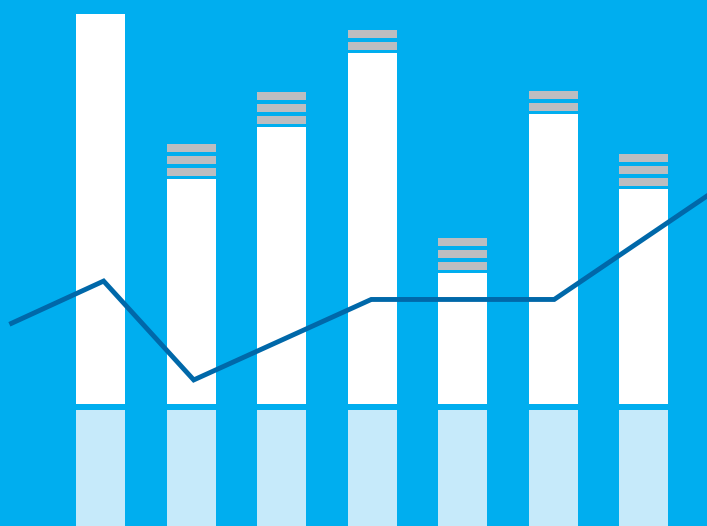


WHO TECHNICAL MANUAL ON
**TOBACCO TAX POLICY
AND ADMINISTRATION**



World Health
Organization

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Foreword

In 1999, the World Bank's *Curbing the Epidemic* was the first report by an international organization to recognize that increasing tobacco excise taxes was the most effective and cost-effective measure to reduce tobacco use and save lives. Over the two decades since, the evidence base supporting this claim, especially in low- and middle-income countries, has been steadily growing. Meanwhile, the credibility of the tobacco industry's arguments against tobacco taxation has been slowly waning. In short, health-promoting tobacco taxation has come of age, and the evidence has consistently shown that it is a win for public health, a win for revenue and a win for the economy overall.

But we must be cautioned against complacency. Although the evidence on tobacco taxation is irrefutable and there are now signs that the tide is turning on the global tobacco epidemic, tobacco taxation was, in 2018, the WHO MPOWER¹ measure that was least implemented at the highest level of achievement. Even more concerning, cigarettes have become more, rather than less, affordable in many low- and middle-income countries over the past decade. Many countries set rates at insufficient levels and increase them too infrequently, while others still use complex and inefficient taxation structures. This failure to advance tobacco taxation able to effect significant price increases constitutes a loss for governments in revenues, a loss for public health and a win for the tobacco industry.

To overcome this inertia, this manual charts the way forward for policy-makers, finance officials and others involved in tobacco tax policy development. It equips them with the information and evidence needed for the realization of their countries' tobacco tax policy objectives. It also analyses the tobacco industry's tactics for influencing the political economy of tobacco taxation and shows the limitations and exaggerations of the arguments used against tax increases. The manual serves as an update of the 2010 *WHO technical manual on tobacco tax administration* by adding new evidence on the successes of tobacco taxation in all parts of the world and broadening its scope to capture more material relevant to developing and implementing more effective tobacco tax policy.

1 The WHO MPOWER package of technical measures and resources that comprises (M) monitor tobacco use and prevention policies; (P) protect people from tobacco smoke; (O) offer help to quit tobacco use; (W) warn about the dangers of tobacco; (E) enforce bans on tobacco advertising, promotion and sponsorship; and (R) raise taxes on tobacco.

Its contributions are particularly timely in a COVID-19-stricken world. As the pandemic has been worsened by the global burden of noncommunicable disease, and revenue is now desperately needed, taxing tobacco should be more palatable than ever. This manual shows policy-makers how to seize this unique opportunity to use tobacco taxation to build back better, save lives and strengthen health systems while increasing revenue.

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ACRONYMS

AEO	authorized economic operator
AFRO	WHO Regional Office for Africa
AMRO	WHO Regional Office for the Americas
ATO	Australian Taxation Office
BAT	British American Tobacco
CCTV	closed-circuit television
CIF	cost, insurance and freight
COP	Conference of the Parties
CPI	consumer price index
CVA	Customs Valuation Agreement (Thailand)
DGCE	Directorate General of Customs and Excise (Indonesia)
DIY	do-it-yourself
ECBA	World Bank Extended Cost-Benefit Analysis
EIU	Economist Intelligence Unit
EMRO	WHO Regional Office for the Eastern Mediterranean
ENDS	electronic nicotine delivery systems
ENNDS	electronic non-nicotine delivery systems
EU	European Union
EURO	WHO Regional Office for Europe
FDA	Food and Drug Administration (United States)
FET	fair and equitable treatment
GCC	Cooperation Council for the Arab States of the Gulf
GDP	gross domestic product
HTP	heated tobacco product
HMRC	Her Majesty's Revenue and Customs (United Kingdom)
IARC	International Agency for Research on Cancer
IIA	international investment agreement
IMF	International Monetary Fund
IRS	Internal Revenue Service (United States)
ISO	International Organization for Standardization
IT	information technology
ITC	International Tobacco Control
JTI	Japan Tobacco International
KRA	Kenya Revenue Authority
LMICs	low- and middle-income countries

MFN	most favoured nation
MOP	Meeting of the Parties (to the Protocol)
MPOWER	(M) monitor tobacco use and prevention policies; (P) protect people from tobacco smoke; (O) offer help to quit tobacco use; (W) warn about the dangers of tobacco; (E) enforce bans on tobacco advertising, promotion and sponsorship; and (R) raise taxes on tobacco
NCDs	noncommunicable diseases
NCI	National Cancer Institute
NT	national treatment
OECD	Organisation for Economic Co-operation and Development
OST	other smoking tobacco
PMI	Philip Morris International
PPP	purchasing power parity
QR	quick response
RGTE	<i>WHO Report on the global tobacco epidemic</i>
RYO	roll-your-own
SACU	Southern African Customs Union
SCARE	(S) smuggling and illicit trade; (C) court and legal challenges; (A) anti-poor rhetoric; (R) revenue reduction; and (E) employment impact
SDGs	Sustainable Development Goals
SEARO	WHO South-East Asia Regional Office
SII	Internal Revenue Service of Chile
TADAT	Tax Administration Diagnostic Assessment Tool
TTC	transnational tobacco company
UAE	United Arab Emirates
UHC	universal health coverage
VAT	value added tax
WAEMU	West African Economic and Monetary Union
WCO	World Customs Organization
WHO	World Health Organization
WHO FCTC	WHO Framework Convention on Tobacco Control
WHO ISPT	WHO interactive smoking projection and target-setting tool
WHO TaXSiM	WHO tobacco tax simulation model
WPRO	WHO Regional Office for the Western Pacific
WTO	World Trade Organization

Executive summary

This *WHO technical manual on tobacco tax policy and administration* builds upon the 2010 *WHO technical manual on tobacco tax administration* by further detailing the strategies for effective tobacco tax policy development, design, implementation and administration. This 2021 edition also serves as an update to the 2010 manual, incorporating the latest developments in science, technology and policy, as well as providing illustrative recent examples from a variety of countries. The best practices laid out in this manual are designed to inform governments on the development of their tobacco taxation policy, facilitating the achievement of their health and revenue objectives while also supporting their overall development strategy.

Tobacco taxes have long been seen as a source of revenue for governments, but as evidence of the harms caused by tobacco has accumulated over the years, public perception has evolved. Increasingly, governments, as well as the general public, are recognizing that taxation of tobacco is not only a revenue source but also an effective public health intervention to reduce tobacco consumption and its associated harms.

The profile of tobacco taxation as a health policy tool has increased greatly since the publication of the 2010 *WHO technical manual on tobacco tax administration*. Multiple global commitments have been adopted over the past decade to address tobacco use specifically – as well as noncommunicable diseases (NCDs) and the Sustainable Development Goals (SDGs) more broadly – through tax and price measures to reduce demand for tobacco products, save lives and fund development. Global development institutions, including the World Bank, the International Monetary Fund (IMF) and major philanthropic foundations, also agree with WHO on the importance of emphasizing and strengthening tobacco taxation as a key health policy tool.

The COVID-19 pandemic has further fuelled this shift in the narrative on tobacco taxation by revealing how the global economy is inextricably linked with population and planetary health. Investing in health is fundamental to any economic recovery, and fiscal policy will be a key driver in addressing the socioeconomic consequences of COVID-19. Interventions such as tobacco taxation – which leads to reduced tobacco consumption, improved population health and increased revenues for governments – should be part of a comprehensive strategy for a build back better recovery.

The evidence is clear: significant increases in excise taxes that lead to price increases have consistently proven to be the most effective, as well as the most

cost-effective, mechanism for reducing tobacco consumption. This manual will guide readers through the necessary steps to create and implement the strongest tobacco taxation policies for their specific countries.

There are many factors to consider when developing tobacco taxation policy. Understanding the market is a fundamental step before deciding which form of taxation to use. Specifically, the choice between ad valorem and specific taxation is influenced by the market structure in a given country. At the same time, tax structure also shapes the market structure. Over the past decade, there has been a trend towards countries adopting specific excise taxes or mixed excise systems that rely more heavily on the specific component, which the latest global data associate with the highest average prices.

Tobacco tax structures can be simple, with one flat rate across the board, or complex, with multiple tiers for products with different characteristics. In 2018, 31 countries used complex, multitiered structures. But evidence demonstrates that simpler excise tax structures – utilized in all high-income countries – leave the least room for industry manipulation or tax avoidance and brand/product switching by consumers.

Not only is it important to set taxes at a high level to discourage consumption, specific excise tax policies must include regular adjustments to increase the tax rate so that it keeps up with inflation and income growth in a country over time. Excise tax increases should aim to reduce the affordability of tobacco products. The base on which the tax is applied is also important. For specific taxation, the tax base should be the quantity in clearly defined units. For ad valorem (or mixed) taxation, the best practice is to use the retail price as the tax base and introduce a minimum excise tax.

With regard to non-tax regulations that affect the price of tobacco products, pricing regulation may be considered to prevent the tobacco industry from exercising differential tax shifting, which it uses to ensure that large price gaps exist between premium and cheap cigarettes. However, pricing policies cannot be used alone. If considered, they should be used only as complements to significant excise tax increases.

Other non-tax regulations include banning promotional discounts for tobacco products and banning the sale of single cigarettes. To assuage concerns that tax increases will increase inflation – as well as to reflect the declining trend in consumption of tobacco products – it is good practice to exclude tobacco products from the basket of items that are used to develop consumer price indexes. Finally, in order to make excise tax on tobacco products more effective in reducing overall tobacco use, all tobacco products must be taxed in a comparable way.

Regular assessment, evaluation and monitoring of the impact of tobacco tax policies over time are essential components of effective tax policy development and analysis. Governments need to have accurate estimates of price, income and tax base elasticities in order to anticipate the impact of a tax increase on consumption and

tax revenue. Ideally, other factors such as non-price policies should also be taken into account when estimating price and income elasticities for a specific country. A variety of tools and indicators exist to measure impact and monitor progress, and these are described in Chapter 2 of this manual.

When developing tobacco tax policy, it is also important to take the broader policy context into consideration at both the domestic and the regional level. Domestically, cooperation is needed across sectors to ensure that policies and interventions in the areas of agriculture, trade, finance and labour do not work against the public health objectives of tobacco control and taxation. For countries that are part of a regional bloc, regional harmonization of tobacco taxation is a useful tool to prevent tax revenue erosion, tax avoidance and tax evasion, as well as to protect population health. Tax harmonization must be designed carefully, however, to be effective. The experience of the European Union (EU) demonstrates that both a declining consumption trend and stable revenues can be achieved with harmonized minimum excise tax rates.

