

EXPANDING THE GLOBAL TAX BASE:

"Taxing To Promote Public
Goods: Tobacco Taxes"

Panel Session Held As Part Of
"Winning The Tax Wars: Global
Solutions For Developing
Countries Conference"

World Bank Group
Washington, D.C.
May 23-24, 2016

Summary Report

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Expanding the Global Tax Base: “Taxing To Promote Public Goods: Tobacco Taxes”

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**“Winning The Tax Wars: Global Solutions for Developing
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Summary Report¹

Objective of the Session

This panel session examined country experiences and discussed the results achieved from the application of tobacco taxation as a policy measure to reduce harmful behavior for health, and prevent ill health, premature mortality and disabilities due to tobacco-related diseases while raising fiscal revenues and reducing health care expenditures. Annex 1 includes the agenda of the session.

Introduction to the Session

(i) “Making the Public Health Case for Tobacco Taxation”

Patricio V. Marquez (Lead Public Health Specialist, Health, Nutrition and Population (HNP) Global Practice, and Co Coordinator of the Global Tobacco Control Program, World Bank Group, and Moderator of the Session)

The scientific evidence accumulated over the last five decades is clear and irrefutable: tobacco use kills. Tobacco taxation, along with measures to reduce the social acceptability of smoking, is one of the most cost effective public health measures to prevent people, particularly the youth, from becoming addicted to a product that causes ill health, premature mortality and disability, as well as high direct and indirect costs for families, communities, and society at large.

Tobacco use, and its negative health, social and economic impact, is a global problem. It is estimated that 1.1 billion people smoke globally. According to the 2015 World Health Organization (WHO) Report on the Global Tobacco Epidemic, in 2013, 21% of adults globally were current smokers – 950 million men and 177 million women.

¹ Prepared by Patricio V. Marquez, Lead Public Health Specialist, Health, Nutrition and Population Global Practice, and Co Coordinator of the Global Tobacco Control Program, World Bank Group, who organized and moderated the panel session, as part of the “WINNING THE TAX WARS: GLOBAL SOLUTIONS FOR DEVELOPING COUNTRIES CONFERENCE” organized by Blanca Moreno-Dodson, Lead Economist, Global Taxation Team, Governance Global Practice, World Bank Group.

Tobacco use is a leading global disease risk factor and underlying cause of ill health, preventable death, and disability. It is estimated to kill more than 5 million people each year across the globe. If current trends persist, tobacco will kill more than 8 million people worldwide each year by 2030, with 80% of these premature deaths taking place in the developing world.

The 2015 World Health Organization (WHO) report on tobacco taxation raises a troubling question for policymakers across the world: If, as shown by scientific evidence, tobacco is a leading global disease risk factor, why then are so few governments levying appropriate levels of tax on cigarettes and other tobacco products to raise prices and reduce consumption?

The importance of this question is accentuated by the widely accepted fact that raising taxes on tobacco products is one of the most cost-effective measures to reduce consumption of products that kill. Besides the potential health benefits of tobacco taxation, this policy measure could help broaden the tax base of countries and generate additional revenue to support budgetary capacity to finance priority investments and programs that benefit the entire population. Indeed, as recognized in the **“Financing for Development Action Agenda”** that was approved by the Heads of State and Government and High Level Representatives of countries in Addis Ababa, Ethiopia in mid-July 2015 at the Third International Conference on Financing for Development, and endorsed in September 2015 at the United Nations General Assembly (UNGA) as part of the Sustainable Development Goals (SDG) to be achieved by 2030, price and tax measures on tobacco can be not only effective and important means to reduce tobacco consumption and health care costs, but represent a revenue stream for financing for development in many countries.

Findings in the WHO report show that while only 33 countries impose taxes that constitute more than 75% of the retail price of a pack of cigarettes—the taxation level recommended to have an impact on consumption—most countries that do tax tobacco products have extremely low tax rates. And some countries do not have a special tax on tobacco products at all.

Given this situation, what can be done to make the case and encourage governments to look at accumulated evidence worldwide, and not simply the tobacco industry’s arguments, and to use tax policies to increase the retail price of tobacco products as one of the best available public health policy measures?

If we do not want to be passive spectators to the unhindered growth of this threat to global health, then political will at the highest levels of government needs to be galvanized, coupled with sustained support from civil society and international organizations. This is required not only to shine a light upon this deadly but entirely preventable health risk, but more importantly, to promote effective and sustained action to deal with it.

The **World Bank Group's Global Tobacco Control Program** supports governments to look at accumulated country evidence and use tax measures to increase the retail price of tobacco products as one of the best available public health policy measures.

Some important lessons from international experience about how to effectively implement tobacco tax policy to achieve public health objectives can be adopted and adapted in policy dialogue and operational support to countries. Such lessons include (World Bank, 1999; Sunley, 2009; WHO Global Tobacco Report 2015; IMF 2016):

- While nearly all countries tax tobacco products, an excise tax is the most important type of tobacco tax, since it applies uniquely to tobacco products and raises prices relative to those of other goods and services.
- Simpler tobacco tax structures are more effective than complex (tiered) ones which are difficult to administer and can undermine the health and revenue impacts of tobacco excise taxes.
- Use of specific and uniform excise taxes enhances the impact of tobacco taxation on public health by reducing price gaps between premium and lower-priced alternatives, which limits opportunities for users to switch to less-expensive brands in response to tax increases. Taxing all tobacco products comparably reduces incentives for substitution.
- Ad valorem taxes are difficult to implement and weaken tax policy impact. Since they are levied as a percentage of price, companies have greater opportunities to avoid higher taxes and preserve or grow the size of their market by manufacturing and selling lower-priced brands. This also makes government tax revenues more dependent on industry pricing strategies and increases the uncertainty of the tobacco tax revenue stream.
- Specific excise taxes need to be adjusted for inflation to remain effective, and tax increases should reduce the affordability of tobacco products. In many countries, where incomes and purchasing power are growing rapidly, large price increases are required to offset growth in real incomes.
- Strong tax administration is critical to minimize tax avoidance and tax evasion, to ensure that tobacco tax increases lead to higher tobacco product prices and tax revenues, as well as reductions in tobacco use and its negative health consequences.

- Regional agreements on tobacco taxation can be effective in reducing cross-border tax and price differentials and in minimizing opportunities for individual tax avoidance and larger scale illicit trade.

Panel Presentations and Discussion

The first part of the session included two presentations that provided an overall framework for understanding the nature and characteristics of tobacco use and its negative social impact. The second part of the session focused on country experiences on the adoption of tobacco tax policy measures, the results generated, and lessons learned.

A Framework for Discussion

(ii) “Phishing for Phools: “The Economics of Manipulation and Deception”

George Akerlof (2001 Nobel Prize Laureate in Economics and University Professor at Georgetown University)

The challenge posed by tobacco use globally becomes clear by understanding insights from the **economics of manipulation and deception**.

Prof. Akerlof explained that ever since Adam Smith, the central teaching in economics has been that free markets provides us with material well-being, as if by an invisible hand. But this fundamental insight in economics is challenged by the fact that markets harm as well as help us. As long as there is profit to be made, sellers will systematically exploit our psychological weaknesses and our ignorance through manipulation and deception. That is, rather than being essentially benign and always creating the greater good, markets are inherently filled with trick and traps and will “phish” us as “phools.”

In regards to human behavior, the job of psychologists is to ferret out our psychological weaknesses or susceptibilities. In a free market equilibrium, if we have some weaknesses, they will be exploited as long as there is a profit to be made. In free competitive markets, we are free to choose, but also “free to phish.”

The four “we-could-not possibly-wants” are personal financial insecurity, financial/macroeconomic instability, ill health, and bad government. In significant ways, sellers play to our weaknesses. They are *“phishing for phools.”* *“Humans think in terms of stories, and decisions are consequently determined by the stories we tell ourselves. Advertisers use this to their advantage by “graph[ing] their story” onto ours, and thereby influencing the decisions we make—in this case, to get us addicted to tobacco use, particularly teenagers and low-income people.”*

This insight could also be used to promote tobacco control. An example of this is the **1964 United States Surgeon General’s Report**. The story told was that “smoking is stupid.” This led to free airtime and bans on indoor smoking in the United States. The arsenal of effective consumer protection regulations that have contributed to reduce the social acceptability of smoking also includes advertising bans, smoke-free public spaces, and restricting sales to minors. In the United States as mandated to the U.S Food and Drug Administration (FDA) by the 2009, **“Family Smoking Prevention and Tobacco Control Act,”** regulatory agencies have authority to regulate the manufacture, distribution, and marketing of tobacco products, including e-cigarettes, like any other drug.

Another recent example is Australia’s 2012 legislation that was adopted to reduce the appeal of smoking by restricting the use of logos, colors, brand images, or promotional information on packaging other than brand names and product names displayed in a standard color and small font below hard-hitting warnings depicting the negative health consequences of smoking. In the two years following the law, tobacco consumption declined 12.8%, which some have attributed, in part, to the legislation.

Other countries are starting to follow Australia’s example. Similar regulations approved in France and the United Kingdom are set to begin implementation in 2016, and they are under formal consideration in several other countries across the world. Uruguay and Thailand already mandate that at least 80% of front and back of the packaging be covered with graphic health warnings. And Mauritius leads Africa in terms of requirements for tobacco packaging and labelling.

Cigarette taxes also play an important role in tobacco control. Taxing tobacco leads to better health, increased revenues, reduction in health costs, and protection of the lives of loved ones. And, “the role of stories in all of this is that they legitimate the higher taxes and make them collectible, and as well as promote political and social acceptance of other regulatory measures to control tobacco use.”

(iii) “Paying the Tab” The Costs and Benefits of Tobacco and Alcohol Control

Philip Cook (Professor of Public Policy and Economics at Duke University and former Director of Duke University’s Sanford Institute of Public Policy)

High excise taxes on tobacco and alcoholic beverages are not an attractive source of revenue unless they are effective in reducing use and abuse. Why? Such taxes could be regressive by the usual standard, and the high prices that result could constitute a particular burden on the poor and often disabled heavy users.²

That would be a dubious proposition if usage were completely insensitive to prices. Hence, high taxes must be justified by evidence that “they are effective in reducing abuse and improving the public health.”

Making that case persuasively is not easy. In the past, most experts on smoking and alcohol abuse did not believe that prices mattered, nor did the public. For alcohol abuse, for example, the dominant school of thought was that the main problem was alcoholism, and that alcoholism was an addiction characterized by loss of control. It stood to reason that addicts would find a way to drink their fill even if prices went up. A tax amounting to, say, an extra dime a drink, was not going to make any difference to people who were already suffering great personal losses for the sake of sustaining their habit. The primary effect of a high tax would be to make their difficult lives even more so.

This argument has intuitive appeal but is incorrect in important ways. First, the problem of alcohol abuse is not synonymous with alcoholism. Youths and other non-alcoholic drinkers who get drunk occasionally can do a lot of damage, as reflected in statistics on highway safety, injuries, violent crime, domestic violence, and even death by alcohol poisoning or ethylic coma.

Second, even if the direct effect of prices are on the consumption habits of relatively moderate drinkers, heavy drinkers can be affected indirectly. There is good evidence that drinking occurs in a social context, and that drinkers across the spectrum influence each other. So if alcohol prices can affect the drinking patterns at the median, then the upper tail of the distribution will shift inward. That is to say, there will be a reduced prevalence of heavy drinking.

