



CENTER FOR TAX POLICY

TAXPAYER REPORT

The Colorado Center for Tax Policy (CTP) conducted this study of the impact of Amendment 35 using funds provided by Altria Corporate Services, Inc. on behalf of Philip Morris USA. CTP (formally Colorado Public Expenditure Council – CPEC), a non-partisan, non-profit taxpayer organization accepted the paid commission to conduct this research with the stipulation that all findings – positive, negative or neutral- would be made available to the media and the general public.

Colorado’s Proposed Tobacco Tax and its Fiscal Impact on Local Government

Introduction

On November 2, 2004, voters in Colorado will be asked to vote on a constitutional measure increasing cigarette and tobacco taxes and earmarking the majority of the funds for specific programs in the areas of health care and education. Amendment 35, if passed, will raise the state tax on a pack of 20 cigarettes by \$0.64 to a total of \$0.84 a pack, a 320% increase. Additionally, it will raise the tax on tobacco products other than cigarettes from 20 to 40 percent of the manufacturer’s list price. If passed, the revenues generated will be specifically earmarked for:

- Children, pregnant women, and the families of enrolled children in the state’s Children’s Basic Health Plan (46% of revenues)
- Comprehensive primary care through a community health center or a qualified provider who serves a patient base that is at least 50% uninsured or medically indigent (19% of revenues)
- Education programs to reduce smoking (16% of revenues)
- Cancer, heart and lung disease prevention, early detection, and treatment programs (16% of revenues)
- General fund, old age pension fund and local governments for health related purposes to compensate for losses in current tobacco tax revenues (3% of revenues).

As with any change in tax policy, the effects are myriad and extend beyond the simple increase in revenue projected to be collected from the new tax. In the case of an excise tax such as the one proposed in Colorado on cigarettes and tobacco, consumers will often modify their behavior with respect to the purchases of the product being taxed. Behavior modification generally results in a reduction in consumption of the good whose price has been increased through taxation. This elasticity effect will have a particular impact on both state and local government budgets in Colorado, as the existing \$0.20 state tax on cigarettes and tobacco products is predicted to yield smaller revenue streams after the new \$0.64 tax is implemented. Of particular concern for this analysis is the impact on the local units of government in Colorado who receive a dedicated portion of the current state cigarette tax.

In 1964, the state established a tax on cigarettes of \$0.03 per pack. Prior to the establishment of the state tax and through 1972, many local governments also taxed cigarettes. In 1973, the state raised the tax to \$0.10 per pack and gave local governments the option of receiving a percentage of the state-collected taxes or levying and collecting their own tax. No local government has levied a tax since that time, preferring to rely upon their percentage of the state tax. The state tax currently is \$0.20 per pack. In FY 2004, the state cigarette tax yielded \$54,065,939. Of this, 27 percent, or just over \$14.5 million, supported the budgets of the state's local units of governments through the revenue share agreement. This revenue flows through to local governments with no specific requirements for spending designations. As a result, a local unit is legally permitted to deposit such revenues in its general fund to support any service or program it provides. It is important to note that because this system of revenue sharing is established by statute, the legislature could enact legislation at any time reallocating the percentage distributions to diminish or eliminate the local share.

Of the many effects of the proposed constitutional amendment, the fiscal impact on Colorado's local governments has received little or no analytical attention. As noted above, the elasticity effect is predicted to reduce the overall consumption of cigarettes in the state. This reduction will result in a smaller revenue stream to the local governments in the state from the existing excise tax. Although the ballot language does earmark 3% of new revenues for, among other purposes, the backfilling of local government revenues, there is no published research demonstrating either the effect on local governments or the adequacy of the 3% stream to hold the local units harmless. This study will address these local government fiscal impacts. Since local governments do not receive any portion of tobacco related product taxes such as chewing tobacco and cigar sales, this study only addresses impacts from the excise tax on cigarettes.

