

State Cigarette Tax Increase Would Cut Smoking Rate and Ease Costs

Indiana has the second highest adult smoking rate in the nation. With a rate of 27.3 percent (representing 1.2 million adult smokers), Indiana stands high above the national smoking prevalence rate of 20.6 percent (Centers for Disease Control, 2005c). And in spite of some recent progress in reducing youth smoking rates, many Indiana youth continue to smoke.

Researchers continue to document details about health problems caused or worsened by tobacco use, with increases in lung cancer and heart disease topping the list. In 2001, nearly 10,000 deaths in Indiana were attributed to smoking (CDC, 2005a). Still, many people do not realize that tobacco use also has hefty social and economic costs that affect smokers and non-smokers alike, including higher lifetime medical costs, lost productivity, and more expensive health insurance.

One of the most practical policies for improving smoking rates is to increase the state cigarette excise tax. Some local communities and almost all states have adopted substantial increases. A fundamental law of economics tells us that as the price of a product rises, consumption falls. We therefore expect that a tax increase that raises cigarette prices will decrease smoking rates, but how much? *Most analysts estimate that a 10 percent increase in cigarette prices would reduce overall cigarette consumption by between 3 and 5 percent* (U.S. Department of Health and Human Services, 2000).

However, tobacco price increases have an even stronger impact on smoking behaviors in some groups, including vulnerable groups such as teenagers and pregnant women.

In this issue brief, we will discuss the economic impact of smoking in the United States and Indiana, summarize the effects of raising state cigarette taxes, provide a history of Indiana's cigarette taxes, and project the impact of tax increases.

Economic Impact of Smoking: United States and Indiana

The Centers for Disease Control and Prevention (CDC) estimates that from 1997 through 2001, an average of \$75.5 billion each year

was spent on healthcare in the United States to treat smoking-attributable conditions.

Researchers have also documented productivity losses from premature death and disease linked to smoking. The CDC estimates that from 1997 through 2001, an average of \$92 billion annually was lost from this decreased productivity (2005b).

When we apply the estimated dollar costs of additional healthcare and lost productivity to cigarette consumption, the results are alarming. Each pack of cigarettes costs society \$7.50 because of disease,

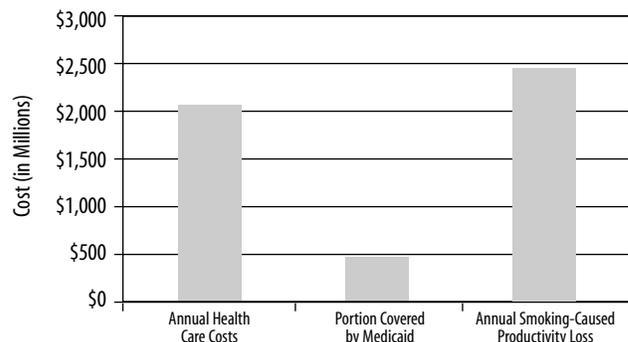
Each pack of cigarettes costs society \$7.50 because of disease, premature death, and lost productivity.

premature death, and lost productivity. Some analysts peg the cost to society as high as \$40 a pack for lifetime smokers (Sloan, Ostermann, Conover, & Taylor, 2004).

Figure 1 shows some of the monetary costs in Indiana attributable to smoking. The annual healthcare cost for smoking-attributable disease in Indiana is \$2.03 billion, and \$487 million of this is covered by the state Medicaid program. Hoosiers

pay an average tax burden of \$560 per household for state and local government expenditures that result from smoking. In addition, estimates of smoking-caused productivity losses in Indiana indicate that \$2.49 billion is lost annually (Campaign for Tobacco-Free Kids, 2005).

Figure 1. Smoking-Caused Monetary Costs in Indiana



Source: Campaign for Tobacco-Free Kids, 2005



Cigarette Tax Increases and Their Impacts on Smoking

Over the past 10 years, average state cigarette excise taxes have tripled, and several major cities, including New York and Chicago, have adopted local tax increases. These tax hikes, along with other factors, have nearly doubled the average price of a pack of cigarettes in the United States, with much larger increases in some jurisdictions.