There is no need to just speculate on these matters – the so-called “laboratory of the states” in the United States, for example, provides strong evidence. That is, over the past 20 years, there has been scores of cases in

² Of course, it could be argued that it is simply “fair” for the smoker or drinker to compensate the public for negative externalities of their use. But “fairness” in that regard assumes that the bad habits are a choice, freely made..

which states increased their alcohol excise taxes. Those cases could be seen as trials in a sort of natural experiment, with states that did not change their tax as the control group. The assessments done utilized administrative data on alcohol sales and health-related outcomes, so not to rely on survey data -- which are always suspect when it comes to drinking and smoking.

The assessments found that an increase in the state tax consistently resulted in a reduction in tax-paid sales per capita. That was a first step, but not enough, because skeptics could say that some drinkers were avoiding the higher tax by buying their booze in neighboring states. It is also possible that only the moderate drinkers were cutting back, so that the reduction had little effect on the amount of alcohol-related harm.

So, in addition to analyzing sales data, the assessment also analyzed the effect on the cirrhosis mortality rate. Cirrhosis mortality is a good indicator of the prevalence of long-term heavy drinking, and in particular alcoholism. What was found was the same pattern as for sales -- cirrhosis mortality dropped when taxes went up. In other words, higher prices postponed or prevented their deaths due to liver disease. That was direct evidence that the tax reduced the consumption of heavy drinkers and a clear indication that the tax was effective with one of the target populations.

In the 35 years since the initial period of study, there have been numerous studies of the effects of alcohol tax changes, for a variety of outcomes -- injury mortality, violent crime, STDs, suicide, domestic violence, and so forth. The results are consistently positive. One of the recent studies found that when the United States Congress doubled the federal beer tax in 1991, the result in just the first year was to save 7,000 lives.

These days, most experts are on board with the idea that higher alcohol taxes tend to reduce alcohol abuse and dependence, and the costly consequences thereof. But that conclusion remains a tough sell with the public and the politicians, especially given the alcohol industry's lobbying and disinformation campaign. And since 1991 the United States Congress and most of the states have little to legislate in this area, letting inflation gradually erode the value of alcohol excises. In fact, inflation has in effect repealed the 1991 legislation that doubled the federal beer tax.

Tobacco taxes have been a very different story in the United States in recent years. The politics changed in 1998 with the Tobacco Master Settlement Agreement (MSA), originally between the four largest United States tobacco companies (Philip Morris Inc., R. J. Reynolds, Brown & Williamson and Lorillard -- the "original participating manufacturers", referred to as the "Majors") and the attorneys general of 46 states, which settled the states' Medicaid lawsuits

against the tobacco industry for recovery of their tobacco-related health-care costs. Large increases in federal and state tax rates have generated many billions in extra revenues despite the resulting decline in smoking. It is widely acknowledged that much of that decline has been induced by the increased post-tax tobacco prices.

Interestingly, some of the best evidence that higher taxes are effective in curtailing tobacco use is similar to the evidence for alcohol abuse-- it comes from the "laboratory of the states" in the United States, and in particular analysis of data generated by many instances in which state legislatures changed tobacco taxes. While there is no doubt that nicotine addiction plays a powerful role in smoking cigarettes, higher prices appear helpful in discouraging initiation and encouraging cessation.

Alcohol and tobacco differ in one important respect, namely the public health goal. For tobacco, the best answer is abstinence -- there is no safe level of smoking. But for drinking, it is moderation, where some scientists actually believe, as many people do, that a drink or two a day is good for the health. As a result, one objection to the alcohol excise tax is that even if it is an effective public health measure, it is poorly focused, in effect punishing all drinkers regardless of whether their drinking is problematic.

But in fact, the alcohol tax is surprisingly well focused on negative externalities of drinking. Consider a proposed increase of 10 cents per drink, which would amount to an annual payment of US\$60/capita on average. But, that average, conceals a huge range. One-third of adults in the United States abstain, and they would obviously pay nothing if the tax were increased. Most drinkers do not drink much, and for them the tax would be just a few extra dollars per year. The bulk of the extra revenue would come from the top 15% of the drinkers (who average 8 or 9 drinks per day); they consume 75% of all the alcohol and hence would pay 75% of new tax. That is also the group that accounts for most of the alcohol-related damage. Hence the claim that it is well targeted.

If the extra revenue were returned directly to the public as a sort of uniform dividend, most adults would receive more than they paid in. And most everyone would benefit from reduced drinking and abuse, starting with the financial benefit of reduced insurance rates, and a reduced threat of violent crime.

In conclusion, the case for higher excise taxes begins with the evidence that they are effective in controlling excess use. While experts are now in agreement that alcohol and tobacco excises are powerful public health instruments, we are a long way from persuading the public of that truth, especially for alcohol. While we all know much of the context on the rationale for taxing tobacco and alcohol, we also know that the key to change is action at a country level.

Country Experiences

(iv) “Six lessons from the U.S. Experience with Tobacco Taxes”

Jason Furman (Chairman of the United States President’s Council of Economic Advisers)

When people think about what the Obama Administration did to improve public health, they often think immediately of the Affordable Care Act (ACA), and appropriately so. The ACA is undoubtedly the single most important health-related legislation of not just the Obama Administration, but of recent decades. But this Administration has also taken many other steps that are improving Americans’ health. The legislation that President Obama signed in his first month in office in 2009, which raised the Federal cigarette tax from \$0.39 per pack to approximately \$1.01 per pack, was his most important public health legislation.

Plausible estimates suggest that this increase in cigarette taxes will reduce the number of premature deaths due to smoking by between 15,000 and 70,000 for two young population cohorts (12-17 and 18-25). The health benefits will be progressively distributed, representing a far larger fraction of income for lower-income families, and even more so when counting the benefits of the expansion of children’s health insurance coverage that the increase funded as discussed below.

It is important to understand that these tax measures complement a range of other steps to reduce the threat to public health posed by tobacco products. In 2009, President Obama signed legislation providing the Food and Drug Administration (FDA) with authority to regulate tobacco products, and requiring FDA approval of certain new tobacco products, building on a series of steps that began with the U.S. Surgeon General’s 1964 report on the harms of tobacco.

The ACA requires health insurance to cover tobacco counseling and interventions without cost sharing, and requires that Medicaid programs cover cessation services for pregnant women. With funding from the ACA’s Prevention Fund, the United States Centers for Disease Control and Prevention (CDC) launched an aggressive, graphic media campaign highlighting the health and physical impacts of smoking called Tips from Former Smokers. The FDA finalized in May 2016 a rule extending its regulatory authority to all tobacco products, including e-cigarettes, cigars, hookah tobacco, and pipe tobacco.

Externalities, Internalities and Addictive Goods

Before diving into the estimates, it is useful to briefly discuss the underlying theory and motivation, because it affects not only the assessment of past policies but also the analysis and motivation for future ones. Tobacco imposes a number of costs on society that can be understood through the traditional economic concept of “externalities,” including the negative health and amenity effects of second hand smoke, the large costs to children and society more broadly of low birthweight babies that happen when a mother smokes during pregnancy, and the additional health costs borne by all of us to help care for smokers.

But smoking has its largest effects on smokers themselves, imposing a cost of about US\$25 to US\$50 or more on someone in terms of shorter life expectancy and other negative health effects. A “rational” person should have an additional pack of cigarettes if the benefit to him or her exceeds at least \$25 plus the relatively modest cost of producing the pack of cigarettes itself.

In most cases it could be assumed that government policy should address externalities, but that rational consumers would fully take into account all of the internal costs and come to the optimal decision with no further need for public policy intervention. However, in the case of tobacco use, there are a number of reasons to believe this simplistic analysis is incorrect. First, and perhaps most importantly, is what economists call the present-bias problem. Across a wide range of domains, we have evidence that people overweight the present at the expense of the future. In the case of tobacco use, which has large costs that appear many years in the future, this leads to smoking at rates above the socially optimal.

The highly addictive nature of tobacco greatly exacerbates this problem since, once people have started smoking, it is difficult to stop even if they decide they want to. Evidence suggests that overly optimistic assessments of one’s ability to quit also play a role in smoking initiation. In surveys, far more teenagers who smoke report that they will quit than those who ultimately do. Teenagers may excessively discount the future health costs assuming that they will be able to quit smoking when, in reality, quitting is much more difficult than they think.

When individuals do not take into account costs they impose on themselves for whatever reason, economists refer to it as an “internality.” Finally, although we have made major strides in increasing public awareness of the health risks of smoking, traditional informational shortcomings may also play a role in smoking initiation.

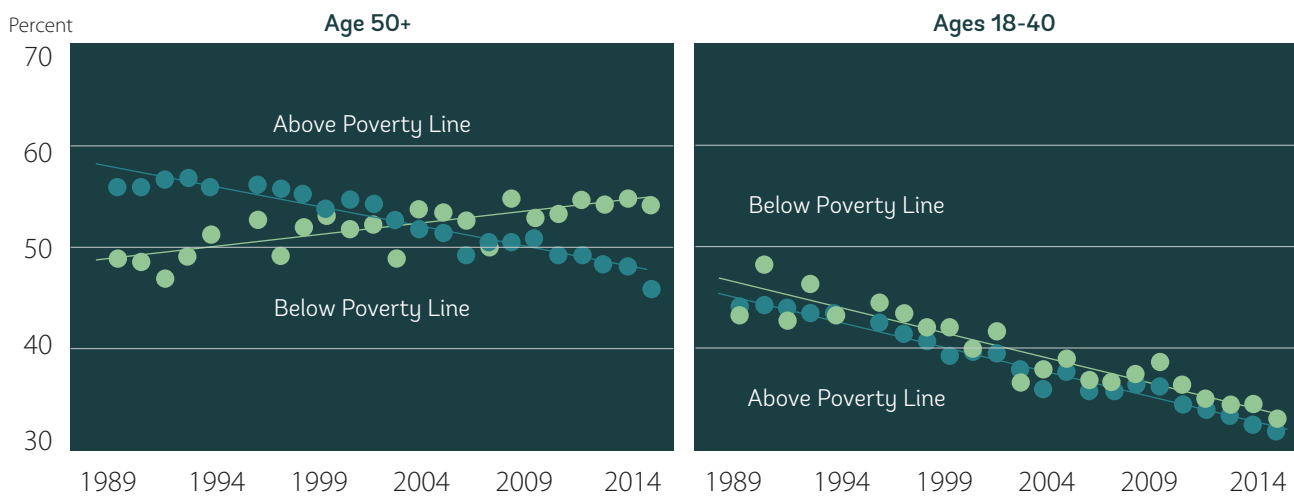
Lesson #1: Smoking Plays a Major Role Not Just in Mortality but in the Inequality of Mortality

There is substantial concern in the United States and around the world about growing inequality. Recently a number of scholars have advanced the stark and troubling thesis that the United States is witnessing a dramatic increase not just in income inequality but also in life expectancy inequality (Chetty et al. 2016, National Academies 2015). The truth is a little more complicated than that, however, and smoking plays an important role in the story.

First, the broader public health story. Age-adjusted death rates in the United States have fallen sharply since the 1950s, with particularly notable declines in death rates from heart disease and stroke, among others, as shown in Figure 1 (CDC 2016). Decreasing death rates have led to a substantial increase in period life expectancies at birth, from 68.2 years in 1950 to 78.8 years in 2013. But while as all-cause death rates were falling rapidly, death rates for lung cancer were rising rapidly, tripling from 1950 to 1990. Since 1990, however, death rates for lung cancer have dropped by nearly one-third. This result partly reflects the success of the sustained campaign to combat smoking waged in the United States over the last half century, a phenomenal public health achievement.

The data on mortality inequality tells a more nuanced tale. Troublingly, for those who have reached middle-age, the gap in life expectancy between higher income individuals and lower income individuals has grown substantially. At the same time, mortality rates early in life are actually falling more quickly in low-income areas than in high-income areas (Currie and Schwandt 2016).

