

CHAPTER I

Introduction

“Sugar, rum, and tobacco, are commodities which are no where necessities of life, which are become objects of almost universal consumption, and which are therefore extremely proper subjects of taxation. In the mean time the people might be relieved from some of the most burdensome taxes; from those which are imposed either upon the necessities of life, or upon the materials of manufacture. The labouring poor would thus be enabled to live better, to work cheaper, and to send their goods cheaper to market. The cheapness of their goods would increase the demand for them, and consequently for the labour of those who produced them. This increase in the demand for labour, would both increase the numbers and improve the circumstances of the labouring poor. Their consumption would increase, and together with it the revenue arising from all those articles of their consumption upon which the taxes might be allowed to remain.”

ADAM SMITH

An Inquiry into the Nature and Causes of The Wealth of Nations, Book V, Chapter III, pages 474-476, 1776; edited by Edwin Canaan, 1976 (emphasis added).

TOBACCO USE is the single largest cause of preventable death globally, killing more than five million people each year. Tobacco use also creates considerable economic costs, from greater spending on health care to treat the diseases it brings on in users and those exposed to tobacco smoke to the lost productivity resulting from the premature deaths it causes. The primary objective of the World Health Organization is to protect public health; given the death and disease it causes, reducing tobacco use is a priority focus of WHO's activities. These efforts include the effective implementation of the WHO Framework Convention on Tobacco Control (WHO FCTC), with a particular emphasis on the strategies contained in the MPOWER measures introduced by WHO to assist in the country-level implementation of tobacco demand reduction measures contained in the WHO FCTC: Monitoring tobacco use and prevention policies; Protecting people from tobacco smoke; Offering help to quit tobacco use; Warning about the dangers of tobacco; Enforcing bans on tobacco advertising, promotion and sponsorship; and Raising taxes on tobacco products.

Of all of these interventions, a significant increase in tobacco product taxes and prices has been demonstrated to be the single most effective and cost-effective intervention for reducing tobacco use, particularly among the young and the poor. At the same time, because of the inelasticity of demand for tobacco products in most countries and the low share of tax in price in many, significant increases in tobacco taxes generate significant increases in the revenues generated by these taxes.

This technical manual aims to help governments achieve both objectives by identifying a set of 'best practices' for tobacco taxation. It documents governments' existing approaches to tobacco taxation, discusses barriers to using tobacco taxes to achieve health and revenue objectives, and provides case studies of effective tobacco tax administration. This manual is intended to be useful to tax administrators at the Ministry of Finance level by making them aware of the practices used and challenges faced by other countries. It will also be useful to officials in a country's Ministry of Health or similar organizations by providing them with a more thorough understanding of key issues in tax structure and administration.

Government Objectives

Governments around the world have followed Adam Smith's advice above, with nearly every country in the world imposing taxes of various types and sizes on the wide variety of tobacco products available. Many of these taxes have been in place for decades, if not centuries, with periodic changes to their magnitude, structure and administration. The variety of taxes applied to tobacco products include excises (both specific and *ad valorem*), customs duties, value added taxes, general sales or consumption taxes, and special levies that fund particular programmes. The labels given to these taxes may vary from country to country, but the forms they take have many similarities.

Of the various types of taxes applied to tobacco products, excise taxes are of the most importance when considering health objectives. These taxes will raise the price of tobacco products relative to the prices of other goods and services, unlike taxes that apply to a wide variety of goods and services, such as value added taxes and general consumption taxes. Moreover, relative to other products also subject to some form of excise, it is the excess over the average excise tax rate that increases the effectiveness of the tobacco excise.

Governments have used tobacco taxes in efforts to achieve multiple, at times competing goals. Historically, revenue generation has been the primary aim of most, if not all, governments that tax tobacco products, and many governments today raise taxes when they need additional revenues. Tobacco products are generally good candidates for taxation, given that they are typically produced by a small number of manufacturers, have few ready substitutes, and have relatively inelastic demand, at least in the short run. As such, they tend to satisfy the so-called "Ramsey Rule" for economically efficient consumption taxes (Ramsey, 1927). That is, because of the relative inelasticity of demand, they can generate considerable revenues while creating fewer distortions in the market than would result from taxes on goods and services with more elastic demand. Of course, there are many other goods and services with equal or greater levels of inelastic demand, for which the same would be true.