Extensive research has been done on the impact of this taxation. Here are some of the conclusions of researchers:

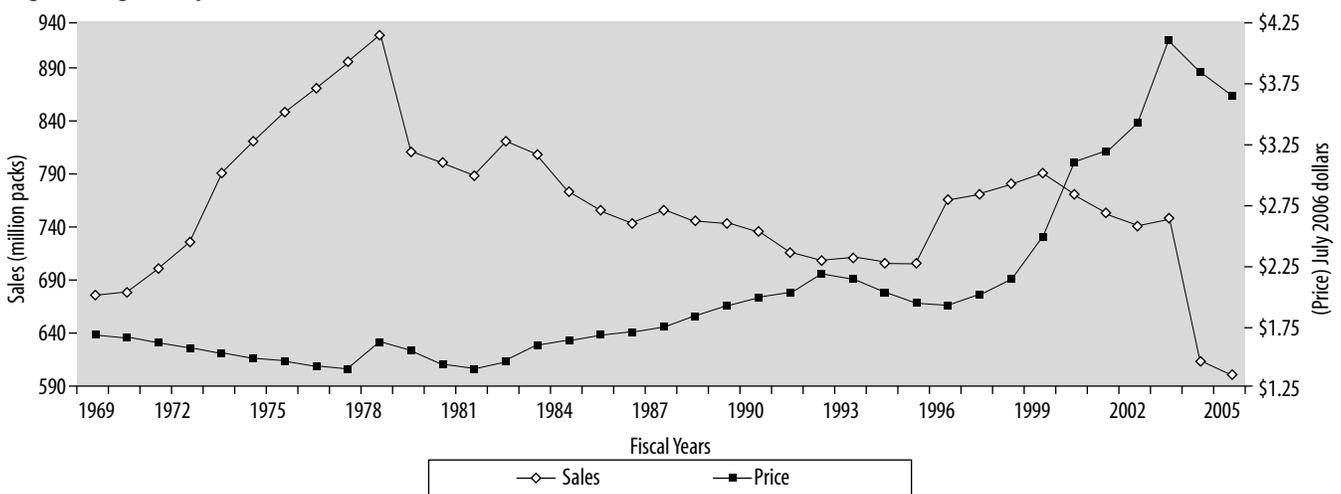
- Following a tax increase that raises cigarette prices, about half of the drop in overall consumption results from reductions in the number of smokers; the other half comes from reduced smoking among users (U.S. Dept of Health and Human Services, 2000).
- A 10 percent increase in cigarette prices increased the probability of a quit attempt by 6 to 9 percent among young adult smokers, with a larger effect on older smokers (Tauras & Chaloupka, 2001).
- Higher cigarette prices increase the demand for cessation products. Studies by Tauras et al. (2003, 2005) found that a 10 percent increase in prices induced a 7.5 percent increase in nicotine replacement therapies. Also, calls increased to free telephone programs offering counseling to help smokers quit.
- Smoking among teenagers and young adults is more sensitive to price than adult smoking. Cigarette price increases help prevent youth from initiating smoking and from increasing their cigarette consumption. Since youth smoking is influenced by peers, improvements in the smoking behavior of some youth results in improvements in the smoking behavior of other youth (Powell, Tauras, & Ross, 2005). Teens are also influenced by their

parents' behavior. If parents quit smoking because of higher cigarette prices, their teenagers are more likely to abstain.

- Cigarette price increases are also particularly effective in reducing smoking among pregnant women. In 2001, Ringel and Evans found that a 10 percent price increase would reduce pregnant women's smoking prevalence by up to 7 percent. This larger response may be because many are already motivated to quit by their pregnancy, and then further motivated by a price increase. Since maternal smoking is linked to low birth weight, sudden infant death syndrome, ectopic pregnancy, spontaneous abortion, and neonatal mortality, reductions in smoking would decrease these complications.
- Smoking among low-income people is highly responsive to price. Smoking in households below the median income level was about four times more responsive to price compared with higher income households (Farrelly, Bray, & Pechacek, et al., 2001). Given the high prevalence of smoking in low income populations (29 percent for those below the poverty level), cigarette tax increases could be particularly effective in reducing smoking and related disease for this population.

Tobacco companies have, at times, partially offset the impact of tax increases by distributing coupons and price-reducing promotions and by giving promotional allowances to retailers to reduce prices. Following the Master Settlement Agreement (MSA), increases in these marketing techniques offset between 33 and 57 percent of the price increases that followed the MSA (Keeler, Hu, Ong, & Sung, 2004). However, research clearly shows that tobacco use declines and revenues increase following tax increases, even with these offsetting promotions.

