

*Enhancing Compliance
with Tobacco
Control Policies*

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Abstract

This paper examines enforcement issues for three tobacco control policies: youth access laws, clean air laws, and most extensively, excise taxes. There are efficient methods for improving tax compliance that require little in the way of additional government resources. Interstate smuggling could be greatly reduced if the low-tax states raised their rates. Barring that, any state could fend off illegal imports through measures such as improved tax stamps, licensing of those involved in the distribution chain, and better record-keeping requirements. The Internet market has already been curtailed by state enforcement efforts coupled with agreements with shippers and credit card companies, and could be limited further by federal enforcement of the Jenkins Act. These and other measures are not expensive, and are likely to be effective.

Clean air laws are to some extent self-enforcing, while youth-access laws definitely are not. Compliance with either could be improved through changes in the regulatory framework, but regular compliance checks are also important. We provide some rough estimates of the costs of compliance checks for both tobacco retailers and for other entities governed by clean air provisions.

Keywords: Clean Air Law, Smoking, Taxation, Tobacco, Youth

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Achieving compliance is necessary if tobacco taxes and regulations are to improve the public health. These measures are not self-enforcing. High tax rates coupled with lax enforcement create profitable opportunities for tax evasion, which has indeed been a growing problem over the last decade. The financial incentive to violate youth access laws is strong enough to require systematic policing. Even clean air regulations, for which social pressure by non-smokers does much of the work, at least initially require some backup from enforcement. Enforcement efforts use public resources and must be budgeted as part of a comprehensive plan to improve compliance.

The prospect of more vigorous tobacco control policies, such as the measures recently recommended by the Institute of Medicine, heightens these concerns about enforcement. On the one hand, these new policy measures might require significantly higher expenditures to ensure compliance, deterring states from adopting or enforcing them. There is also concern that these measures – particularly the tobacco tax increases – could promote criminal activity such as large-scale cigarette smuggling. This chapter addresses these concerns with a detailed discussion of enforcement of three IOM-recommended policies: excise tax increases, stronger youth access laws, and more extensive clean air regulations. (The other three IOM policies – media campaigns, school-based interventions, and cessation programs – aim at changing attitudes toward smoking or supporting cessation, and do not involve law enforcement.)

Although we present some evidence about the cost of enforcement, this chapter focuses primarily on issues of regulation. As we will show, enforcement costs are not fixed but depend heavily on regulation. There are efficient methods for improving compliance, especially compliance with excise taxes, which involve relatively modest costs. A well-designed system of regulations would allow federal, state, and local governments to adopt more vigorous tobacco

control measures while avoiding both an increase in criminal activity and an inordinate burden in enforcement costs.

The discussion that follows examines the enforcement first of excise taxes, then of youth access laws and clean air laws. Of these three, we give the most attention to excise tax enforcement, which is distinctive in several ways. First, tax enforcement is more important to public health outcomes; raising prices through higher taxes is at the forefront of the current efforts to reduce smoking. Second, unlike enforcement of clean air or youth access regulations, tax enforcement tends to pay for itself many times over in the form of increased collections. Last, the regulatory framework is far more important to tax compliance than to the other two policies, and thus requires more extensive treatment.

Tax compliance and enforcement

The IOM-based policy scenario used in this volume calls for every state to raise its excise tax on a pack of cigarettes by \$2. This tax increase is intended to raise cigarette prices and reduce consumption, but it would also increase the financial incentive to evade state cigarette taxes. To the extent that tax evasion and avoidance undercut the effects of the tax increase, the reduction in smoking would be smaller than projected. The SimSmoke model discussed earlier in this volume makes no explicit assumptions about regulations or the extent of tax evasion. The price-elasticity parameters used in its estimates are based on historical data, reflecting past methods for combating tax evasion. In looking to the future, it is important to note that tax-enforcement regulation is not static, and that the actual effects of the recommended tax increase would depend on the regulatory regime. There have been a number of innovations in recent years to combat tax

evasion and avoidance, and it is safe to say this trend will continue as states seek to improve their tax collections.

This section describes the main channels of cigarette excise-tax evasion, and discusses the evolution of the regulatory structure designed to curtail this evasion. After a general discussion of tax evasion and avoidance, we discuss measures intended to address four types of activities: Internet or “direct” purchases, purchases from Native American reservations, other individual efforts to evade or avoid taxes, and large-scale smuggling. We close the section with a discussion of enforcement costs under alternative regulatory frameworks.

Tax evasion and avoidance

Tax evasion and avoidance differ in their legal status: tax evasion involves illegal activities, while avoidance involves legal activities such as purchases in lower tax jurisdictions or from a duty-free shop. Most tax evasion and avoidance activities channel cigarettes from low-tax or tax-exempt sources to smokers in higher-tax jurisdictions. Federal and state excise taxes account for almost one-third of cigarette prices on average.¹ The federal government imposes a uniform excise tax on cigarettes, but state and local taxes are far from uniform, and the resulting cost differences are substantial. As of early 2008, state cigarette taxes ranged from a low of seven cents per pack in South Carolina to a high of \$2.575 per pack in New Jersey. In addition, some localities apply sizable additional excise taxes; notable examples include New York City (\$1.50 per pack), Chicago (68 cents per pack), and Cook County, Illinois (\$2.00 per pack). These differences in tax rates create large geographic differences in cigarette prices, sometimes across

¹ This section focuses on cigarette taxation, but the policies that are discussed generally apply to other tobacco products, including loose tobacco.

nearby jurisdictions. For example, the combined state and local taxes in Chicago are \$3.66 per pack, over two and a half higher than taxes in Indiana (99.5 cents per pack) and more than double taxes in Wisconsin (\$1.77 per pack). Moreover, Indian reservations are typically exempt from state and local excise taxes and hence can sell cigarettes at a discount. Further differentiation results from general sales taxes. Sales tax rates differ widely across jurisdictions, and in some jurisdictions cigarettes are exempt.² Variation in sales taxes adds to the differences in the final price smokers pay for cigarettes.

While jurisdictional differences have existed for many years, the magnitude of these differences, both absolutely and as a share of cigarette prices, has increased sharply in recent years. These differences create incentives for tax evasion and avoidance, both for individual smokers and criminal organizations. The growth of the Internet over the past decade and the emergence of hundreds of on-line cigarette vendors have facilitated evasion.

Measuring tax avoidance and tax evasion is difficult, but recent estimates indicate that they accounted for a significant share – one-eighth or more – of total cigarette consumption in the U.S in the early 2000s (Stehr, 2005). The extent of the problem differs by jurisdiction and is most severe in high-tax jurisdictions with ready access to low-tax or untaxed cigarettes. In addition, smokers differ in their likelihood of engaging in these activities, with heavier smokers and those with higher incomes more likely to report purchasing from low-tax or untaxed sources (Hyland et al. 2006). Tax evasion and avoidance reduce but do not negate the revenue and public health impact of cigarette excise tax increases (Merriman et al., 2000; Farrelly, et al., 2003; Yurekli, 2006).

² Alaska, Delaware, Montana, New Hampshire and Oregon do not impose a general sales tax, while the general sales tax is not applied to cigarettes in Minnesota and Oklahoma (Orzechowski and Walker, 2008).