Figure 1: Percent that Ever Smoked by poverty Status, United States, 1991-2014



Source: NHIS and CEA calculations following Currie and Schwandt (2016).

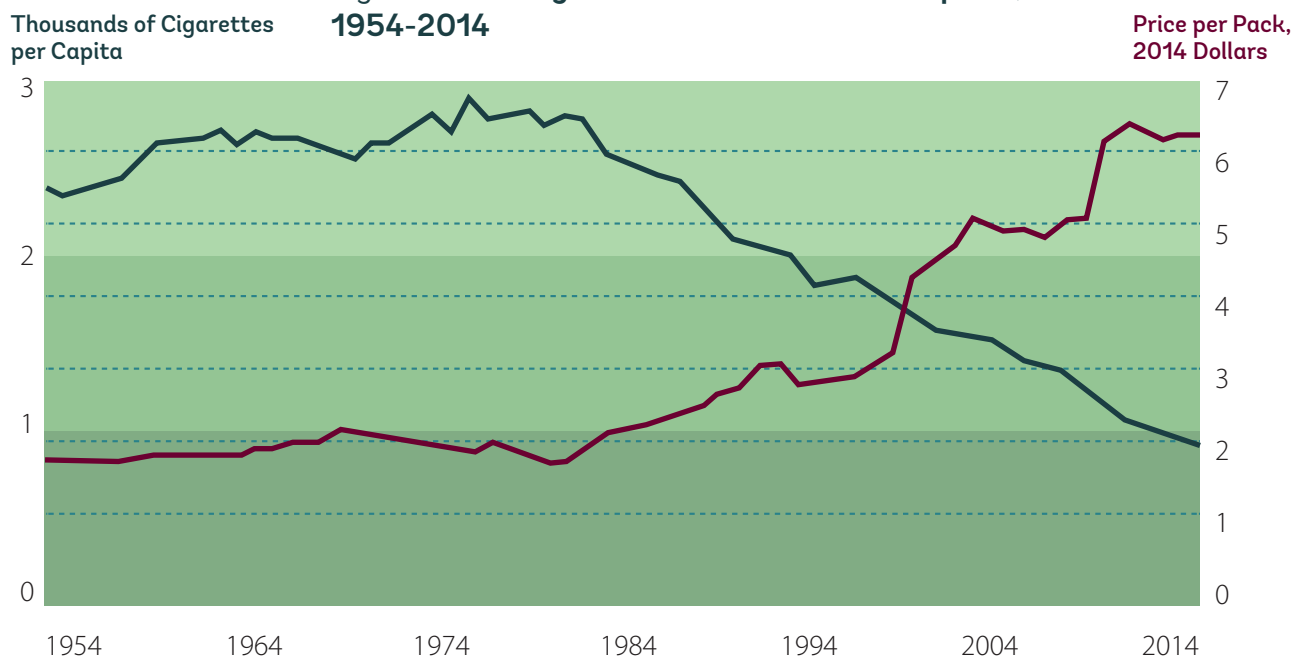
Differing trends in smoking rates by income are likely one important factor driving differences in the evolution of mortality rates for the young and old. The share of the population 50 and older “below” the poverty line that has ever smoked has grown over the last twenty-five years while the share of the population 50 and older “above” the poverty line that has ever smoked has decreased. In contrast, smoking rates for the population ages 18-40 have declined substantially regardless of poverty status, and smoking rates for people living in poverty are only slightly higher than for those not living in poverty.

Lesson #2: Price Plays an Important Role in Smoking

From 1954 to 1983, inflation-adjusted cigarette prices were essentially flat, coinciding with an increase in per capita cigarette consumption. Since 1983, cigarette prices have increased rapidly and, in parallel, consumption has plummeted (Figure 2). Of course, these changes were driven by a variety of factors in addition to price, including public education campaigns, access to approved cessation tools and other factors, many of which have been the subject of extensive research.

Research into the relationship between cigarette prices and smoking typically estimates elasticities of demand: the percentage decrease in cigarette demand that would result from a one percent increase in price. However, due to the addictive nature of tobacco products, we are concerned with more than the simple quantity of cigarettes consumed. For example, some research examines the impact of prices on smoking initiation and other studies look at the impact of price on quit attempts or the fraction of the population that smokes.

Figure 2: U.S. Cigarette Prices and Consumption, 1954-2014



Source: Orzechowski and Walker (2015); Bureau of Labor Statistics; CEA calculations.

Meta-analyses of the relationship between tobacco prices and use suggest that the overall elasticity of demand for adults lies between 0.3 and 0.7 (CBO 2012, IARC 2011, Gallet and List 2003, Chaloupka and Warner 2000), that is to say that a 10 percent increase in cigarette prices will lead to a 3 to 7 percent decline in consumption. These meta-analyses find that about half of this reduction comes from existing users smoking less (the intensive margin) and about half comes from a decline in the number of smokers (the extensive margin).

Though subject to some debate, a number of studies suggest the relevant elasticities for youths and young adults are higher than those for adults, which is to say that youths and young adults respond relatively more to prices.

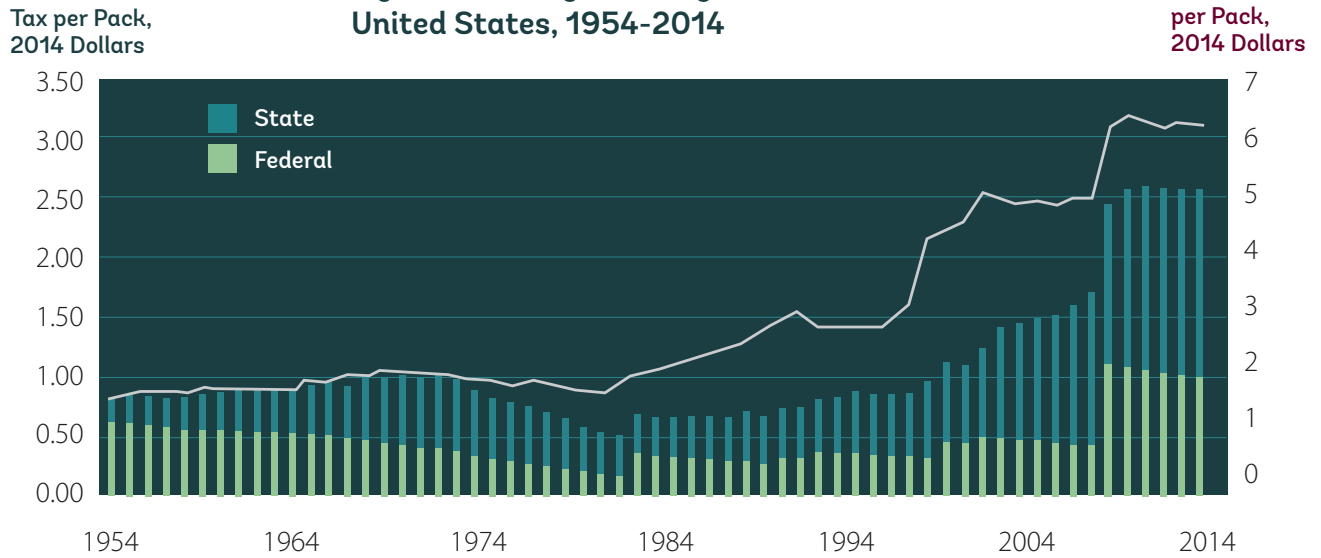
Lesson #3: Cigarette Taxes Play an Important Role in Cigarette Prices

U.S. cigarette taxes fell sharply in inflation-adjusted terms through the 1970s and early 1980s as inflation eroded their value (Figure 3). Federal cigarette taxes were increased in 1983, but remained well below their inflation-adjusted value from decades before. However, around 2000, cigarette taxes took on an increased role as part of tobacco and health policy, and tax rates increased sharply in the first decade of this century, driving the substantial increase in cigarette prices since then. In addition, the Master Settlement Agreement reached in 1998 between the Attorneys General of forty-six States and the District of Columbia and the four largest tobacco companies included substantial annual payments to the Government that function like a further tax on tobacco.

Lesson #4: Cigarette Taxes Have Large Aggregate Benefits for Public Health

By increasing cigarette prices, cigarette taxes substantially reduce smoking rates and generate large improvements in public health. This finding is borne out both by the body of existing research on the topic and the experience of the 2009 tobacco tax increase, which are discussed in some detail below.

Figure 3: Average U.S. Cigarette Taxes and Prices, United States, 1954-2014



Source: Orzechowski and Walker (2015); Bureau of Labor Statistics; CEA calculations.

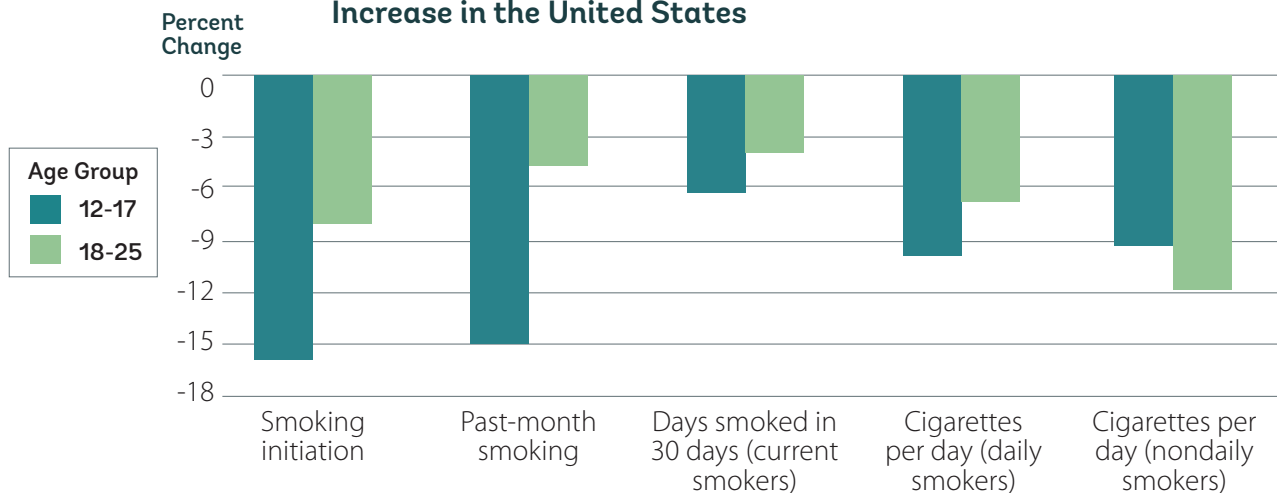
Two studies that examine the impact of the most recent increase in Federal tobacco taxes in 2009 find resulting reductions in smoking among youths. The more recent study (van Hasselt et al. 2015) concluded that smoking initiation for youths age 12-17 fell more than 15 percent and initiation for young adults' 18-25 fell by 8 percent (Figure 4). Past-month use likewise fell by about 15 percent for youths 12-17 and by about 5 percent for young adults 18-25. While all of these results are economically significant, the estimated effect on smoking initiation for young adults 18-25 is not statistically significant. The other study ((Huang and Chaloupka 2012) found similar decreases, concluding that the percentage of 8th, 10th, and 12th grade students who smoked in the past month fell by between 10 and 13 percent. Two studies that examine the impact of the most recent increase in Federal tobacco taxes in 2009. Both of the studies examining that tax increase find resulting reductions in smoking among youths. The more recent study concluded that smoking initiation for youths age 12-17 fell more than 15 percent and initiation for young adults' 18-25 fell 8 percent (Figure 4, van Hasselt et al. 2015). Past-month use likewise fell by about 15 percent for youths 12-17 and fell about 5 percent for young adults 18-25. While all of these results are economically significant, the estimated effect on smoking initiation for young adults 18-25 is not statistically significant. The other study found similar decreases, concluding that the percentage of 8th, 10th, and 12th grade students who smoked in the past month fell by between 10 and 13 percent (Huang and Chaloupka 2012).