Discussions of policy development and implementation for new and emerging nicotine and tobacco products such as heated tobacco products (HTPs) and electronic nicotine and non-nicotine delivery systems (ENDS/ENNDS), are complicated, by their constantly changing technology and market dynamics. Policies and regulations need to be developed carefully and adjusted accordingly.

Where HTPs are not banned, the current recommendation is to tax them at the same level as cigarettes on a per-unit basis, regardless of tobacco content.

Early evidence from the United States shows that demand for e-cigarettes, a subcategory of ENDS/ENNDS products, is possibly even more price-responsive than the demand for conventional cigarettes, meaning that taxes can be used as an effective deterrent to ENDS/ENNDS products use. While there is preliminary evidence of substitutability between conventional cigarette use and e-cigarette use, further research is needed to understand substitutability effects among users of both conventional cigarettes and ENDS/ENNDS products. It is essential to implement regulation of ENDS/ENNDS products along with any tax policy to safeguard public health.

In countries where they are not banned, ENDS/ENNDS products must be regulated and taxed in a manner that discourages uptake by youth and non-users. Taxing e-liquids is a key component of ENDS/ENNDS taxation. Nicotine-containing and non-nicotine-containing e-liquids should be taxed equally. Ultimately, while the policy implications of these newer products require careful consideration, the fact remains that conventional tobacco products constitute the overwhelming share of consumption (more than 97% in 2018).

Tobacco tax administration must be both efficient and effective to ensure that health objectives are met and the desired level of tax revenue is raised. Since the

implementation of tobacco taxation often involves numerous agencies within a country, clearly defined roles and responsibilities are essential to maximize efficiency. Coordination among the different agencies involved, as well as with neighbouring countries, is required for tobacco tax administration to be effective. Performance evaluation and accountability for competent authorities is also necessary, and many tools and indicators exist to facilitate these processes (described in Chapter 3). There are a number of steps authorities should take to ensure efficiency and effectiveness at each stage throughout the tax compliance cycle (see Chapter 3, section 3.3).

Control and enforcement are the main functions of tax administration, and these can best be achieved through the use of a strategic plan and a risk-based approach. Controls can be exercised through licensing and due diligence, fiscal markings (e.g. tax stamps), tracking and tracing, implementation of anti-forestalling measures, national audits and specific controls for imports and exports, as well as for free zones and transshipment points. Once smuggling or illicit trade is detected, actions such as seizing and destroying smuggled and/or illicit tobacco and collecting due taxes must be taken immediately. To deter further illegal activities, a comprehensive audit must also be carried out, including all those involved in the illicit acts. Penalties and sanctions must be sufficient to deter illegal activities. The Protocol to Eliminate Illicit Trade in Tobacco Products provides invaluable guidance for tobacco tax administration, control and enforcement that is applicable even for countries that are not Parties to it.

The broader elements of a good tax system include proper resourcing of competent authorities, strict rules and regulations to detect and punish corruption and a strong judiciary system capable of resolving disputes as soon as possible.

In its efforts to oppose tobacco tax increases, the tobacco industry utilizes many SCARE tactics – (S) smuggling and illicit trade, (C) court and legal challenges, (A) anti-poor rhetoric, (R) revenue reduction and (E) employment impact – to influence the political economy of tobacco. Chapter 4 provides detailed analyses of these issues with supporting evidence that belies the SCARE tactics, as well as guidance for tax and other relevant authorities on how to anticipate and respond to industry arguments.

This manual also provides tools and methodologies to help tax authorities define and evaluate the problem of illicit trade of tobacco products in their countries, independent of the tobacco industry's generally inflated estimates. Price (and tax) levels are not a key determinant of illicit trade; rather, the problem is exacerbated by the lack of governance and tax administration capacity. Refraining from increasing taxes is not the solution. Countries should instead respond with a comprehensive strategy to fight illicit trade, including undertaking independent estimates of illicit trade levels and implementing good tax administration practices such as those discussed

in Chapter 3 and contained in the WHO Framework Convention on Tobacco Control (WHO FCTC) Protocol to Eliminate the Illicit Trade in Tobacco Products.

When it comes to court challenges, the tobacco industry is less likely to challenge excise taxes than other tobacco control measures, because taxation is a comparatively well-established regulatory measure. The industry will, however, exploit the slightest vulnerability in the design, adoption or implementation of tax measures. For this reason, measures to strengthen regulators' legal position are described that will enable authorities to protect themselves from potential legal challenges.

The industry argument of regressivity, or the notion that tobacco tax increases hurt the poor because they have to pay a larger share of their income in taxes than the rich, has two fundamental limitations. First, the notion of regressivity does not take into consideration the broader health and economic harms caused by tobacco use that exacerbate the impoverishment of lower-income smokers. These harms are actually reduced when tobacco consumption decreases following a tax increase. Second, the tobacco industry argument ignores the fact that higher tobacco taxes and prices can induce behaviour change as is reflected in the price elasticity of demand. Evidence consistently shows that lower-income smokers are more sensitive to price and therefore more likely to reduce smoking in response to a tax and price increase. Including these factors shows tobacco taxation to be, in fact, a progressive public health intervention that disproportionately benefits the poor.

While essentially admitting that a tobacco tax increase may have the desired effect of reducing consumption, the industry also tries to argue that a tax increase will also reduce revenues. In fact, the price inelastic demand for tobacco makes tobacco tax increases a win-win for both public health and finance. This manual presents several country examples that demonstrate how well-designed and well-implemented tobacco tax increases lead to increases rather than decreases in revenue in the short to medium term. In addition, the reduced consumption resulting from a tax increase results in reductions of other tobacco-related government expenditures as well.

The final tactic used by the tobacco industry to challenge proposed tax increases is to frame tobacco taxes as an economic rather than a public health issue. This false choice between health and jobs is based on faulty assumptions that 1) tobacco is a significant source of domestic employment; 2) job creation relies on tobacco consumption and 3) tobacco-related livelihoods are prosperous, sustainable and irreplaceable.

Earmarking can be a useful tool for improving the political economy of tobacco tax increases. While the primary goal of tobacco tax increases is to reduce demand for tobacco, setting aside portions of tax revenue to fund other tobacco control efforts or relevant health programmes can help convince the public, politicians and officials of the value of significant tobacco tax increases. Earmarking can also be

used to counter tobacco industry arguments about potential negative effects of tax increases – for example, by supporting tobacco farmers in transitioning to other crops.

Tobacco taxes work. This is why the industry invests so much money and effort in blocking large tax increases and other effective tax policy reforms. Policy-makers must not be swayed by industry pressure but need only to follow the facts. This manual provides all the information policy-makers need to make the right decisions at each step of the process – from designing, evaluating, implementing and administering tax policy to refuting specious industry attacks and communicating the value of tobacco taxation to legislators and the broader population. An effectively designed and efficiently administered tobacco tax policy will not only produce the direct results of reducing tobacco consumption among smokers and raising revenue for governments, its effects will be felt much more broadly. Indeed, raising tobacco taxes is a SMART policy: it Saves lives; Mobilizes resources; Addresses health inequities; Reduces burdens on health systems; and Targets tobacco use, a major risk factor for NCDs.

- Saves lives: Tobacco use is the leading cause of preventable deaths globally – it claims 8 million lives each year. Tobacco taxation is the most effective mechanism for reducing tobacco consumption and its associated health burden worldwide.
- Mobilizes resources: Despite being the single most effective tobacco control measure, tobacco taxation is largely underutilized as a policy mechanism. Based on available data on the price and taxation of cigarettes, it is estimated that excise taxes on cigarettes generated a worldwide total of US\$ 361 billion in revenues in 2018, including US\$ 162 billion in revenues for low- and middle-income countries (LMICs). If all countries were to raise cigarette excise tax rates by the equivalent of US\$ 1 per pack, the amount of excise revenue from cigarettes would increase by US\$ 178–219 billion, or by 49–61% at 2018 levels. LMICs would gain the most from such tax increases, with excise revenues increasing by 82–103%, providing governments in these countries with an extra US\$ 133–167 billion. This shows the substantial revenue potential of tobacco taxes.
- Addresses health inequities: Tobacco taxation and tax increases are effectively progressive or pro-poor policies because of their positive distributional impact. Lower-income smokers benefit disproportionately from reduced tobacco consumption and use in terms of health gains and income retention.
- Reduces burdens on health systems: The worldwide economic cost of tobacco use was US\$ 1.4 trillion in 2012. Tobacco taxes reduce tobacco-related burdens on governments and health systems through population-based preventive measures.

- **Targets tobacco use:** Tobacco taxation directly targets and reduces tobacco use, which is a major risk factor for several deadly NCDs.

In summary, significant tobacco tax increases, designed and implemented according to the latest guidance and best practices presented in this technical manual – and as a strong component of a comprehensive tobacco control strategy – will bring about substantial reductions in tobacco use and the health and economic harms it causes.

CHAPTER 1.

Why this manual?

BACKGROUND

Tobacco taxes are not new. Governments around the world have been applying taxes on tobacco and tobacco products practically since the idea of excise was conceived. And rightly so: tobacco is not a necessity, it is easy to tax and the demand for it is relatively inelastic. These characteristics, along with the substantial revenues tobacco taxes generate, have made tobacco a highly appropriate object of taxation. As evidence of the harms of tobacco has accumulated over the years, the public perception of tobacco taxes has evolved. Now tobacco taxes are not only seen as a revenue source, but, more importantly, they are recognized as an effective public health intervention to reduce tobacco consumption. This trend reflects the reasons excise taxes exist in the first place – to discourage harmful behaviour and to mitigate the associated negative externalities (1–2).

Many governments view tobacco taxes as a significant and stable source of revenue, which may explain why there is often a degree of hesitation whenever tobacco tax reform is proposed. Historically, many governments have relied on revenues from tobacco taxes and have even adjusted the level of taxation according to their revenue needs (3). However, some countries are beginning to recognize the value of applying high tobacco taxes primarily as a public health tool, viewing revenues as a secondary consideration (4).

Arguments against tobacco tax hikes or improvements to the tax structure are often economic in nature: such tax changes will allegedly decrease revenues, wipe out jobs, increase illicit trade and harm local industries, among other claims. But the evidence has consistently shown that such claims are simply not true in an overwhelming majority of situations. The tobacco industry, in particular, frequently portrays this conflict as a false dichotomy between public health and the economy – as if prioritizing health comes at the expense of the economy. In fact, studies and real-world experiences have shown that increasing tobacco taxes not only improves public health but also has a net positive impact on the economy and development of a country – a true win-win scenario (5–6).

As an update to the first *WHO technical manual on tobacco tax administration* published in 2010, this manual aims to help readers better navigate the various

issues surrounding tobacco taxes and their implementation. The primary intended audience includes policy-makers, finance officials, tax authorities, customs officials and other relevant persons/bodies involved in the formulation and implementation of tobacco tax policy. The manual provides a detailed guide to the design of tobacco tax policy and describes how to effectively administer these taxes to maximize impact. Detailed discussions of the political economy considerations and the hurdles that need to be overcome before and during implementation are included as well. The overarching goal is to equip those working in the tax policy and implementation spheres with sufficient information to help realize the health and revenue objectives of a government's tobacco tax policy in line with its overall development strategy.