The major forms of tax evasion or avoidance can be differentiated by the scale of the activity and its legal status. First, individuals make Internet, telephone, or mail-order purchases from vendors based in low-tax states or in tax-exempt locations. Although purchasers are generally liable for paying the taxes in their state of residence, they rarely do so in practice.³ Second, individuals may buy cigarettes for personal consumption from reservations. Non-natives buying from reservation stores are liable for excise taxes, but compliance is low for reservation purchases as well. Third, individuals purchase cigarettes for personal use from other tax-exempt sources such as military commissaries or duty-free shops, or from lower-tax jurisdictions. Lastly, criminal enterprises purchase large quantities of cigarettes from low-tax jurisdictions or divert cigarettes from distribution before any taxes are paid and smuggle these cigarettes to high-tax jurisdictions for sale to scofflaw retailers. As we discuss, governments at all levels have tried to curb each of these means of tax evasion or avoidance.

Direct or Internet Purchases

The recent growth of the Internet and the emergence of hundreds of Internet cigarette vendors have helped smokers avoid state cigarette taxes (Ribisl, Kim and Williams, in press).⁴

³ Similarly, the Internal Revenue Code (Chapter 52) requires that federal excise taxes are to be paid on cigarettes sold by foreign-based vendors; to the extent that foreign vendors are not compliant with this policy, they are also likely to be non-compliant with other federal policies, including those requiring health warning labels (Cohen, 2005).

⁴ The same applies with respect to payment of the federal cigarette tax on purchases made from foreign-based vendors. To date, there is little evidence to indicate that foreign-based Internet vendors account for more than a minimal share of on-line cigarette sales. However, as efforts targeting domestically based vendors become increasingly successful, foreign-based vendors' share is likely to increase.

Although surveys suggest that relatively few smokers buy regularly from Internet vendors, one widely-cited study projected that Internet sales of tobacco products would be as high as \$5 billion in 2005, with states losing \$1.4 billion in tobacco tax revenues as a result (Forrester Research, Inc., 2001).⁵

Smokers purchasing cigarettes from direct channels are generally required to pay the applicable state taxes on these cigarettes, although the specific requirements differ from state to state. For example, in Illinois the “use tax” is 98 cents per pack plus 6.25 percent of the purchase price less the sales tax per pack (if any) paid where purchased; this use tax is equivalent to the sum of the state’s cigarette excise and general sales taxes.⁶ Some states mandate interest or penalties on unpaid or overdue taxes. Without active enforcement, however, virtually no one complies with these requirements. Enforcement is hampered by the fact that states cannot identify who is buying cigarettes from out-of-state vendors or measure the quantities purchased.

As tax revenue losses from Internet sales increased, states began exploring options for dealing with this problem. Particularly important in early efforts was the Jenkins Act (15 USC 376a), a federal statute adopted in 1949. The Jenkins Act was intended to curb tax evasion resulting from the interstate sale of mail-order cigarettes. The Act requires vendors who market or ship cigarettes across state lines to register with the tobacco tax administrator of the destination states, and to send this office monthly statements or copies of invoices documenting the names and addresses of recipients and the quantities of cigarettes shipped. This information would allow states to collect excise taxes from recipients of cross-state shipments.

⁵ More recent data on the actual level of Internet sales and resulting lost tax revenues are not available.

⁶ For details, see the “Illinois Cigarette Use Tax Return” available on-line at: <http://www.revenue.state.il.us/taxforms/Misc/Cig/rc44.PDF>.

The Jenkins Act applies to Internet cigarette sales as well as to other direct (mail and telephone) sales. States' initial efforts to apply the Jenkins Act met resistance from Internet cigarette vendors, however, and received no support from the U.S. Department of Justice (DOJ), the federal agency with primary enforcement authority for the Act.⁷ Recently, Washington State has moved ahead with efforts to apply the Jenkins Act to Internet sales. In October 2002, the Washington Department of Revenue filed a complaint against Dirtcheap Cigarettes (www.dirtcheapcig.com) asserting the state's authority to enforce the Jenkins Act and requiring the on-line vendor to provide reports on sales to Washington residents (*State of Washington v. D.C. Inc., No. CV02-2438L*). The Federal District Court agreed, concluding that the state's right to enforce the Jenkins Act was implied given that Congress' intent in adopting the Act was to help states crack down on cigarette tax avoidance (Banthin, 2004). Given the ruling, Dirtcheap settled with the state before going to trial, agreeing to provide the information required by the Jenkins Act.

Washington State's success in applying the Jenkins Act led to similar efforts in many other states. Those obtaining customer lists from on-line vendors have often shared these lists with other states. Comprehensive information on the extent of these efforts, their costs, and the revenues generated from them is not available.⁸ However, newspaper reports suggest that the revenues derived from these efforts are a large multiple of the costs. For example, Michigan

⁷ The Bureau of Alcohol, Tobacco and Firearms (BATF), which until 2003 was part of the Department of Treasury (and is now in DOJ), has "ancillary" authority to enforce the Act, when the sales under investigation may be violations of the Contraband Cigarette Trafficking Act (discussed below) for which it has primary enforcement authority (GAO, 2002).

⁸ An effort to systematically collect this information from states for use in this chapter was unsuccessful.

reported collecting \$5.9 million from about 9,000 residents based on lists provided by 13 on-line vendors (Christoff 2006).

Washington State continues to provide leadership among the states, becoming the first state to obtain a customer list from a reservation-based on-line vendor. In January 2005, the Washington State Department of Revenue sued one of the largest reservation-based Internet vendors, Smokesignals.com, run by a member of the Seneca Nation and located on the Seneca reservation in New York. In a stipulated judgment reached in July 2005 in U.S. District Court, the company agreed to provide the information required under the Jenkins Act (Washington Department of Revenue, 2005). The resolution of this lawsuit suggests that tribal sovereignty does not exempt reservation-based Internet cigarette vendors from the Jenkins Act. As a result, the Smartsmoker.com web-site (an alternative name for Smokesignals.com) now states:⁹

As part of the Seneca Nation of Indians and the Iroquois Confederacy, SmartSmoker is currently not required to collect state sales tax for products sold on Tribal land.

Nonetheless, we are required under federal law to report all sales and shipments of cigarettes to the state taxing authority within your home state. You should contact the taxing authority within your state to determine your tax obligation on the use of these products within your state.

One result of these efforts may be a growth in sales by foreign-based Internet vendors, a group that has received little attention to date. Hundreds of foreign-based Internet sites sell cigarettes (including American brands) directly to smokers in the United States (Ribisl, Kim and Williams, in press). To our knowledge, no enforcement actions have been taken against foreign-based Internet cigarette vendors under the Jenkins Act or other applicable federal or state

⁹ www.smartsmoker.com/content/aboutus.asp, accessed March 12, 2006.

statutes. A limited review of the Web sites of foreign-based Internet vendors suggests that many of the same issues that arose in efforts targeting domestic vendors are likely to arise in enforcement actions targeting foreign vendors. For example, with respect to the legality of shipping internationally and the payment of applicable taxes, one such vendor - SimplySmoke.com, apparently based in Russia – cites the 1999 Universal Postal Convention in support of the legality of shipping cigarettes through the mail, and places the responsibility for tax compliance squarely on the purchaser:¹⁰

U.S. consumers who buy goods from foreign sources become the importer.

Payment terms on this site: cash before delivery. Once the goods are paid, title of the product is transferred, and SimplySmoke no longer owns the product, once it leaves the stock - the buyer, which is the importer, then owns the product.

The importer is responsible for assuring that the shipments comply with a variety of both state and federal government import regulations. To avoid misunderstandings we highly recommend you consult your local tax office.

Some foreign vendors state more or less explicitly that they will not comply with Jenkins Act requests:¹¹

¹⁰ www.simplysmoke.com/faq.php#Legal, accessed March 15, 2006

¹¹ www.simplysmoke.com/privacy.php, accessed March 15, 2006.