The findings from these recent studies are broadly consistent with the results from the earlier literature. Adapting the estimates from these two studies, an analysis of cigarette taxes and smoking by the U.S. Congressional Budget Office (CBO 2012), and estimates from a study of youth smoking by Carpenter and Cook (2008), the evidence suggests that the 2009 Federal cigarette tax

increase could have plausibly reduced the number of smokers in a cohort of 18 year-olds by between 45,000 and 220,000 people, roughly 3 to 15 percent.

We can also apply estimates of the health impacts of smoking, the frequency and success of quit attempts, and so forth, to the estimates presented above on the impact of the cigarette tax increase on smoking rates to obtain an estimate of the health benefits portion associated with the tax increase. For these calculations, we can adopt an assumption that roughly one-third of young smokers die prematurely due to smoking (U.S. Surgeon General 2014). Based on these assumptions, the 2009 cigarette tax increase plausibly reduced the number of premature deaths due to smoking in each cohort (12-17 and 18-25) by between 15,000 and 70,000.

Figure 4: Changes in Smoking Behavior Due to 2009 Tax Increase in the United States



Source: van Hasselt et al. (2015).

We are unlikely to have reached the optimal level of tobacco taxation, especially when the average combined Federal and State tax is about US\$2.50 per pack and estimates of the harm associated with smoking a pack of cigarettes range from about US\$25 to US\$50 or more per pack (although consumers take some of the costs of this harm into account in making their decisions). To this end, President Obama has proposed to further raise the Federal cigarette tax from US\$1.01 to US\$1.95 per pack and to index it to inflation going forward (along with proposing to harmonize tax rates on different tobacco products). This increase in tobacco taxes is part of an effort to fund high-quality early education for all Americans, a policy that itself would have enormous economic benefits (CEA 2016). The proposal would reduce the number of premature deaths due to smoking in a youth cohort by between about 10,000 and 50,000 based on similar assumptions used to analyze the 2009 increase.

Lesson #5: Tobacco Taxes Disproportionately Benefit Lower-Income Households

Tobacco taxes are sometimes criticized for being regressive, but this criticism is backward. The health benefits of tobacco taxes far exceed the increase in tax liability, and they accrue disproportionately to lower-income households. Moreover, it is important to also evaluate what the additional revenue raised by the tobacco tax may be used for. The most recent increases, enacted in 1997 and 2009, were used to create and expand a very progressive children's health insurance program. The Administration's proposal to further increase tobacco taxes would finance a highly progressive high-quality early education proposal.

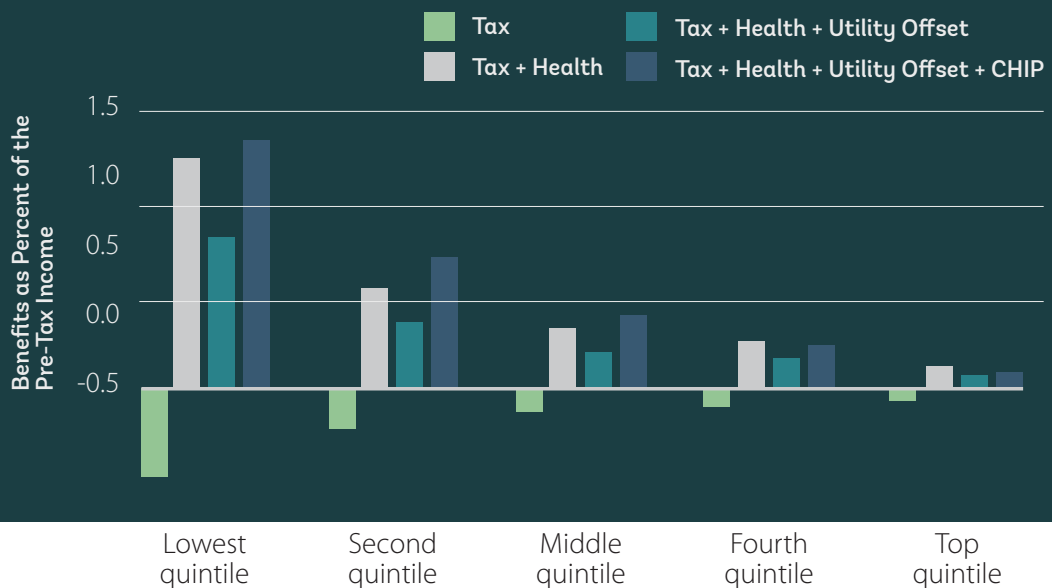
Welfare and Distributional Impact of the 2009 Tobacco Tax Increase

Figure 5 provides an illustrative estimate of the distributional impacts of the 2009 tobacco tax increase based on a plausible set of assumptions. However, we would not place too much weight on any one number; the point here is to illustrate why applying standard distributional analysis to tobacco tax changes go so badly awry.

The illustrative distribution is computed by allocating the burden of tobacco taxes according to the distribution of tobacco taxes reported in Rosenberg (2015), allocating US\$37.5 billion in health benefits proportional to the tax burden, allocating a US\$9.4 billion utility offset proportional to the health benefits (and thus also proportional to the tax burden), and allocating CHIP benefits equal in value to the tax increase proportional to the distribution of children with CHIP coverage in the March CPS.

In particular, the blue bars in Figure 5 portray the traditional finding that tobacco tax increases, by themselves, are regressive—leading to the largest percentage reductions in pre-tax incomes for the lowest-income households. But the picture changes markedly when we count the benefits of reduced mortality and morbidity as shown in the second set of estimates in orange. These benefits are strongly progressive, for two reasons. First, smoking is more prevalent at lower incomes, so the reductions in smoking are larger for those groups (not accounting the fact that they may also be more sensitive to price increases, a factor that is not included here). Second, these estimates assume the dollar value of the health benefit does not vary with income and thus is proportionately more important to lower-income households, although other assumptions on this question are also possible.

Figure 5: Illustrative Distribution of the 2009 Tobacco Tax Increase in the United States



Note: Lower estimate for van Hasselt et al. (2015) is based on results for 18-25 year-olds; higher estimate is based on results for 12-17 year-olds. Source: Huang and Chaloupka (2012); van Hasselt et al. (2015); CBO (2012); Carpenter and Cook (2008); CEA calculations.

The third set of estimates in grey takes into account a “utility offset” reflecting the fact that people who stop smoking may lose some of the utility they would otherwise have derived from smoking. If people were fully rational, this utility offset would roughly match the internal health costs, but, as discussed above, this is not the case with tobacco, so these estimates assume an illustrative 25 percent offset. The 25 percent offset, reflecting the high end of estimates in a recent analysis conducted for the U.S. Department of Health and Human Services (HHS 2015), is merely illustrative and arguably very high for a good with addictive properties. Moreover, there are good arguments that in the case of people dissuaded from taking up smoking in the first place, this offset could be much smaller and possibly zero. The point is to show that even with this large offset the tobacco tax increase is still highly progressive, albeit slightly less so.

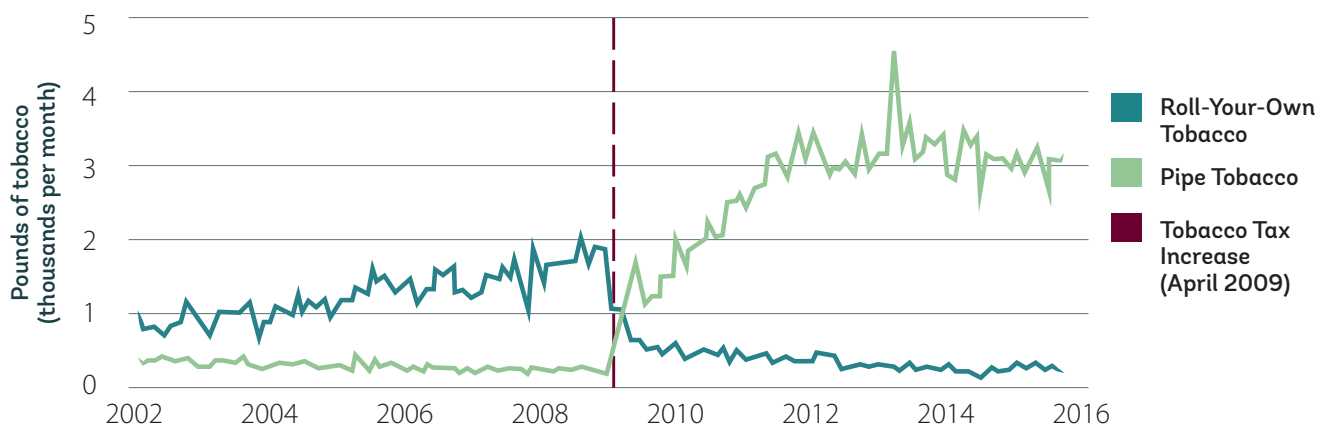
Finally, the last set of estimates incorporates not just the direct effects of the tax, but also the use of the revenue it generates—in this case expanding health insurance coverage for low- and moderate-income children. Accounting for this coverage expansion adds to the progressivity of the overall legislative package.

The bottom line is that these estimates are positive for all groups and large on average for low-income households.

Lesson #6: It is Really Important to Tax Similar Tobacco Products at Similar Rates

One often overlooked aspect of tobacco taxation is the importance of harmonizing the tax rate on different tobacco products. Currently, there is a wide disparity in tax rates in the United States between tobacco products (Figure 6). For example, pipe tobacco is taxed at a rate of less than \$3 per pound while roll-your-own tobacco is taxed at a rate of nearly \$25 per pound. These disparities can lead to substitution between tobacco products and can mitigate the positive health effects of tobacco tax increases.

Figure 6: Sales of Roll-Your-Own and Pipe Tobacco, United States, 2002-2016



Source: Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau.

The problem is that if you raise the tax on one product without raising it on another, consumers can substitute to the cheaper product, potentially undoing some of the public health benefit the tax was intended to encourage. This is not just a theoretical possibility but visible in the data. For example, consider the patterns in the sale of roll-your-own and pipe tobacco and in small and large cigars following the enactment of the 2009 tobacco tax increase. Prior to the law’s enactment, the tax rates on roll-your-own tobacco and pipe tobacco were the same. After the law’s enactment, the tax rate on roll-your-own tobacco was over US\$20 per pound higher than the tax on pipe tobacco. And, as you can see in the figure below, sales of roll-your-own tobacco plummeted after the law, and sales of pipe tobacco increased by a factor of ten. Similarly, as the law disadvantaged modestly priced small cigars relative to modestly priced large cigars, sales of small cigars plummeted and sales of large cigars rose. In fact, many manufacturers of small cigars slightly increased the weight of their product to classify it as a large cigar (GAO 2012).

In the extreme case where different tobacco products are perfect substitutes, a tax increase on one product alone would have no impact on overall consumption and resultant health harms. In reality, of course, substitution is imperfect but still larger than one might expect. When President Obama's proposal was being developed to increase and harmonize taxes on tobacco, economists in the Treasury Department estimated that the reduction in tobacco consumption under a harmonization proposal would be nearly two and a half times the size it would be under an increase in the cigarette tax alone that raises comparable revenue. This implies additional health benefits of more than \$100 billion over ten years. This is not just a technical detail.

