

# The Economic Impact of Raising the State Tax on Cigarettes and Other Tobacco Products in Michigan

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## Executive Summary

Increasing Michigan's state tax on cigarettes from \$2.00 to \$3.00 per pack, and simultaneously raising the tax on Other Tobacco Products (OTP) to parity, will increase tax revenue and productivity while decreasing smoking, which in turn will decrease health care costs. Specifically, a \$1.00 per pack increase in the cigarette tax will:

- Increase the state's tobacco excise tax revenues by at least \$200 million per year, starting immediately;
- Decrease the prevalence of adult smoking by 2.4-3.2% and daily cigarette consumption by continuing smokers by an equivalent amount;
- Thereby decrease the medical costs associated with smoking, including savings for state taxpayers through a reduction in smoking-produced Medicaid health care services, and additional savings for the private sector;
- Increase productivity by reducing smoking-related absenteeism, on-the-job productivity deficits (e.g., due to smoking breaks), and work loss due to premature deaths;
- Through increased productivity, increase the state's tax revenues through higher income tax collections; and, importantly,
- Decrease youth smoking by 11-21%.

An increase in the tobacco excise tax has a number of alleged adverse consequences. As demonstrated later, not all of these are real and of those that are, the consequences are less serious than suggested by tax opponents. As explained in the body of the paper, the advantages of the tax increase dramatically outweigh any disadvantages.

The analysis presented below leads to three main policy recommendations:

1. Michigan's cigarette tax should be increased from \$2.00/pack to \$3.00/pack. The OTP tax should be increased to parity. The OTP tax increase will eliminate a price-based shift in use toward OTPs.
2. MDCH and the state police should work with state and local law enforcement agencies and tribal leaders to ensure enforcement of anti-smuggling and tobacco tax laws and to ensure that tribal tax laws are followed.
3. A portion of the revenue gained from the tobacco tax increase should be dedicated to state tobacco prevention programming, including providing for youth tobacco use prevention and increased tobacco dependence treatment resources for low-income tobacco users.

Smokers' response to a cigarette tax increase: The underlying reason for the economic benefits that follow

Well over 100 empirical studies have evaluated smokers' responses to price increases, with a special interest in the impact of tax-induced price increases.<sup>1</sup> In general, a price increase of 10% will reduce adults' demand for cigarettes by 3-4%. Approximately half of that decrease will reflect smokers' decisions to quit smoking, while the remaining half represents a reduction in daily cigarette smoking among continuing smokers. Low-income smokers are more price-responsive than high-income smokers. Youth are far more price responsive than adults, with estimates suggesting that a 10% price increase will decrease demand for cigarettes among young people by 7-13%.

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<sup>1</sup> Gallet CA, List JA. Cigarette demand: a meta-analysis of elasticities. *Health Econ* 2003;**12**:821-35.

Currently the average retail price of a pack of cigarettes is \$6.31. A \$1.00 increase in the cigarette excise tax thus will increase retail price by 15.85%. That will reduce adults' demand for cigarettes by 4.8-6.3%; for youth, the decrease will be 11-21%.

### Tax revenue increases

Fiscal Year 2011 tobacco tax revenue in Michigan was estimated at \$965 million, most of it (\$905 million) from the cigarette tax, the rest (\$60 million) from OTP taxes.<sup>2</sup> A \$1.00 per pack cigarette tax increase would represent a 50% increase in the tax rate (from \$2.00 to \$3.00). We assume that all of the tax increase would be passed on to consumers in the form of a \$1.00 per pack increase in retail price. If cigarette sales did not change, tax revenue would increase by 50%. However, as noted above, the resulting price increase will reduce cigarette demand by about 5.6% (the midpoint of the range of 4.8-6.3%). The \$965 million in tobacco tax revenues represents 483 "cigarette pack equivalents" in taxed sales (i.e., for simplicity, attributing all of the tobacco tax revenue to cigarette sales and dividing by \$2/pack.) This sales figure would drop by about 2% without any tax change, due to normal annual declines in tobacco use. That would mean sales of 473 million pack-equivalents in the next fiscal year, implying revenue of \$946 million. However, the tax increase would decrease taxed sales by an additional 5.6%, dropping sales to 447 million pack-equivalents, generating \$1341 million in tobacco tax revenues, an increase of \$395 million, or 42%.

