

# NOTES

## FISCAL POLICY

### How to Design and Enforce Tobacco Excises?

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# HOW TO DESIGN AND ENFORCE TOBACCO EXCISES?

## Introduction

Tobacco<sup>1</sup> is for several good reasons more heavily taxed than other goods in many countries. From the early days of industrial production of cigarettes in the late nineteenth century until a clear link was established between tobacco and various health conditions in the middle of the twentieth century, tobacco was fairly lightly taxed. All this changed with the publication of two governmental reports, in the United Kingdom (Royal College of Physicians, 1962) and the United States (United States Department of Health, Education and Welfare, 1964), in the early 1960s (Yach and Wipfli, 2006). From that point, the wider public came to accept the rationale for tougher tobacco products regulation and, eventually, for higher taxes.

Tobacco-related revenue is generally collected through excise taxes—that is, taxes on the use of a particular product. There are, however, significant variations in both the level and composition of tobacco excises across countries. In the recent past, several countries, such as Canada, some in northern Europe (for example, Sweden, Denmark, Norway), and many Pacific and Caribbean islands, have primarily used specific taxes (a fixed monetary value per physical unit of the excised good), while others, such as China and other East Asian countries, core and southern European countries, and many South American and African ones, relied more heavily on ad valorem taxation (a percentage of the value of the excised good).<sup>2</sup> Many countries use both, but in differing proportions, and with different methods.

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<sup>1</sup> For the purpose of this note, “tobacco” is understood to include all tobacco products.

<sup>2</sup> Value-added tax or other sales taxes should be applied to all tobacco products in addition to excises, and include excises in the base. In this respect, there is almost always an ad valorem component to taxation, even with completely specific excises.

Many rationales for taxing tobacco have been invoked, but in fact, most governments tie tobacco excise policy to revenue-raising and health objectives.<sup>3</sup> Other concerns, such as equity or the protection of local industry, for example, have generally been better tackled by the expenditure side of the budget or other policy instruments than by excises. Pursuing revenue or health objectives, however, has direct and significant consequences for both the level and type of excises, and governments should be keenly aware of them when setting policy objectives and designing the excise system.

Tobacco excise receipts vary across countries, but have proved to be a significant and stable source of revenue for many. Tobacco excise revenues are generally low: 0 to 0.2 percent of GDP in most sub-Saharan countries, 0.2 to less than 1 percent of GDP in the Organisation for Economic Co-operation and Development countries and many large developing markets such as Vietnam or the Philippines, and slightly more in some large middle-income markets such as Egypt (1 percent of GDP) and Turkey (1.4 percent of GDP). However, overall tobacco-related revenue can in some cases represent a high proportion of government revenue, especially taking into account the profits of state monopolies: China and Indonesia derived, respectively, 7.6 and 8.4 percent of central government revenue from tobacco in the mid-2000s (Barber and others, 2008; Hu and others, 2008); and the Philippines, Egypt, and Turkey, respectively, 3.1, 4.2, and 3.7 percent of central government revenue in 2013.<sup>4</sup> Furthermore, in many countries such as Indonesia, high revenue is linked more to high prevalence than to high tax rates, implying significant additional revenue potential.

Taxes can be a powerful instrument to decrease tobacco consumption for health reasons and have therefore been a core component of efforts by the World

<sup>3</sup> The pure efficiency case for heavy taxation of tobacco products—to limit distortions in the wider tax system (leaving health aspects aside)—is not compelling. See Crawford and others (2010).

<sup>4</sup> Based on WHO statistics ([http://www.who.int/tobacco/surveillance/policy/country\\_profile/en/](http://www.who.int/tobacco/surveillance/policy/country_profile/en/)). Includes excises and import duties.

### Box 1. Tobacco Externalities and Internalities: Nature and Measure

There is a fairly broad consensus on how to think about using tax policy to address the health costs of smoking related to tobacco externalities, although methodological and empirical issues remain regarding their measurement and quantifying their precise implications for tax policy.

Negative externalities from smoking—harm suffered, in some form, by non-smokers—have traditionally been the primary economic argument for taxing tobacco products more heavily than the generality of goods. Such externalities arise from two main sources. The first is the annoyance that smokers can cause to individuals around them, and more severely, the tobacco-related diseases among non-smokers who are forced to breathe other people's smoke (for example, restaurant staff, children of smokers). Second, in countries where health systems are funded publicly—to any extent—it is also possible that smokers will on average consume more health care than they pay for (which might also be the case with private insurance); there is then a strong case to “internalize” these costs through tobacco taxes.<sup>1</sup> But there may, on the other hand, also be positive externalities from smoking: some benefit, that is, to non-smokers. For example, pensions available for non-smokers may be higher because smokers tend to die earlier. Barendregt and others (1997) also point to longer-living non-smokers as a source of higher costs for the health care system, although such claims have been challenged (Rasmussen and others, 2004). There is a natural repugnance, however, to seeing social benefit in early deaths, and these arguments

<sup>1</sup> The magnitude of externalities—and hence the appropriate corrective tax—will also be affected by non-tax tobacco policies; they tend to be reduced, for instance, by smoking bans (Christiansen and Smith, 2012).