(v) “China’s 2015 tobacco tax adjustment and initial impact”

Rose Zheng, (Economics and Tax Professor, School of International Trade and Economics (SITE), University of International Business and Economics (UIBE), Beijing, China, and Director of China’s WHO Tobacco Control Collaboration Center)

China is the leading producer and consumer of tobacco in the world, with 44% of the world’s cigarettes consumed in China. About 300 million people, or 30% of the total population of China smoke, with a 53% prevalence of tobacco smoking among men aged 15–69, among the highest in the world.

Tobacco use is one of the top three health risk factors that have contributed significantly to the rapid growth of non-communicable diseases (NCDs) in China. Smoking is a major killer. Approximately 1 million deaths every year are caused by tobacco, despite improved access to medical care thanks to the expansion in recent years of national health insurance coverage.

In the face of this dire reality, what to do? Wait to treat people when they develop lung cancer and other tobacco-related diseases, or adopt measures to prevent the onset of disease in the first place? Governments have an obligation and the means to protect their population’s wellbeing by adopting effective fiscal and regulatory measures, in addition to providing medical care to those persons who fall ill. In that sense, 2015 may prove to be a landmark year for tobacco control in China, as the Government adopted a national tax reform on cigarettes as well as a ban on smoking in public places in Beijing and Shanghai—a ban that is proposed to be expanded across the country.

Initial assessments done by a team from WHO's Collaborating Center for Tobacco and Economics at Beijing's University of International Business and Economics (UIBE), show that the 2015 tobacco tax reform is proving to be a win-win for both fiscal and public health in China. That is, it is contributing to:

- Reducing cigarette consumption.
- Shaping cigarette market share.
- Influencing tobacco industry profit margin and hence by influencing its producing and marketing strategy.
- Increasing government's revenue.
- Changing smoker's behavior including quitting, switching up/down

2015 Tobacco Tax Reform

- Exercise tax rate at the wholesale segment was increased from 5% to 11%
- An additional specific tax of 0.1RMB (0.015USD) per pack (with 20 sticks) was introduced at the wholesale level.

The 2015 cigarette exercise tax adjustment		
	Before May 10, 2015	After May 10, 2015
At Producer price level		
Specific exercise tax (per pack)	0.06 RMB	0.06 RMB
Ad valorem tax		
>= 7 RMB	56%	56%
< 7 RMB	36%	36%
At Wholesale price level		
Specific exercise tax (per pack)	0	0.10 RMB
Ad valorem tax	5%	11%

STMA (State Tobacco Monopoly) price announcement responding to tax adjustment:

- Wholesale price has increased 6%
- STMA provincial branches can set up cigarette retail price in the province based on local market under STMA retail price guidance and at the same time need to meet the required principle that the retailer's profit margin shouldn't be lower than 10%
- Both new cigarette tax and pricing policy took effective from May 10, 2015

On 10 May 2015, 10 years after the ratification, the Chinese Ministry of Finance officially raised the tax on cigarettes, and China's State Tobacco Monopoly Administration (STMA) passed the tax on to retail price of cigarettes.

Using a tobacco tax as an instrument for tobacco control is a significant step for the Chinese government. To understand the significance of the 2015 tobacco tax policy adjustment, it is useful to understand the role of China's tobacco industry, the cigarette pricing mechanism and the tobacco tax structure in the Chinese economy (Hu, Zhang, and Zheng 2016). The Chinese tobacco industry is a government owned

national monopoly, the State Tobacco Monopoly Administration (STMA). In 2013, STMA produced more than 2.0 trillion cigarettes, which contributed 816 billion RMB (US\$130 billion), or about 6.3% of China's central government tax revenue. Owing to the importance of the tobacco economy in China, STMA has the advantage of being able to work with the central and local governments. STMA's goal is to promote the industry, even though the harmful health effects of smoking are now well known in China.

STMA is responsible for the centralized management of cigarette factories, cigarette companies and retailers, and it determines the cigarette prices. Cigarette factories decide the cigarette producer prices, cigarette companies decide the cigarette wholesale prices (the producer prices and wholesale prices need to be reported and to be approved by the State Administration of Taxation), and cigarette retailers decide the retail price of cigarettes by adding a regulated market profit margin set by STMA to the wholesale price.

The Chinese government collects five different taxes from the tobacco industry: tobacco leaf tax, value added tax (VAT), excise tax and urban construction/educational supplemental tax. The VAT is not tobacco-specific, but has a uniform rate (17%) across all products. Within these five types of taxes, only the excise tax directly influences the magnitude of the retail price of cigarettes.

Initial evidence of the impact of the 2015 tobacco tax increase

- Impact on price and market structure.** The weighted average wholesale price increased by 8.9% from 10.27RMB per pack in 2014 to 11.18RMB per pack in 2015. The average retail price increased by 10.29%, from 11.61RMB per pack to 12.81RMB per pack. However, from a global perspective, the weighted average cigarette price in China is still relatively cheap: less than US\$2 per pack on average. Also, as the low-end price categories increased more than middle and premium price categories of cigarettes, the price gaps between tiers have been reduced. This encourages smokers up-shifting from the low end categories (Class V and Class IV) to the middle and upper price categories (Class III and Class II).

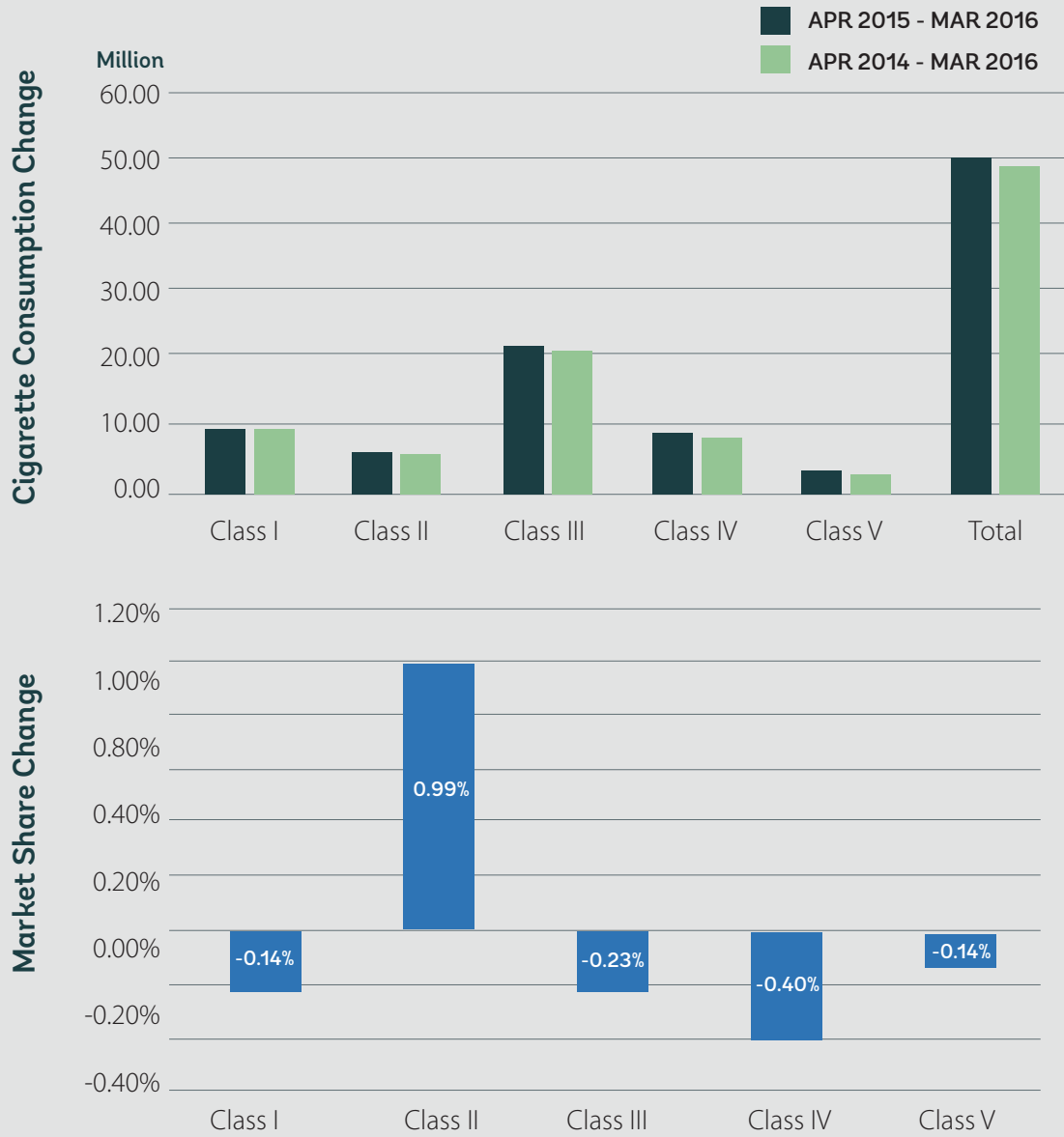
Impact on Prices								
	Class	Class I (Premium)	Class I (Average)	Class II	Class III	Class IV	Class V	Total in average
Wholesale price (RMB/pack)	2014	36.00	20.60	11.60	8.30	4.50	2.25	10.27
	2015	38.16	21.84	21.84	12.30	4.77	2.39	11.18
	Δ	2.16	1.24	0.70	0.50	0.27	0.14	0.92
	Δ%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Retail price (RMB/pack)	2014	43.00	23.00	13.00	9.50	5.00	2.50	11.61
	2015	45.00	25.00	14.00	10.00	5.50	3.00	12.81 (\$2)
	Δ	2.00	2.00	1.00	0.50	0.50	0.50	1.19
	Δ%	4.65%	8.70%	7.69%	5.26%	10.00%	20.00%	10.3%

- **Impact on tax incidence.** The sales weighted tax share as % of retail price increased from 52% in 2014 to 56% in 2015, which is still lower than WHO recommended standard of 75%. The sales weighted average excise tax as % of retail price increased by 4% from 31% in 2014 to 35% in 2015.

Tax as % of Retail Price								
	Class	Class I (Premium)	Class I (Average)	Class II	Class III	Class IV	Class V	Total in average
Total tax as % of retail price	2014	52%	55.40%	58.50%	44.82%	47.23%	53.72%	52%
	2015	55%	58.84%	61.73%	50.37%	52.22%	55.98%	56%
	Δ	3%	3.44%	3.23%	5.55%	4.99%	2.25%	4%
Total excise as % of retail price	2014	36%	38.86%	40.66%	27.47%	28.91%	33.37%	35%
	2015	39%	42%	45%	33%	34%	36%	39%
	Δ	3%	3.48%	4.07%	5.61%	5.19%	2.95%	4%

- **Impact on consumption.** For the first time since 2001, as confirmed by the State Tobacco Monopoly Administration (STMA), the volume of cigarette sales decreased by 2.36% in 2015 compared to 2014. After the 2015 tax adjustment, sales continued to decrease by 4.61% over May 2015-April 2016 compared with May 2014-April 2015, and by 5.36% between October 2015-September 2016 compared with October 2014-September 2015.
- **Impact on government tax revenue.** The Chinese government profits financially from the manufacture and sale of tobacco, as well as from tobacco taxes collected by the government. According to STMA data, the tobacco industry in China contributed 840.4 billion RMB (about US\$129.29 billion) tax revenue from tobacco products in 2015, an increase of 9% over the 2014 level. As a state-owned enterprise, it also contributed an additional 190.97 billion RMB (US\$29.38 billion) profit to the central government, plus 63.6 billion RMB (US\$9.79 billion) enterprise income tax to the central government. The 2015 tax increase, which was applied at the wholesale level rather than at the retail level, generated an additional 57.8 billion RMB (US\$8.89 billion) in excise tax at the wholesale level.
- **Impact on public health.** A preliminary estimation suggests that within 12 months followed by the 2015 tax increase, the total number of smokers would decrease by about 5 million.