This increase could be diminished by two factors, however. The sales figure of 483 million packs for FY11 represents tax-paid sales. Cigarette purchases were undoubtedly higher than that as a result of limited smuggling across Michigan's borders. While it is possible that the tax increase will induce more smuggling activity (discussed below), most of the effect of smuggling is already built into the FY11 sales figures, so any additional smuggling would be incremental. It is also possible that the tobacco

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<sup>2</sup> Michigan Department of Treasury preliminary estimate. January 11, 2012.

industry would take advantage of the tax increase by increasing the wholesale prices of its products by a small amount. Hypothetically, and quite conservatively, suppose that these two factors combined reduced tax-paid sales by 15% to 380 million packs. Then the tax revenue increase would be \$194 million, or 21% higher. Again, we consider this additional decrease in legal sales unlikely, so this is a very conservative estimate of additional revenues. This strongly suggests that a \$1.00 per pack increase in the state's cigarette excise tax rate (with an equivalent increase in the OTP rates) will increase the state's tobacco tax revenue, likely by more than \$200 million. The incremental tax revenue benefit would decline over time very gradually as inflation erodes the real value of the tax, unless an inflation adjustment were built into the tax rate.

The finding that an increase in tobacco tax rates will simultaneously decrease tobacco use and increase tax revenues is universally true across all studies of the effects of tax increases in the United States and in multiple other countries.

#### Reduction in Medicaid expenditures

Treatment of smoking-produced illness cost the taxpayers of Michigan approximately \$500 million in Medicaid expenditures in 2011.<sup>3</sup> With a greater than 5% decline in tobacco use expected from the \$1.00 cigarette tax increase (likely considerably higher among Medicaid recipients, who will be more price-sensitive) – and hence a reduction in smoking-produced illnesses – Michigan would experience an immediate reduction in Medicaid expenditures of millions of dollars per year. Over time, according to the Campaign for Tobacco Free Kids, the tax-induced reduction in smoking by Medicaid recipients would save the state program a collective \$1.16 billion.<sup>4</sup>

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<sup>3</sup> This is the estimate of the Campaign for Tobacco Free Kids in 2004 dollars ([www.tobaccofreekids.org/research/factsheets/pdf/10.78.pdf](http://www.tobaccofreekids.org/research/factsheets/pdf/10.78.pdf), accessed January 24, 2012), adjusted to 2011 dollars by use of the Medical Care Price Index.

<sup>4</sup> Campaign for Tobacco-Free Kids. State Costs Caused By Smoking [And How To Reduce Them While Also Raising Revenues]. July 15, 2009. Figure updated by the Campaign for Tobacco-Free Kids January 26, 2012.

An example of why significant cost-savings to Medicaid can accrue rapidly following a tax increase can be found in the impact of tobacco use on the prevalence of low birth weight births. According to Michigan's 2008 Pregnancy Risk Assessment Monitoring System Report,<sup>5</sup> the prevalence of low birth weight births was 6.9% among women who did not smoke during pregnancy and 11.9% among women who did smoke during pregnancy. The prevalence of low birth weight births was 12.8% among women enrolled in Medicaid, compared with 8.6% for uninsured women and 6.0% for women with private insurance. 26.7% of women who were ever enrolled in Medicaid reported smoking during pregnancy, compared with 6.1% of women who were never enrolled in Medicaid. According to Michigan FY 2000 data, Medicaid paid \$3,474 for normal weight births in the first year of life. In contrast, Medicaid paid \$12,488 for low birth weight births for those infants in the 2,000-2,499 gram weight range, and up to \$192,200 per birth for the lowest birth weight births, including infants weighing < 750 grams. The financial implications of reducing smoking among pregnant women on Medicaid are obvious and dramatic. Indeed, they are substantially larger than suggested here because the costs of care have risen a great deal since these data were collected more than a decade ago.