Some governments have pursued other goals (in addition to revenue generation) through the types of tobacco taxes they apply. Some have used high customs duties to protect domestic tobacco growers and tobacco manufacturers from outside competitors. Others have done the same by applying excise taxes to tobacco products that vary based on the source or type of tobacco contained in the product, the price of the product (where foreign brands are expensive relative to those produced domestically), or other product characteristics. In other cases,

governments have adopted what they consider to be a “pro-poor” policy that keeps taxes low on relatively inexpensive products or brands while more heavily taxing more expensive products or brands, in order to keep retail prices low for the products/brands most widely used by the poor.

Over the past half-century, as evidence on the health consequences of tobacco use has accumulated, governments have begun to use tobacco taxes as a way to promote public health by reducing tobacco use and the death and disease it causes. Growing research evidence that demonstrates that higher taxes, by increasing prices, lead to reductions in tobacco use, with relatively larger impact on vulnerable populations – youth and young adults, the poor, and pregnant women – has led many governments to adopt and increase tobacco taxes with the stated intent of reducing tobacco use (Chaloupka et al., 2000; Ross and Chaloupka, 2006).

Similarly, as the evidence on the health consequences of tobacco use has grown, market failures in tobacco product markets have become increasingly apparent, strengthening the economic rationale for government intervention that includes increased tobacco taxes (Jha and Chaloupka, 2000). There are clear negative externalities from tobacco use, given the well documented health consequences of exposure to environmental tobacco smoke (USDHHS, 2006). To the extent that health care is publicly funded, there are costs imposed on non-smokers resulting from smokers’ increased use of health care to treat diseases caused by smoking.

Information failures exist in many countries regarding these health consequences, with the full risks from tobacco use poorly understood by a significant portion of the population. These failures are exacerbated by the increasingly early ages at which tobacco use is initiated and by the addictiveness of tobacco use, something few new users in these countries comprehend. The ‘internalities’ that result from individuals’ self-control failures that lead to greater tobacco use than desired are yet another market failure that strengthens the case for government intervention in tobacco markets (Gruber and Koszegi, 2008). While higher tobacco taxes may be a blunt policy for curbing tobacco use, they are highly effective, particularly among young people and the poor for whom these market failures are likely most important.

Given the evidence on the effectiveness of higher tobacco product prices in reducing tobacco use, higher tobacco taxes are a central element of the WHO FCTC. Article 6 (Annex Figure 1), calls for Parties to the treaty to use tax and price policies to reduce tobacco use, while Article 15 (Annex Figure 2) calls for the adoption and implementation of measures aimed at eliminating the illicit trade in tobacco products that can undermine the effectiveness of increased tobacco taxes.

Tobacco Taxes and Tobacco Use

Well over one hundred studies have examined the impact of tobacco product taxes and prices on overall tobacco use¹. Until recently, nearly all of these studies came from high-income countries including the United States, Canada, the United Kingdom, Australia, and several others. These studies consistently find that increases in taxes and prices on tobacco products lead to reductions in tobacco use. Most studies have focused on cigarette smoking, given that cigarettes account for the nearly all tobacco use in high-income countries. While these studies have produced a wide range of estimates of the magnitude of the effects of price on overall cigarette consumption, the vast majority of these studies estimate price elasticities in the range from -0.25 to -0.5, with most of these clustered around -0.4 (this number means that if price was increased by 10% consumption would go down by 4%). Several of these studies have modelled the addictive nature of tobacco use, finding that demand is more responsive to price in the long run than it is in the short run.