All orders are processed and shipped from out of the US. Therefore We don't report tax or customer information to any government agency or other entity. (www.cigoutlet.net, based in Moldova, accessed March 15, 2006)

SimplySmoke.com does not distribute, sell or rent your name, email address, or other personal information to any third party. (SimplySmoke.com, accessed March 15, 2006)

Both of these sites (and likely most sites of other foreign vendors) indicate that they ship cigarettes in small quantities, regardless of the quantity purchased. For example, Cigoutlet.net splits larger orders into shipments of no more than two cartons. These smaller shipments appear designed to avoid the attention from U.S. Customs authorities that larger shipments might attract.

Enforcement actions against off-shore vendors would be more difficult than comparable actions against domestic vendors. However, the federal government has a greater incentive to become involved, because foreign vendors are evading *federal* taxes, not just state and local taxes. Targeting these sites may become increasingly important in coming years given the success states have had in targeting domestic vendors.

In addition to their efforts to collect applicable taxes from smokers buying directly, states have also tried to curtail Internet and other direct cigarette sales. State Attorneys General (AGs) have been at the forefront of many of these efforts. In 2005, state AGs reached agreements with major shipping companies (including Federal Express, United Parcel Service, and DHL) to ban direct tobacco product shipments to U.S. residents. The U.S. Postal Service is now the only major delivery option. In early 2005, state AGs also negotiated agreements with major credit card companies (including Visa, MasterCard, American Express, and Discover) to prohibit the use of credit cards for on-line cigarette purchases; PayPal, the on-line payment service, agreed to

do the same.¹² Smokers can still pay for on-line purchases with checks or money orders. In early 2006, Philip Morris reached an agreement with state AGs not to provide its cigarettes to vendors who do not comply with policies governing Internet and other direct sales. These agreements cost states little or nothing, and are likely to be highly effective in reducing Internet and other direct purchases and in generating new revenues.

Many states have passed legislation that targets Internet and other direct cigarette sales. In 2000, New York became the first state to ban Internet and other direct sales to state residents; the law was eventually upheld after a legal challenge brought by Santa Fe Natural Tobacco Company and Brown & Williamson Tobacco Company, and went into effect in 2003. A few other states have adopted similar bans. More common are measures limiting Internet and other direct sales. Maine, for example, prohibits delivery services from delivering tobacco products from vendors either not licensed by the state or not in compliance with the state's policies regarding direct shipments; other states have adopted similar policies. California and some other states require Internet vendors either to pay the state taxes on cigarettes shipped to the state or to inform customers that they are required to pay these taxes. Arizona law stipulates that out-of-state shippers are liable for paying the state's excise tax on cigarettes, which raises interesting Constitutional issues; the Supreme Court has held that out-of-state shippers are *not* liable for paying sales and use taxes, but the Court might take a different view of excise taxes serving a state regulatory purpose, such as improving public health (Graff 2006).

Finally, two major bills addressing Internet and other direct sales of tobacco products have been introduced in Congress. In June 2003, Senators Hatch and Kohl introduced the

¹² It appears that these agreements do not extend to the use of credit cards for purchases from foreign-based vendors. For example, the SimplySmoke.com and Cigoutlet.net sites discussed above indicate that they accept payment by credit card.

“Prevent All Cigarette Trafficking Act” (PACT). Among other provisions, the bill requires that all applicable taxes in the state to which cigarettes are being shipped be paid in advance, bans delivery by mail or common carrier of tobacco products not labeled as being in compliance with the Act, requires all Internet and other direct vendors (including those located on reservations) to comply with the Jenkins Act, raises Jenkins Act violations from misdemeanors to felonies, and grants states explicit authority to enforce the Jenkins Act. A companion bill – the “Internet Tobacco Sales Enforcement Act” (ITSE) - introduced in the House in July 2003, contains similar provisions designed to strengthen the Jenkins Act. The PACT Act passed the Senate in December 2003, while the ITSE Act was unanimously approved by the House Judiciary Committee in January 2004. To date, however, no further action has been taken on either bill. Provisions strengthening the reporting requirements of the Jenkins Act were recently adopted as part of legislation extending the Patriot Act (PL-109-177, enacted March 9, 2006), but these are more limited than those included in the PACT and ITSE Acts. Although many states have successfully moved ahead despite the relatively limited federal attention to these issues, their efforts would be strengthened by enactment of either bill.

In sum, while Internet sites continue to offer direct shipment of cigarettes on which state and local taxes have not been paid, those offers are less attractive to potential customers than they used to be: transactions costs have increased (no credit cards allowed) and customers face a greater risk of being identified and forced to pay the taxes. If the US Postal Service stopped accepting cigarettes for shipment, sales by mail would be significantly curtailed. Site operators are under increasing legal pressure. With or without federal action, there is good reason to think that this channel for excise tax evasion is becoming less profitable.

Reservation Sales

There are approximately 275 Native American reservations located in the U.S. About two-thirds of states include reservation land, with some reservations located near large population centers. The sovereign-nation status of tribes located on reservations has implications for state taxation and regulation of businesses based on these reservations. Sovereignty has meant that cigarettes and other tobacco products sold on reservations have been exempt from state cigarette excise taxes and sales taxes applied to cigarettes. This exemption does not extend to non-natives who purchase these products on reservations. Historically, however, there has been little compliance with state policies requiring the payment of applicable taxes on tobacco products purchased on reservations.

Until recently, states did little to address this problem because of uncertainty about their right to collect taxes on reservation sales. As discussed below, a recent U.S. Supreme Court decision involving Kansas' efforts to collect state gasoline taxes may lead to a resolution of this question. In the meantime, however, states have taken other approaches to collecting cigarette taxes from non-resident smokers who buy cigarettes from reservation outlets. The first involves "tribal taxes" levied on cigarettes sold on reservations, with most or all of the tax revenue remaining with the tribe. Some of these tribal taxes are enacted in response to state efforts to minimize the difference between prices on and off reservations, so as to reduce the incentive for non-reservation residents to purchase cigarettes at reservation outlets. Perhaps a third or more of states have entered into over two hundred such agreements with various tribes. For example, an agreement reached between Washington State and the Puyallup Tribe, effective January 2005,

called for a tribal tax of \$11.75 per carton for cigarettes sold on the reservation.¹³ This agreement requires that tax stamps reflecting payment of the tribal tax be applied to all cigarettes sold on the reservation, and that thirty percent of the tax revenues go to the state, with the remainder staying with the tribe (RCW 43.06.564). The agreement notes that the “tribal tax is in lieu of the combined state and local sales and use taxes, and state cigarette taxes” and that the tribal tax will be increased when the state tax increases (as was the case in July 2005 when the state tax was increased by 60 cents per pack). Most such agreements, often called “compacts,” are negotiated separately with individual tribes, and their terms may vary for tribes within the same state.

Second, states have sought to collect applicable excise and sales taxes for cigarettes sold on reservations. One of the more contentious of these efforts is that of New York State. For many years, a New York statute has required the collection of state taxes on cigarettes sold at reservation outlets to individuals not residing on the reservation. The state has generally not enforced the policy, however, despite a 1996 U.S. Supreme Court decision allowing it to do so. The state’s most recent enforcement effort, in 1997, led to a Seneca Nation protest that closed a portion of the New York State Thruway, a highway that crosses tribal land. As New York’s cigarette tax increased over time and the state lost more revenue to reservation purchases by non-residents, the state legislature renewed calls for the policy to be enforced. In 2003, enforcement was mandated as part of a state budget bill. Despite this mandate, New York Governor Pataki delayed enforcement efforts; the most recent target date for implementing these enforcement efforts – March 1, 2006 – came and went with no action. If enforcement ever begins, the New

¹³ At the time of the agreement, the Washington state cigarette excise tax was \$14.25 per carton, along with state sales tax of 6.5 percent.