Health Organization (WHO) and World Bank to curb the tobacco epidemic.<sup>5</sup> With an annual global death toll of over 5 million people, tobacco is one of the most prominent killers of our times. Despite low price elasticity in the short run, the much larger long-run impact of taxes on consumption has motivated a significant surge toward the use of taxes as a way to decrease the burden of tobacco-related diseases (Jha and Chaloupka, 1999;

<sup>5</sup> See, for example, WHO (2008) and following releases, in particular, “WHO Report on the Global Tobacco Epidemic, 2015” ([http://www.who.int/tobacco/global\\_report/2015/en/](http://www.who.int/tobacco/global_report/2015/en/)).

are in any case less relevant for low-income individuals in medium- and low-income countries (the overwhelming majority of smokers in the world), who in many cases have no prospective pension and who are also relatively more likely to die from other causes.

Health care and other costs of smoking are empirically difficult to assess, and where data do exist, estimates are based on different methodologies that usually prevent direct comparison, hence “highly controversial” overall empirical evidence (Crawford and others, 2010). Available estimates are generally for advanced or high-capacity countries. It has been estimated that in the United States, for example, annual tobacco-related health care costs amount to US\$132.5 to US\$175.9 billion (United States Department of Health and Human Services, 2014). For many countries they represent 0.1–1.1 percent of GDP (Lightwood and others, 2000). For a number of high-tax countries, however, some have argued that tobacco taxes are already at levels that address the associated externalities (Manning and others, 1989; Warner and others, 1995; Chaloupka and Warner, 2000).

Account also needs to be taken of “internalities”: self-control problems that can provide a distinct reason (additional to external effects) for heavy taxes on smoking (Gruber and Koszegi, 2001). These can point to far higher levels of tobacco taxation than estimated net externalities in some advanced countries: Gruber and Koszegi (2008), for instance, suggest additional taxes of US\$8 to US\$15 per pack. These considerations thus point to higher taxes than externalities alone would warrant, though by exactly how much remains uncertain, and, more generally, this conceptual approach to policy formation has its critics (for example, Whitman, 2006).

Chaloupka, 2008).<sup>6</sup> Governments indeed deploy a suite of policies to address tobacco-related health concerns,

<sup>6</sup> While such a justification for taxation as a way to reduce tobacco consumption (that is, short of forbidding tobacco) has often been labeled as paternalistic, similar arguments are widely accepted in the case of illegal drugs, for example. Indeed, the addictive and lethal nature of tobacco, as well as the fact that the overwhelming majority of smokers start before adulthood, has led many to argue that taxes should be used mainly to protect youth (see, for example, Warner and others, 1995). While this paternalistic argument obviously does not easily extend to all segments of the population, and is not universally accepted, it is a clear reminder that the assumption of a rational, forward-looking, and fully informed individual underlying standard economic models has its own limitations and that government paternalism and related regulation is widely accepted in many spheres of life.

including regulation (for example, smoke-free environments), public support of tobacco-cessation programs, and, to address informational problems, advertising bans and awareness campaigns, notably. But tax policies have a central role to play (WHO, 2010), and their importance is widely recognized, notably in article 6 of the WHO Framework Convention on Tobacco Control and other international initiatives, such as the Sustainable Development Goals. The underlying rationale for such policies, in terms of both externalities (the adverse effects of smoking on others) and the newer notion of “internalities” (self-control problems) is reviewed in Box 1.

Some key questions recur in the IMF Fiscal Affairs Department’s revenue-related technical assistance work, which covers over 100 countries annually: (1) How high should tobacco taxes be and what are the best ways to tax tobacco? (2) Should tobacco tax revenue be earmarked and, if so, what for? (3) How should tobacco taxes be collected, will they result in illegal<sup>7</sup> trade, and if so how should this be dealt with? These are some of the questions this Note tackles, drawing on the Fiscal Affairs Department’s technical assistance experience as well as a large and sometimes contested literature, and recognizing that most governments around the world are pursuing both revenue and health objectives when they tax tobacco.

## Revenue Potential

The level of tobacco taxes can be measured by the share of excise taxes in the final retail price paid by the consumer. Its calculation is generally based on a representative pack of 20 cigarettes. For example, the final retail price of a 20-cigarette pack of Diplomat brand in Ghana was ₵2.50 in April 2009. Excise tax on this brand was then ₵0.0235 per stick, or ₵0.47 per pack, yielding an excise tax level of 18.8 percent. The level of excises is therefore a different concept from the statutory rate, and excludes taxes that also apply to other products, such as the value-added tax (VAT)

<sup>7</sup> Reference is often made to “illicit” trade, in the sense defined in article 1 of the WHO Framework Convention on Tobacco Control: “any practice or conduct prohibited by law and which relates to production, shipment, receipt, possession, distribution, sale or purchase including any practice or conduct intended to facilitate such activity.” However, use of this term has proved contentious in other contexts (notably regarding capital flows), and this Note will therefore use the term “illegal,” although it should be understood as fully compatible with the definition provided by the WHO Framework Convention on Tobacco Control.

(import duties could be included if they apply to the consumption of all tobacco products).

Determining the desirable level of tobacco excises requires taking into account various demand-related factors. These notably include overall consumption (and therefore prevalence), price, income levels and the ensuing affordability of tobacco products, and the reaction of the demand to tax increases, as well as the considerations discussed in Box 1.