Over the past decade, a growing number of studies have examined the impact of taxes and prices on tobacco use in low- and middle-income countries. These studies have estimated a wide range of price elasticities with most, but not all, indicating that demand for tobacco products is more responsive to price in low and middle-income countries than it is in high income countries. For example, Hu and Mao (2002) estimate that the price elasticity of cigarette demand in China ranges from -0.54 to -0.64, while John (2008) estimates price elasticities in the range from -0.86 to -0.92 for bidis and -0.18 to -0.41 for cigarettes in India. As in studies for high-income countries, studies from low and middle-income countries that account for the addictive nature of tobacco use find that demand responds more to price in the long run. For example, Aloui (2003) estimates short run price elasticities for tobacco use in Morocco in the range from -0.51 to -0.73, and estimates long run elasticities that range from -1.36 to -1.54.

Findings from studies based on individual-level survey data on adult tobacco use indicate that taxes and prices influence both tobacco use decisions (prevalence) and the frequency and amount of tobacco consumption among smokers (conditional demand). In general, estimates from high-income countries suggest that about half of the impact of price on tobacco use results from its effect on prevalence. Given that relatively little initiation occurs during adulthood, these

1 See Chaloupka et al., 2000 and Ross and Chaloupka, 2006, and Annex Table 4 for reviews of the research discussed in this section.

changes largely result from cessation among adult users. This is confirmed by a small number of studies finding that increases in prices lead a number of current users to try to quit, with some successful in doing so in the long run.

Studies using survey data from low and middle-income countries similarly find that price affects prevalence, although the relative impact on prevalence and consumption varies considerably across studies/countries. For example, Adioetomo et al. (2005) find no impact of price on the prevalence of smoking in Indonesia, while estimating an elasticity for conditional cigarette demand of -0.61. In contrast, Kyaing (2003) estimates a total price elasticity of -1.62 with a prevalence price elasticity of -1.28 and a conditional demand elasticity of -0.34 in Myanmar.

Several studies based on survey data have examined the differential responses of various population subgroups to changes in the prices for tobacco products, including those based on age, gender, income, education, race/ethnicity, and location (urban vs. rural). Findings for gender, race/ethnicity and location vary across countries, while consistent patterns are more evident with respect to age and socioeconomic (SES) status (as measured by income and/or education). Studies looking at tobacco use among adolescents and young adults find that young people are two to three times more responsive to tax and price than are older persons (Chaloupka, forthcoming). Studies that examine the uptake of tobacco use find that higher taxes and prices are particularly effective in keeping young people from moving beyond experimentation with tobacco use, preventing them from becoming regular and, eventually, addicted users. Similarly, as predicted by economic theory, lower SES populations are more responsive to price than are higher SES populations. For example, Sayginsoy et al. (2002) estimate cigarette demand elasticities of -1.33, -1.00 and -0.52 for low, middle and high income populations in Bulgaria (total price elasticity of -0.8). Similarly, van Walbeek (2002) estimates elasticities by income quartile ranging from -1.39 for the lowest quartile to -0.81 for the highest quartile in South Africa.

Finally, several studies examine the potential for substitution among tobacco products in response to changes in the relative prices of these products. In general, these studies find that part of the reduction in the use of one tobacco product in response to an increase in its price will be offset by increased use of other products if the prices of these products are not also increased. For example, Laxminarayan and Deolalikar (2004) find that changes in relative prices for cigarettes and rustic tobacco in Viet Nam lead to substitution between the two, particularly for substitution from cigarettes to rustic tobacco in response to an increase in the relative price of cigarettes. This potential for substitution highlights the importance of

increasing taxes and prices for all tobacco products, if the public health benefits of higher prices are one of the motives for tobacco tax increases.