York experience will provide valuable information about the costs and effectiveness of this type of policy.

Other states have adopted more straightforward methods for collecting cigarette taxes on reservation sales. These approaches generally involve state collection of taxes from wholesalers or distributors on cigarettes destined for reservations, and the return of a portion of these taxes to the tribe based on the share of reservation sales made to tribal members (Zello, 2005). Nebraska, for example, allows reservation retailers to obtain a credit from wholesalers for the taxes paid on sales to reservation residents, while Wisconsin refunds to tribal councils the state tax on cigarettes consumed by tribal members. A related approach used in some states including Washington allows for a small number of untaxed cigarettes to be provided to registered tribes for sale to tribal members, with the number based on the tribal population and expected consumption. Nothing prevents these cigarettes from being sold to non-residents, however. Other states require “tax-exempt” stamps to be attached to cigarettes sold to tribal members on reservations. Arizona, for example, requires a “green stamp” on these packs, in contrast to the “blue stamp” applied to cigarettes on which the state excise taxes have been paid.¹⁴

The final approach is least common but simplest administratively: collect state cigarette taxes from all cigarettes sold anywhere in the state, including those sold on reservations and to tribal members, with no refunds or credits. Kansas, for example, does not exempt from tax cigarettes or tobacco products that are sold on Indian reservations or land, or sold to retailers who are Indian tribes or tribal members (Notice 00-07, 2000). The recent U.S. Supreme Court decision concerning Kansas’ taxation of gasoline sold on reservations suggests this may be a

¹⁴ Arizona also uses a “red stamp” for cigarettes that are sold at reservation outlets to non-tribal members on which a lower tax is applied.

viable option in other states (*Kansas Department of Revenue v. Prairie Band Potawatomi Nation* 2005). Clearly, a uniform system applying state cigarette excise taxes to all cigarettes, without exceptions for tribal members, is the simplest option. It would eliminate an important channel for tax avoidance, and would also mean that reservations in high-tax states like New York could no longer operate profitable Internet sales operations. The political feasibility of extending state tax laws to Indian reservations remains to be tested.

Other Individual Tax Avoidance and Evasion Activities

Individuals can engage in other forms of tax avoidance and evasion, including cross-border shopping (purchase of cigarettes in lower-tax localities for consumption in their own higher-tax locality) or purchase of cigarettes from duty-free outlets or military commissaries. These behaviors may account for 1 to 2 percent of cigarette consumption nationally, and more in populous areas near low-tax jurisdictions.

With respect to cigarette sales on military bases, states might take the same approach as some have taken for reservation sales, requiring all applicable taxes to be pre-paid and creating mechanisms for tax credits or refunds to military personnel. Alternatively, states could engage the Department of Defense in efforts to limit cigarette sales on military bases to military personnel only (e.g. through identification checks) or to eliminate the tax-exempt status of cigarette sales on military bases.

The international Framework Convention on Tobacco Control (FCTC) calls for the elimination or restriction of duty-free cigarette sales; to the extent that countries ratify this treaty,

duty-free options will be reduced for Americans traveling abroad.¹⁵ Similarly, the voluntary agreements reached with shipping companies and credit card companies could serve as a model for similar agreements with international airlines for bans on the duty-free sale of tobacco products.

With respect to small-scale cross-border shopping by individual smokers, states have few, if any, cost-effective options for collecting taxes on these sales directly. Instead, regional approaches may be more effective in addressing this problem. For example, efforts to increase cigarette taxes regionally may help reduce interstate tax differentials and thus the incentive for small-scale cross-border shopping. Regional efforts to raise state cigarette taxes in the Northeast and in the South have been somewhat effective in this regard, although sizable differences remain among some states in each region. Likewise, limits on the quantity of cigarettes purchased would reduce the savings from a cross-border shopping trip; such limits would have the added benefit of discouraging larger-scale smuggling.

Large-Scale Cigarette Smuggling

The large differences in state tobacco tax rates create profitable smuggling opportunities. Most commonly the smuggling pipeline is filled by large purchases of tax-paid cigarettes in low-tax states, which are then transported to high-tax states and sold by retailers as if they were legitimate. Smuggling from other countries in North America is also conceivable, but has not been important in the past.

¹⁵ This would be true regardless of whether or not the United States ratifies the treaty, something that appears extremely unlikely at present.

The key federal legislation targeting large-scale cigarette smuggling is the Contraband Cigarette Trafficking Act (CCTA). This law was enacted in 1978 in response to the increase in cigarette smuggling after interstate cigarette tax differentials rose sharply in the 1960s. The Act made it a felony for an unauthorized individual to ship, receive, sell or possess “contraband cigarettes,” which were defined as quantities of more than 60,000 cigarettes (300 cartons) for which there was no evidence that taxes had been paid.¹⁶ The act was amended as part of the recent extension of the Patriot Act; the most significant change was lowering the permissible quantity to 10,000 cigarettes (50 cartons).¹⁷ This amendment was added to the Patriot Act after the identification of cigarette smuggling operations that generated funds for terrorist organizations.

The application of cigarette tax stamps is likely to be the most important state-level measure targeting large-scale smuggling.¹⁸ Michigan’s experiences in the 1990s provide a clear illustration. On May 1, 1994, Michigan’s excise tax was raised from 25 cents to 75 cents per pack, making Michigan’s tax the highest in the country. At the time, Michigan was one of very few states that did not apply a tax stamp to cigarette packs to indicate that the state tax had been paid. Although cigarette tax revenues more than doubled after the tax increase, the revenue increase was smaller than expected, with the gap attributed to a dramatic rise in smuggling of cigarettes from low-tax states. This smuggling was facilitated by North Carolina’s decision to stop requiring tax stamps on cigarettes at almost the same time as the Michigan tax increase;

¹⁶ There are exemptions in the Act for common carriers and in states where there are no tax markings required.

¹⁷ Some states have limits below those set by the CCTA or the recent amendment to the CCTA.

¹⁸ State tax stamps are applied by cigarette wholesalers who generally receive a modest commission from the state for the application of the stamp.

South Carolina followed suit in 1996. Given state tax rates of five and seven cents, respectively, the elimination of the North and South Carolina tax stamps allowed fortunes to be made by smuggling cigarettes from these states to Michigan. Despite Michigan's enforcement efforts, smuggled cigarettes may have accounted for 15 percent or more of the market at its peak. The loss of revenue to the state prompted Michigan to require a tax stamp on all cigarettes sold in the state, with the new legislation fully implemented by September 1, 1998. The tax stamps strengthened the state's enforcement capacity by making it easier to identify smuggled cigarettes. The impact was dramatic; gross state cigarette tax collections rose by about 14 percent from fiscal year 1998 (ending June 30) to fiscal year 1999.

In 2008, three states – North Carolina, South Carolina, and North Dakota (with excise taxes of 35, 7, and 44 cents respectively) – did not require tax stamps. The lack of stamps on cigarettes from these states facilitates smuggling, while the large differences between taxes in these states and those in high tax states create a significant incentive. Reinstating the stamping requirements in North and South Carolina and introducing this requirement in North Dakota would be a significant step in addressing this problem.