From a revenue-raising perspective, the level of excises needs to be determined within the overall revenue policy, notably taking into account all costs associated with economic distortions, administration, redistribution, and so forth, in comparison with other taxes (such as the VAT). The revenue potential of the excise will be mainly determined by the current size of the market (price and quantity), but also by the affordability of tobacco products, which may rapidly increase in countries with strong growth, unless offset by tax increases. In this regard, the sensitivity of consumer demand to taxes becomes prominent for tax policy, as this will generally shrink the tax base and thus limit the revenue-raising capacity of tobacco taxes.<sup>8</sup>

Consumer reaction to tobacco taxes is measured by the price elasticity of demand.<sup>9</sup> Low price elasticities of demand (that is, a steeply sloped demand curve) characterize goods that, on revenue grounds, are strong candidates for excises, since the quantity demanded then does not decrease much following a (tax-induced) price increase. However, the price elasticity depends on the specific shape (for example, its curvature) of demand and generally also on the initial price. Country authorities should carefully assess consumers’ reaction to price increases in order to assess the potential revenue effects. This includes effects through possible diversion of consumption to illegal (untaxed) products.<sup>10</sup>

<sup>8</sup> Supply effects are often assumed away in dealing with tobacco excises, but can be important. Indeed, as for any market, it is the relative slopes of both demand and supply curves that will determine the price impact of a tax, as well as the distribution of its burden between producers and consumers. Market conditions can also affect the degree of tax pass-through (see Delipalla and O’Donnell, 2001).

<sup>9</sup> Notwithstanding the impact on the consumption of other taxable goods.

<sup>10</sup> Or toward other tobacco products, if they are not taxed consistently (see WHO, 2010). Interestingly, it is still unclear whether e-cigarettes are a complement or substitute to tobacco products or, more dynamically, whether they should be considered as a cessation mechanism or a first step toward tobacco consumption. While this has created intense debates within the health care community, the tax policy consequences have yet to be fully discussed.

The tax revenue potential from an increase in tobacco excises is inversely related to the share of existing taxes in the price. The lower consumption as a result of a higher excise rate will mitigate its revenue effect. This mitigating impact will be larger if the initial tax rate is higher, since a reduction in consumption will then be costlier. In fact, one can show that tax revenue will increase only as long as the price elasticity is greater than the inverse of the share of all taxes in price (this is sometimes called the “critical elasticity”; see Crawford and Tanner, 1995). For example, if the share of taxes in the price is 75 percent (and the critical elasticity is therefore  $-1.3$ , that is,  $-100/75$ ), a small tax increase will increase tax revenue as long as the price elasticity of cigarettes is between 0 and  $-1.3$ .

At high levels of tax, a decrease in consumption might reduce revenue so much that this exceeds the direct increase in revenue from the higher tax rate over the pre-existing base. Thus, tax increases beyond this point will reduce overall tax revenue (Laffer, 2014). However, the point at which this will arise is difficult to identify in practice and would require characterizing the demand over the entire range of possible tax rates (and implied prices), whereas price elasticities are typically only locally determined empirically, based on the actual range of past prices, and not for the entire range of possible prices.<sup>11</sup>

As the demand curve is typically unknown over the entire range of possible tax rates and ensuing prices, governments can best pursue revenue-raising objectives through a process of sustained incremental increases in excises. Thus, governments can learn about the demand and its characteristics by gradually (but not necessarily slowly) increasing excises (in real terms) and measuring the impact on price, quantity, and tax revenue. If possible, it is desirable for government also to monitor the impact of additional taxes on smokers’ habits (for example, initiation/quit rates, number of cigarettes smoked per smoker, switch to other market segments or illegal products) in order to better understand smokers’ reaction and assess the likely effect of future tax hikes. This can also improve the understanding of patterns and distribution networks for illegal products in order to tighten controls wherever possible. Obviously, countries that already

tightly control the supply chain and for which illegal trade is a lesser concern could proceed with faster and larger tax increases, especially if they know well the demand for tobacco products or pursue health objectives—South Africa, Peru, and the Philippines are recent examples.

Local considerations, consumption habits, and traditions may also have implications for tax policy. For example, the presence of alternative “traditional” tobacco products, such as bidis, water pipes, or chewing tobacco, that are more difficult to tax (for political reasons or because production and consumption is scattered and widespread, for example), could increase the price elasticity of cigarettes, although the evidence is not entirely conclusive. The age of smokers, intensity of smoking, distribution channels, strength of tobacco control policies, and general perception of smoking will also influence demand and supply characteristics and consequently how tobacco products can be taxed.

In many countries, raising tobacco taxes can offer a “win–win”: higher revenue and positive health outcomes. Countries’ circumstances and governments’ weighting of revenue, health, and other objectives vary, and hence so too will the desirable level of tobacco tax rates. In many cases, however, current tax rates are evidently far below what is feasible in terms of revenue potential. Thus, tax increases could serve revenue purposes as well as health and other objectives, as recently evidenced for the cases of Lebanon and China, for example.<sup>12</sup> Of course, countries putting more weight on health objectives could raise taxes even further than the revenue maximizing point, in which case lower tax revenue would be an implicit and accepted consequence of a higher tax level.

### The Choice between Ad Valorem and Specific Excises

The choice between ad valorem and specific excises will have a strong impact on the tobacco industry structure, prices, and product quality<sup>13</sup> and diversity through the “multiplier effect.” For example, if a manufacturer facing an ex-factory ad valorem tax of 40 percent decides to improve the quality of its

<sup>11</sup> For example, if the price per pack of cigarette has fluctuated between €0.50 and €1.00 over the past 20 years and it is determined (by measuring the impact of these fluctuations on quantity) that the price elasticity is  $-0.4$ , this elasticity is valid for that price range only.

<sup>12</sup> For these two respective countries, Salti and others (2014) and Verguet and others (2015) calculated that higher taxes not only provided additional revenue, but also reduced tobacco-related health expenditures, especially among low-income households.

<sup>13</sup> “Quality” here simply means things that consumers value, such as taste, harshness/smoothness, and packaging.