Background on Colorado and National Cigarette Tax Rates

Colorado first began collecting taxes on cigarettes in 1964 when the tax was \$0.03 per pack. Since 1964 there have been six increases and one decrease with the last being a \$0.05 increase resulting in the current state excise tax of \$0.20 per pack of 20. The trend throughout the country has been to raise tobacco taxes to boost state revenues. Almost 70% of the states have raised tobacco taxes since January 2002 with several states pending increases. The table on the following page shows the states, their corresponding tax rates as of January 1, 2004, and the date of any recent tax increases where applicable.

As of January 2004, there were 6 states with lower cigarette taxes than Colorado. Virginia (see footnote 2 on page 3) smokers currently pay the least amount of state tax at \$0.025 per pack while smokers in New Jersey pay \$2.05 in state taxes for a single pack, the highest in the nation. All of Colorado's neighboring states have higher cigarette taxes, although Oklahoma currently maintains a rate of only \$0.03 higher (See footnote 1 on page 3). In many of the studies reviewed for this report, cross border sales and illegal sales of cigarettes have been problematic. If this initiative passes, Colorado's tax on cigarettes will be more consistent with that of its neighbor states; therefore, it is assumed that cross border sales will at most have only a marginal effect on state sales. The only potential effect may be the loss in cross border sales into the state as Colorado's tax comes more in line with its neighbors and thus reduces the incentive for others to cross state lines into Colorado to purchase cigarettes. Currently Colorado's tax rate is \$0.40 cents less per pack than Wyoming's which may be resulting in cross border sales into the state in the Cheyenne-Fort Collins corridor. The other border areas of the state, however, are sparse enough in population to conclude that cross border sales are again a marginal concern at best.

State	Tax Rate	Recent tax increase	State	Tax Rate	Recent tax increase	State	Tax Rate	Recent tax increase
AL	0.425		KY	0.03		ND	0.44	
AK	1.00		LA	0.36	8/1/02	OH	0.55	7/1/02
AZ	1.18	11/26/02	ME	1.00		OK ¹	0.23	11/1/02
AR	0.59	6/30/04	MD	1.00	6/1/02	OR	1.28	
CA	0.87	6/1/03	MA	1.51	7/25/02	PA	1.35	1/7/04
CO	0.20		MI	1.25	8/1/02	RI	1.71	7/1/03
CT	1.51	3/15/03	MN	0.48		SC	0.07	
DE	0.55	8/1/03	MS	0.18		SD	0.53	3/18/03
DC	1.00	1/1/03	MO	0.17		TN	0.20	7/1/02
FL	0.339		MT	0.70	5/1/03	TX	0.41	
GA	0.37	7/1/03	NE	0.64	10/1/02	UT	0.695	5/1/02
HI	1.30	6/30/03	NV	0.80	7/1/03	VT	1.19	7/1/03
ID	0.57	6/1/03	NH	0.52		VA ²	0.25	
IL	0.98	7/1/02	NJ	2.05	7/1/03	WA	1.42	1/1/02
IN	0.56	7/1/02	NM	0.91	7/1/03	WV	0.55	5/1/03
IA	0.36		NY	1.50	4/3/02	WI	0.77	
KS	0.79	1/1/03	NC	0.05		WY	0.60	7/1/03

Source: Orzechowski & Walker, "The Tax Burden on Tobacco" Volume 38, 2003.

Other Determinants of Local Cigarette Demand

National data demonstrates that since the early 1980s cigarette demand has been steadily decreasing, averaging a 2% decrease per year. From a high of just under 150 packs per capita in the mid 1970s, today Americans smoke on average 71.8 packs per person. Colorado's numbers are even lower. A 2003 report released by the Colorado Department of Public Health and Environment shows a 9.6% decline per capita in tobacco use between 2000 and 2002, from 70.7 packs to 63.9 packs per person. The overall drop in demand is likely attributed to smokers responding to health warnings associated with cigarettes. It is also possible that some smokers have determined that the habit is now too expensive and have decided to quit. However, smokers may respond to price changes in other ways as well. As local cigarette purchases become increasingly expensive, smokers may turn to means other than their local vendors for purchasing cigarettes. The emerging alternative means of purchase is the Internet³.