To avoid detection, smuggling operations often employ counterfeit tax stamps that are applied to unstamped packs or substituted for the stamps on packs from low tax states. To address this problem, California adopted legislation in 2002 that called for a new, "high-tech" stamp that includes encrypted information identifying the name and address of the distributor who applied the stamp, when it was applied, and its value, along with other features making the stamp more difficult to counterfeit. In addition, the legislation strengthened licensing requirements, making it easier to track cigarettes through the distribution chain. Inspectors using hand-held scanners can quickly scan the stamps, identify packs being sold illegally, and track the

sources of the illegal cigarettes. The new stamps were phased in with a target date of January 1, 2005. In late 2005, the *Los Angeles Times* reported that the new stamps had been highly effective in generating revenues and curbing cigarette smuggling. Over the previous 20 months, the state's revenues from tobacco taxes rose by more than \$124 million, numerous smuggling rings were identified, and millions of illegal cigarettes were seized (Halper, 2005). A report in *Convenience Store News* (CSN) noted that 8,420 compliance checks were conducted in fiscal year 2005, leading to 523 citations (CSN, 2006).

The tactics used by California to crack down on cigarette smuggling, including prominent, difficult-to-counterfeit tax stamps, licensing of those involved in the distribution chain, pack-specific information identifying those in the distribution chain, and stricter recordkeeping requirements, combined with aggressive enforcement, have been suggested for many years (e.g. Sunley, et al., 2000; Joossens, et al., 2000). The FCTC calls for many of these elements, along with labeling provisions that would help identify packs being sold illegally. California's success shows that similar efforts in other states and at the federal level can be highly effective in reducing cigarette smuggling and increasing revenues generated from tobacco taxes.

Excise tax compliance and regulatory regimes

Based on this discussion, we can make some qualitative judgments about the implications of a uniform \$2 increase in state excise tax on tax compliance (see table 1). This tax increase is likely to have little effect on the most common means of avoidance – individual purchases from

vendors in low-tax jurisdictions¹⁹ – but would increase the incentive to evade state taxes altogether. Under the existing regulatory regime, direct Internet sales from reservation or foreign vendors are likely to increase, as are smuggling from foreign sources and individual purchases from reservations.

Whether evasion rates would actually increase, however, would depend on the loopholes in the regulatory framework and the intensity of enforcement. As we have seen, there are a variety of regulations that would reduce profits from tax evasion and curtail opportunities for avoidance. The table distinguishes outcomes under two regulatory frameworks: the patchwork of federal and state regulations that applied in 2006, and a framework that incorporates reforms suggested by the discussion above:

- All reservations are subject to state cigarette taxes;
- US Postal service joins other shippers in refusing to ship cigarettes to evade taxes;
- Embargo continues on use of credit cards to pay for mail-order cigarettes;
- All states adopt “high-tech” tax stamps and tracking systems, with regular inspections of the supply chain.

The actual regulatory framework has evolved rather rapidly in recent years and may approach something like this new configuration in the near future. The result would be to close the principal loopholes by which cigarette taxes are currently evaded. Under this new regime, consumers could continue to avoid taxes by purchasing cigarettes in low-tax jurisdictions. As shown in the table, however, the incentive for individuals to purchase in other jurisdictions

¹⁹ The uniform increase in state tax rates would leave the current disparities unchanged in an absolute sense – Chicago residents would save the same amount per carton by driving to Indiana. But the relative disparities would be reduced by raising all taxes, and that may make some difference in cross-border purchases.

would be just the same after a uniform \$2 increase in state taxes as it is now – while all prices would be higher, inter-jurisdiction price differences would remain approximately the same.

The costs of tax enforcement depend on the intensity of the enforcement effort chosen by the relevant government agencies. To the extent that enforcement budgets are influenced by the marginal payoff in terms of additional tax collections, we expect these expenditures to be influenced by both the regulatory framework and the tax rate. In other words, the effect of a tax increase on enforcement expenditures is indeterminate, but will likely be influenced by the payoffs (in terms of increased tax collections) to additional enforcement efforts. Jurisdictions choose how much to spend on compliance efforts, and there is nothing about a \$2 increase that would compel a change in these efforts. On the other hand the extra \$2 per pack tax would ensure a greater payoff to compliance efforts for all but the relatively low-tax states, which might benefit even more from purchase for illegal sale elsewhere. There is no good way to predict states' budget priorities in this new regime.

Youth Access

A number of regulations aim to reduce youth access to tobacco and lower smoking initiation among teenagers. These youth access laws include state laws prohibiting sale to minors, prohibitions on self-service displays, and restrictions on placement of vending machines. Most states also sanction minors for purchasing, using or possessing tobacco products (the so-called “PUP laws”). Although laws prohibiting the sale of cigarettes to minors have been on the books since the 1890s, these laws were rarely enforced. For example, in 1988 minors are estimated to have purchased about 1 billion cigarettes, yet there were only 32 reported violations of youth access laws in all 50 states (CDC 1990). The impact of PUP laws is debated among

tobacco control experts, with some asserting that criminalization of purchase, use and possession may glamorize tobacco products and heighten their appeal to teens (Wakefield and Giovino 2003).

The Synar Law passed by Congress in 1992 put a national youth-access policy into place. It stipulated that states would lose Federal funding for mental health programs if they failed to adopt and adequately enforce stringent regulations. The law required states to set the minimum age for the legal purchase of tobacco products at 18 or higher. It also required states to enforce youth access tobacco laws by auditing retail tobacco outlets. A state agency (or a private concern under contract) was to conduct random, unannounced audits using decoy minors. States were required to reduce the retailer violation rate to below 20 percent by a deadline that depended on the rate of non-compliance in the base year, 1997. All states were to be in compliance by 2003. By 2005, Kansas was the only state with a non-compliance rate above 20 percent, at 38.0 percent.²⁰ In 2005, the median non-compliance rate among the states was 11.6 percent, and Delaware and Arkansas had non-compliance rates below 5 percent.²¹

Although most states' compliance rates meet Federal standards, survey evidence indicates that youth access to cigarettes has changed little since 1992 (DiFranza 2001; CDC 2006b). One reason is that, with a non-compliance rate of 11.6 percent, minors can still purchase cigarettes at almost one in eight retailers. In addition, many teens get cigarettes from older friends and family members. There is evidence that for younger teens, access to cigarettes

²⁰ The Synar data for years 1997-2005 can be found on the Substance Abuse and Mental Services Administration (SAMSHA) web site at <http://prevention.samhsa.gov/tobacco/01synartable.aspx>

²¹ Authors' calculation from Synar data provided by SAMSHA web site mentioned in footnote 24.

through retail purchase has declined, but access from social sources (family and friends) may have increased.²²

The Synar compliance checks may not be very effective at identifying retailers who sell to minors. The usual audit procedure is to send a minor into a store to attempt to buy a pack of cigarettes. States are advised to follow the Substance Abuse and Mental Health Services Administration (SAMHSA) protocol for these underage purchases by decoys. However, this protocol does not capture the way in which most young people would actually try to buy cigarettes. Decoy minors are not allowed to lie about their age or use false identification; actual underage purchasers are likely to do both. Indeed, when minors presented a bona fide ID card upon request by a store clerk, they were six times more likely to be allowed to buy cigarettes - even though the ID card identified them as underage (Levinson, Hendershott and Byers 2002). In addition, clerks are much more likely to sell cigarettes to minors who are frequent customers, but decoy minors are unlikely to have visited the store frequently enough to become familiar to store clerks (Landrine and Klonoff 2003).

Because the Synar law penalizes states that record high rates of non-compliance, state agencies have little incentive to use more effective means of detecting youth access violations (DiFranza, Savageau and Bouchard 2001; GAO (2001)). For example, states have discretion regarding age and sex of decoys. Knowing that 14-year-old boys are probably more likely to be refused service than 17-year-old girls creates an incentive to use the former as decoys. Furthermore, Synar audits often lead to enforcement activity that tips off other stores in the area, temporarily raising compliance rates. Because both state agencies and retailers have an incentive

²² According to Monitoring the Future, a survey of a nationally representative sample of 50,000 8th, 10th, and 12th graders, the perception of the availability of cigarettes has declined for both 8th and 10th graders. See http://www.monitoringthefuture.org/data/05data/cfig05_1.pdf.

to avoid successful purchases by decoys, the Synar non-compliance rates are likely to understate the number of retailers who sell cigarettes to minors. Indeed, underage smokers claim that purchasing cigarettes is relatively easy even in communities with high measured compliance rates (DiFranza and Coleman 2001).