THE CONSEQUENCES OF TOBACCO USE AND THE NEED FOR INTERVENTION

Most people are aware that smoking and tobacco use are harmful to health, but few truly comprehend the scale of this harm. The tobacco epidemic claimed more than 100 million lives in the last century (7), with updated estimates now reaching 8 million deaths annually from tobacco use and exposure to second-hand smoke (8). As much as 80% of these deaths occur in low- and middle-income countries (LMICs) (6), revealing how the developing world carries much of the global burden. Tobacco use is a major risk factor for many chronic conditions, including heart disease, cancer, diabetes and chronic lung disease – collectively known as noncommunicable diseases (NCDs). NCDs account for about 15 million premature deaths (between ages 30 and 69) worldwide, killing people in their most productive years. As the leading cause of preventable deaths, tobacco use remains one of the foremost public health challenges of our time.

The consequences of tobacco use also present enormous economic, development and social costs that wreak havoc on families, communities and societies. The annual economic cost of smoking was estimated at US\$ 1.4 trillion in 2012, equivalent to 1.8% of the global gross domestic product (GDP) (9). With these figures likely to have increased since then, the massive health and economic burdens of tobacco use provide justification for governments to intervene and strictly regulate the market for tobacco products. The purview of tobacco control extends beyond the strong imperative to protect people's health and well-being; it should also strive to contain the market failures and negative externalities of tobacco use, particularly since these effects can significantly impact a country's development trajectory.

The mounting evidence of the enduring destruction caused by tobacco in the 20th century provided compelling reasons for a strong global response, which led countries to negotiate the World Health Organization Framework Convention on Tobacco Control (WHO FCTC). The WHO FCTC came into force in 2005 as the

first public health treaty under the auspices of WHO. To facilitate its implementation at the country level, WHO packaged a set of demand-reduction measures directly taken from the treaty (7). These interventions, collectively known as MPOWER, are as follows: (M) monitoring tobacco use and prevention policies; (P) protecting people from tobacco smoke (smoke-free laws); (O) offering help to quit tobacco use (cessation services); (W) warning about the dangers of tobacco (including graphic pack warnings and plain packaging); (E) enforcing bans on tobacco advertising, promotion and sponsorship; and (R) raising taxes on tobacco products. Specifically, under Article 6 of the WHO FCTC, Parties recognized that price and tax measures are an effective and important means of reducing tobacco consumption for various segments of the population – in particular, among young persons (10).

The severity of the tobacco epidemic and its ongoing damage to health and economies are clear justifications for governments to actively intervene and correct market failures. The scale of the burden and the rate at which lives are being destroyed necessitates urgent and aggressive action on tobacco control, using measures that most countries have committed to implementing and that are proven to be effective in reducing tobacco use.

WHY TOBACCO (EXCISE) TAXES ARE CRUCIAL

Among the different tobacco control interventions, raising excise taxes has been identified as the most effective as well as the most cost-effective measure to reduce consumption (6). While other interventions are certainly important components of a comprehensive tobacco control strategy, the direct impact of significant tax increases on consumption is by far the strongest. On average, a tax increase that causes prices to go up by 10% reduces consumption by 4% in high-income countries and 5% in LMICs (6). When implemented at scale, this demonstrates the enormous power of tobacco taxation and its potential to save lives. Tobacco taxes differ from other interventions in that their impact can increase and build over time – even if taxes are already relatively high, their rates need to be continuously increased to retain and amplify their effectiveness. However, this should not be taken as a suggestion that governments considering tobacco control interventions should focus solely on taxes. Taxes are even more effective when implemented as part of a comprehensive package of measures such as MPOWER, which covers distinct but complementary intervention points.

Among the different taxes applied on tobacco products, excise taxes are the most significant because they raise both absolute and relative prices (6). This is important when considering health objectives, since it is the magnitude of the price increase of tobacco products that determines the reduction in consumption. An excise tax is typically applied on a limited set of products, designed to discourage their use by

raising the price significantly over that of other products available in the market. This is in contrast to value added taxes (VAT) or sales taxes, which apply to most goods and services. Seeking to raise the prices of tobacco products through VAT or sales taxes would fail to increase relative prices, making this an ineffective and inefficient method. Customs or import duties on tobacco products are also utilized, but their impact is waning with the global trend towards bilateral and regional agreements aimed at trade facilitation. The application of these duties varies across countries, but overall, they are not applicable to locally produced tobacco products. As a tool to increase prices, import duties cannot substitute for excise taxes, since they are not specifically designed to reduce consumption.

When viewed as a public health policy tool, tobacco taxation is highly cost-effective, since it delivers significant impact yet is relatively inexpensive to implement (11). The costs of implementing tobacco taxation are much lower than those of clinical NCD interventions such as cancer treatments or maintenance medications, since the commodity and human capital requirements are less substantial (12). Moreover, increasing tobacco taxes actually generates additional revenue for a government. Tobacco taxes are also very effective in pre-empting or reducing consumption among groups of people who are especially price-sensitive – youth in particular, who are prevented from initiating a lifelong addiction if taxes and prices are sufficiently high (13). This is also true for the poor, who are more prone to catastrophic health expenditures than the wealthy are. Preventing initiation or encouraging cessation by imposing high taxes provides an escape route from the vicious cycle of tobacco use and poverty (6).

A DECADE OF PROGRESS AND COMMITMENT TO ACTION

Since 2010, when the first *WHO technical manual on tobacco tax administration* was published, numerous developments have raised the profile of tobacco taxes as an essential public health intervention. The Conference of the Parties (COP) to the WHO FCTC adopted guidelines for implementation of Article 6 of the treaty, which focuses on price and tax measures to reduce the demand for tobacco. Also within this period, three high-level meetings on the prevention and control of NCDs by the United Nations General Assembly, as well as the endorsement of the Global NCD Action Plan in 2013 by the World Health Assembly, have resulted in strong global commitments to implement measures, such as increased tobacco taxes to protect people's health.

The 2030 Agenda for Sustainable Development, which contains 17 goals known as the Sustainable Development Goals (SDGs), describes the global development strategy for the next decade. Within the SDGs, two specified targets are highly relevant for tobacco control: strengthening the implementation of the WHO FCTC (target 3.a)

and reducing premature mortality from NCDs by 30% (target 3.4). Furthermore, the Addis Ababa Action Agenda¹, which aims to provide a global framework for financing the SDGs, also highlights tax and price measures on tobacco as key mechanisms to reduce demand and save lives while increasing domestic resources for development. Another important milestone was the 2018 entry into force of the Protocol to Eliminate Illicit Trade in Tobacco Products. These key events, along with several outcome documents and policy declarations in the area of tobacco control and the wider development sphere, have introduced tobacco taxation into the consciousness of a much larger share of policy-makers.

As detailed in subsequent chapters, numerous countries have imposed sufficiently high tobacco tax rates while applying best practices in tax policy design and implementation over the past decade (8, 10). For example, sustained and substantial tax increases have reduced tobacco use in LMICs such as Brazil (14), Turkey (15) and the Philippines (16). High-income countries also continued their leadership in this area, comprising 23 of the 38 countries judged to have sufficiently high tobacco taxes in 2018 (8). However, much remains to be done. The 2019 *WHO report on the global tobacco epidemic* (RGTE) shows that tobacco taxes are still the most underutilized tobacco control policy among the MPOWER measures (8), with only 14% of the world's population being covered by sufficiently high tobacco taxes.

Substantial progress has also been made in building the tools and evidence base for tobacco taxation. Volume 14 of the International Agency for Research on Cancer (IARC) handbooks of cancer prevention, *Effectiveness of tax and price policies for tobacco control*, published in 2011, is a key review of the literature published as of May 2010 on the effectiveness of tax and price policies in reducing tobacco use. The National Cancer Institute (NCI)-WHO *Monograph on the economics of tobacco and tobacco control*, published in 2016, details the evidence accumulated over the years from various countries, focusing not only on tax and price policies, but on all aspects of the economics of tobacco and tobacco control. In addition, numerous published studies from LMICs provide a comprehensive picture of the impact of tobacco taxation in different contexts. The updated Appendix 3 of the Global NCD Action Plan explains the cost-effectiveness of tobacco taxation (11), while the Global NCD Business Plan, *Saving lives, spending less*, built on this work by estimating a dollar figure for the return on investment expected from implementing the best-buy interventions for tobacco control, including taxation (12).

The past decade has seen major steps forward for tobacco taxation in terms of global commitments, the number of countries implementing best practices and the

1 The Addis Ababa Action Agenda of the Third Conference on Financing for Development. Third International Conference, 13-16 July 2015, Addis Ababa, Ethiopia (https://sustainabledevelopment.un.org/content/documents/2051AAAA_Outcome.pdf, accessed 17 February 2021).

expansion of the evidence base on tobacco taxes, particularly in LMICs. Within the development sphere, institutions such as the World Bank, the International Monetary Fund (IMF) and many other multilateral agencies are aligned with WHO on the importance of tobacco taxation and the need to improve its implementation (17–18). Considerable challenges remain; although it appears that the world is headed in the right direction, progress needs to accelerate at a much quicker pace in order to achieve the SDG targets by 2030.

SHAPING A “NEW NORMAL” FOR TOBACCO TAXATION

The global upheaval caused by the COVID-19 pandemic has cast an unprecedented spotlight on how well governments around the world prepared for and responded to the crisis. It has exposed glaring health systems vulnerabilities and highlighted the struggles of many countries to control the spread of the virus. But perhaps more than anything, the pandemic has demonstrated how the economy, trade, science, politics and many other aspects of our societies are very much interdependent and interconnected with the health of the population.

It is clear that an individual’s state of health can significantly determine their susceptibility to disease and their ability to overcome it. People with NCDs are more vulnerable to becoming severely ill with a number of conditions, which also appears to be the case with COVID-19 (19). Tobacco use is a major risk factor for NCDs, and available research suggests that smokers are at higher risk of developing severe illness and dying from COVID-19 (20). Just as the different aspects of society are interconnected, so too are people’s health, the existence of health-promoting environments and the government policies and agencies that shape these environments. This critical moment presents a unique opportunity and renewed motivation to discourage the use of harmful products such as tobacco and to further improve tobacco control measures, especially tobacco tax policy.

Moving forward, a business-as-usual approach to tobacco taxation will not be sufficient. Responding to this new reality and preparing for the next pandemic entails implementing measures that promote healthier populations. Like the COVID-19 pandemic, any future pandemic will likely exacerbate health inequities, bring about more economic uncertainty and put pressure on governments’ fiscal capacities. Interventions such as higher tobacco taxes, which protect people’s health while generating more revenues and economic benefits, become even more important in such crisis situations. Given this context and the stakes involved, ministries of finance and tax authorities are in a unique and powerful position – one of saving not only livelihoods, but also lives.

The importance of increasing tobacco taxes – one of the most effective public health tools available – cannot be overstated. The traditional approach of treating

tobacco tax exclusively as a revenue source has no place in the new normal. One cannot deny the scale of the tobacco epidemic, the necessity to correct market failures and the overwhelming evidence of tobacco taxation's benefits to health and to the economy. The positive trend in the changing narrative around tobacco taxation needs to continue. Tobacco taxation should not be viewed in isolation from the rest of government policies, but rather as an important part of the whole, an essential piece in working towards our common goal of better health for all.

OVERVIEW OF SUBSTANTIVE CHAPTERS

This manual is primarily designed for policy-makers, finance officials, tax authorities and customs officials. It may also be useful for officials within health ministries or other government agencies, as well as nongovernmental organizations working in this area, including tobacco control advocates. Significant effort is made to present real-world examples and recent experiences from a wide range of countries to demonstrate success stories and lessons learned in raising tobacco taxes. A substantial amount of evidence has been generated in LMICs over the past few years that supports and augments the existing evidence base, providing a much broader body of knowledge than was available when the first *WHO technical manual on tobacco tax administration* was released.