Of late, Internet sales have captured the interest of academics, the tobacco industry, and state governments. One report estimates that Internet tobacco sales alone will cost the states \$1.4 billion in tax revenue by 2005⁴. Another notes Internet sales of cigarettes by 2005 will account

¹ Oklahoma has a proposed ballot issue to increase the tax to \$1.03 per pack with a provision for rebates to sellers in border cities.

² Virginia's increase was a two stage phase in. The first increase of \$0.20 takes effect in September, 2004 and a subsequent increase of \$0.30 will take effect in July of 2005.

³ Almost all Internet providers also offer sales over the phone with toll-free numbers. For the purposes of this report, references to Internet sales will also include orders placed with such organizations on the phone.

⁴ Forrester Research Inc. *Online Tobacco Sales Grow*. April 27, 2001.

for nearly 5.9% of the industry's total volume⁵. This study went further to identify approximately 190 domestic Internet sites selling cigarettes. Additionally, a separate research project was conducted in which orders were placed with ten different Internet cigarette vendors⁶. In many cases, this report documented testimonials from the Internet provider confirming the increase in sales, particularly from New York City, where tobacco taxes had recently been increased. Findings from this project placed the average Internet cost per pack of premium cigarettes at \$3.21 including shipping⁷. The current average retail cost for a pack of cigarettes in Colorado is just over \$3.20⁸. Should the proposed tax increase pass, the average price of a pack of cigarettes in Colorado will increase to the vicinity of \$3.85 per pack or \$38.50 per carton. Under these circumstances, Internet sales would save the average Colorado consumer just under 20%. For further comparison of cost trends, a copy of a recent four-color insert from the Sunday *Denver Post* advertising low-cost cigarettes for purchase over the Internet is attached as Appendix B.

Native American Indian reservations are another alternative purchase source and cigarettes sold on such lands are exempt from federal and state excise taxes. Since cigarettes can be purchased at these locations tax-free, there is a potential for an increase in Indian reservation cigarette sales if the state tax is increased. In addition, a growing trend is for these sovereign Indian reservations to sell cigarettes via the Internet. It was estimated in 2002 that there were approximately 190 domestic websites selling cigarettes however, this number is always fluctuating as companies open and close frequently⁹. In the study previously mentioned that interviewed companies selling cigarettes over the Internet, 50 percent were based on Indian reservations, none of which were in Colorado¹⁰.

While one tendency for tax avoidance may be the increase in on-site Indian reservation cigarette sales, we believe this will not have a dramatic effect on Colorado's cigarette tax revenues. This is due to the small number of Indian reservations located in Colorado and their lack of proximity to major population centers. The four reservations reside in the southwest corner of the state and share borders with New Mexico, Arizona and Utah. One study showed Colorado's cigarette consumption supplied by Native American sales at 0.5 percent, while New Mexico was at 9.1 percent, Arizona at 3.0 percent and Utah at 3.5 percent¹¹.

All of the above mentioned potential behavioral responses to the proposed cigarette tax ultimately affect both the success and the impacts of the proposed tax measure. Changes in consumption or purchasing behavior affect the size of the revenue stream ultimately generated by the new tax. In addition, these same consumption and purchasing decisions negatively affect the revenue generated from the state's existing \$0.20 per pack tax on cigarettes. Although the findings from this research will briefly address the estimates for new revenue generated from the new \$0.64 tax, the majority of the findings will address the impact on Colorado's local governments who currently receive 27% of the current revenue stream from cigarette taxes.

⁵ Prudential Financial Research. *Buying Cigarettes Over the Internet*. September 24, 2002. pp.1

⁶ Prudential Financial Research. *Buying Cigarettes Over the Internet*. September 24, 2002. pp 3

⁷ Prudential Financial Research. *Buying Cigarettes Over the Internet*. September 24, 2002. pp 15

⁸ Campaign for Tobacco Free Kids. State Cigarette Prices, Taxes, and Costs per Pack. On the web at <http://www.tobaccofreekids.org/research/factsheets/pdf/0207.pdf>.