Impact on consumption and market structure



Impact on Government Tax Revenue										
	Tobacco Tax & Profit	Tobacco Tax	Tobacco Industry Profit	Tax & Profit Contribution to Central Gov't	Profit Before Income Tax	Corporate Income Tax	SOE Profit Contribution Rate	SOE Profit Contribution	Add'l Contribution	Add'l Excise Contribution
	BILLION USD	BILLION USD	BILLION USD	BILLION USD	BILLION USD	BILLION USD	%	BILLION USD	BILLION USD	BILLION USD
2014	161.81	118.43	43.38	140.16	33.83	8.46	25%	6.34	6.92	
2015	175.94	129.29	46.65	168.46	39.14	9.79	25%	7.34	13.15	8.89
Δ		9%	8%	21%						

While the impact of the 2015 tobacco tax increase is generating measurable benefits, the price of cigarettes in China continues to be low and increasingly affordable for a population that enjoys rapid wage increases. Indeed, the tobacco tax rate in China is still relatively low compared to the WHO-recommended benchmark, which is 75% of the retail price--the taxation level recommended to have an impact on consumption. It is also below the rates in OECD countries such as Australia (63%), Canada (65%), New Zealand (73%), Germany (75%), France (80%), and in neighboring countries such as Thailand (66%) and Philippines (64%).

Cigarette prices in China have also not increased much during the past decade. According to the China National Statistical Yearbook, from 2000 to 2012 the price index of cigarettes rose by just 4% (year 2000=100, 2012=103.9). In contrast, food prices doubled (2000=100, 2012=195.1), the alcohol price index increased by 40% (2000=100, 2012=140.90), and the price of tea and soft drinks went up by 15% (2000=100, 2012=115.5). Therefore, the rate of increase of cigarette prices in China is way behind that of many food products (Hu, Zhang, and Zheng 2016).

Tobacco taxes must be increased regularly in order to reduce tobacco use. Otherwise, if incomes rise more quickly than inflation, the relative cost of tobacco products can actually decrease over time. This has been the case in China over the last decade as the economy has grown, incomes have increased, and tobacco products have become more affordable. China made rapid economic growth between 2000 and 2012, with an annual rate of GDP growth of more than 9%. During this period, the affordability index of cigarette consumption in China increased from 1.00 in 2000 to 1.69 in 2012, an almost 70% increase in purchasing power. As a result, cigarettes in China are now about 70% more affordable than they were in the year 2000.

If the ultimate goal is to help smokers quit and prevent the next generation from getting addicted to smoking cigarettes, then additional tobacco tax policy reforms are needed in China, especially for re-orienting the excise tax structure towards specific excise taxes at the retail level in the medium-term and towards a uniform tax system at the retail level in the long-term, because a simple and unified excise tax system that taxes all cigarettes at the same level is more appropriate for reducing smoking while at the same time leading to a more effective tax administration and higher tax revenues. Additional tax increases adjusted for inflation and growing per capita incomes are required to reduce affordability over time, and hence consumption, tobacco-related diseases, and the risk of ill health, premature mortality and disability. Also, the differential mixture of both ad valorem and specific excises provides incentives for price manipulations to the extent that manufacturers can alter their pricing or production behavior to avoid higher tax liabilities.

If done, as estimated in a recent study, a 50% increase in tobacco price through excise tax would lead over 10 years to 5.3 million years of life gained, and reduce expenditures on tobacco-related disease treatment by US\$2.4 billion (Verguet, et al 2015).

Looking into the future, as evidenced in a 2011 World Bank study “Toward a Healthy and Harmonious Life in China: Stemming the Rising Tide of Non-Communicable Diseases”, with stronger tobacco control measures including steeper tobacco tax increases, the rapid rise in China's non-communicable diseases can be halted, resulting in major gains for people's health and the country's social and economic development.

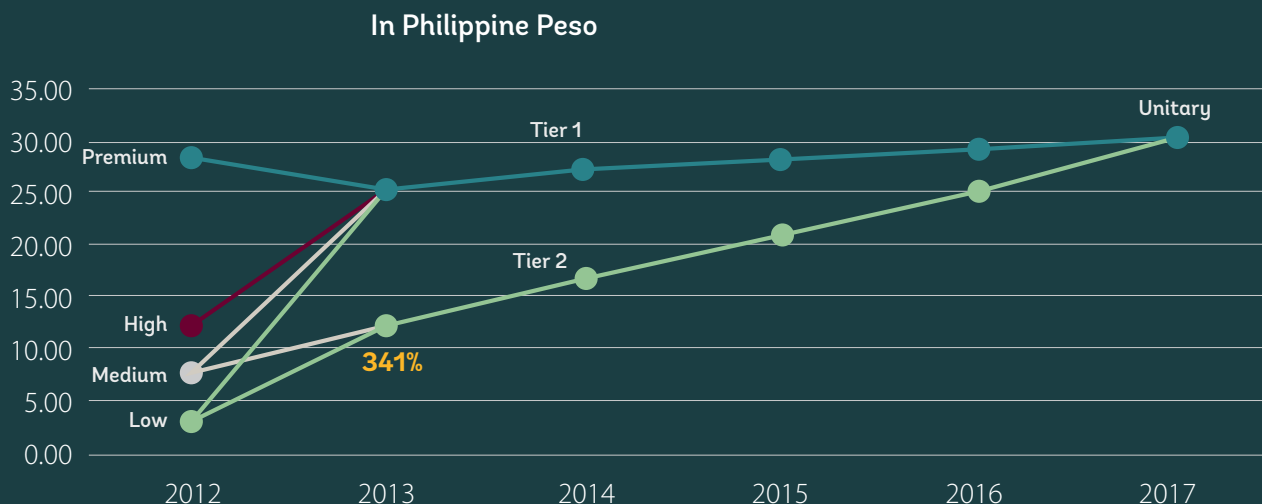
(vi) Philippines's “Sin Tax Reform Law”

Jeremias Paul (former Under Secretary of Finance in the Philippines, and currently Coordinator of the Tobacco Taxation Unit at WHO)

Philippines is among the top smoking countries in Southeast Asia, and tobacco taxes and prices are among the lowest in the world. Strong tobacco lobby hindered previous tobacco excise tax reform efforts. President Aquino promised “no new taxes” during his campaign for office, the Philippines had ratified the WHO Framework Convention on Tobacco Control in 2005 and the government faced a one-year deadline for compliance to WTO decision on distilled spirits. The rationale put forward by the Aquino Administration to enact the “sin tax” reform was to help finance the expansion of Universal Health Care, address public health issues relating to alcohol and tobacco consumption, and simplify the current excise tax system on alcohol and tobacco products. The goals was also to fix long standing, fiscal structural weaknesses such as removing the price/brand classification freeze; level the playing field; reducing number of tax tiers; and making the tax system more buoyant by indexing tax rates to inflation.

The adoption by Congress of the “**Republic Act 10351 on Restructuring the Excise Tax on Alcohol and Tobacco Products (RA 10351)**” in December 2012 was a landmark legislation enacted under the Aquino Administration (it was passed the Senate by only one vote). This law can be seen as a fundamentally good governance measure with positive impact on both fiscal and public health.

Philippine Tobacco Tax Reform Path at a Glance



Key Features

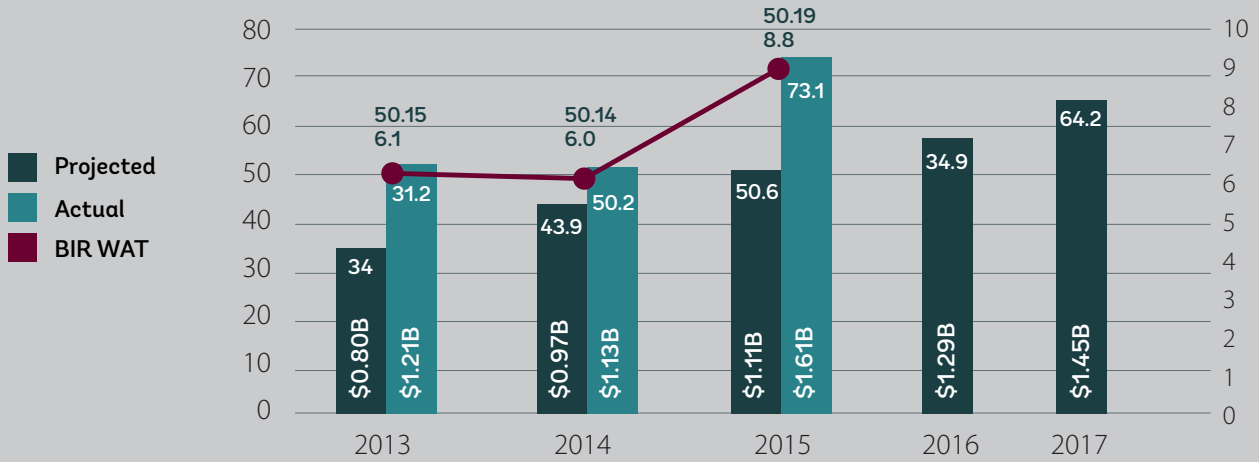
- Removal of price classification freeze/tax advantages of legacy brands.
- Unitary tax structure 2017.
- Tax rates indexed to inflation starting 2017.
- Health impact/WHO FCTC compliance a major consideration in rate setting.
- Bulk of incremental revenues earmarked for UHC.
- Safety nets for tobacco farmers /others.

In Billion Pesos	2013	2014	2015	2016	2017
Projected Incremental Revenue (Tobacco)	23.4	29.6	33.5	37.1	40.9
Projected Incremental Revenue (Alcohol)	10.6	13.3	17.1	19.8	23.3
Projected Incremental Revenue (Total)	34.0	42.9	50.6	56.9	64.2
Estimated Earmark for Health as of 2012	30.5	38.4	45.6	51.3	58.0

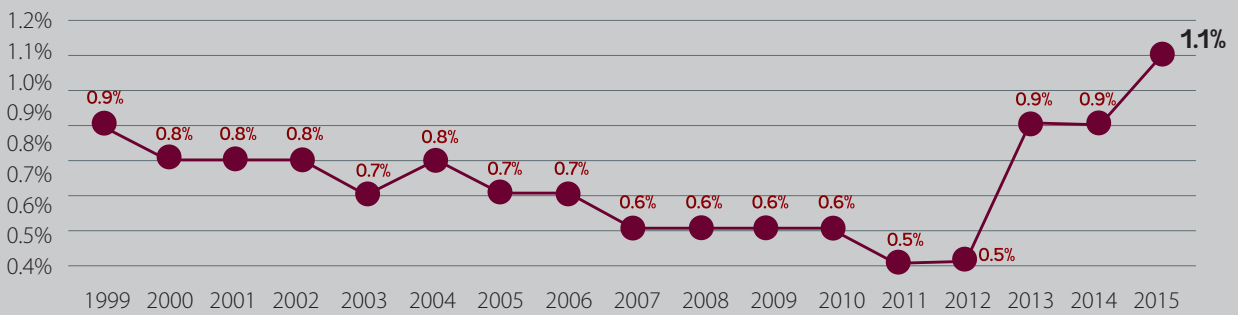
Some of the key issues raised by the opponents of the “sin tax” law in regards to raising tobacco taxes were that they will reduce, not increase revenues, adversely affect tobacco farmers, increase smuggling and illicit trade, negatively impact the poor, increase unemployment, and destroy the local tobacco industry.