Chapter 2 delves into the theory, practice and empirical evidence on tobacco excise tax policy, including current global trends. The chapter offers a detailed analysis of the various elements that constitute tax structure, aiming to provide policy-makers with a comprehensive understanding of the factors affecting prices, consumption and the market. It describes the key components to keep in mind when designing tobacco tax policy to maximize the impact of tax increases and improve the tax structure. The chapter also includes updated global price and tax data, specific examples from various countries and a discussion of tax base elasticity, automatic excise tax adjustments and pricing regulations, as well as descriptions of new and emerging nicotine and tobacco products, including electronic nicotine- and non-nicotine delivery systems (ENDS/ENNDS) and heated tobacco products (HTPs).

Chapter 3 focuses on tobacco tax administration. It provides an in-depth discussion of the fundamental components that make tobacco tax collection effective and efficient, ensuring achievement of the health and revenue objectives of tax policy. It highlights the importance of cooperation among the various agencies involved in the implementation of tobacco taxes within countries and across borders. Building on country and regional experiences from previous decades, the chapter outlines specific measures and recommendations to maintain oversight of the whole tax compliance cycle. Also included are actions to facilitate control and enforcement, such as licensing, fiscal markings (e.g. tax stamps), tracking and tracing systems

and import and export controls. Finally, the discussion pivots towards the broader elements of a good tax system, such as proper resourcing of competent authorities, a strong judiciary and strict rules regarding corruption.

Chapter 4 deals with the important challenges in the area of political economy when countries attempt to increase tobacco taxes or simplify the tax structure. The tobacco industry often relies on identified patterns of argumentation and tactics to obstruct such reforms, i.e. SCARE tactics – (S) smuggling and illicit trade, (C) court and legal challenges, (A) anti-poor rhetoric (regressivity), (R) revenue reduction and (E) employment impact – each of which is discussed thoroughly in this chapter. Also included is a detailed discussion of the measurement of illicit trade and a discussion of earmarking tobacco tax revenue for health purposes.

Finally, Chapter 5 presents a comprehensive list of the best practices in tobacco tax policy and administration discussed throughout this manual. The list is intended to serve as a practical guide and quick reference to the salient points presented.

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CHAPTER 2. Tobacco excise tax policy

2.1. GLOBAL OVERVIEW OF TOBACCO TAX PRACTICES

A well-designed tax policy is key to having an effective tax policy. Any government that is planning to reform its tax policy must first understand the fundamental components of a good tax policy, as well as consider the strengths and weaknesses of different approaches to taxation, how they impact price and the requirements for tax administration. Understanding how the tobacco market operates in a country is equally important for policy-makers because of the inevitable interaction between the market and tax structures.

Beyond the political considerations that strongly influence tobacco tax policy development, this chapter focuses on the technical aspects of tobacco taxation – excise tax in particular. Section 2.1 provides an overview of tobacco tax practices at the global level, focusing on the different ways countries structure excise tax. Section 2.2 emphasizes the importance of carefully designing excise tax policy, highlighting not only the significance of tax increases but also excise tax structure and its impact on prices, taking into account how market structure influences trends. This section also discusses the importance of measuring impact as another aspect of tax policy development, and it presents the crucial elements for performing measurement, as well as the relevant indicators available to monitor progress.

Section 2.3 describes external policy considerations in the design phase to ensure that the goals of tobacco control and taxation are achieved. Intersectoral policy integration and coherence at the domestic level is discussed as a strategy to ensure that policies of other sectors do not inhibit or obstruct public health policy objectives. This section also reviews the current state of regional tax harmonization based on the experience of existing regional blocs and draws conclusions on the best policy approaches to preserve the public health interests of individual countries.

Section 2.4 discusses new and emerging nicotine and tobacco products, in particular HTPs and ENDS/ENNDS. It reviews the latest evidence on the health impacts of these products and current approaches to regulation. Key policy considerations are identified, and recommendations are provided for adopting an appropriate excise tax policy for these products.

Section 2.5 summarizes the issues covered in the chapter and the key takeaways.

2.1.1 TAXES APPLIED ON TOBACCO PRODUCTS

Taxes are classified as either direct or indirect. Direct taxes are imposed on the profit, income, property or wealth of persons or companies, whereas indirect taxes are imposed on the price of goods and services. Indirect taxes are most relevant to tobacco products taxation, because they directly influence price. A variety of types of indirect taxes can be applied to tobacco products. These include:

- excise taxes – taxes that apply to a few selected commodities (they can also be applied to alcohol, fuel, sugar-sweetened beverages, etc.).
- VAT or sales taxes – VAT is a multistage tax on all consumer goods and services that is applied proportionally to the price the consumer pays for a product. It is a tax on the amount by which the value of an article has been increased at each stage of its production or distribution. Some countries impose sales taxes instead of VAT. Unlike VAT, which is collected at every stage of the supply chain, sales taxes are generally levied at the point of retail on the total value of goods and services purchased. Ultimately, the consumer ends up paying the tax, whether it is a VAT or a sales tax.
- import duties – taxes on selected goods imported into a country to be consumed in that country (i.e. goods that are not in transit to another country). In general, import duties are collected from the importer at the point of entry into the country.
- other taxes – other indirect taxes, such as environmental taxes, that do not fall into any of the categories listed above.

One of the most well-established and widely understood points in tax policy is that tobacco products should be subject to excise taxation. The focus of this chapter – and of this manual overall – is on excise taxes. They are the most important type of indirect taxes for tobacco control because they are applied directly to tobacco products and contribute the most to increasing the price of tobacco products relative to other goods and, subsequently, to reducing consumption.

There are two basic types of excise taxes:

- specific – levied as a monetary value per quantity of the product being taxed (e.g. 1 000 cigarettes, pack of 20 sticks, kilogram of tobacco); and
- ad valorem – levied as a percentage of the value (e.g. retail price, or the producer/ex-factory price or the cost, insurance and freight [CIF] value¹) of the product being taxed.

These types of excise tax can be applied at a uniform or a differential (tiered) rate and on their own or in combination (i.e. a mixed system).

1 CIF is the value of an imported product as declared to customs upon entry into a territory.

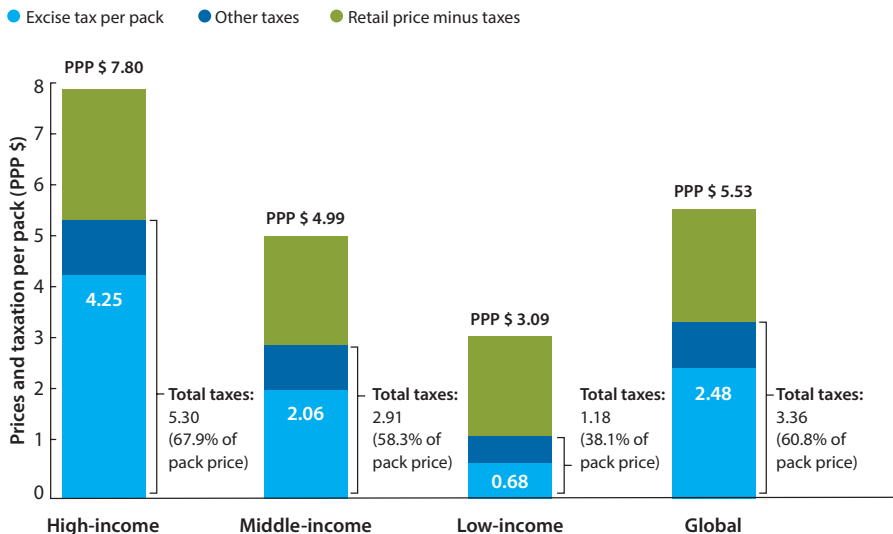
Given the widespread use of cigarettes – almost the only tobacco product used in some parts of the world – and the scarce availability of data for other tobacco products, this chapter focuses mainly on cigarettes. But there are a few examples and recommendations for other tobacco products, including those that are more prevalent in specific parts of the world (e.g. bidis or smokeless tobacco in South-East Asia and waterpipe tobacco in the Eastern Mediterranean region).

2.1.2 CIGARETTE TAXES AND RECENT TRENDS WORLDWIDE

Tax and national income levels: the higher the income level, the higher the taxes and prices

At the global level, cigarette price and tax levels correlate positively with a country's income level: prices and taxes are higher in higher-income countries and lower as income level decreases. This trend has not changed over the years since 2008. Figure 2.1 presents the levels of price and tax by income groups for 2018, using the World Bank classification of income groups.

Fig. 2.1 Weighted average retail prices and taxation (excise and total taxes) of most-sold brand of cigarettes, by income group, 2018



Notes: Averages are weighted by WHO estimates of the number of current cigarette smokers ages 15 and older in each country in 2017.

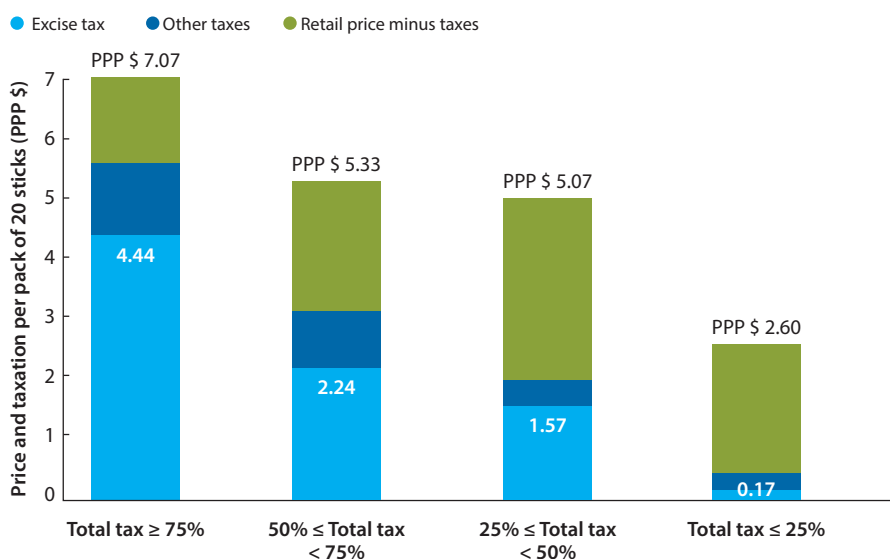
Prices are expressed in purchasing power parity (PPP) adjusted dollars or international dollars to account for differences in the purchasing power across countries – based on 53 high-income, 97 middle-income and 28 low-income countries with data on prices of the most-sold brand, excise and other taxes and PPP conversion factors.

Source: (1).

Tax and price levels: the higher the tax share, the higher the price

Globally, cigarette prices correlate positively with tax percentage levels: as the total tax share (of which excise represents the largest part) as a percentage of retail price increases, the price of cigarettes generally also increases (see Fig. 2.2 below).² This indicates that taxes do influence prices.

Fig. 2.2 Weighted average retail prices and taxation (excise and total taxes) of most-sold brand of cigarettes, by total tax levels, 2018



Notes: Averages are weighted by WHO estimates of the number of current cigarette smokers ages 15 and older in each country in 2017.

Prices are expressed in PPP adjusted dollars or international dollars to account for differences in the purchasing power across countries – based on 53 high-income, 97 middle-income and 28 low-income countries with data on prices of the most-sold brand, excise and other taxes and PPP conversion factors. Source: (1).