#### Increase in economic productivity and associated fiscal benefit

Cigarette smoking causes an estimated \$4.7 billion in lost productivity in Michigan each year.<sup>6</sup> Decreased tobacco use rates resulting from the increased tax would increase productivity – an economic benefit to employers, both private and public – thereby increasing state income tax revenues.

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<sup>5</sup> Michigan Department of Community Health. Pregnancy Risk Assessment Monitoring System (PRAMS) Report. 2008.

<sup>6</sup> Centers for Disease Control and Prevention. Smoking-attributable mortality, years of potential life lost, and productivity losses—United States, 2000-2004. *MMWR* 57(45):1226-28, November 14, 2008, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5745a3.htm>. We have inflated the CDC estimate to 2011 dollars by using the Consumer Price Index.

## Risk of increase in cigarette smuggling

Smuggling and tax evasion are concerns in all states due to the impact of non-taxed internet sales, non-taxed tobacco product sales on tribal lands, formal organized crime smuggling, and informal cross-border purchases by smokers in high-tax states residing very close to lower-tax states. States bordering Michigan have the following per-pack cigarette excise tax rates: Indiana-- \$0.995, Ohio-- \$1.25, and Wisconsin-- \$2.52. With a tax increase in Michigan to \$3.00, all three border states would have state tobacco excise tax rates that are lower than Michigan's rate.

The Mackinac Center for Public Policy estimated that 26% of all cigarettes smoked in Michigan were contraband in 2009.<sup>7</sup> We find this estimate inconsistent with current smoking rates and excise tax revenues in the state, which imply that the rate of contraband cigarettes is likely no higher than 13%. Increasing the tax by \$1.00 per pack would increase the incentive to evade taxes, but even if the share of contraband cigarettes doubled, tax revenues would still increase, and the health and health expenditure benefits associated with the tax increase would still be realized.

Michigan's worst experience with cigarette smuggling existed before the state adopted a required cigarette tax stamp. That simple measure significantly reduced smuggling. Any number of additional measures have been demonstrated to reduce smuggling. These include requiring better record keeping by retailers, distributors, and wholesalers, and working with Michigan's tribes to limit sales of tax-free cigarettes to other than tribal members. Research has found that enforcement of laws is a more important determinant of the extent of smuggling than cross-border price differences.<sup>8</sup>

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<sup>7</sup> LaFaive M, Nesbit T. Cigarette taxes and smuggling 2010. The Mackinac Center for Public Policy. Midland, Michigan, 2010. <http://www.mackinac.org/archives/2011/2010-09TobaccoSmugglingFINALweb.pdf>

<sup>8</sup> Joossens L, Raw M. Turning off the tap: the real solution to cigarette smuggling. *Int J Tuberc Lung Dis*. 2003;7(3):214–22.

According to the Michigan Department of Treasury, Michigan has taken and continues to take steps to enforce relevant laws, which has increased collection of taxes and penalties owed. Michigan has signed tax agreements with 9 of the 12 federally recognized tribes in Michigan, resulting in standard protocols and cooperative collection of state tobacco excise taxes by these 9 tribes.<sup>9</sup>

### Concern about retail employment due to the reduction in cigarette sales

Job loss in the retail sector, specifically among convenience store employees, is invariably raised as a concern related to tax increase-induced reductions in cigarette sales. Recent research should put this concern to rest. A study by Huang and Chaloupka published in November finds that increased tobacco taxes do not decrease convenience store and gas station density in states, and in fact may have a slight tendency to increase density, which is a good measure of the success of such enterprises.<sup>10</sup>