The startup implementation of the “sin tax” law over 2013-2016, however, has shown that in regards to revenues, the actual incremental revenues were higher than projected, reversing the declining trend of tobacco and alcohol excise collections to GDP.

Win for Revenues: Actual incremental revenues higher than projected
 Projected vs. Actual Incremental Revenue from RA 10351

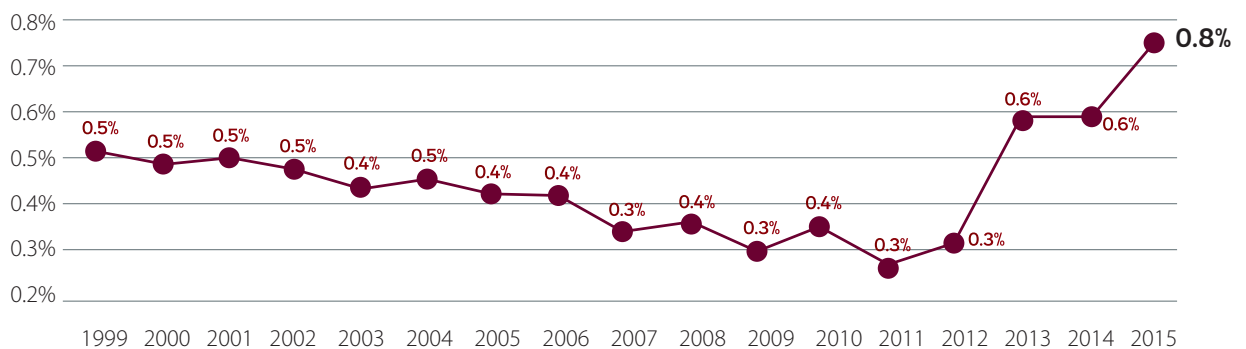


Win for Revenues: Sin Tax Law Reversed the Declining Trend of Tobacco and Alcohol Excise Collections to GDP | Tobacco & Alcohol Excise Collection



Tobacco taxes accounted for the bulk of collections with share of tobacco excise tax collections to GDP highest in 2015.

Win for Revenues: Tobacco Taxes Accounted for Bulk of Collections with Share of Tobacco Excise Tax Collections to GDP Highest in 2015
 Tobacco Excise Tax Collection



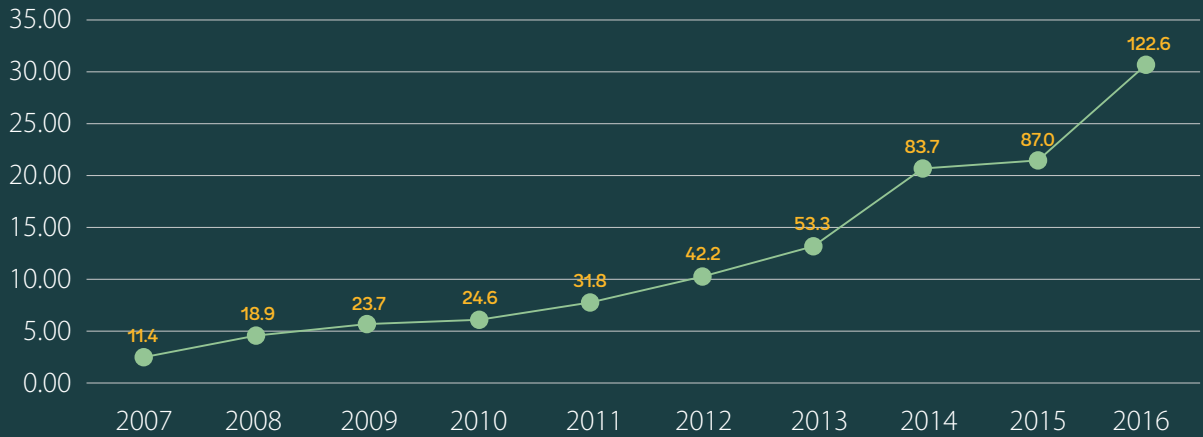
Along with other factors, like low inflation, high international reserves, declining debt to GDP ratios, and good governance, the “sin tax” law also made it possible to achieve Philippine’s first investment grade rating. The rating agencies informed the Ministry of Finance that they were just waiting for this to happen as approved by Congress 2012—the contribution of excise tax revenues from tobacco increased from 0.3% to 0.8% of GDP over 2013-2016. Apart from tax administration measures, this was the only tax policy measure adopted during the Aquino Administration.

Win for the Economy: Adoption of Sin Tax Law contributed to Philippines' First Investment Grade Rating.

MOODY'S	Investment Grade Baa3 Positive (Oct. 3, 2013); Upgraded to Baa2 Stable (Dec. 11, 2014)
FITCH RATINGS	Investment Grade BBB- Stable (March 27, 2013); Affirmation (March 25, 2014); Upgraded to BBB- Positive (Sept. 24, 2015)
STANDARD & POOR'S	Investment Grade BBB-/Stable (May 2, 2013) Upgraded to BBB /Stable (May 8, 2014) Affirmation (April 24, 2015)
JAPAN CREDIT RATING AGENCY (JCRA)	Investment Grade BBB/Stable (May 7, 2013); Affirmation (May 30, 2014); Upgraded to BBB+/Stable (July 6, 2015)
RATING & INVESTMENT (R&I) INFORMATION, INC.	Investment Grade BBB/Stable (July 9, 2014); Affirmation (July 20, 2015)

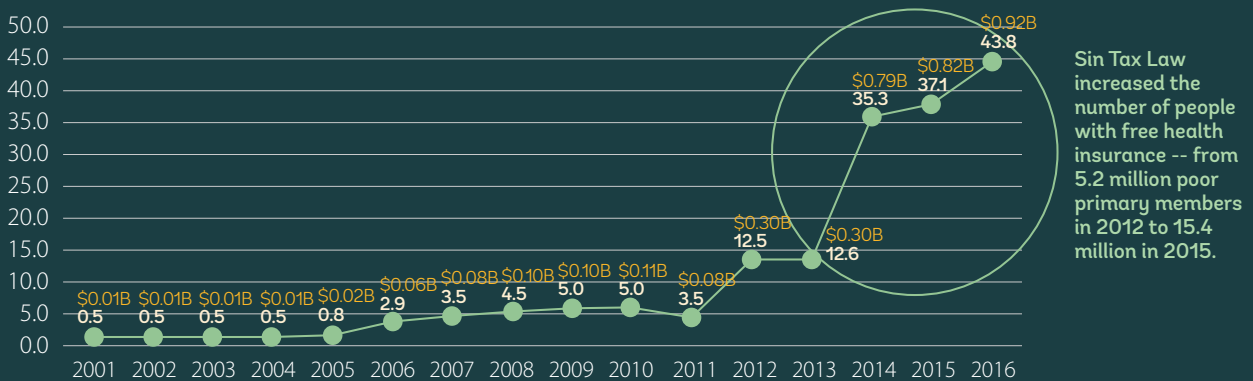
For Public Health, the Health Budget is now almost triple 2012 levels. As mandated by the “sin tax” law, the incremental revenues from the tax collection were earmarked for health following regular budgetary processes. Section 8 (C) of the Republic Act 10351 states that after deducting the allocations under Republic Act Nos. 7171 and 8240 (allocations to tobacco farmers), 80% should be allocated to the National Health Insurance Program, and 20% to the Ministry of Health’s health enhancement facilities program.

Win for Public Health: Health Budget Almost Triple 2012 Levels
 DOH Budget (In B PhP)



The tax revenue collected from the application of the “sin tax” law increased the number of people with free health insurance—from 5.2 million poor primary members in 2012 to 15.4 million in 2015.

Win for the Poor: National Government Allocation for Health Insurance Premiums for the Poor



Additionally, smoking prevalence has declined among the young and poor. Results of the Smoking Prevalence Study done by Dans et al based on National Nutrition Health Survey 2013 and 2015 data, showed that:

- Prevalence of smoking among adult Filipinos went down from 31.0% in 2008 to 25.4% in 2013, and then to 23.3% in 2015.
- There are about 4.0 million less smokers in the country because of the application of the “sin tax” law. The drop is partly from people who stopped smoking, but mostly from people who avoid starting to smoke.
- At least 70,000 death have been averted since 2013.

The experience in the Philippines show that raising tobacco taxes is an easy way to raise domestic revenues for health while reducing health risks associated with tobacco-related diseases. Framing the “sin tax” law as a health measure allowed the Philippines to raise tobacco taxes substantially, than otherwise possible if it was framed as a revenue measure. Political support at the highest level was critical for ensuring the approval of the law in Congress. The collaboration established between the ministries of finance, health, and other ministries was important as the government agencies need to collaborate and adopt a systems and whole of government/society approach. It is also important to be vigilant and systematically monitor progress and outcomes.

(vii) Uruguay's Experience

Fernando Serra (Director of the Tax Advisory Unit at the Ministry of Economy and Finance of Uruguay)

Uruguay became a Party to the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) on September 9, 2004, and has adopted some of the most comprehensive tobacco control laws in the world, including Latin America's first ban on smoking in enclosed public places in 2006, the world's largest pictorial warnings on 80% of the front and back of the pack in 2009, and the first ever ban on differentiated branding (i.e., applying the same brand to a family of tobacco products) in February 2009. Additionally, Uruguay has legislation to counter illegal trade of tobacco products, where contraband is viewed as a customs infringement that is dealt with in civil and criminal law, and ratified the FCTC's Protocol on Illicit Trade on Tobacco in 2014.

Uruguay has also imposed several tax increases on tobacco products since 2005, with tax increases adopted in 2007 and 2010, including excise taxes (impuestos específicos internos or IMESI) and VAT, as well as increases in the "precios fictos" ("precios fictos" are ex factory and/or whole sale prices of cigarettes multiplied by a Government-determined coefficient):

Tobacco Tax Policy Measures adopted over 2005-2016

2005	2007	2009 2010	2014 2015 2016
Decree 164/005: Increases the excise tax rate (IMESI) on cigarettes to 68.5% and hand roll tobacco to 28%	<p>Tax Reform Law 18.083 of 2007: Introduces value added taxes (VAT) on tobacco products, which were except from VAT before</p> <p>Law 18.083: Establishes "precios fictos" for taxing cigarettes and other tobacco products ("precios fictos" are ex factory and/or whole sale prices of cigarettes multiplied by a Government-determined coefficient)</p>	<p>Decree 268/009: Increases the "precios fictos" for taxing cigarettes and smoking supplies by 30%</p> <p>Decree 09/010: Increases "precios fictos" for taxing cigarettes and other tobacco products by 35%</p> <p>Decree 09/010: Increases the tax rate on duty free cigarettes and other tobacco products to 70%</p>	<p>Decree 375/014: Increases "precios fictos" for taxing cigarettes and other tobacco products by 8.7%</p> <p>Decree 164/015: Increases "precios fictos" for taxing cigarettes and other tobacco products by 10%</p> <p>Decree 11/016: Increases "precios fictos" for taxing cigarettes and other tobacco products by 15.5%</p>

In 2016, IMESI and VAT taxes accounted for 66% of the retail price for the most popular brand. The increase in tobacco taxes has resulted in higher prices and tax revenue collected, in spite of lower volume of sales. The public health impact has been significant as well: prevalence among the adult population dropped from 33.5% in 2005 to 22% 2016, and among the youth from in 22.8% 2005 to 8.2% 2016. In addition, over the 2005-2016 period, the contamination of air in public spaces due to smoking was reduced by 90%.

Results

Beginning in July 2007, a VAT tax of 22% is imposed on cigarettes* on top of the IMESI excise tax. In subsequent years, the base price for taxing cigarettes and other tobacco products was increased.