**Table 1. The Impact of Changes in Production Costs on Price in the Presence of an Ad Valorem Tax**

		Ex-Factory Price	Ad Valorem Tax (40%)	Retail Price	Price Change
Case #1	Initial Situation	1.00	0.40	1.40	NA
Case #2	Cost Increase = 0.20	1.20	0.48	1.68	0.28
Case #3	Cost Decrease = -0.20	0.80	0.32	1.12	-0.28

products and pass the added costs to customers, the price increase will be 40 percent more than the added cost because of the ad valorem tax (Table 1); this is known as the multiplier effect. Conversely, if the same manufacturer cuts its costs, the retail price will decrease by more than the reduced costs, because the tax will decrease under an ad valorem system. This obviously provides a strong incentive to cut costs, and as a result, quality and diversity of brands will tend to be lower under ad valorem excises (Keen, 1998), as both require significant resources. In a similar fashion, if operating distinct firms or brands involves significant fixed costs, the multiplier effect will also tend to reduce the number of firms and therefore lead to an industry with few manufacturers more inclined to produce a small number of low-quality brands.<sup>14</sup>

Conversely, specific taxes will result in less-intense price competition, and higher quality, price, and diversity. Because the tax per cigarette is fixed, manufacturers can reap the benefits of investments in product differentiation with a smaller price increase (greater diversity and improved quality, including product characteristics such as length, taste, and so forth). In addition, specific taxes constitute a de facto minimum price and push the entire price spectrum higher by the same amount, hence there will be a lower percentage price difference between high- and low-quality brands, which tends to favor higher-quality brands (see Table 2). For these reasons, specific taxes will therefore tend to increase quality and diversity beyond the no-tax situation.<sup>15</sup>

<sup>14</sup> See WHO (2010) for a more detailed introductory discussion of the multiplier effect and of other tax policy design concerns.

<sup>15</sup> See Johnson (1978), Stern (1987), Delipalla and Keen (1992), Skeath and Trandel (1994), Keen (1998), Anderson and others (2001), Delipalla and O'Donnell (2001), and Hanson and Sullivan (2008).

**Table 2. Decrease in the Relative Price of Quality under a Specific Excise Tax**

	Specific Tax = 0		Specific Tax = 0.50	
	Low-Quality Brand	High-Quality Brand	Low-Quality Brand	High-Quality Brand
Pretax Price	1.00	1.25	1.00	1.25
Specific Excise	0	0	0.50	0.50
Final Price	1.00	1.25	1.50	1.75
Percentage Price Difference	$(1.25 - 1.00) / 1.00 = 25\%$		$(1.75 - 1.50) / 1.50 = 16.7\%$	

Given the multiplier effect, what is an optimal policy mix between specific and ad valorem excise? The economic literature suggests that neutrality (minimally distorting taxes) would require imposing a ratio of specific and ad valorem excises so as to leave quality unchanged compared to the no-tax situation (Delipalla and Keen, 2006). However, in the case of tobacco and the distinct health issues it raises, “quality” has remained at best a distant concern and as a result, the choice between specific and ad valorem excises often depends on other, more practical, considerations:

- *Administrative simplicity.* Ad valorem excises can be more difficult to administer because they are based on the product value, which needs to be assessed at a specific point (ex-factory, import,<sup>16</sup> distribution, retail) and can be underestimated (along with the VAT) through legal or illegal accounting practices.
- *Stability of revenue.* Prices of cigarettes can change more than quantity because of the low price elasticity, and at times of rapid changes in the market structure, quantity therefore represents a more stable base than total revenue, arguing for greater recourse to specific taxes.
- *Inflation.* Contrary to specific excises, ad valorem excises revenue are more responsive to inflation (although automatic adjustment of specific excises to inflation can easily be legislated).
- *Competition policy.* The multiplier effect of ad valorem taxation can help keep prices in check if the industry is concentrated.
- *Protection for domestic industry.* Ad valorem excises are sometimes used as a protective device, shielding

<sup>16</sup> Given the limited administrative capacity of customs administrations to assess the value of imported goods in line with international standards, implementing ad valorem excises is a challenge in many developing countries.

low-quality local cigarettes against higher-quality imports by increasing the price differential (or conversely).

- *Health and externalities.* The health effects of tobacco use are proportional to quantity consumed and not to the value of the product, which tilts the balance in favor of specific excises (WHO, 2010).

Actual specific/ad valorem mixes are often the result of industry pressure. The powerful impact of the multiplier effect on market structure makes the choice between ad valorem and specific taxes a central point of industry lobbying, in addition to the level of taxes. Complex systems involving tiers of specific excises or a combination of specific and ad valorem taxes can create niche markets and protect market shares. Changes to the existing tax mix can therefore have a complex impact on market dynamics and revenue, and governments need to analyze and assess industry proposals based on their own objectives.

Current trends point to a greater use of specific taxes. Sunley (2007) points to the role of market liberalization and the ensuing difficulties in monitoring ex-factory prices and maintaining stable revenue in the shift to specific excises in Asia. A similar trend is present in the European Union and other high-income countries, although health reasons also seem to drive this evolution (European Commission, 2004; Cnossen, 2006; WHO, 2010). Such considerations have also led some countries to use a multi-tiered system of specific taxes where price-based tiers act as a proxy for value, although some of these systems have recently been eliminated (for example, Indonesia, Philippines).