Figure 2. Cigarette prices and sales in Indiana, 1969 to 2005



Note: Figure 2 shows cigarette prices adjusted for inflation. Source: impacTeen



Indiana Cigarette Taxation

Indiana cigarette excise taxes were first implemented in 1947 at 3 cents per pack. Over time, these taxes were raised, but infrequently. The most recent increase was from 15.5 cents to 55.5 cents per pack in 2002. Indiana's cigarette excise tax is 58 percent of the average of all states and ranks 35th overall. State cigarette taxes as a percent of price in Indiana have fallen since 1955, now accounting for about 15 percent of the total price per pack.

Figure 2 (page 2) shows how Indiana cigarette prices and sales have changed dramatically over time. Sales peaked in 1977 when prices were low. The chart shows that the higher the price, the lower the sales, as predicted by economic theory.

An important issue for Indiana policymakers is to determine the potential effects of raising the state cigarette excise tax. Based on estimates, a \$0.50 per pack increase in the state cigarette tax would reduce annual cigarette sales by about 32 million packs, while generating more than \$280 million annually in new revenue. We can estimate that it would lead 34,000 adult smokers to quit, prevent 48,000 youth from taking up smoking, and prevent 23,000 premature deaths caused by smoking. It would also generate significant reductions in smoking-related healthcare spending. The estimated effects of various tax increases per pack are shown in tables 1 and 2.

Table 1. Projected effects of a cigarette tax increase on cigarette prices, cigarette sales, and revenue

Tax Increase Per Pack	Percentage Price Increase	Percentage Change in Sales	New Excise and Sales Tax Revenues
\$0.25	6.58%	-2.63%	\$144.70
\$0.50	13.17%	-5.27%	\$280.91
\$0.75	19.75%	-7.90%	\$408.62
\$1.00	26.33%	-10.53%	\$527.83

Source: Chaloupka, 2006.

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Table 2. Projected declines in youth and adult smokers and smoking-caused deaths at different tax increase levels, Indiana

Tax Increase Per Pack	Percentage Change, Youth Smokers	Change In Number of Youth Smokers	Percentage Change, Adult Smokers	Change in Number of Adult Smokers	Smoking Caused Deaths Avoided
\$0.25	-4.30%	-23,881	-1.30%	-16,784	11,334
\$0.50	-8.60%	-47,761	-2.60%	-33,568	22,669
\$0.75	-12.80%	-71,642	-4.00%	-50,352	34,003
\$1.00	-17.10%	-95,523	-5.30%	-67,136	45,337

Source: Chaloupka, 2006.

Support for Tobacco Tax Increases

In general, there has been consistent support among voters for tobacco tax increases. There seems to be greater support when the additional revenue generated from these increases is dedicated to tobacco control efforts and other health-related activities. In fact, such legislation is often supported by a large number of smokers. Overall support tends to be consistent across demographic and socioeconomic groups.

Conclusion

Policies aimed at reducing smoking by increasing the state tobacco tax appear to be a viable strategy. Their affects on reducing the number of teenage smokers and pregnant smokers, increasing the likelihood of a quit attempt by adults, and decreasing the number of low-income smokers would have many long-term benefits. In Indiana, an increase of only \$0.25 per pack would have significant effects.

In addition to the obvious reductions in smoking-related diseases that would be associated with fewer smokers, we could expect that a cigarette excise tax increase would bring declines in smoking-related healthcare costs and increases in workforce productivity. These results go beyond improving the lives of the individuals who quit smoking and those who never start. Society as a whole would benefit.



Indiana's Future: Identifying Choices and Supporting Action to Improve Communities

This project, funded by an award of general support from Lilly Endowment, Inc., builds on the Center's research to increase understanding of Indiana. The Center's faculty and staff work to identify choices that can be made by households governments, businesses, and nonprofit organizations to improve our quality of life. Our goal is to understand the people, economics, problems, and opportunities in Indiana, and to help decision-makers understand the impact of policy decisions. The Center also works to mobilize energy to accomplish these goals.

This issue brief was developed by the Center for Health Policy, a highly focused research unit within the Center for Urban Policy and the Environment. It is one result of an ongoing effort to inform decision-makers about vital issues that affect the health of Indiana citizens. The Center produced this report with the help of Dr. Frank J. Chaloupka, a national expert on the issue of tobacco taxes.

The Center for Urban Policy and the Environment is part of the School of Public and Environmental Affairs at Indiana University-Purdue University Indianapolis. An electronic copy of this document and other information about health policy and other community issues can be accessed via the Center Web site (www.urbancenter.iupui.edu). For more information, visit the Web site or contact the Center at 317-261-3000.



State of Indiana

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