⁹ Prudential Financial Research. *Buying Cigarettes Over the Internet*. September 24, 2002. pp 3

¹⁰ Prudential Financial Research. *Buying Cigarettes Over the Internet*. September 24, 2002. pp 15

¹¹ Patrick Fleenor, Tax Foundation. *How Excise Tax Differentials Affect Interstate Smuggling and Cross-Border Sales of Cigarettes in the United States*. October 1998. pp 11.

Study Assumptions

As noted above, this review only analyzes the potential revenue impacts of the cigarette tax increase to local revenues. A baseline assumption of this study is that the state/local allocation of the current \$0.20 per pack cigarette tax remains unchanged. Note that the ballot initiative also increases the tax from 20 percent to 40 percent of the manufacturer's list price of other tobacco products such as cigars and chewing tobacco. However, this tax revenue is not distributed to the local governments. Therefore, that aspect of the initiative was not considered germane to this study.

Additionally, there are a pair of economic assumptions as well as a behavioral one that underlie the findings that follow. The first underlying economic assumption is that the entirety of the proposed tax increase will be passed onto the consumer in the form of higher cigarette prices. For many tax increases, particularly ones on goods sold in fiercely competitive markets or on goods whose elasticities are quite high, the burden of the tax is more equally shared between the consumer and the seller. However, previous studies on the incidence of tobacco tax increases suggest that close to 100% of the burden is passed through to the consumer¹². Under this assumption, the resulting price of a pack of cigarettes in Colorado will average in the range of \$3.85.

The second economic assumption underlying this research is that dealing with the elasticity of demand for cigarettes. Elasticity refers to the responsiveness of demand to changes in price. Goods with high elasticities are ones for which demand changes significantly in response to moderate changes in price. The opposite is the case for goods with low elasticities. In those cases, changes in price lead to relatively small changes in consumption of the good. Elasticities range from 0 in the case where demand is completely unresponsive to price changes (inelastic demand) to infinity in the case where a small change in price results in consumers completely abandoning the purchase of the good in question (elastic demand). Generally an elasticity of 1 is considered to be the cutoff between elastic and inelastic demand.

In the literature, estimates of the elasticity of demand for cigarettes range from a low of .2 to up to an elasticity of 1¹³. There are a variety of factors that bear on the ultimate elasticity result from a change in price. First of all, demand will generally be more elastic if the availability of substitutes is abundant. In the case of cigarettes, the availability of substitutes refers mostly to substitute sources of purchase such as neighboring states, Indian reservations, military bases, and the Internet. Additionally, the elasticity will tend to be greater as the good gets increasingly expensive or represents a greater proportion of a consumer's market basket. Finally, other economic and social conditions as well as the time elapsed from the price increase may affect elasticities. Therefore, it is not unreasonable to find some debate in the literature over the exact elasticity of demand for cigarettes.

In order to better estimate the appropriate elasticity for the purposes of this research, Colorado was compared with a set of neighboring western states with recent tax increases on cigarettes. The table below shows selected elasticities for those recent western tax increases.

¹² William N. Evans, Jeanne S. Ringel, and Diana Stech. 1999. Tobacco Taxes and Public Policy to Discourage Smoking. In *Tax Policy and the Economy*, James Poterba, ed. Cambridge, MA: MIT Press. 1-55.

¹³ W.Kip Viscusi. 2003. *Principles for Cigarette Taxation*. Prepared for the Conference on Excise Taxation.