## Earmarking

A significant minority of countries earmark tobacco taxes for various purposes. Program rationales, types of funded expenditures and their connection with tobacco consumption, and the related administrative processes vary considerably, but there are general advantages and disadvantages to earmarking (see Bird, 1997; Bird and Jun, 2005; and Hu and others, 1998).

*Main advantages:*

- Earmarked taxes covering tightly related expenditures are akin to a user fee and help keep public expenditures in line with voters' preferences (for example, car registration fees used for road works).
- Earmarking can help bring about economically desirable policy change by ensuring some form of

compensation for those who might have otherwise stood to lose, absent any such mechanism.

- If earmarking can politically help raise revenue for a good purpose, it might help bring expenditures to an efficient level at minimum political cost.

*Main disadvantages:*

- Earmarking reduces the government's capacity to allocate budget resources to their highest-impact use.
- Budget resources are fungible and earmarking is often not accompanied by additional resources. Indeed, although in many cases earmarking has played some role in tobacco control, there is no strong evidence that earmarking is a necessary condition for success.
- In some cases, earmarking might have adverse consequences. John (2008) notes, for example, that some earmarked tobacco taxes in India are used to improve the welfare of bidi workers; this amounts to a direct subsidy to the industry (and defeats the original purpose of the tax).

Overall, the case for earmarking is weak. Indeed, tightly relating expenditures to earmarked taxes is difficult in the case of tobacco. Tobacco imposes many different types of costs (for example, health, productivity, material damages) that can also be linked to other causes, and identifying the tobacco-related part of these costs to determine the amount of the tax can be difficult. This also means that, having linked health expenditures to tobacco taxes, it would be politically difficult, for example, to justify a decrease in health expenditures as a mechanical consequence of a decrease in tobacco tax revenue, because the exact timing and effect of tobacco use on health expenditures is not easy to determine. Furthermore, there is also strong evidence that the absence of earmarking has not prevented governments from dedicating substantial resources to such activities (for example, publicly funded lung cancer treatment).<sup>17</sup> However, earmarked tobacco taxes could have a symbolic role in justifying new tobacco taxes to broadly compensate for the costs of tobacco (for example, public health care) or might be used to justify seed funding for tobacco control programs (and have indeed done so in the past).

<sup>17</sup> WHO (2016) concludes, for example, that based on empirical evidence, earmarking successes "may be special cases, and [that] the effectiveness of the earmark may diminish over time and budget rigidity may become inefficient," and further that "revenues from earmarked sources may not actually be additional."



## Tobacco Tax Administration

### General Considerations

Given heightened incentives for fraud because of the higher tax rate and portability of tobacco products, the central concern in the administration of tobacco taxes is to tightly control the import/production and distribution of excised products. Although perfectly controlling the supply chain cannot realistically be a pre-requisite to start increasing excises, given that incentives to fraud are broadly related to the tax wedge, increasing taxes should go hand in hand with tighter controls. This control should as much as possible be exercised at all points of the supply chain, from the fields where tobacco leaves are grown or port of entry, to the final purchase by the individual consumer of the product.<sup>18</sup> Such controls need a clear legal framework and dedicated services or functions in the revenue administration.

The legal framework needs to contain some key elements. The categories and particular tobacco products subject to excise taxation must be clearly defined, keeping in mind possible substitution patterns. Guiding taxation principles, the base, the rates, the method of calculation, and the exact point of taxation in the production/supply and distribution chain<sup>19</sup> also need to be clearly defined. The legislation must also serve as the basis for the special excise administration and control measures designed to mitigate this increased risk of fraud. Administrative and control measures need to be tailored to the specifics of the local context, for each stage of the processing and distribution.

In most countries, excise taxes are due to central government, and a centrally organized excise administration is responsible for the management and collection of excise taxes, including tobacco taxes.<sup>20</sup> Excise administrations are often part of the tax administration, although the customs administration sometimes

collects both import and domestic excise taxes. In most countries, the customs administration collects excise taxes on imported excisable goods together with customs duties. In rare cases, if excise revenue is high or the taxation system is peculiar, countries might have an excise service separate from the tax and customs administrations (as for example in the United States). In low-compliance environments, more physical and onsite checks should be performed by the excise administration (for example, inspection of inventories) and corresponding administrative capacity is required. In a highly compliant environment, company audit capacities are often adequate.

### Specific Administrative and Control Measures

Only licensed and strictly controlled economic operators should be involved at any stage of import, production, and distribution (including retail). Legislation should define compulsory requirements, guarantees, safeguards, and related controls, under which tobacco products can be imported or produced and distributed. The license should include concrete physical, administrative, and financial conditions, and adherence to these conditions must be regularly controlled and non-compliance severely penalized, including by suspending or withdrawing the license.

Clear and complete records should be kept, and information supplied seamlessly to the excise administration. Operators need to keep up-to-date records of the flows of materials used for production and of inventories. The content and the format of the records need to be defined by law and in the license. These records should be reported at prescribed intervals and/or kept available to the excise authority for remote and/or onsite control purposes. The records should reflect and correspond with the actual physical status of inventories. It is important that the records and the information supplied by the economic operator facilitate the controls for both the operator and the authorities. If the concentration of the industry allows or the fiscal risks justify, the production plant can be supervised on site by the excise administration on a permanent basis.

Excise stamps as well as other markings affixed to the packs of cigarette can facilitate the collection of excise taxes and controls, as well as audits and enforcement actions at various stages of distribution. A tax stamp (or “banderole”) is issued by the excise authority at the value of the excise tax. It is purchased by the

<sup>18</sup> Controls of cultivation are looser as illegal farming is more difficult to conceal than trade of final products.