In addition to these problems with compliance checks, the penalties available to states are weak. In 32 states, regulators may not impose civil or administrative penalties on retailers selling cigarettes to minors.²³ In these states, the only resort is criminal prosecution of a clerk, a cumbersome and unrewarding venture. Youth access laws structured in this way legally insulate owners and allow them to make underage sales with little risk of prosecution.²⁴

Even when retailers can be fined, current sanctions may not be a sufficient deterrent. Fines are typically graduated but are rarely more than \$1,000.²⁵ These fines are trivial compared with the profitability of convenience store sales to under-aged teens. DiFranza (1999) estimated that underage smokers in 1996 spent about \$1.9 billion (2006 dollars) – in other words, about \$8,500 per store if distributed evenly among the roughly 221,000 retail outlets selling tobacco in

²³ This number is extracted from ALA (2006) SLATI which provides the relevant text from state youth access laws.

²⁴ Some retail outlets have very high turnover rates for their employees. On average the staff of convenience stores turns over almost completely in a year. For full time employees turnover is about 102 percent annually and for part time employees the turnover rate is 138 percent (National Association of Convenience Stores press release at www.nacsonline.com/NACS/news/press_release from December 12 2002.

²⁵ ALA (2006); ImpacTeen data at <http://www.impactteen.org/tobaccodata.htm>.

2002.²⁶ Under-age smokers buy cigarettes mostly from convenience and liquor stores and gas stations; if all such purchases were made from these outlets, the annual revenue per store would be about \$14,000, with a net revenue of \$1,100 assuming a ten percent markup. If the retailer is caught and fined \$500 once a year, then profits net of the penalty are still positive. If only a small percentage of this subset of stores sell cigarettes to teens, then profit rates are higher. When only 20 percent of outlets are non-compliant and the detection rate is 50 percent, net profits rise to \$6,800.

In some states, penalties for retailers selling cigarettes to minors can include suspension or revocation of retail tobacco licenses. Of the 40 states that required licenses in 2005,²⁷ 28 allow suspension of the licenses of stores selling to under-aged youths, and 12 allow revocation of retail licenses for repeated non-compliance with youth access.²⁸ License revocation is a severe penalty because about 25 percent of all convenience store revenues, an annual average of \$206,000 or about \$3,400 per week (2006 dollars), comes from cigarette sales.²⁹ But even in states that permit it, licenses are rarely revoked.

The IOM policy scenario calls for strengthening youth access laws by requiring four randomly timed compliance checks each year at each tobacco retailer, with penalties for noncompliance that are potent and well-enforced, and with heavy publicity and community

²⁶ Authors' calculation; the number of retail outlets is from the US Economic Census (Retailers) (2005), Table 2, page 199. Other figures on retail establishments cited here are also from US Economic Census (Retailers) (2005).

²⁷ This is for the fourth quarter of 2005 and obtained from the State Tobacco Activities and Tracking and Evaluation (STATE) System web site which is provided by CDC. The web site URL is <http://apps.nccd.cdc.gov/statesystem/index.aspx>

²⁸ ALA (2006); ImpacTeen data at <http://www.impacteen.org/tobaccodata.htm>

²⁹ Authors' calculation using U.S. Census (2005).

involvement. For the SimSmoke simulations, maximum civil penalties were set at \$1,000 and suspension of the retailer's license to sell tobacco products,³⁰ with graduated civil penalties, universal licensure for tobacco retailers, and bans on vending machines and self-service displays. The SimSmoke youth access module also assumes "full community mobilization" and wide publicity.

In addition to these policies, other measures are considered "best practice" by the American Lung Association and industry sources on youth access.³¹ One is electronic age verification. Three states, Connecticut, New York and Ohio, currently issue drivers licenses with a magnetic strip so that licenses of young customers can be scanned into an electronic scanning device that verifies age. This makes false identification easier to detect and records the purchase if it occurs. In Connecticut the use of ID scanners is the only affirmative defense for making an underage sale, providing an incentive to install and use the devices. (If the customer appears to be underage and presents an out-of-state drivers license, both the customer and license are photographed.) Finally, enforcement would be strengthened by establishment of a state-wide agency charged with monitoring and enforcing compliance with youth access laws. Enforcement costs could, at least in part, be financed by the fines collected (US Department of Health and Human Services 2000).³²

³⁰ Personal communication with David Levy; also see Levy and Friend (2000).

³¹ Connecticut and New York received "A" from the American Lung Association for the design and enforcement of their youth access laws. The industry site wecard.org recommends the purchase of electronic age verification devices as a best practice.

³² Most of these recommendations are found in Centers for Disease Control, *Best Practices for Tobacco Control Programs*, - August 1999, Office of Smoking and Health. American Lung Association recommends electronic ID scanning in its best practices report of 2005. DiFranza (2005) provides an updated list of best practices.

What would be the direct cost of imposing these policies? One approach is to cost out specific policy measures. For instance, four compliance checks per year at each retail outlet selling tobacco, at an average cost of \$170 per audit yields a total cost of about \$150 million.³³ Modifying the audit protocol to establish “familiarity” (two extra visits per establishment) might add \$86 million to the cost of compliance checks.³⁴ The total national annual cost of ID scanners is likely to be about \$110 million,³⁵ which would presumably be borne by the retailers. The cost of a bureau to issue and revoke licenses and administer fines would differ widely by state, but in any event that cost is likely to be covered by the collection of fines and fees. These considerations suggest total costs of about \$346 million, with almost a third of that cost borne by retailers. Because the states already conduct some compliance checks, the marginal cost of achieving the best practice level would be lower.

Alternatively, enforcement costs can be estimated using CDC best practice funding formulas (CDC 1999, 4), which estimate the cost of a package of measures similar to those proposed by the IOM. The CDC enforcement formula (which includes enforcement of both youth access and clean air regulations) recommends expenditures between \$0.53 and \$0.98 per

³³ The cost per audit at the state level reported in DiFranza, Peck, Radecki and Savageau (2001) is \$150 (2001 dollars) which is \$170 in 2006 dollars.

³⁴ The figure is calculated by the authors’ assuming a cost of \$170 (2006 dollars); see footnote 33 for details.

³⁵ The cost of ID scanners ranges between \$300 and \$1400, so complete coverage for the United States lies between about \$60 million and \$300 million. Assuming full depreciation in 3 years and using the upper price limit, this works out to an annual mean cost of \$500 per retailer. Some retailers will of course require more than one scanner. Cost figures are from one manufacturer, Tokenworks, at <http://www.cardvisor.com/shop/store/dynamicIndex.asp>

capita in 2006 dollars as well as fixed costs of administration and interagency cooperation of \$187,000 to \$367,000 per state. These financial guidelines place annual enforcement costs between \$169 million and \$314 million in 2006 dollars. The CDC also provides funding guidelines for other statewide programs that include grants to cities and local law enforcement agencies to aid in enforcing youth access laws.³⁶ The suggested range of expenditures for these programs is \$146 to \$366 million. Taken together, then, the estimated total cost of enforcing youth access laws would range from \$313 to \$680 million. Our estimate of \$346 million for compliance checks is at the low end of this range – not surprising, because the CDC best practice figures include other youth access enforcement measures as well as the cost of clean air enforcement.