ELASTICITY CALCULATIONS FROM 2002 INCREASES IN WESTERN STATES

	Increase per pack	Base tax before increase	New Tax	Percent increase in price	Percent Change in sales	Elasticity *
Washington	\$ 0.60	\$ 0.83	\$ 1.43	72.73%	-18.57%	-0.26
Kansas	\$ 0.46	\$ 0.24	\$ 0.70	191.67%	-21.58%	-0.11
Nebraska	\$ 0.30	\$ 0.34	\$ 0.64	88.24%	-21.00%	-0.24
Oregon	\$ 0.60	\$ 0.50	\$ 1.10	120.00%	-13.07%	-0.11
Arizona	\$ 0.60	\$ 0.58	\$ 1.18	103.45%	-27.00%	-0.26

ELASTICITY CALCULATIONS FROM 2003 INCREASES IN WESTERN STATES

South Dakota	\$ 0.20	\$ 0.33	\$ 0.53	60.61%	-4.10%	-0.07
Montana	\$ 0.52	\$ 0.18	\$ 0.70	288.89%	-10.30%	-0.04
Idaho	\$ 0.29	\$ 0.28	\$ 0.57	103.57%	-4.50%	-0.04
New Mexico	\$ 0.70	\$ 0.21	\$ 0.91	333.33%	-33.50%	-0.10
Nevada	\$ 0.45	\$ 0.35	\$ 0.80	128.57%	-8.60%	-0.07
Wyoming	\$ 0.48	\$ 0.12	\$ 0.60	400.00%	-73.00%	-0.18

CTP Calculation based upon the following sources:

Tax increase per pack and percent change in sales data from Orzechowski & Walker. *The Tax Burden on Tobacco*. Volume 38, 2003

Base tax data from FY 1997 from Patrick Fleenor. 1998. *How Excise tax Differentials Affect Interstate Smuggling and Cross-Border Sales of Cigarettes in the United States*. Tax Foundation Publication.

* Note that demand elasticities are always negative. It is customary to consider them in absolute value.

The above findings do suggest that demand elasticities increase over time. This would be consistent with theory that suggests that elasticities increase as consumers find alternative sources such as the Internet for their purchases. As such, the 2003 elasticities are considered artificially low for the purposes of this study. The findings from 2002 are consistent with the low range of the findings in the literature; however, the availability for Internet purchases, which increase each year, were less prevalent in 2002. Additionally, every state has slightly different economic and social characteristics. Therefore, elasticities will tend to vary by state depending upon the specific characteristics of the state. In order to better reflect this uncertainty, this research will present findings for 3 different elasticity scenarios, elasticities of .3, .45, and .6. The first, an elasticity of .3, is the most conservative estimate and most consistent with the findings from the recent western state tax increases. The other 2 scenarios, the elasticities of .45 and .6, more closely represent longer-term elasticities expected to prevail should Internet sales continue to grow at the current or even increasing pace. Furthermore, Colorado's proposed increase of \$0.64 per pack represents a larger absolute increase than almost any of the other states studied. Larger price increases may result in more significant behavioral change, lending support to the use of a slightly higher elasticity of demand. All findings that follow will be presented for each of the elasticity scenarios.

Finally, there is a behavioral assumption that must be built into any estimates of the impact of the proposed cigarette excise tax. For at least the last decade, cigarette consumption has been decreasing at a pace of approximately 2% per year without regard for whether prices have increased or not¹⁴. In the findings that follow, the exogenous 2% decrease will be factored into all calculations.

Estimated Statewide Effects from Colorado’s Proposed Tax Increase

Under the proposed change to the state’s cigarette tax, there will be 2 offsetting effects to state revenue. The \$0.64 per pack increase will generate new revenue for the state; however, that revenue is earmarked for specific purposes as outlined in the introduction to this report. The offsetting effect is the decrease in state revenue from the existing \$0.20 per pack tax that will result from the elasticity effect on the purchase and consumption of cigarettes in the state. The revenue generated from the \$0.20 tax is general revenue to both the state and local governments in Colorado. The impact from this decrease will be felt in the general fund budgets of all governments in the state. The table below outlines the projected increases and decreases to the state revenues under the 3 elasticity scenarios.