To summarize, a large and growing literature clearly demonstrates that the overall demand for tobacco products is significantly affected by changes in tobacco product taxes and prices. These studies demonstrate that price affects all aspects of tobacco consumption, with higher prices preventing initiation among potential users, inducing cessation among current users, and reducing the frequency of consumption and amount consumed by continuing users. Consistent with economic theory, demand is generally found to be more responsive to price in low and middle income countries than in high income countries and, within a given country, use among younger and/or lower SES populations responds more to price than does use among older and/or higher SES persons. As predicted by economic theories of addiction, the impact of a permanent increase in price will be larger in the long run than in the short run. Finally, several studies show that changes in the relative prices of tobacco products will lead to some substitution among products, partially offsetting the impact on overall tobacco use of an increase in the price of one product.

Overview of the Manual

This technical manual aims to help governments maximize the benefits that they can receive from higher tobacco taxes by identifying a set of best practices for tobacco taxation. This is one of several available or forthcoming products that focus on tobacco taxation, including: the forthcoming monograph on the economics of tobacco and tobacco control being jointly produced by WHO and the US National Cancer Institute (NCI); the handbook on the effectiveness of tobacco tax and price policies forthcoming in the tobacco control handbook series produced by the International Agency for Research on Cancer (IARC); and the series of reports on tobacco taxation produced by the Bloomberg Global Initiative to Reduce Tobacco Use (BI).

These products differ in their breadth and depth, as well as their target audiences. The IARC handbook, for example, will provide an in-depth review of the global research evidence on the impact of tobacco taxation and price-related policies on tobacco use, while the NCI/WHO monograph provides a broader review of the global evidence on the public health and economic impact of a range of tobacco control policies and other interventions, with an emphasis on impact in low and middle-income countries. In contrast, most of the BI reports are focused on country-specific evidence and on estimating the potential impact of increased tobacco taxes on tobacco use, preventable deaths, and revenues in a given country. This technical manual aims to provide more practical guidance on tax structure and tax administration issues for tax administrators and other government officials interested in increasing tobacco product taxes. Taken together, these and other materials provide a complementary and comprehensive picture of the economics of tobacco, tobacco taxation, and tobacco control.

Chapter 2 of this technical manual begins by providing an overview of tobacco taxes globally, highlighting the different types of taxes that governments apply to tobacco products, describing the alternative tax structures used in various countries, and reviewing the theoretical and limited empirical evidence on the impact of tax structure on tobacco product prices, tax revenues, and tobacco use.

Chapter 3 describes issues in tax administration, given that strong tax administration is necessary for tobacco taxes to be effective in protecting health and generating revenues. The chapter begins with a discussion of the need for strong technical capacity among tax administrators, including an understanding of the impact of alternative tobacco taxes on tobacco product prices, tobacco use, and revenues, as well as an understanding of other key determinants of tobacco demand. It goes on to describe the challenges associated with effective tobacco tax administration, from the monitoring of tobacco production and collection of taxes to approaches to limiting tax avoidance and evasion.

Chapter 4 focuses on the political economy of tobacco taxation, highlighting the obstacles and challenges that governments face when they consider adopting and implementing higher tobacco taxes. The arguments used by opponents of higher tobacco taxes are reviewed, including: questions about the potential and sustainability of tobacco tax revenues; the macroeconomic impact of higher tobacco taxes, particularly their impact on employment and inflation; possible harmful effects of higher tobacco taxes on the poor; and the possibility of increased illicit trade in tobacco products in response to higher taxes. The chapter also provides examples of the tobacco industry's role in negotiating tobacco tax rates in some countries, as well as manufacturers' responses to tax increases. Finally, this chapter also describes the dedication or earmarking of tobacco tax revenues for various programmes, generally health focused ones, in a growing number of countries.

Given the experiences and issues described in these chapters, the final chapter provides a set of “best practices” for tobacco taxation – practices that will help maximize the public health benefits of higher tobacco taxes while at the same time producing new tax revenues for at least the short to medium term. In addition, given the gap in many countries between current practices and identified best practices, this chapter includes suggestions for how governments using various approaches can best transition from their current approach to these best practices.

However, there is relatively limited empirical evidence on many of the topics covered within. As governments begin to make the transition from their current practices to “best practices”, much will be learned from their experiences.