With youth access laws, as with excise taxes, regulatory change could improve compliance at relatively modest cost. For instance, the minimum age of legal purchase could be raised to 19 (as it currently is in three states), or even 21; this would mean that very few high school students could legally obtain cigarettes from commercial outlets and would limit “social sources” of cigarettes for underage smokers. Second, allowing minor decoys to lie about their age and to use ID (both valid and fraudulent) would give a more accurate indication of teen access to cigarettes through retail outlets. Although these additional measures are not explicitly assumed by the SimSmoke model, they may be necessary to achieve the reduction in youth smoking assumed by the SimSmoke simulations.³⁷

Smoke-free air laws

³⁶ This includes funds for program evaluation, media advocacy and grants to various non-governmental organizations to inform various population sub groups about tobacco control.

³⁷ Personal communication with David Levy; also see Levy and Friend (2000).

The enactment of smoke-free air laws by federal, state, and local governments is an attempt to protect nonsmokers from exposure to the health and other effects of secondhand smoke. While most such laws are enacted by states, counties, and municipalities, the federal government has intervened in several instances. In 1988 President Ronald Reagan signed the Federal Aviation Act into law, making all domestic flights lasting two hours or less smoke-free. In 1990, all domestic flights lasting six hours or less became smoke-free. In 2000, the Wendell H. Ford Aviation and Investment and Reform Act made all flights to and from the United States smoke-free. The Pro-Children's Act of 1994 prohibited smoking in facilities that receive federal funding for children's services on a regular or routine basis.

All 50 states and the District of Columbia have enacted laws restricting smoking in certain public places. Many states and hundreds of municipalities have legislated complete indoor smoking bans in various public places and private worksites. As of April 1, 2008, comprehensive bans on workplace smoking covered jurisdictions that included 48.5 percent of the total US population, while restaurants were subject to comprehensive smoking bans for 61.4 percent and bars 49 percent.³⁸ Most other states had partial bans in place. For comparison, the IOM-based scenario used throughout this volume assumes that all states ban smoking in indoor worksites and restaurants, and in three out of four other categories of places (government buildings, retail stores, public transportation, and elevators).

Several outdoor smoking bans have been enacted in recent years. In 2004, California prohibited smoking within 20 feet of all public building entrances, exits, operable windows, and air intakes. Moreover, a growing number of local-level ordinances have banned smoking in outdoor areas. Solana Beach, California, became the first city in the continental United States to

³⁸<http://www.no-smoke.org/pdf/SummaryUSPopList.pdf> accessed May 15, 2008.

enact a beach smoking ban in 2003. By May 2005, there were 18 smoke-free beaches on the California coast (California Department of Health Services, 2006). In addition, many municipalities have enacted smoking bans in outdoor areas including arenas, stadiums, public parks, school grounds, and bus stops.

Through a series of detailed case studies, Jacobson and Wasserman (1997, 1999) were among the first to examine the process by which smoke-free air laws were enforced. They concluded that, with few exceptions, individuals voluntarily comply with smoke-free air laws in the absence of proactive enforcement efforts by either state or local agencies. The states that Jacobson and Wasserman studied spent few resources enforcing smoke-free air laws because the enforcement mechanisms were mainly “complaint driven”; in other words, enforcement agencies would respond to complaints made against individuals and establishments after violations had occurred.

Studies suggest that complaints of violations of clean air laws rise after a smoking ban is passed but then decline over time. For instance, when restaurants became smoke-free in New York City in 1995, there was initially a dramatic increase in complaints that subsided within two years (Hyland, Cummings, and Wilson 1999). Moreover, Massachusetts experienced a large number of complaints immediately following the enactment of its smoke-free workplace law. According to the Massachusetts Tobacco Control Program (2006), 742 calls were placed to the complaint and information phone line during the first month after the law went into effect (18 percent of them about alleged violations). The number of calls quickly declined; by the twelfth month following the enactment of the law, only 29 calls were received.

Several studies have found smoking bans to be highly effective despite limited enforcement. Skeer et al. (2004) found that the percentage of bars in Boston observed with

smokers decreased from 100% before the implementation of a smoking ban to 2.5% within 3 months of the enactment of the ban. The smoking ban in Boston was supported by pre-implementation outreach and educational campaigns by the Boston Public Health Commission. Skeer and colleagues speculate that the education and media campaign contributed to the high compliance rate.³⁹ Weber et al. (2003) examined long-term compliance by bar patrons with the California Smoke-Free Workplace Law in Los Angeles County. They found compliance rates increased in each of the four years after the California Smoke-Free Workplace Law was implemented. In particular, the percentage of free-standing bars in Los Angeles County that were observed to be smoke-free increased from 46% in 1998 (the year the smoking ban was implemented) to 76% in 2002. Among bars with restaurants, the percentage that were smoke-free rose from 92% in 1998 to 98.5% in 2002. Lee and colleagues (2003) examined compliance by patrons of free-standing bars five years after the California Smoke-Free Workplace Law began, using unobtrusive observation techniques in an unnamed California city. They found that smoking was observed at least once in half of the bars, suggesting a lower compliance rate for this California city than Los Angeles County. Interestingly, a one-year review of the law requiring smoke-free workplaces in the Republic of Ireland found compliance rates over 90 percent in workplaces, including hotels, restaurants, and pubs; a phenomenally high 93 percent of the public thought the law was a good idea, including 80 percent of smokers (Office of Tobacco Control 2005). Similarly, Fong and colleagues (2006) surveyed smokers in Ireland a few months before the ban was implemented and 8-9 months afterwards, and found that the Irish law led to dramatic declines in smoking in workplaces (62% to 14%), restaurants (85% to 3%),

³⁹ An earlier study of compliance with a local ordinance in Cambridge, implemented in 1986, found low compliance rates in stores. Employees reported that after two years, 38 percent of stores allowed customers to smoke (Rigotti et al., 1993).

and bars/pubs (98% to 5%). Moreover, 83% of smokers in Ireland thought that the smoking ban was a “good” or “very good” thing.

Why are these bans effective? Social pressure is doubtless much of the explanation. As social acceptance of smoking in public declines, smokers may be more likely to conform to clean air laws, and non-smokers may be more willing to object when smokers violate the law. In general, these laws have been embraced by the public. Tang and colleagues (2003) found California bar patrons’ approval and acceptance of the California smoke-free bar law increased steadily during the first two years. Similarly, two studies of workplace smoking bans found employee approval increased substantially after smoking restrictions were introduced (Borland et al. 1990; Rosenstock et al., 1986). Following enactment, both studies found, approval of workplace smoking bans increased significantly among both non-smokers and smokers, with smokers increasing their level of approval more than nonsmokers.

To ensure high compliance rates, some states use random inspections of businesses. For example, in Massachusetts, local health departments funded by the Massachusetts Tobacco Control Program (MTCP) are required to randomly inspect businesses and follow up on reports of violations. Between July 5, 2004 and June 30, 2005, MTCP-funded local health departments conducted 5,356 random inspections yielding a compliance rate of 91 percent (MTCP, 2006). Violations included active smoking, smoke odor, or missing signage. Another effort, as described in the aforementioned MTCP (2006) document, by the Massachusetts Association of Health Boards and MTCP-funded Community Mobilization Networks attempted to monitor compliance in bars and restaurants on weekend evenings. They observed 515 establishments and found an 88% compliance rate.

