublin	1.01	0.3	0.00	1.31
Duffield	1.01	0.3	0.00	1.31
Dungannon	1.01	0.3	0.00	1.31
Edinburg	1.01	0.3	0.00	1.31
Exmore	1.01	0.3	0.00	1.31
Fincastle	1.01	0.3	0.00	1.31
Floyd	1.01	0.3	0.00	1.31
Fries	1.01	0.3	0.00	1.31
Front Royal	1.01	0.3	0.00	1.31
Glade Spring	1.01	0.3	0.00	1.31
Glasgow	1.01	0.3	0.00	1.31
Goshen	1.01	0.3	0.00	1.31
Gretna	1.01	0.3	0.00	1.31
Halifax	1.01	0.3	0.00	1.31
Hallwood	1.01	0.3	0.00	1.31
Hamilton	1.01	0.3	0.00	1.31
Hillsville	1.01	0.3	0.00	1.31
Hurt	1.01	0.3	0.00	1.31
Independence	1.01	0.3	0.00	1.31
Irvington	1.01	0.3	0.00	1.31
Ivor	1.01	0.3	0.00	1.31
Jarratt	1.01	0.3	0.00	1.31
Jonesville	1.01	0.3	0.00	1.31
Keller	1.01	0.3	0.00	1.31
Kenbridge	1.01	0.3	0.00	1.31
Keysville	1.01	0.3	0.00	1.31
La Crosse	1.01	0.3	0.00	1.31
Lawrenceville	1.01	0.3	0.00	1.31
Lebanon	1.01	0.3	0.00	1.31
Louisa	1.01	0.3	0.00	1.31
Madison	1.01	0.3	0.00	1.31
McKenney	1.01	0.3	0.00	1.31
Melfa	1.01	0.3	0.00	1.31
Mineral	1.01	0.3	0.00	1.31
Monterey	1.01	0.3	0.00	1.31
Montross	1.01	0.3	0.00	1.31
Mount Crawford	1.01	0.3	0.00	1.31
Narrows	1.01	0.3	0.00	1.31
Nassawadox	1.01	0.3	0.00	1.31
New Castle	1.01	0.3	0.00	1.31



CITIES/TOWNS	Federal Rate (\$ per pack)	State Rate	Local Rate	Total
Newsoms	1.01	0.3	0.00	1.31
Nickelsville	1.01	0.3	0.00	1.31
Occoquan	1.01	0.3	0.00	1.31
Onancock	1.01	0.3	0.00	1.31
Onley	1.01	0.3	0.00	1.31
Painter	1.01	0.3	0.00	1.31
Pamplin City	1.01	0.3	0.00	1.31
Parksley	1.01	0.3	0.00	1.31
Pearisburg	1.01	0.3	0.00	1.31
Pembroke	1.01	0.3	0.00	1.31
Pennington Gap	1.01	0.3	0.00	1.31
Phenix	1.01	0.3	0.00	1.31
Pocahontas	1.01	0.3	0.00	1.31
Port Royal	1.01	0.3	0.00	1.31
Quantico	1.01	0.3	0.00	1.31
Remington	1.01	0.3	0.00	1.31
Richlands	1.01	0.3	0.00	1.31
Ridgeway	1.01	0.3	0.00	1.31
Rural Retreat	1.01	0.3	0.00	1.31
Saxis	1.01	0.3	0.00	1.31
Scottsburg	1.01	0.3	0.00	1.31
South Boston	1.01	0.3	0.00	1.31
South Hill	1.01	0.3	0.00	1.31
St. Charles	1.01	0.3	0.00	1.31
Stanardsville	1.01	0.3	0.00	1.31
Stony Creek	1.01	0.3	0.00	1.31
Surry	1.01	0.3	0.00	1.31
Tangier	1.01	0.3	0.00	1.31
The Plains	1.01	0.3	0.00	1.31
Toms Brook	1.01	0.3	0.00	1.31
Troutdale	1.01	0.3	0.00	1.31
Troutville	1.01	0.3	0.00	1.31
Urbanna	1.01	0.3	0.00	1.31
Victoria	1.01	0.3	0.00	1.31
Virgilina	1.01	0.3	0.00	1.31
Wachapreague	1.01	0.3	0.00	1.31
Wakefield	1.01	0.3	0.00	1.31
Washington	1.01	0.3	0.00	1.31
Waverly	1.01	0.3	0.00	1.31
Weber City	1.01	0.3	0.00	1.31
West Point	1.01	0.3	0.00	1.31



## About the Authors

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restrain men from injuring one another, shall leave  
them otherwise free to regulate their own pursuits of  
industry and improvement, and shall not take from  
the mouth of labor the bread it has earned. This is the  
sum of good government, and this is necessary to close  
the circle of our felicities.”*

*Thomas Jefferson, 1801*

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