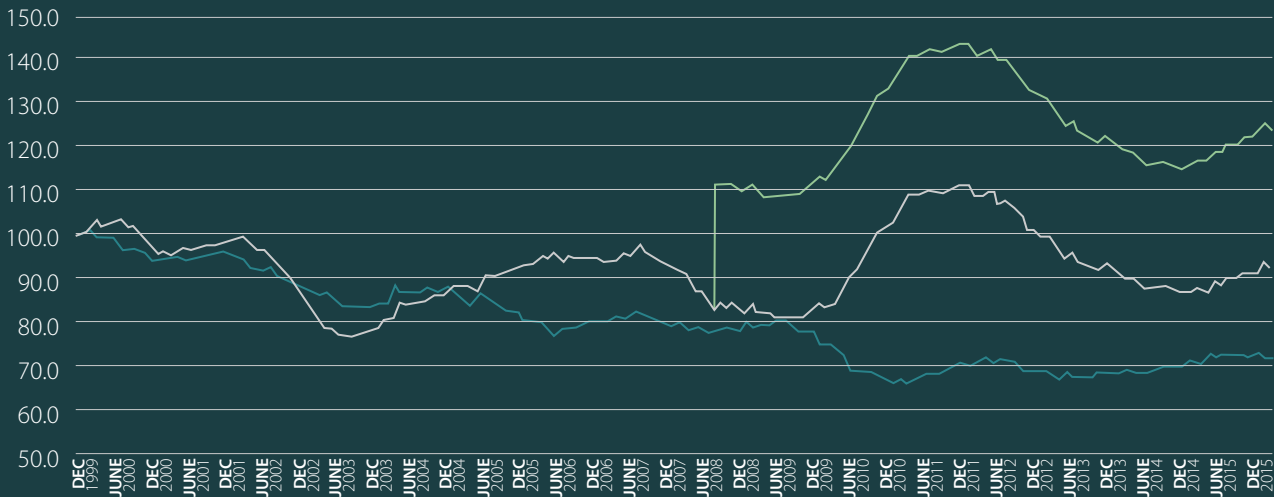
Tobacco Tax Increases, 2007-2016

PERIOD	MEASURE	EXCISE TAX / RETAIL PRICE	VAT / RETAIL PRICE	COFIS / RETAIL PRICE	TOTAL TAX BURDEN
Until July 2007	Tax Exempt	62%	0%	3%	64%
After July 2007	22% VAT adopted	48%	18%	0%	66%
After June 2009	Increase in the base price for taxing tobacco	47%	18%	0%	65%
After February 2010	Increase in the base price for taxing tobacco	54%	18%	0%	72%
After December 2014	Increase in the base price for taxing tobacco	48%	18%	0%	66%
After June 2015	Increase in the base price for taxing tobacco	48%	18%	0%	66%
After January 2016	Increase in the base price for taxing tobacco	47%	18%	0%	66%

*Pack of 20 cigarettes

As shown in the graph below, the tax policy measures adopted over the 2007-2016 period have led to significant tax revenue collected from excise taxes + VAT in real terms.

Impact on the Tax Revenue Collected (IMESI Excise Tax and VAT)
Sales and Tax Revenue Collected, by year, base year Dec 1999 = 100



■ Total Sales ■ Tax Revenue collected from excise taxes in real terms ■ Tax Revenue collected from excise taxes + VAT in real terms

Litigation Experience with the Tobacco Industry

Uruguay, a small country in South America, offers a good example of how a government that is committed to protecting the health and wellbeing of its people was able to withstand for more than 6 years the pressure of litigation from a giant multinational tobacco company, whose annual revenues of more than US\$80 billion exceed the country's gross domestic product of close to US\$50 billion. As discussed in detail below, Philip Morris started legal proceedings against the Government of Uruguay in February 2010 claiming that the comprehensive tobacco control measures adopted by the Government since 2003 violated obligations under international trade and investment arrangements.

At its core, the lawsuit opposed provisions in two tobacco control measures adopted by the Government of Uruguay for protecting public health from the adverse effects of tobacco promotion, including "false" marketing that certain brand variants are safer than others, even after misleading descriptors such as "light," "mild," "ultra-light" were banned, and to increase consumer awareness of the health risks of tobacco consumption and encourage people, particularly the youth, to quit or not to take up smoking.

Ordinance 514 issued by the Ministry of Public Health in 2008 requires each cigarette brand to have a "single presentation" and prohibits different packaging or "variants" for cigarettes sold under a given brand. **Presidential Decree 287 of 2009** mandates an increase in the size of prescribed health warnings of the surface of the front and back of the cigarette packages from 50% to 80%, leaving only 20% of the cigarette pack for trademarks, logos and other information. The application of these provisions forced Philip Morris to withdraw most of its brands (such as Marlboro Red, Marlboro Gold, or Marlboro Green) from retail stores in Uruguay.

On July 8, 2016, however, **the International Center of Settlement of Investment Disputes (ICSID), an independent arm of the World Bank Group**, dismissed the lawsuit in its entirety and ruled that Uruguay should be awarded compensation for all the expenses and costs associated with defending against these claims. In essence, the ruling accepted the claim made by the Government of Uruguay that its anti-tobacco measures were "about protection of public health, not interference with foreign investment."

As Uruguay's President, Dr. Tabaré Vázquez, an oncologist, stated in a televised address to the country after the ruling, the ICSID award reinforces that **"it is not acceptable to prioritize commercial considerations over the fundamental right to health and life."** Indeed, as observed by former **New York City Mayor Michael Bloomberg**, an international public health champion, who provided financial support to help Uruguay deal with the litigation: **"No country should be ever be intimidated by the threat of a tobacco company lawsuit, and this case will help embolden more nations to take actions that will save lives."**

Now, countries across the world have an important legal precedent to follow in adopting tobacco control policies for the benefit of their population.

Conclusions

If development is lifting up lives, and new and innovative approaches for funding development are seen as "game changers," then it could be argued that the development community needs to redouble its commitment to advocate with national governments and society at large for raising taxes on tobacco products. As shown by the different country experiences, taxing tobacco is one of the most cost-effective measures to reduce consumption of products that kill prematurely, make people ill with all kinds of tobacco-related diseases (e.g., cancer, heart disease, respiratory illnesses), and cost health systems enormous amounts of money for treating often preventable diseases.

In addition, hiking tobacco taxes can help expand a country's tax base to mobilize needed public revenue to fund vital investments and essential public services that benefit the entire population and help build the human capital base of countries, such as financing the progressive realization of universal health coverage and mental health scale-up as well as education for all and early childhood development initiatives.

The experience of the United States, China, Philippines, and Uruguay offers lessons that are applicable to a broad range of countries in both the developed and developing world. Indeed, for a number of years now the World Bank, the World Health Organization (WHO) and others have promoted the use of tobacco taxes as the most effective means of reducing smoking prevalence on a global level. If anything, the use of taxation as a means of reducing the prevalence of smoking may be even more effective in developing countries going forward.

While estimates of price elasticities of demand for cigarettes across countries vary somewhat widely from study to study, studies of low- and middle-income countries have generally (though not always) found that demand for tobacco is even more price-responsive than in high-income countries (Chaloupka et al. 2000; WHO 2010). A broad range of studies of population subgroups within low- and middle-income countries (e.g. Sayginsoy, Yurelki, de Beyer 2002; van Walbeek 2002) have also found that price-responsiveness is negatively correlated with income, as in developed countries.

And, just as in the United States, non-harmonization of taxes across different tobacco products has been shown to lead to substitution of lower-taxed products for higher-taxed products in developing countries (see, for example, Laxminarayan and Deolalikar 2004 for evidence from Vietnam), blunting the effectiveness of taxation as a means to reduce the overall prevalence of tobacco use.

Developing countries may face unique challenges in governance and the efficacy of taxation that may complicate the use of tobacco taxes as a public health measure. But to the extent that these research findings hold true broadly, the lessons laid out regarding the United States, China, Philippines, and Uruguay are a reason why it is so important to overcome those challenges rather than use them as an excuse for inaction. Also, it is important to keep in mind that tobacco taxation is a critical public policy measure that needs to be prioritized and supported as it would contribute to the achievement of WHO's goal to reduce tobacco consumption globally by 25% by 2025 and the Sustainable Development Goal target to reduce premature deaths from noncommunicable diseases by a third by 2030 (Lancet Editorial, Jan. 21 2017).

Annex 1

Agenda for Session: Expanding the Global Tax Base: Taxing to Promote Public Goods, Tobacco Taxes

Tuesday, May 24, 2016

8:15-11:00am

World Bank Group

Preston Auditorium

Washington D.C.

This session examined the use of tobacco taxes to reduce harmful behavior for health, and prevent ill health, premature mortality and disability while raising fiscal revenues and reducing health care expenditures, with particular lessons for developing countries.

Link to the webcast: <http://live.worldbank.org/winning-the-tax-wars>

8:15 – 9:00: Coffee

Introduction to the topic: Patricio V. Marquez, Lead Public Health Specialist, WBG HNP Global Practice

9:00 – 10:30: Speakers:

“Phishing for Phools: Smoking and Health”: Prof. George Akerlof, 2001 Nobel Prize Laureate in Economics, and University Professor at Georgetown University

“Paying the Tab” “The Costs and Benefits of Tobacco and Alcohol Control”: Prof. Philip Cook, ITT/Terry Sanford Professor of Public Policy Studies, Duke University, and author of seminal book “Paying the Tab”

Panelists:

“Policy, Politics, and the Tripling of Federal Tobacco Taxes in the United States to Deter People from Smoking, Save Lives, and Mobilize Revenue over the last 30 years”: **Jason Furman, Chairman, President’s Council of Economic Advisers, Executive Office of the President of the United States**

“The Impact of the 2013 Sin Tax Reform in the Philippines”: **Jeremias Paul, formerly Under Secretary of Finance of the Philippines and now Coordinator, Tobacco Economics Program, WHO.**

“2015 Tobacco Taxation Reform in China: Results and Challenges”: **Rose Zheng, Director, WHO Collaborating Center for Tobacco and Economics Professor, School of International Trade and Economics (SITE), University of International Business and Economics (UIBE), Beijing, China.**

“Tobacco Taxation and International Litigation: Uruguay’s Experience”: **Fernando Serra Director of the Tax Advisory Unit at the Ministry of Economy and Finance of Uruguay.**

10:30 – 11:00: Coffee Break. Book Signing

“Phishing for Phools. The Economics of Manipulation & Deception” by Prof. George A. Akerlof and Prof. Reobert J. Shiller.

“Paying the Tab” and Tobacco and Alcohol Taxation” by Prof. Philip Cook, ITT/Terry Sanford Professor of Public Policy Studies, Duke University.



(from left to right)

Patricio V. Marquez

Lead Public Health Specialist, World Bank Group

Fernando Serra

Director of the Tax Advisory Unit at the Ministry of Economy and Finance of Uruguay.

Prof. Philip Cook

ITT/Terry Sanford Professor of Public Policy Studies, Duke University.

Prof. George Akerlof

2001 Nobel Prize Laureate in Economics, and University Professor at Georgetown University.

Jason Furman

Chairman, Council of Economic Advisers, Executive Office of the President of the United States (appointed by President Barack Obama on June 10, 2013).

Jeremias Paul

formerly Under Secretary of Finance of the Philippines and now Coordinator, Tobacco Economics Program, WHO.

Rose Zheng

Director, WHO Collaborating Center for Tobacco and Economics Professor, School of International Trade and Economics (SITE), University of International Business and Economics (UIBE), Beijing, China.

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