The direct costs of enforcing smoke-free air laws fall on state and local governments. Enforcement activities may include conducting inspections (either proactively or in response to complaints), processing complaints, and taking steps to sanction violators. The example of New York State is instructive. Enforcement of the state's smoke-free air laws – New York State Clean Indoor Air Act (CIAA) and New York City (NYC) Smokefree Air Act (SFAA) – is carried out locally by city or county health departments or by state health department district offices, and usually by the Public Health Sanitarians or Technicians who also enforce the youth access and sales-to-minors laws. Enforcement is funded by contractual agreement with the state at levels based on the number of tobacco retailers operating within the jurisdiction. Leftover funds from the sales-to-minors program have typically been used to support CIAA enforcement, which is an unfunded mandate. In program year 2006-2007, county health departments and the New York City's Department of Health and Mental Hygiene received \$5.8 million for tobacco enforcement activities. This represented a 45% increase in funding from the previous program year, and was intended to enhance local CIAA/SFAA enforcement (Miner, 2006). In addition, staffing resources are provided to state district offices for enforcement of youth access laws and the CIAA. While total funding cannot be broken down by tobacco enforcement program activities, time spent on enforcement activities can. In 2004, the state health department used 366.7 full-time-equivalent staff days for CIAA enforcement activities and conducted 434 inspections (Miner, 2005). In the same year, county health departments used 1814.2 full-time-equivalent staff days for CIAA enforcement activities and conducted 4748 inspections (Miner, 2005). Comparable figures are not available for the NYC Department of Health and Mental Hygiene because SFAA inspections cannot be distinguished from other inspections that the

agency conducts. The three entities combined issued 2,873 citations for violations of clean air laws, yielding penalties totaling \$1,215,550 in 2004 (Miner, 2005).

There is also limited evidence on the direct government costs of conducting compliance checks. The Massachusetts Tobacco Control Program (MTCP), for example, funds local health departments to conduct random inspections of businesses. Local departments of health receive allocations based on the number of tobacco retailers operating under their jurisdiction. The funds are used for youth access compliance checks, smoke-free-air compliance checks, and administration costs. During the 2005-2006 fiscal year, local health departments received a total of \$1,600,000 from MTCP for tobacco control purposes, or \$240 per tobacco retailer operating in each community (Sullivan, 2006). The local health departments are expected to conduct three random smoke-free air and youth access inspections at each tobacco retailer as well as conduct random smoke-free air inspections of other businesses. Approximately \$320,000 (20% of the funds for tobacco control) received by local health departments from the MTCP were used for smoke-free air compliance checks; the remaining \$1,280,000 was used to cover youth access inspections and administrative costs (Sullivan, 2006). Businesses found not to be compliant with the Massachusetts Smoke-Free air ordinance were issued either a ticket with a fine or a citation with no fine. In 2005, 122 tickets and 35 citations were issued for non-compliance with the smoke-free air law, generating revenue of \$21,550 (Sullivan, 2006). On several occasions, search warrants were required in order to conduct the inspections, raising costs by about \$100 per site (Sullivan, 2006).⁴⁰

As part of the Best Practices Guidelines (August, 1999) discussed above, the Centers for Disease Control and Prevention (CDC) recommended that states spend a minimum of \$0.55 per

⁴⁰ Law student interns were used to obtain the search warrants.

capita in 2008 dollars to enforce youth access laws, retailer licensure provisions, and non-sales policy areas such as smoke-free air restrictions to implement and sustain comprehensive tobacco control programs. Thus, the CDC's minimum recommendation implies that the states should be spending a total of \$176 million on tobacco control enforcement in 2008.⁴¹ If we assume other states divide the budget as Massachusetts did, with 20% of tobacco funding spent on clean air enforcement, all states combined would spend \$35.2 million to enforce smoke-free air laws as part of a minimally funded comprehensive tobacco control program.

Opponents of smoking bans argue that the imposition of such laws would inflict economic losses on bars and restaurants and have a negative impact on employment levels in localities that enact such laws. The chapter by Hyland and colleagues examines the merit of this argument. Businesses operating in smoke-free air environments may actually reap cost savings. Potential operational cost savings include lower fire insurance premiums, reduced cleaning costs, lower capital replacement costs due to fewer burned materials, and reduced absenteeism of employees. Unfortunately, we have little evidence about these cost savings, and future research about their magnitude is warranted.

Conclusion

⁴¹These numbers are updated from the CDC's recommendations for 1999 on enforcement and administration expenditures. The recommended enforcement in 1999 was \$0.43 (minimum) to \$.80 (maximum) per capita. Those recommendations, updated to 2008 using the CPI inflation calculator, are \$0.55 to \$1.03. The US population as of May 2008 is 304 million, so the total enforcement budget should be \$167.3 to \$313.3 million. The CDC specified 1999 administrative costs as 5% of program costs, yielding a total recommended enforcement plus administrative cost of \$175.7 to \$329.0 million.

This chapter examined the enforcement of three tobacco control policies: excise taxes, youth access laws, and clean air laws. As we have discussed, there are efficient methods for improving tax compliance that require little in the way of additional government resources. Interstate smuggling could be greatly reduced if the low-tax states raised their rates. Barring that, any state could fend off illegal imports through measures such as improved tax stamps, licensing of those involved in the distribution chain, and better record-keeping requirements. Internet marketing from Indian reservations could be reduced simply by requiring that prices paid in tribal stores include state excise taxes (something the states could do, according to a Supreme Court ruling on a related matter). The Internet market has already been curtailed by state enforcement efforts coupled with agreements with shippers and credit card companies, and could be limited further by federal enforcement of the Jenkins Act. These and other measures are not expensive, and are likely to be effective. The scarce resource is political will.

We have not estimated the enforcement costs that would be associated with a \$2 a pack increase in excise tax rates because states would not be obligated to spend more on enforcement as a result of the tax increase. There would, however, be some incentive for them to do so under the *current* regulatory regime, for two reasons. First, the higher tax rates would probably induce more tax avoidance and evasion activity, especially mail-order sales from Indian reservations and abroad and in-person purchases from reservations and military installations. In addition, the loss of tax revenue for every pack that did not pay the state tax would be \$2 greater than otherwise. But we argue that if all the states adopted several simple reforms, such as taxing sales on reservations and using high-tech cigarette-tax stamps, those methods of evasion would be far less profitable and hence less prevalent, and thus states would have correspondingly little

incentive to increase enforcement expenditures. With those reforms in place, any given level of excise taxation would be more effective in promoting the public health.

Compliance with youth access and clean air laws can also be improved through change in the regulatory framework, but both also require regular compliance checks for the regulations to be effective. We provide some rough estimates of the costs of compliance checks for both tobacco retailers and for other entities governed by clean air provisions. If every state conducted several inspections of tobacco outlets each year and ran a vigorous program of clean-air inspections, while supporting local community efforts with a grants program, the total cost could be between \$176 million and \$329 million.⁴² Some part of that cost would be defrayed by income from fines. Because states are already funding compliance efforts, the marginal cost would be far less. To put these estimates in perspective, total state expenditures for *all* aspects of tobacco control, prevention, and cessation programs were about \$717 million in FY2008.⁴³

⁴² See footnote 41.

⁴³ Campaign for Tobacco-free Kids, “Key State Specific Tobacco-Related Data and Rankings,” at <http://www.tobaccofreekids.org/reports/settlements/2008/execsum.pdf>.

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Table 1: Change in tax evasion resulting from large tax increase

Evasion method	Regulatory framework as in 2006	Reformed regulatory framework
Direct Internet sale from		
Reservation	+	0
Abroad	+	0
Low cost state	0	0
Smuggling from		
Low tax state	0	0
Foreign sources	+	0
Individual purchase in low- tax state	0	0
Individual purchase on reservation	+	0