Tax level and WHO regional classification: taxes and prices are highest in the European region, followed by South-East Asia, the Americas and the Western Pacific, with the lowest levels in the Eastern Mediterranean and African regions

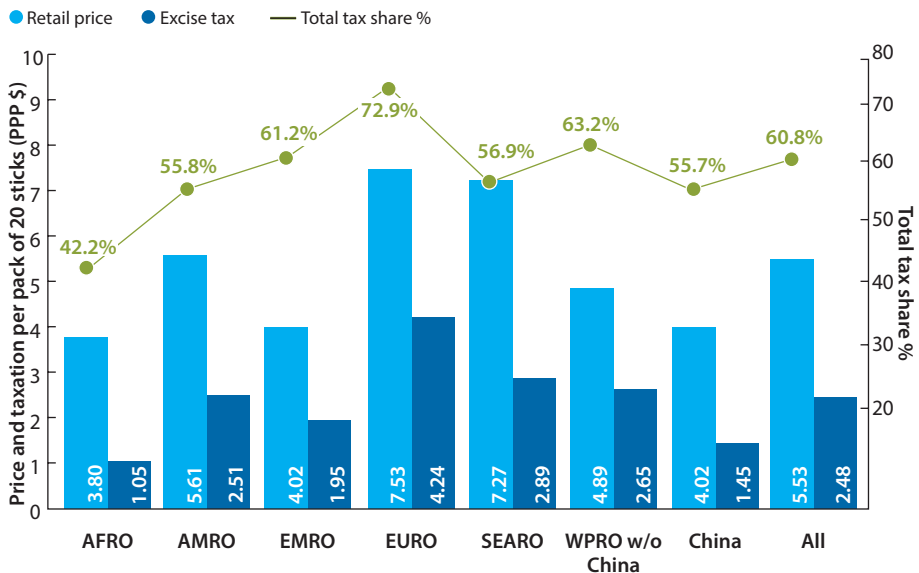
At the regional level (WHO regional classification), average levels of prices and taxes vary greatly. The highest level can be seen in the European region, which includes the European Union (EU) countries. The EU's unified tax structure includes high levels of minimum taxes – which lead to high prices – and encourage member

² This is a general trend and does not apply for every country; there are countries that have a large tax share but low prices for cigarettes.

countries to regularly increase their taxes to meet their obligations. However, with the current minimum level now being reached by all EU member countries, the motivation to increase excise taxes may wane. Indeed, the minimum cigarette excise amount in the EU has not been adjusted since it went into effect on 1 January 2014, and it is suffering from inflation erosion. Member States of the EU acknowledged this in June 2020 by stating that action at the EU level is required to ensure that minimum excise duty rates regain traction to effectively reduce the consumption of tobacco products and that the minimum rates of excise duties on a number of tobacco products would be increased (2).

Excise taxes are lowest in the African and Eastern Mediterranean regions. And China – reported separately due to its size – has lower tax rates than the Western Pacific region (see Fig. 2.3).

Fig. 2.3 Weighted average retail prices and taxation (excise and total) of most-sold brand of cigarettes, by region, 2018



Notes: China is represented separately from the Western Pacific Regional Office (WPRO) average because of its exceptionally large number of smokers compared with the number in other countries in the region. AFRO is the African Region, AMRO is the Region of the Americas, EMRO is the Eastern Mediterranean Region, EURO is the European Region, SEARO is the South-East Asia Region. Averages are weighted by WHO estimates of the number of current cigarette smokers ages 15 and older in each country in 2017.

Prices are expressed in PPP adjusted dollars or international dollars to account for differences in the purchasing power across countries – based on 53 high-income, 97 middle-income and 28 low-income countries with data on prices of the most-sold brand, excise and other taxes and PPP conversion factors.

Source: (1).

Global tax structures trend: more countries are adopting specific excise taxes or mixed excise systems that rely more on the specific component

Since 2008, the number of countries that rely solely on ad valorem taxes or apply no excise taxes at all has decreased as more countries have adopted specific or mixed systems. More of the countries that have implemented a mixed system have increased the specific component of the tax structure relative to the ad valorem component (see Figs. 2.4 and 2.5).³

Fig. 2.4 Changes in excise tax structure, 2008–2018

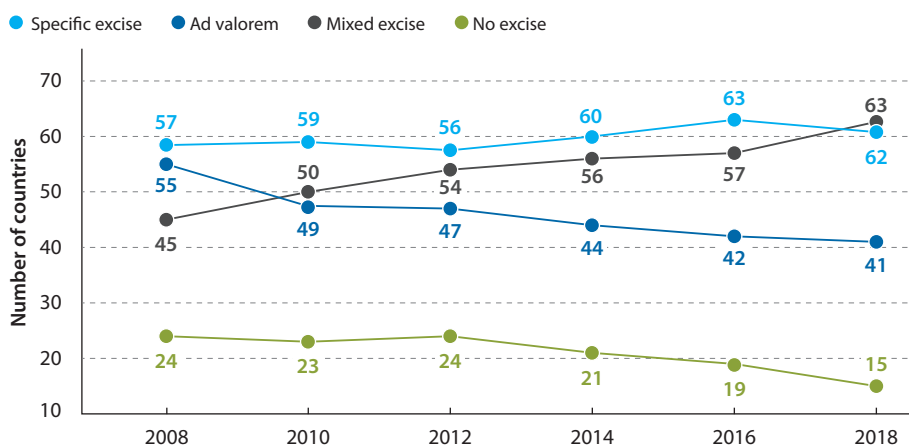
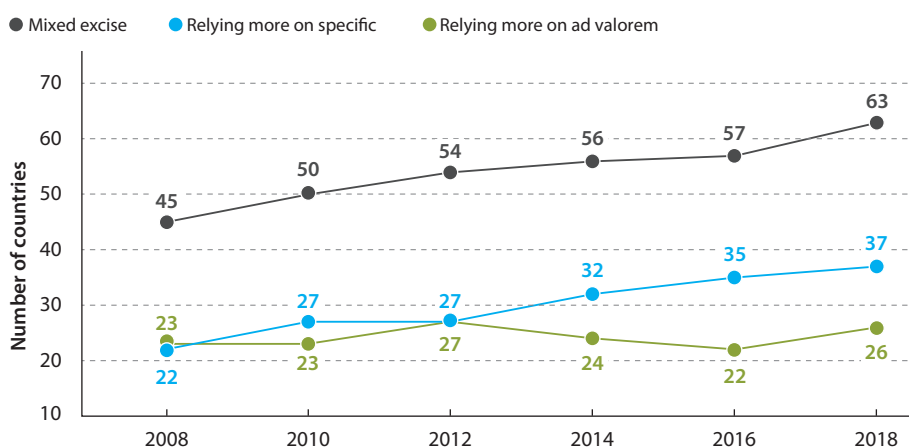


Fig. 2.5 Changes in reliance on specific versus ad valorem component in mixed systems, 2008–2018



Source: (1).

³ For information about countries that applied each type of excise tax structure in 2018, see Annex 2.1.

The imposition of a minimum specific excise tax: half of the countries that have a mixed or ad valorem structure impose an excise tax floor

A minimum specific excise tax ensures that at least a certain minimum amount of tax is paid, irrespective of price level. Almost half of the 101 countries that impose either ad valorem or a mixed excise for which data on minimum excise are available (47 countries) set a minimum specific excise tax.⁴ Nearly two thirds of those that set a minimum specific excise tax (29 countries) are high-income countries; most of them are in the EU, which requires its members to impose a minimum specific excise tax.

The choice of tax base worldwide: almost half of the countries that apply a mixed or ad valorem excise system use retail price as the base

Setting the base for applying a specific excise is relatively easy: most countries use a defined quantity of sticks for cigarettes, the weight in kilograms for tobacco and the weight in grams for other tobacco products (1).

Different bases for ad valorem excises are applied in different countries. Nearly half of the 105 countries that implement either ad valorem or a mixed excise for which data are available (47 countries) use the retail price⁵ as the tax base for the ad valorem part, and most of those (28 countries) are high-income countries. Using the retail price as the base for the excise ad valorem tax is more effective than using the producer price or the CIF value. Unlike retail prices, which are easy for tax administrators to ascertain by monitoring the market, the producer price or CIF value is prone to undervaluation by producers or importers, who may pass on their margins to related parties further down the supply chain and successfully reduce their tax burden. This tactic is also known as transfer pricing.

Additionally, global-level data show that the excise ad valorem on the retail price seems to lead to higher retail prices on average compared with an excise ad valorem applied on other bases, such as the producer price or CIF value (see Fig. 2.8 below).

On complex tiered structures: 31 countries still apply complex, multitiered excise taxes on tobacco products

As of 2018, 31 countries imposed excise taxes that varied according to defined characteristics of cigarettes, including price level, type of production, type of package and length of cigarette (Table 2.1). Some countries use more than one criterion to differentiate the tax rates. Indonesia, for example, imposes differential rates based on volume

4 This means that countries with a mixed system impose an overall minimum specific excise tax (where the yield of the specific plus the ad valorem excise cannot be below the set minimum specific excise tax), in addition to the excise on a specific component.

5 Countries that impose ad valorem on retail price exclusive of VAT are also included, since retail prices are easy to determine and VAT rates are known variables.

produced, type of cigarette and price level. In other countries, such as Member States of the EU, differential rates for cigarettes are prohibited by law, and the rate of the ad valorem tax and the amount of specific excise duty must be the same for all cigarettes (3).

Table 2.1 Criteria used by countries for tiered excise taxes, 2018

BASE OF TIERS		COUNTRY
Retail price		Bangladesh, Belarus, Indonesia, Jordan, Mozambique, Myanmar, Pakistan, Thailand
Cigarette grade (e.g. premium, mid-grade, economy)		Egypt, Japan ^a , Mali
Producer price		China, Lao People's Democratic Republic
Production volume		Indonesia
Type	filter/non-filter	Belarus, Georgia ^a , India, Kenya, Republic of Moldova, Nepal, Papua New Guinea
	hand/machine made	India, Indonesia
	kretek/white cigarette	Indonesia
	tobacco content (dark/blonde or dark/light)	Algeria, Bolivia (Plurinational State of)
Packaging	soft/hard	Mozambique, Uganda
Cigarette length		India, Nepal, Sri Lanka
Trade (domestic/imported)		Iran (Islamic Republic of), Lebanon, Myanmar, Solomon Islands, Tonga, Uzbekistan
Leaf content (domestic/imported)		Fiji, United Republic of Tanzania

^a Japan and Georgia were using a tiered excise tax structure when these data were collected in 2018, but as of 2020, that is no longer the case.

Source: (1).

2.2 DESIGNING EXCISE TAX POLICY

Significantly increasing the taxes on and prices of tobacco products is the most effective and most cost-effective policy to control tobacco use (4). Increased taxes that are passed on to tobacco users as higher prices reduce consumption. When designing tobacco tax policy or reforming tobacco tax systems, policy-makers face challenges ranging from technical issues – such as determining what tax structure and rates to apply – to political economy issues such as addressing the SCARE⁶ tactics of the tobacco industry. This section provides guidance for policy-makers regarding the best tax structure to use from a health perspective, taking into consideration all the appropriate tax designs. It also proposes recommended indicators to consider when formulating policy change.

⁶ SCARE tactics are the tactics most commonly used by the tobacco industry when countries plan to increase tobacco taxes. They are described, and refuted, in detail in Chapter 4.

2.2.1 THE IMPORTANCE OF THE TYPE OF EXCISE TAX STRUCTURE

The existing theoretical and empirical evidence on approaches to the choice of (uniform) specific and ad valorem excises is reviewed below, along with their effects on price, consumption, perceived quality and variety of tobacco products, government revenue and tax administration.

The use of the word “quality” in this chapter does not refer in any way to the health impact of a tobacco product. It refers rather to the consumers’ perceptions of quality and their decision to buy a product, which they may evaluate based on the packaging, the blend used for the cigarette or anything that makes the product more appealing to them. Just to be clear, from a public health perspective, all cigarettes are equally harmful even if perceived by consumers as having higher or lower quality.