Elasticity Scenario	0.3	0.45	0.6
Projected revenue increase in FY 2005 from new \$0.64 tax (in millions)	\$ 166.06	\$ 160.77	\$ 155.49
Projected revenue loss in FY 2005 from existing \$0.20 cigarette tax (in millions)	\$ 4.43	\$ 6.08	\$ 7.73
Estimated FY 2005 Consumption (in millions of packs)	259.46	251.20	242.96

Source: CTP Calculation

In many states, increases in tobacco taxes are analyzed for their overall impact on state revenues. In Colorado’s case, the overall increase is not the appropriate measure as the new revenue will be earmarked for new programs. Thus, although there will be a new revenue stream, the true impact on the state’s existing budget will in fact be slightly negative, as shown above. However, as there is generally interest in the effect of cigarette tax increase overall, the below table is presented for comparison purposes. This table displays the effects on both consumption and revenue in two of Colorado’s neighboring states. As the data demonstrates, in other states when an increase in the tobacco tax was implemented, the trend was a decline in consumption but an overall increase in revenue.

State	Year of increase	% Change in tobacco tax	FY 02 to FY 03 % change in quantity of cigarette packs sold	% Change in Cig Tax Revenue from FY 02 to FY 03
AZ	11/26/02	50.85%	-7.28%	35.46%
UT	5/6/02	25.90%	-9.01%	21.26%

Source: CTP calculation. Data from Orzechowski & Walker, 2003

¹⁴ Finding presented at the 2004 National Taxpayers Conference Annual Meeting by Randy Morris, Regional Consultant, Brown and Williamson Tobacco.

The Proposed Cigarette Tax and the Effect on Colorado’s Local Governments

Currently, Colorado’s local governments receive 27% of the \$0.20 excise tax collected on every pack of cigarettes sold in Colorado. This equated to nearly \$14.6 million for fiscal year 2003 and was a 3% decrease from fiscal year 2002. The Department of Revenue distributes these funds annually based upon an allocation base of the unit’s proportion of total local sales tax revenue. There are a total of 342 local governments that receive a share of the cigarette tax revenue with the largest share going to Denver (\$2.49 million in the last fiscal year).

If the ballot initiative is successful, Colorado’s local governments will continue to share in the proceeds from the statewide \$0.20 excise tax. However, as demonstrated above, the proceeds from that tax will decline due to the elasticity effect on consumption. The authors of the proposed ballot measure recognized the effect on the existing revenue stream and wrote into the ballot language a clause that is intended to hold all units of government, state and local, harmless from that loss. Specifically, the ballot language calls for the dedication of 3% of the new revenue stream to be *“appropriated for health related purposes to provide revenue for the state’s general fund, old age pension fund, and municipal and county governments to compensate proportionately for tax revenue reductions attributable to lower cigarette and tobacco sales resulting from the implementation of this tax.”* Under the ballot language, not all of the 3% will be available for local governments. Furthermore, the language as quoted above specifies that the 3% stream be appropriated for health related purposes, and in Colorado health related programs are the responsibility of county not municipal government. Thus, local governments in the state are vulnerable to losing the 3% backfill since most do not have existing programs eligible to receive such funds. As it currently stands, the ballot initiative does not further clarify the suballocation of the 3% revenue stream, ultimately leaving the discretion up to the state legislature. As such, it is not possible to adequately determine whether local units of government will indeed be held harmless.

The table below summarizes the total loss of revenue associated with the reduction in cigarette consumption, the 27% share of the loss associated with local governments, and the projected revenue generation from 3% of the new tax. Again, all 3 elasticity scenarios are presented. It should be noted that under elasticity scenarios in excess of 0.3, the 3% revenue stream is not sufficient to fully compensate for the overall loss in total state and local revenue due to reduced cigarette consumption.