<sup>19</sup> Excises should be collected as early as possible in the distribution chain (for example, at the time of import processing and at domestic tobacco factories) in order to keep the number of taxpayers as low as possible, and therefore the controls simple, inexpensive, and effective.

<sup>20</sup> In certain countries, in addition to federal or central government taxes, local governments (in the case of the United States, both state and local governments) are also entitled to impose excise duties on tobacco products using their own tax/excise services. Such arrangements require close coordination among the different levels of government.

producer or importer and applied on each product sold as a proof of payment of the excise tax on that product (and the VAT in certain countries). For this reason, stamps should have strong security features similar to those used for banknotes and passports. The high cost of such stamps and consequent use of low-quality stamps has often led to counterfeit stamps and fraud in many countries, hence a general concern about the efficiency of stamps as a proof of payment for taxes. For these reasons, many countries have replaced tax stamps by fiscal stickers that contain or give access to product-specific useful information (often through bar codes). While fiscal stickers do not aim to prove the payment of taxes (as stamps do), they are useful for taxation, control, and auditing purposes.<sup>21</sup> Some countries require pre-printed indication of duty paid status of tobacco for the specified markets (for example, the United Kingdom, France) on the pack itself. The burden and cost of applying markings always rests with the producer/importer except the cost of production and sale of the excise stamp. During periods of forestalling (for example, prior to excise rate change) the quantity and therefore the costs of printing and distributing tax stamps may significantly increase and governments should ensure that the excise administration has sufficient funds to cover such extra costs, although forestalling should altogether be prevented in the first place through appropriate regulation.

Sophisticated marking systems can go all the way to track and tracing. This process would require producers to apply appropriate signs on packs and packages (master cartons) to track every product along the distribution chain. The date, time, and place of production; origin; intermediaries; intended destination; and taxation status can therefore be identified and controlled to determine the genuineness and point of diversion of smuggled tobacco products (basic information such as the taxation status should also be made easily understandable to consumers). Track and tracing systems require heavy infrastructure and must be able to deal with complex transactions and distribution chains and are therefore costly. Given the need to adapt to changing commercial practices, the

<sup>21</sup> Tax stamps must include a maximum retail price if an ad valorem excise on the final price is applied, otherwise the effective ad valorem rate would be lower than the statutory rate. This might in turn require additional legal and regulatory guidelines on price controls, as well as the administrative means to implement the controls or at least monitor the retail conditions. Fiscal stickers may also in these cases include a maximum price, but not necessarily.

system should be operated by a dedicated organization in coordination with the industry, and all contained information should remain accessible to the excise administration at all times.

The point of payment and related conditions must be clearly defined in the law. Points of payment and methods are established after consideration of risks, technology, liquidity, and costs. Usually, the point of taxation is when the product leaves the factory premises (or customs/tax warehouse in case of imports), before retail distribution. The number of such producers and importers are typically limited and they are well known to the excise authorities. Usually, the producers and importers file their declaration and pay the taxes periodically, on a monthly basis on a pre-defined day of the month following the removal of tobacco products from the warehouses. The excise legislation should prevent the excessive forestalling, accumulation, and sale of stocks using earlier and lower-value tax stamps, and regulations should limit the quantities and/or time allowed for the sale of such stocks. Specific procedures should be defined for damaged stocks, returns, and other special events.

Transit, warehouse, and free zone operations entail elevated risks of fraud and adequate special measures should be applied. Financial guarantees commensurate with the amounts of all duties and taxes due can be demanded. The quantities produced and transacted can also be limited and special physical control measures applied, such as the separation of processing operations from the sealed storage of taxed and untaxed products. Physical and direct control by the officials of the excise authority during a part or the whole operation can be applied (for example, physical escort of the transit consignment from border to border by individual trucks or in a convoy, application of radio or satellite tracking systems to goods or conveyances/vehicles/containers).

Authorities should impose severe restrictions on duty free and internet sales. In principle, duty free shops exist to facilitate the sale of products for export at a low risk, and convenient place and time. Therefore, it is recommended that duty free shops be licensed only at the exit sides of airports and seaports and to sell tobacco only for outbound passengers.<sup>22</sup> Sales of excisable products in duty free shops at land borders and inland within the country are not recommended. Consideration should be given to reduce duty free

<sup>22</sup> Duty free allowances should be limited by frequency, length of absence from the country, and quantity.

allowances within the limits of international standards if deemed necessary and practical. Sales of tobacco over the internet and similar difficult-to-control channels should be subject to strict control, and consideration given to prohibiting them.<sup>23</sup>

Due diligence, appropriate responsibility, and care should be legally mandated for the licensed operators. This includes the design and operation of their own internal control systems to prevent fraud and make their processes transparent. Operators should also be legally bound to report any suspicious cases and cooperate fully with the authorities in the investigation of fraud cases including sharing internal information on processes and business operations.

### Fighting Tobacco-Related Excise Fraud

Given their light weight, small size, and high value, tobacco products are susceptible to fraud through illegal trade, production, and cultivation. The latter is usually a small problem, and significant clandestine factories are limited to countries where enforcement capabilities are generally weak and/or corruption high. On the other hand, illegal trade and production of final products is a widespread problem, given the high profit margins: a single container or truckload of illegal cigarettes can yield up to US\$2 million in profits. The consensus among experts puts the annual revenue loss in tobacco taxation within the European Union at roughly €10 billion, and worldwide at US\$40–50 billion—that is, about 600 billion sticks, or 10 percent of global consumption (ITIC, 2013; Merriman, 2001; Joossens, 2011; European Commission, 2013; Euro-monitor, 2015).