The choice between ad valorem and specific taxation is influenced by the market structure, i.e. the nature and degree of competition in the market for goods and services. Although each country has its own specific characteristics, the tobacco market structure is typically a monopoly or an oligopoly where firms have the power to control prices – and hence exploit the tax structure – to their benefit. For example, China, the largest producer and consumer of tobacco products in the world (5), has a state monopoly. In Viet Nam, foreign brands are produced under licence by the state monopoly. In Thailand and Egypt, despite the presence of foreign companies, the market is dominated by the state-owned company. In Uruguay, the oligopoly is led by a domestically owned company. In Bangladesh, the oligopoly consists of domestically owned companies competing with foreign companies (6). In most of Africa, the market consists of transnational tobacco companies (7).

The impact of tax structure on final price: uniform specific versus uniform ad valorem

The choice between specific and ad valorem taxes is a long-standing issue in tax policy, as the level and structure of excises have different implications for the interests and goals of various groups. Given the market structure of the tobacco industry – typically a monopoly or oligopoly for most products in most countries – different excises may have different effects on government revenue, manufacturer profit, consumer price, perceived product quality and variety and tax administration (8–16). Consequently, the two types of excise taxes – specific and ad valorem – may have different implications for public health to the extent that they affect individual consumption via their impact on perceived product quality, variety and prices. Moreover, governments have the potential to influence tobacco excises to manage demand, raise revenue and promote public health.

The impact of tax on prices and in turn on consumption is also influenced by price and income elasticities, as well as consumer perceptions of quality (“perceived quality”) and the variety of available products, which, in turn, are closely linked to the type of tax structure adopted.

Tax structure is affected by both the price elasticity of demand and the price elasticity of supply. The price elasticity of demand measures the responsiveness of consumer demand to changes in prices. The price elasticity of supply measures how sensitive producers are to changes in prices.

Tobacco tax structure is also influenced by market structure. In a monopoly, the profit-maximizing firm sets the price, considering the price elasticity of demand: the lower the price elasticity (in absolute value) – i.e. the less sensitive the consumer is to price changes – the higher the price the monopolist can set. Profits are typically abnormal in a monopolist market structure, meaning total sales revenue is higher than total cost (where total cost includes a normal profit). A monopolist producer therefore receives more than the minimum reward required to invest its (physical and human) capital and undertake business risks.

Economic theory predicts that in a private monopoly, prices are higher than in an oligopolistic market. This is not, however, necessarily true when the monopoly is owned by the state and the government’s objective is not straightforward profit maximization: the government might have other considerations, such as preserving jobs (e.g. in China) or keeping prices low for low-income consumers (e.g. in Egypt).

Under a monopoly, an ad valorem taxation structure enables the monopolist producer to set prices lower than would be possible under a specific tax structure. This is feasible because under ad valorem taxation, when supply increases and price falls, the price reduction is not fully borne by the producer. Rather, the price reduction is partly shared by the government since, as supply increases, the tax per unit of product sold falls. In other words, ad valorem taxation leads to lower prices and higher consumption relative to revenue-equivalent specific taxation. Technically, this means that the supply function is less elastic under ad valorem taxation. In contrast, under a specific taxation structure, any increase in the monopolist producer price will go to the producers as revenue, which incentivizes them to increase prices.

The same logic also applies to an oligopolistic market structure, where profits again are, in general, abnormal.

KEY TAKEAWAY 1

In a monopoly or an oligopoly, specific taxation incentivizes industry to set prices higher than it would with ad valorem taxation.

Understanding oligopolies, however, is more complicated, since they are characterized by strategic interdependence among a few firms. This strategic interdependence extends to the relationship between industry and regulators. Industry anticipates the government's regulatory policy – whether through tax or other interventions – and acts accordingly. For example, competitors may coordinate and lobby against a certain tax structure reform or tax rate increase.

Under an oligopoly market structure, ad valorem taxation is a relatively more efficient tool for transferring part of the profits to the government as tax revenue, since it acts like both an excise and a profit tax. In contrast, a specific tax has a smaller (negative) effect on profits. This explains why we observe multinationals that are leaders in high-priced brands (e.g. Philip Morris International [PMI]) lobbying in favour of specific taxation (17). As an example, in the countries of the Cooperation Council for the Arab States of the Gulf (GCC), the tobacco industry has been trying for a long time to lobby governments to introduce a specific excise (18–21). After years of consideration and discussions on the possible introduction of excise taxes, the GCC adopted the Common Excise Tax Agreement of the States of the Gulf Cooperation Council in November 2016 (21), which introduced an ad valorem excise on tobacco products.

Tobacco companies' support for excise tax structures ultimately depends on the market segments they control in a particular country. A company selling mainly premium brands will favour specific excises, whereas a company that sells mid-priced or economy brands would favour ad valorem excise (17).

When oligopolistic firms produce identical products, a specific tax has a stronger positive effect on price and is more likely to be overshifted to consumer prices than an ad valorem tax (13). Overshifting means that the price increases by more than the tax increase itself. Empirical evidence supports this (22–26).

KEY TAKEAWAY 2

In an oligopoly, prices are likely to increase by more than the amount of the specific tax increase when demand is relatively inelastic.

In general, demand for a product depends not only on prices but also on consumer perceptions of quality and preferences for variety. For example, the most popular brand in GCC countries is Marlboro, a premium brand (1).

Consumers differ in their willingness to pay, depending on their respective perceptions of quality, which influence whether they ultimately purchase high- or low-priced brands. A tax-induced price increase can cause the following plausible responses from consumers or users of tobacco products: (1) a group of consumers will quit; (2) a group of consumers will reduce their overall consumption;

(3) another group, most likely high-income users, will switch to an upgraded version of the tobacco product if its relative price (compared to the cheaper brand) has been reduced, which is the case under a specific tax increase; there might also be a group of consumers in the lower income range who switch to lower-priced variants of the tobacco product if the price gap increases, as is the case under an ad valorem tax increase; and (4) another group might switch to the illegal market or buy products in a neighbouring country with a lower tax where possible.

Consumers' decisions to purchase are also affected by their preferences for variety – meaning preferences among products that consumers perceive as equal in quality but are given different characteristics by the producers to account for consumer taste preferences. Thus, it is possible that a tax increase that leads to an increase in average prices will lead to an increase in the total quantity demanded in the market because of an increase in the variety of product choices available to consumers. Variety enables new consumers to be captured, especially in an environment lacking certain regulations (e.g. without plain packaging and flavour bans). The tobacco industry was able to capture a new group of consumers when it introduced menthol cigarettes into the tobacco market. There is more than sufficient evidence that menthol cigarettes increased youth smoking initiation, increased nicotine dependence and reduced adult smoking cessation (27). To prevent this from happening in their countries, Member States of the EU have prohibited characterizing flavours other than tobacco in tobacco products (28). It is therefore important to consider the broader effects that the structure and level of an excise tax can have on average price, perceived quality and the variety of cigarette brands and other emerging substitutes.

When consumers make choices based on dimensions other than quantity, the two types of tax structures are not equivalent, even in a perfectly competitive market where firms have no market power (29–30). To illustrate this point, consider a US\$ 1 cost to improve consumer perceptions of quality for a tobacco product. This will lead to an equivalent price increase under specific taxation but not under ad valorem taxation. At an ad valorem rate of 20%, the price must increase by more than US\$ 1, or by $1/(1 - 0.2)$ to cover the US\$ 1 cost of improvement, due to the multiplier effect. A specific tax induces consumers to reduce the quantity demanded, but they might still choose to pay a higher price in exchange for a product that they perceive to be of better quality. An ad valorem tax, on the other hand, leads to a reduction in both quantity and perceived quality, not a substitution between them. An ad valorem tax has only an income effect and – unlike specific taxation – does not lead to substitution between perceived quality and quantity.

KEY TAKEAWAY 3

Under specific taxation, the industry has incentives to create upgraded variants of tobacco products that attract new consumers and encourage consumption.

When firms produce differentiated products, as the tobacco industry does, economic theory provides ambiguous results regarding specific versus ad valorem taxation. The relative effects of the two types of tax are not as straightforward as in the case of oligopolistic firms producing a homogeneous product. With differentiated products, the relative effects of the tax types depend on various assumptions: whether or not firms face symmetric costs, whether the number of firms is fixed or new firms can enter the market and the level of the tax revenue requirement. When firms face different costs, ad valorem taxes exacerbate the absolute differences in marginal costs between them. The high-cost brand is not considered a perfect substitute for the low-cost brand. A sufficiently high ad valorem tax rate may lead to a relative underproduction of the high-cost products (31). The effect of specific and ad valorem taxes on consumer perceptions of quality depends on market structure and the price and income elasticities of demand across various qualities. The relative price of the cheapest product does not necessarily remain unchanged or increase; it might fall (32).

Empirical evidence showing that increases in the specific tax lead to a lower market share for the cheaper generic brands and an upward shift to premium brands (33–34) usually considers gradual tax increases and ignores income effects. Chaloupka et al. (35) found that in 21 EU countries that impose a mixed tax system, the price gap between premium and low-priced brands – while not reflecting the full distribution of cigarette prices – is smaller when the specific component of the mixed structure dominates.⁷ Although the price gaps are narrower under specific taxation, there is evidence that firms sometimes respond by introducing new, very cheap (subvalue) brands, or they exercise differential tax shifting.

This practice has been evident in India for quite some time, with the Indian Tobacco Company launching a number of cheaper variants of its flagship cigarette brand, Gold Flake, to take advantage of a lower excise tax rate in the so-called microcigarette (< 60 mm length) market (36). Consequently, the cheapest end of India's cigarette market has expanded significantly in recent years due in part to the marketing of new brand variants like Gold Flake Century.

⁷ The EU countries impose a mixed tax structure with a minimum tax floor. Some countries rely on the specific component more than others, but they remain within a given range (the specific component must be between 5% and 76.5% of total tax share of the weighted average price).

As another example, transnational tobacco companies, which have sold ultra-low-priced brands in the United Kingdom since 2006, have managed to double their market share in a few years: their real price did not increase, since they absorbed part of the tax increases (37). The share of ultra-low-priced brands increased between 2001 and 2009 from 5% to 10%, while the market share of economy brands increased from 40% to 50% and the market share of premium brands and mid-priced brands decreased during the same period (from 35% to less than 25% for the former and from 15% to 5% for the latter). In order to keep the price of discount brands low and certain consumers in the market, firms may overshift the tax for premium products and undershift it for the lower-priced products (37–40).

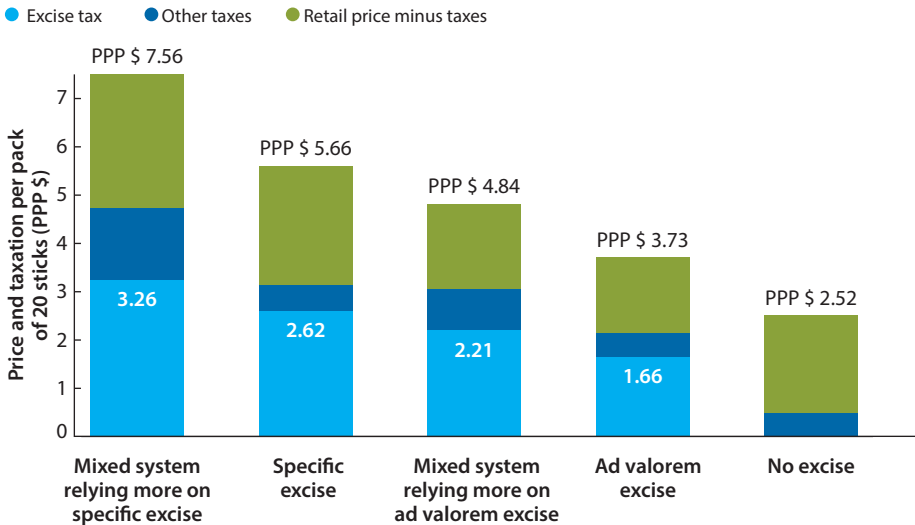
KEY TAKEAWAY 4

Evidence suggests that the price gap between brands is narrower under a specific tax structure. As the tobacco industry simultaneously consolidates producers and widens its portfolio of products, evidence is emerging that it is introducing cheaper brands while increasing the price of its expensive brands, therefore paradoxically widening the price gap within its products. The extent of the impact is still unclear, however, and this evidence does not negate the overall conclusion that a specific tax structure reduces price gaps.