Elasticity Scenario	0.3	0.45	0.6
Projected revenue loss in FY 2005 from existing \$0.20 cigarette tax (in millions)	\$ 4.43	\$ 6.08	\$ 7.73
Projected local government share of lost FY 2005 revenue (in millions)	\$ 1.20	\$ 1.64	\$ 2.09
Estimated revenue generated from 3% of new tax, FY 2005 (in millions)	\$ 4.98	\$ 4.82	\$ 4.66

Source: CTP Calculation

On a municipality by municipality basis, the impact of the revenue loss varies, generally according to the economic size of the municipality. Naturally the largest effect will be felt in Denver, where projections for revenue loss range between just over \$205,000 to just under

\$357,000 depending upon the elasticity of demand. Although these amounts represent a small portion of the total budget for Denver, these revenues would support, for example, the salaries of 3 to 6 Denver city firefighters. Finding a replacement revenue source in the current economic climate is far from trivial. Municipal governments such as Denver's will need to recognize the unintended effect of this proposed ballot measure. The following table lists, aggregated by county, the effect of the reduction in local share of the cigarette excise tax. Municipal level detail is found in Appendix A to this report.

Allocation of Lost Revenue Among Colorado's Counties

3 Elasticity Scenarios

County	.3 Elasticity Scenario	.45 Elasticity Scenario	.6 Elasticity Scenario	County	.3 Elasticity Scenario	.45 Elasticity Scenario	.6 Elasticity Scenario
Adams	\$ 96,786	\$ 132,274	\$ 168,569	Kit Carson	\$ 1,313	\$ 1,795	\$ 2,287
Alamosa	\$ 4,035	\$ 5,514	\$ 7,027	La Plata	\$ 12,813	\$ 17,511	\$ 22,316
Arapahoe	\$ 158,038	\$ 215,986	\$ 275,250	Lake	\$ 720	\$ 984	\$ 1,253
Archuleta	\$ 2,182	\$ 2,982	\$ 3,801	Larimer	\$ 68,471	\$ 93,577	\$ 119,253
Baca	\$ 340	\$ 465	\$ 592	Las Animas	\$ 2,594	\$ 3,545	\$ 4,518
Bent	\$ 275	\$ 376	\$ 479	Lincoln	\$ 1,114	\$ 1,523	\$ 1,941
Boulder	\$ 67,770	\$ 92,619	\$ 118,033	Logan	\$ 4,145	\$ 5,665	\$ 7,219
Broomfield	\$ 19,369	\$ 26,472	\$ 33,735	Mesa	\$ 35,753	\$ 48,863	\$ 62,270
Chaffee	\$ 4,017	\$ 5,491	\$ 6,997	Mineral	\$ 217	\$ 297	\$ 379
Cheyenne	\$ 239	\$ 326	\$ 416	Moffat	\$ 2,543	\$ 3,476	\$ 4,430
Clear Creek	\$ 1,256	\$ 1,717	\$ 2,188	Montezuma	\$ 4,755	\$ 6,498	\$ 8,282
Conejos	\$ 393	\$ 538	\$ 685	Montrose	\$ 8,354	\$ 11,417	\$ 14,549
Costilla	\$ 138	\$ 188	\$ 240	Morgan	\$ 3,460	\$ 4,729	\$ 6,026
Crowley	\$ 177	\$ 241	\$ 307	Otero	\$ 2,744	\$ 3,750	\$ 4,779
Custer	\$ 408	\$ 558	\$ 711	Ouray	\$ 771	\$ 1,054	\$ 1,343
Delta	\$ 3,661	\$ 5,004	\$ 6,377	Park	\$ 1,007	\$ 1,376	\$ 1,754
Denver	\$ 212,377	\$ 290,249	\$ 369,890	Phillips	\$ 541	\$ 739	\$ 942
Dolores	\$ 168	\$ 230	\$ 293	Pitkin	\$ 11,343	\$ 15,503	\$ 19,756
Douglas	\$ 60,512	\$ 82,700	\$ 105,393	Prowers	\$ 2,151	\$ 2,939	\$ 3,746
Eagle	\$ 20,683	\$ 28,267	\$ 36,023	Pueblo	\$ 29,621	\$ 40,483	\$ 51,591
El Paso	\$ 126,800	\$ 173,293	\$ 220,843	Rio Blanco	\$ 1,038	\$ 1,418	\$ 1,807
Elbert	\$ 1,252	\$ 1,711	\$ 2,180	Rio Grande	\$ 1,628	\$ 2,225	\$ 2,836
Fremont	\$ 5,194	\$ 7,099	\$ 9,047	Routt	\$ 8,249	\$ 11,273	\$ 14,366
Garfield	\$ 14,642	\$ 20,011	\$ 25,502	Saguache	\$ 307	\$ 419	\$ 534
Gilpin	\$ 748	\$ 1,022	\$ 1,303	San Juan	\$ 232	\$ 317	\$ 404
Grand	\$ 4,626	\$ 6,322	\$ 8,057	San Miguel	\$ 2,866	\$ 3,917	\$ 4,992
Gunnison	\$ 3,991	\$ 5,454	\$ 6,951	Sedgwick	\$ 308	\$ 421	\$ 536
Hinsdale	\$ 183	\$ 250	\$ 318	Summit	\$ 16,068	\$ 21,959	\$ 27,984
Huerfano	\$ 724	\$ 990	\$ 1,261	Teller	\$ 2,448	\$ 3,345	\$ 4,263
Jackson	\$ 218	\$ 298	\$ 380	Washington	\$ 486	\$ 664	\$ 846
Jefferson	\$ 126,469	\$ 172,840	\$ 220,266	Weld	\$ 39,594	\$ 54,112	\$ 68,959
Kiowa	\$ 107	\$ 146	\$ 186	Yuma	\$ 1,573	\$ 2,150	\$ 2,740