Illegal trade is a context-specific activity that has various modus operandi and therefore requires multi-dimensional context-specific solutions (Box 2). There are two types of such trade. *Bootlegging* is the illegal resale outside the country of origin of legally purchased duty-paid cigarettes. It is the textbook illegal trade of classical international trade theory, but it is marginal for tobacco (although potentially a significant problem in Europe). Bootlegging is generally caused by wide tax differences between neighboring countries with weak or no border controls (for example, internal borders between member states in customs unions). It can also be related to abuse of international travelers'

allowances, cross-border shopping, and so forth. *Smuggling* is the cross-border trade in untaxed cigarettes. Smuggling is by far the most significant type of illegal trade: up to 90 percent of the total. In general, excise fraud extends from standard customs/commercial fraud (for example, mis-declaration of quantities, values, origin, and classification) to undeclared activities such as (1) the diversion of legally produced cigarettes from international transit routes directly to the retail market, (2) illegal domestic production and sale of cigarettes, and (3) legal or illegal production for export. In the last two cases, illegal production might also involve counterfeit cigarettes (for example, branded cigarettes illegally produced by non-owners of the brand, abusers of industrial and intellectual property rights).<sup>24</sup> Tax exemptions are also often linked to smuggling (for example, loose transit and transshipment systems, free zones). Because smuggling involves untaxed cigarettes, it generally remains largely unaffected by mild to moderate decreases in taxes and responds more to controls and repression.

Bootlegging, and smuggling even more so, generally involves criminal networks. The complexity of smuggling operations requires carefully designed and well-orchestrated plans that only sophisticated criminal networks can undertake. For this reason, detection, seizure, and elimination of illegal products must be accompanied by thorough and systematic investigations (often with undercover methods) and successful criminal prosecution including forfeiture of proceeds from crime to uproot entire networks. Organized groups active in these trades are often also active in other illegal activities—such as illegal migration or smuggling of arms, drugs, and illegal medicines—and can be very dangerous, hence the need for an appropriate security apparatus.

Sound and coherent VAT, excise and criminal laws, and regional and international coordination are important first steps to minimize the incentives and opportunities for smuggling and bootlegging. Clear policy rationales; well-defined administrative procedures; regional coordination on matters of rates, base, and trade (for example, personal allowances); comprehensive, stringent, and coherent excise regulations (as opposed to scattered customs and criminal procedures) with strict and direct/unconditional tax liabil-

<sup>23</sup> See article 11 of the Protocol to Eliminate Illicit Trade in Tobacco Products.

<sup>24</sup> Illegal production can take place in illegal production facilities (often semi-mobile units), or in legal facilities, with or without the knowledge of the facilities' managers.

ity; and so forth all contribute to fighting fraud. In addition, international coordination (notably through the WHO Framework Convention on Tobacco Control and the related Protocol to Eliminate Illicit Trade in Tobacco Products) can significantly improve the efficiency of national efforts. Smuggling and in particular smuggling of tobacco products should notably be criminalized, with adequate level of penalties and other sanctions including confiscation of proceeds of tobacco-related crime.

It is essential to gather information on both legal and illegal trade and production, movement, import, and export of tobacco products, including the raw materials and equipment/material used in production.<sup>25</sup> This includes public information, industry, own data, and informants, as well as the exchange of information with other government agencies and with international partners (for example, regional organizations like the European Anti-Fraud Office). Analyzing the information helps governments understand the situation and trends, define the risks, and from there identify measures to tackle the problems. Standard control measures can then be adjusted at every step, from pre-arrival controls to post-clearance audits. The faster this process takes place, the greater the chances to minimize revenue loss. At a broader level, understanding the size, characteristics, and patterns of the illegal production and trade is a pre-requisite to developing effective anti-fraud strategies and actions; strategies to fight smuggling in countries where it has a 2 percent share of the market will not be the same as those used in countries where it has a 10 percent share (for example, Europe) or a much larger share (for example, Brunei).

Border controls are a first line of action. Depending on the modus operandi, revenue risk, and available human and material resources, officers with required qualifications and experience should be assigned to border controls. Front-line officers should be supported by appropriate intelligence, background support and service, guidance and supervision from management, and technical aids to enforcement. The format and the integrated control technology as well as the cooperation with other agencies at the border station are important factors in effective controls.

<sup>25</sup> For example, tobacco leaves, cut and fine-cut tobacco, cigarettes and other tobacco products, materials used for producing cigarettes like paper and filters, and those used for packing.

Mobile excise control units stopping vehicles and verifying the legality of excisable goods within the country are often useful. Inland mobile controls should be carried out along important transport corridors, communication centers, and bottlenecks like bridges, ferries, and passes. Such inland mobile controls can detect illegal imports and unauthorized domestic products while they are transported inside the country. Support to these operations requires tight coordination among police, border guards, and other such services (for example, joint patrols). Controls along the green borders (that is, between two official border crossings) should be organized in coordination with border police and customs services of neighboring countries.

Investing in appropriate equipment is necessary. Most general anti-smuggling equipment like X-ray scanners (including scanners for small parcels, containers, trucks, and trains), endoscopes, mirrors, night vision equipment, cameras, automatic license plate readers, and mobile offices can also be used to support the detection of illegal tobacco shipments. In many low-income countries, basic equipment such as rifles, communication devices, motorcycles, utility vehicles, and small speedboats might be prioritized. Specific tools include tobacco detector equipment and tobacco scenting dogs. The same dogs can be trained to detect both tobacco and narcotic drugs.