The impact of tax structure on final price: uniform specific, ad valorem and mixed systems

Evidence from the 2019 RGTE (1) data suggests that the average price of the most-sold brand of cigarettes – weighted by the number of smokers – is the highest in countries implementing a mixed system that relies more on specific excise, followed by countries applying specific excise taxes only, followed by countries applying a mixed system that relies more on ad valorem and then by countries that apply ad valorem excise only (Fig. 2.6). The price is lowest in countries that have no excise at all. In past WHO reports on the global tobacco epidemic, countries that applied specific excise only had the highest price, on average. The trend may have changed partly because more countries are adopting mixed excise systems.

Fig. 2.6 Weighted average price and excise for a pack of the most-sold brand of cigarettes, by excise tax structure, 2018



Notes: Averages are weighted by WHO estimates of the number of current cigarette smokers ages 15 and older in each country in 2017.

Prices are expressed in PPP adjusted dollars or international dollars to account for differences in purchasing power across countries – based on 53 high-income, 97 middle-income and 28 low-income countries, with data on prices of the most-sold brand, excise and other taxes and PPP conversion factors.

Source: (1).

Shang et al. (41) describe and compare price distributions, using data from 16 countries of the International Tobacco Control (ITC) Project that impose different cigarette tax structures. Specific uniform taxation tends to result in less variability in prices than all other structures (ad valorem tax, mixed tax, tiered tax). In general, structures other than uniform specific tax give rise to more opportunities for brand switching and tax avoidance. Reliance on complicated systems is likely to be associated with wider price distribution, leading to greater tax avoidance, as there are more opportunities for substitution with cheaper brands when taxes rise.

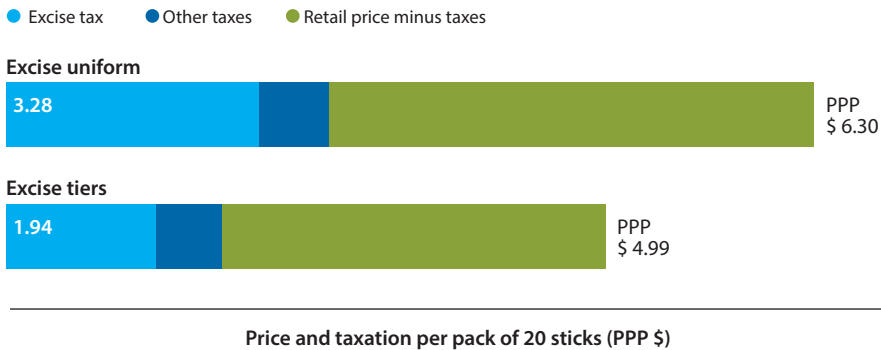
KEY TAKEAWAY 5

Evidence suggests that the tax structures most likely to lead to higher prices are uniform specific excise tax structures or mixed systems that rely more on specific excises.

The impact of tax structure on final price: uniform excise versus tiered tax systems

Another aspect of tax structure that impacts final price is the use of tiered taxation, i.e. tax rates that vary according to product characteristics. The characteristics can vary, from price level to the type of tobacco leaf contained in the cigarette, the size of production volume, the packaging, etc. Table 2.1 (earlier) lists the criteria used by 31 countries as the basis for different tax rates. Evidence suggests that the average cigarette price and the average excise level for a pack of cigarettes tend to be much lower in countries that use a tiered excise structure than in countries that use a uniform excise tax (see Fig. 2.7).

Fig. 2.7 Weighted average price and excise for a pack of the most-sold brand of cigarettes for countries with and without tiered taxation, 2018



Notes: Averages are weighted by WHO estimates of the number of current cigarette smokers ages 15 and older in each country in 2017.

Prices are expressed in PPP adjusted dollars or international dollars to account for differences in the purchasing power across countries – based on 53 high-income, 97 middle-income and 28 low-income countries, with data on prices of the most-sold brand, excise and other taxes and PPP conversion factors. *Source: (1).*

Uniform specific tax structures are likely to lead to relatively higher prices with less variability in price distribution. Compared with tiered tax structures that have differential rates based on brand characteristics, uniform taxation may reduce consumers' incentive to switch to cheaper brands (leading to higher quit rates and lower prevalence), as well as decreasing manufacturers' incentive to reduce their tax liabilities by changing their pricing strategies, production process or size (42–45). In Indonesia, for example, where small producers were taxed more favourably, manufacturers had an incentive to reduce their scale of production but increase the number of affiliated small companies. The issue was resolved when tax authorities considered the aggregate production of all affiliated companies in the application of differential tax rates. By 2017, there were 786 active factories, while

there had been 4 198 factories in 2006.⁸ Abolishing the differential tax rates would have been even more effective in removing the incentive for tax avoidance, as well as helping improve both public health and government finances.

KEY TAKEAWAY 6

Evidence suggests that applying a uniform excise tax on cigarettes is not only easier to administer than tiered systems but also more likely to lead to higher cigarette prices.

The impact of tax structure on final price: the significance of the choice of the tax base

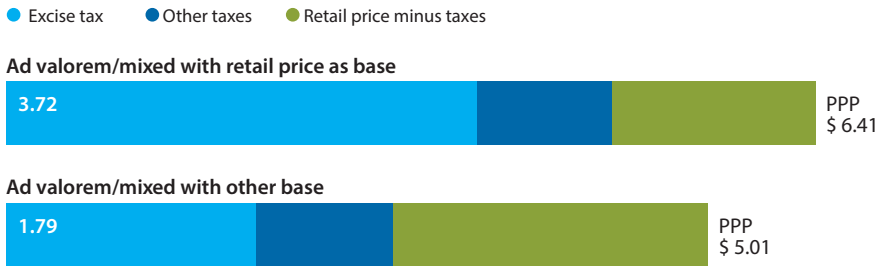
It is important for the excise tax to be applied to the base that leads to the greatest possible effect on price and revenue. For specific taxation, the tax base is the quantity of tobacco products. The quantity of cigarettes, cigars and bidis is measured in number of sticks; for other tobacco products, such as smokeless tobacco or roll-your-own (RYO), it is measured in the weight of the tobacco. When the tax is ad valorem, the choice of the tax base is important not only for health considerations – due to its effect on consumption – but also for tax revenue generation and industry profits.

An ad valorem tax that is based on the ex-factory price (or CIF value) provides tobacco manufacturers with opportunities to reduce their tax liability, especially when they control the distribution system. Tobacco producers may sell cigarettes to distributors who are related parties at a reduced price, which then serves as the basis for calculating their ad valorem tax liability. Distributors, however, can then set high prices and share the extra profit with the producers (46). Because of the potential for such trade mispricing, the best practice is to use the retail price as the tax base and introduce a minimum excise tax per pack.

Data in the 2019 WHO RGTE (1) show that, on average, the price level of a pack of cigarettes and the excise level are both much higher in countries that use retail price as the base for their ad valorem excise (Fig. 2.8). The maximum retail sales price, which includes all taxes, is used as the ad valorem tax base in the EU. That price also forms the tax base for ad valorem taxes in a growing number of LMICs, including Brazil, Egypt, Thailand, Turkey and Rwanda.

8 Indonesian Ministry of Finance, personal communication, 2017.

Fig. 2.8 Weighted average price of the most-sold brand of cigarettes in countries that use retail price as the base for their ad valorem excise, 2018



Price and taxation per pack of 20 sticks (PPP \$)

Notes: Averages are weighted by WHO estimates of the number of current cigarette smokers ages 15 and older in each country in 2017.

Prices are expressed in PPP adjusted dollars or international dollars to account for differences in the purchasing power across countries – based on 53 high-income, 97 middle-income and 28 low-income countries with data on prices of the most-sold brand, excise and other taxes and PPP conversion factors.

Source: (1).

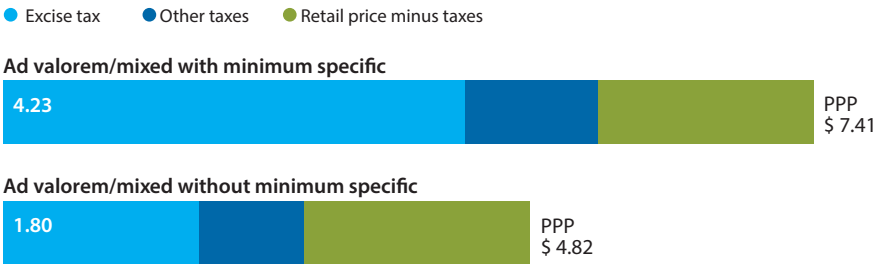
KEY TAKEAWAY 7

The base on which the excise is applied is important. For specific excise, the base needs to be clearly defined (for cigarettes, cigars and bidis, it is the number of sticks; for other tobacco products, such as smokeless tobacco or RYO, it is the weight of tobacco). For ad valorem excise – where the base is typically either retail price, CIF value or producer price – evidence suggests that countries that apply the excise tax on the retail price of cigarettes tend to have higher prices than those that apply the tax on other bases. CIF and producer prices are difficult for government authorities to ascertain and are prone to undervaluation.

The tax impact on final price: the significance of the minimum excise tax

The use of a minimum excise tax in countries with ad valorem or mixed systems is another important factor in determining final price. On average, the price of a pack of cigarettes – as well as the excise level – is much higher in countries that impose a minimum specific excise than in those that do not (see Fig. 2.9). While more than half of the 47 countries that apply a minimum excise are members of the EU, removing EU countries from the average calculations produces the same conclusions.

Fig. 2.9 Weighted average price of the most-sold brand of cigarettes in countries with and without a minimum specific excise tax, 2018



Price and taxation per pack of 20 sticks (PPP \$)

Notes: Averages are weighted by WHO estimates of the number of current cigarette smokers ages 15 and older in each country in 2017.

Prices are expressed in PPP adjusted dollars or international dollars to account for differences in the purchasing power across countries – based on 53 high-income, 97 middle-income and 28 low-income countries with data on prices of the most-sold brand, excise and other taxes and PPP conversion factors.

Source: (1).

KEY TAKEAWAY 8

Among countries that apply an ad valorem or mixed excise tax on cigarettes, evidence suggests that those that impose a minimum specific excise tax tend to have higher prices than those that do not. The minimum excise tax also helps guarantee minimum excise revenues.

Summarizing the advantages, disadvantages and impacts of the choice of excise tax structure for tobacco products

Table 2.2 summarizes the characteristics of different types of tobacco excise taxes and the advantages and disadvantages of each type in relation to its impact on quantity demanded, perceived quality of brands offered, price, certainty and stability of revenue, administration and enforcement and opportunities for tax avoidance and tax evasion as they are predicted by the economic theory of imperfect competition and observed in real life.