The conventional wisdom that a reduction in cigarette sales reduces economic activity in a state results from tobacco industry efforts to spread this misconception. Their logic is appealing: If consumers' spending on cigarettes declines, revenues for businesses selling cigarettes will decline and they will be forced to lay off workers. What the industry ignores – intentionally – is that monies not spent on cigarettes will be reallocated to spending on other goods and services. Because cigarettes are produced outside of Michigan – and hence are an import into the state – reallocated spending is far more likely to go toward goods and services produced within the state. Spending on goods and services produced within Michigan will generate *more* jobs, not fewer, because spending on indigenously-produced commodities and services causes more income to remain within the state and recycle throughout the state. When Michiganders buy

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<sup>9</sup> For more information about enforcement activities and steps that Michigan has taken to prevent and deter tobacco tax evasion, visit

[http://www.michigan.gov/documents/treasury/TobaccoTaxEnforcementReportltrhead\\_178062\\_7.pdf](http://www.michigan.gov/documents/treasury/TobaccoTaxEnforcementReportltrhead_178062_7.pdf).

<sup>10</sup> Huang J, Chaloupka FJ. The economic impact of state cigarette taxes and smoke-free air policies on convenience stores. *Tobacco Control*. Epub ahead of print, accessed November 1, 2011.

tobacco products, their spending is immediately exported to North Carolina, Kentucky, Virginia, and the other tobacco-producing states. Research has demonstrated that reductions in spending on tobacco in Michigan will *increase* employment within the state.<sup>11</sup>

### Impact on low-income tobacco users

In part because the proportion of the low-income population that smokes is considerably larger than the proportion of smokers among those with high incomes, the percentage of annual income spent on tobacco by the low-income population exceeds that at higher income levels. Tobacco tax is thus what is called a regressive tax, one that places a relatively larger tax burden on the low-income population. This is clearly undesirable.

The flip side is equally if not more important, however. Precisely because there are more low-income smokers, and because they are more price-sensitive than are high-income smokers, an increase in tobacco prices resulting from a tax increase will help more low-income smokers to quit. Thus, if the tax burden is regressive, the health benefit is strongly progressive: the tax increase will improve the health of the poor by far more than it will the health of the affluent. Smoking is a major source of health disparities across the income spectrum (for example, differences in life expectancy), and a tobacco tax increase will decrease those disparities.

For low-income individuals who continue to smoke after the tax increase, the financial burden of the increased tax is real and significant. For this reason, and to maximize the public health benefits of a tobacco tax increase, a portion of the revenue gained from the tax increase should be dedicated to programming and resources to encourage and assist low-income tobacco users to quit.

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<sup>11</sup> Warner KE, Fulton GA. The economic implications of tobacco product sales in a nontobacco state. *Journal of the American Medical Association* 1994;271:771-6.

## The bottom line

Opponents of a tobacco tax increase cite a number of concerns, all of which are either wrong (the alleged employment effect), less severe than claimed (smuggling), or real but partially remediable (the extra financial burden on continuing low-income tobacco users). In contrast, the benefits of increasing tobacco taxes are real and substantial. A tobacco tax increase is a win-win-win-win-win proposition. It will:

- Increase the state's tax revenues, through both a substantial increase in tobacco tax revenue and an increase in income tax revenue
- Improve the health of the citizens of Michigan, especially that of the state's most economically-deprived population.
- Reduce Medicaid's substantial expenditures on smoking-related health care.
- Increase the productivity of Michigan's workforce.
- Decrease the number of children and adolescents who will begin to smoke, thereby reducing the future burden on smoking on the state.

It is important to emphasize that a majority of citizens support an increase in the tax. On some surveys even a majority of *smokers* support an increase, if a portion of the new revenues goes towards combating youth smoking. Legislators should recognize that raising tobacco taxes thus constitutes an unusual opportunity to do public health good while doing well for the state treasury, and achieving both with the support of the public.