Excise administration staff will require dedicated training. Special emphasis should be given to tobacco processing technologies, distribution methods, taxation principles, rules, practices, inward processing relief, and illegal trafficking patterns. Training staff to resist threats and bribes from criminals is equally important and is most effective if pursued through the implementation of a professional anti-corruption program supported by a code of conduct, disciplinary measures, and proper human resource management. Resource allocation should take into account the revenue weight, revenue risks, and special requirements of dealing with tobacco.

Seizure, storage, and destruction of illegal tobacco should be mandatory for excise and customs authorities. This generally involves burning, grinding, and depositing at waste management plants. As for legitimate tobacco, the storage, transport, and destruction of seized and confiscated goods require extra care and caution, as well as transparent and documented processes. This can also create significant and unexpected additional expenses, in particular at times of massive and successful law enforcement operations, and authorities should plan for the necessary budget resources.

## Box 2. Revenue Raising, Incremental Tax Adjustments, and Illegal Trade: The Canadian Case

The Canadian federal and provincial governments gradually increased cigarette taxes so as to almost triple the real (that is, inflation-adjusted) retail price between 1980 and 1992/1993. Federal nominal revenue surged from Can\$0.7 billion to Can\$3.3 billion over this period (Figure 2.1). The increase did not result in smuggling until the early 1990s, when previously almost non-existent untaxed exports of Canadian cigarettes to the United States surged and re-entered Canada as duty not paid (DNP) cigarettes (Figure 2.2). In 1993, it was estimated that roughly one-third of the Canadian market consisted of DNP cigarettes.

Tough measures against tobacco manufacturers and their employees involved in the scam (Austen, 2008; Canada Revenue Agency, 2008), significant but temporary tax cuts, new export taxes, and tougher police controls allowed the government to control the situation and paved the way for taxes to increase again. This time, the tax increases took place at a much faster pace given the political acceptability of the tax and a good understanding of the demand (Figure 2.1). Revenue surged again to previous levels, despite a sharp decrease in the prevalence of smoking. Large-scale illegal trade, however, came back after 2004 with actual production of new brands on the same indigenous reservations that had been used in the 1990s by smugglers to re-import cigarettes, because of their peculiar legal and geographical characteristics. This triggered a second wave of enforcement efforts by Canadian authorities (including an enhanced stamping regime), and revenue increased again from 2010.

No two countries are alike, but the Canadian case illustrates a few key points. First, the revenue increase has been substantial despite smuggling. In Canada, real (inflation-adjusted) tobacco-related revenue was roughly 50 percent higher in 2011 than in 1980, despite a 50 percent lower prevalence rate and significant illegal trade. However, the social cost of smuggling (for example, rising crime) can be high, especially among communities closely affected by it, and the attitude toward paying taxes more generally can also greatly suffer. Second, gradually raising rates is an efficient way of understanding the demand and market reactions to higher prices, as can be seen from the faster increases after 2000. Third, tight control over the tax base is a key element of any revenue-raising strategy in any country. Situations in which parts of the country come under a different legal regime or are beyond the reach of the law make it difficult to enforce high excises, whether this is related to jurisdictional peculiarities, political reasons, war, logistics, and so forth. Fourth, once in place, criminal networks are hard to dismantle and require a multi-pronged strategy that extends beyond simple repression (Royal Canadian Mounted Police, 2008). Many individuals involved in the mid-2000s Canadian smuggling episode learned the trade in the early 1990s and took over old distribution networks, to the dismay of tobacco manufacturers, whose activities led to the initial growth in contraband (Canada Revenue Agency, 2008; Marsden, 2009; Imperial Tobacco Canada, 2009; Kemball, 2009). Finally, understanding the nature of smuggling is crucial to fighting it: even in a single country, solutions that worked once might not work twice.

Figure 2.1. Canada: Tobacco Price and Federal Excise Revenue

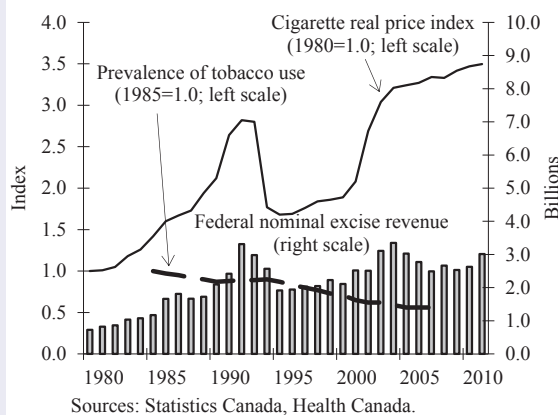
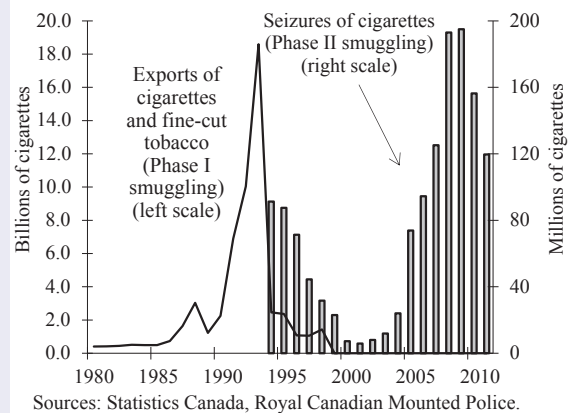


Figure 2.2. Canada: Estimated Smuggling and Seizures



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