Source: CTP Calculation based upon Department of Revenue allocation percentages FY 04.

Conclusion

On November 2, 2004 the citizens of Colorado will be asked to vote on a constitutional increase in the tax on cigarettes. The ballot measure, as presented to voters, outlines the increase in revenue expected to be generated from this tax increase and fully dedicates those increased revenues to specific health and education related programs. Fiscal impact studies of this proposed measure limit their analysis to the revenue generation potential of the tax increment, and these estimates vary with the study. This research estimates the revenue generation potential of the \$0.64 increase in the cigarette tax to vary between \$155 and \$166 million, depending upon the elasticity scenario under which the calculation is performed. These estimates are marginally lower than the latest official estimates provided by the state.

Tax changes generally have multiple effects, and this one, if approved, will as well. Today, Colorado levies a \$0.20 tax per pack on cigarettes sold in the state. If the ballot measure passes, the state tax per pack will be \$0.84 per pack, a 320% increase in the tax. Significant increases such as the one proposed here elicit behavioral changes in consumers, particularly for products that have close substitutes. Although there are not direct substitutes for cigarettes, there are emerging alternative methods of purchasing cigarettes, particularly the Internet and on Indian reservations and military bases, through which consumers can avoid payment of the state tax. Although the Internet is a still emerging technology for the purchase of tobacco products, its use has steadily increased over the past 4 years. The availability of such alternative means of purchase imposes an unintended, and previously unstudied fiscal impact on the state and local governments in the state.

In Colorado, the \$0.20 per pack excise tax supports the general operation of both the state and local governments. This study projects that, under varying elasticity scenarios, the total loss to state and local governments will vary between \$4.43 and \$7.73 million in the first year of operation of the tax due to the purchasing changes of the consuming public. Locally, the most significant effect will be felt by the City and County of Denver, with a projected revenue loss of varying between just over \$205,000 to just over \$357,000 depending upon the elasticity of demand. Although the ballot language does provide for the dedication of 3% of the revenue stream from the new tax to hold state and local government harmless, it should be noted that under elasticity scenarios in excess of 0.3, the 3% revenue stream is not sufficient to fully compensate for the overall loss in total state and local revenue due to reduced cigarette consumption. Furthermore, the ballot requirement that the 3% be appropriated for health related purposes leaves local governments vulnerable to losing their presumed share since Colorado's municipal governments, with the exception of the consolidated city/county governments of Denver and Broomfield, do not currently deliver health related programs.