Table 2.2 Characteristics of different types of tobacco excise taxes

	Specific excise	Ad valorem excise	Ad valorem with a minimum specific excise (or excise tax floor)	Mixed specific and ad valorem excise	Mixed specific and ad valorem excise with a minimum specific excise tax (or excise tax floor)
TAX BASE	The unit of product (e.g. 1 000 cigarettes)	The value of the product (e.g. retail, wholesale or manufacturer price)	Excise is calculated on an ad valorem basis; however, if the calculated tax falls below a specified minimum amount, a specific tax rate applies	Unit and value of product	Both unit and value, unless the calculated tax falls below a specified minimum, in which case the tax base is the unit
The tax should be collected at the point of manufacturing or at the time of importation					
ADMINISTRATIVE REQUIREMENTS	Low, as only the volume of the products needs to be ascertained	Requires strong tax administration with technical capacity; otherwise, the administrative burden can be high	Requires strong tax administration with technical capacity; otherwise, the administrative burden can be high, as with a pure ad valorem regime	Requires strong tax administration with technical capacity; otherwise, the administrative burden can be high, as it requires assessing and collecting both ad valorem and specific excises	Requires strong tax administration with technical capacity; otherwise, the administrative burden can be high, as it requires assessing and collecting both ad valorem and specific excises, as well as minimum specific excise tax compliance
UNDERVALUATION	Not an issue	Susceptible to undervaluation	Provides an easy tool to prevent undervaluation of low-priced brands subject to the minimum specific excise	The ad valorem part of the excise collection may be susceptible to undervaluation, depending on the choice of tax base	The minimum specific excise prevents possible ad valorem tax base undervaluation of low-priced brands

	Specific excise	Ad valorem excise	Ad valorem with a minimum specific excise (or excise tax floor)	Mixed specific and ad valorem excise	Mixed specific and ad valorem excise with a minimum specific excise tax (or excise tax floor)
IMPACT ON PERCEIVED PRODUCT QUALITY	Upgrading effect tends to reduce the relative tax on higher-priced brands	Multiplier effect provides a disincentive to costly so-called quality improvement	No incentive to upgrade higher-priced brands	Eliminates incentive to upgrade higher-priced brands, while at the same time provides an incentive to upgrade for lower-priced brands	Eliminates incentive to upgrade higher-priced brands, while at the same time provides an incentive to upgrade for lower-priced brands
IMPACT ON PRICE	Tends to lead to relatively higher prices, particularly for low-priced cigarettes	Tends to lead to relatively lower prices; price reductions will be subsidized if the multiplier effect is strong	Tends to lead to relatively higher price increases for low-priced cigarettes	An increase in the specific tax will lead to relatively higher prices, particularly for low-priced cigarettes; the increase in the specific excise will also increase the ad valorem payment if the base of the ad valorem includes excise	An increase in the specific tax will lead to relatively higher prices, particularly for low-priced cigarettes; the increase in the specific excise will also increase the ad valorem tax amount if the base of the ad valorem includes excise. Increases in the ad valorem and /or specific tax will raise the minimum tax paid if the minimum is a percentage of the total tax on, for example, weighted average price; they will reduce price gaps, given impact on perceived quality

	Specific excise	Ad valorem excise	Ad valorem with a minimum specific excise (or excise tax floor)	Mixed specific and ad valorem excise	Mixed specific and ad valorem excise with a minimum specific excise tax (or excise tax floor)
INFLATION	The real value of the excise tax will be eroded unless the tax is adjusted in line with inflation	The real value of the excise tax will be preserved as prices increase, at least to the extent that tobacco product prices follow inflation	The real value of the minimum specific excise will be eroded over time unless the excise is adjusted in line with inflation	The real value of the specific excise will be eroded unless the excise is adjusted in line with inflation	The real value of the specific excise and the minimum specific excise will be eroded unless the excises are adjusted in line with inflation
HEALTH BENEFITS	Will discourage consumption of tobacco products irrespective of the price band	May encourage more trading down in favour of cheaper cigarettes, reducing the health benefit	The minimum specific excise reduces incentives for trading down	May reduce trading down	Reduces trading down

Source: (47).

2.2.2 OTHER TAX DESIGN CONSIDERATIONS

The significance of automatic adjustments and indexation of specific tax to inflation

Specific taxation does not depend on price and therefore, unlike the ad valorem tax, is not automatically adjusted for inflation. The real value of a specific tax is eroded over time as the price of the taxed product increases. Therefore, especially in countries with rapid growth in inflation, the nominal value of the specific tax must be increased regularly in order for the tax to maintain its real value. This is of great importance for both public health and public revenues, especially in countries where manufacturers do not increase prices regularly and/or low-priced tobacco products are the dominant products in the market.

Table 2.3 lists countries that include automatic adjustments to their excise in order to avoid the erosion of the specific excise over time, using different units of adjustment and based on different frequencies.

Table 2.3 Countries that include automatic adjustments to the specific excise

COUNTRY	UNIT OF ADJUSTMENT OF THE SPECIFIC EXCISE
Argentina	Inflation (consumer price index [CPI]), on a quarterly basis
Armenia	Minimum specific excise set to increase in the Tax Code by 15% on average between 2019 and 2021
Australia	Wages – excise rates on tobacco and tobacco products increase in March and September each year, based on average weekly ordinary time earnings
Bosnia and Herzegovina	Specific excise rate is increased annually by at least 7.50 convertible marks per 1 000 cigarettes; minimum excise tax is increased annually to be at least 60% of the weighted average price
Canada	Inflation – federal tobacco tax rates are to be increased every five years, indexed to Canada's CPI starting in 2019
Chile	Inflation
Colombia	Specific tax set to 1 400 pesos, increased to 2100 pesos in 2018; starting in 2019, it will increase yearly by the CPI plus 4 points
Costa Rica	Inflation
Dominican Republic	Inflation, on a quarterly basis
France	Increase from 2017 to reach an average price for cigarettes of €10 per pack by 2020
Honduras	Inflation, annually to December of the previous year
Italy	Minimum tax burden calculated every year in March on the basis of the weighted average price of cigarettes sold in the previous year
New Zealand	Inflation annually plus 10% annually from 2017 to 2020
Nicaragua	Updated annually as of 1 January 2017, taking the highest among the annual devaluation of the official exchange rate of Cordoba with respect to the US dollar, published by the Central Bank of Nicaragua, and the annual inflation rate of the CPI published by the National Development Information Institute, observed in the last 12 months available
North Macedonia	Specific and minimum specific rate increase by 0.2 denars per cigarette on 1 July each year until 2023
Philippines	Agreed tax increases and rates for specific excise tax between 2020 and 2023, with a 5% indexation thereafter
Romania	Inflation, annual (1 January) adjustment of the total excise according to inflation calculated on 1 October of the previous year
Serbia	Inflation, every six months
Southern African Customs Union (SACU) – Botswana, Eswatini, Lesotho, Namibia and South Africa	Inflation, on an annual basis ⁹
Sweden	Inflation

9 While the adjustment is not strictly automatic in the SACU, it is greatly informed by the inflation rate. The Treasury has some discretion. In recent years, the increases have typically been slightly above inflation.

COUNTRY	UNIT OF ADJUSTMENT OF THE SPECIFIC EXCISE
Turkey	Producer Price Index
Ukraine	Agreement to increase the specific component 20% annually between 2019 and 2025
United Kingdom	Increase by 2% above the retail price index (measure of inflation) for the 2015–2020 Parliament

Source: (1).

KEY TAKEAWAY 9

To avoid erosion of their specific excise tax, countries need to regularly – and, ideally, automatically – adjust the excise to inflation.

The significance of automatic adjustments and indexation of specific tax to income growth

In addition to the risk of erosion due to inflation, the effect of a (specific) tax can be significantly reduced if the tax is not adjusted for increases in consumer income. Income growth makes products more affordable – thereby encouraging consumption – especially in countries with rapid income growth. Australia is one of the rare countries that explicitly adjusts its specific excise rates according to wage growth (see Table 2.3). However, a number of countries have adopted automatic adjustments that are higher than inflation and sometimes largely cover income growth as well (see also Table 2.3). Adjusting tax for income growth contributes to increases in prices that make tobacco products less affordable (see section 2.2.3).

KEY TAKEAWAY 10

The specific excise tax needs to be adjusted to reflect income growth so that tobacco products do not become more affordable over time.

Measures for specific contexts: the role of pricing and other non-tax regulation

Emerging evidence indicates that the tobacco industry finds ways to mitigate the impact of higher taxes on prices. For example, despite the heavy reliance on specific taxation in the United Kingdom, a price differential between premium and cheap cigarettes still exists. There is evidence that the tobacco industry does not always pass tax increases on to cheaper products (37, 48). Differential shifting among price categories is also observed in the EU (49–50), New Zealand (38) and the United States (51). Therefore, the public health community has suggested that pricing regulation could be considered as a method of eliminating inexpensive tobacco products that are often used by the young and the poor (52). Three types of pricing regulation are described below: minimum mark-up, price floor and price ceiling.

Pricing regulation

- **Minimum mark-up** – It has been argued that a minimum mark-up of wholesale tobacco prices could be a better strategy to raise prices of tobacco products than excise tax increases. Minimum mark-up laws aim to discourage the sale of products below an assessed cost by imposing a mark-up to the cost declared at different levels of the supply chain. Some studies in the United States have shown that minimum mark-ups do not increase average cigarette prices (53–54). However, a recent study of the impact of minimum mark-up/price laws has shown that these laws are linked with higher prices, especially for the cheapest brands, and could be used as an effective tool to mitigate the impact of the industry’s price-reducing promotions (55). Another concern related to minimum mark-ups is that they can be manipulated by manufacturers and are likely to lead to higher profits for the industry, as well as extra administrative costs for the government (56).
- **Price floor** – A few studies suggest that setting a price floor, or a minimum price, is an alternative strategy for increasing tobacco taxes, particularly with respect to reducing health inequities (57–60). A price floor, imposed by the government or as a vertical restraint imposed by the supplier upon retailers, is a price that firms cannot legally undercut. Governments impose price floors to restrain unfair competition or, in the case of services, to increase quality. It is difficult, however, to find the right floor or to anticipate unintended consequences or an industry’s adjustments. A study in Malaysia, where a minimum price for cigarettes was imposed in 2010, found that the policy did not seem to have a meaningful impact on prices: licit brand prices remained well above the minimum price, while illicit brands remained well below it. This outcome may be a result of the floor being set too low or the proportion of illicit trade being high, either of which would reduce the effectiveness of the policy (52).

In the EU, imposing minimum retail sale prices for cigarettes could be a breach of harmonized legislation concerning the internal market, as minimum prices would distort competition. Therefore, increasing minimum excise duties is recommended instead, to discourage consumption (61). Increasing the minimum excise duties would also result in the additional revenue going to the governments instead of contributing to industry profits.

A price floor would probably lead to increased industry profits – giving the industry greater funds for its marketing strategies – and lower tax revenue for governments, reducing their ability to cover costs associated with tobacco use. By reducing price competition, the price floor allows firms to compete aggressively for market share in other dimensions (e.g. product specifications). Competition among firms may prevent them from raising their prices,

but a government that imposes a price floor does this for them. Minimum pricing is likely to create windfall profits for manufacturers and retailers. It can even help manufacturers sustain a cartel. If the industry uses the money to increase promotions, advertising or grant proposals for related research, this could undo some of the potential benefits of the policy.¹⁰

Some recent evidence shows that, at least in the case of the United Kingdom, increased concentration of power among a handful of multinational corporations is enabling them to undermine tax increases through increased price segmentation, and that requiring minimum prices might be a good way to address the problem. A longitudinal analysis of price data from the United Kingdom (48) has shown that despite regular excise tax increases over time, average real prices for cheaper segments of the tobacco market (in this case, cigarettes and RYO) did not increase – indicating an undershifting of the tax increases in those segments that resulted in increased sales volume. At the same time, average prices for more-expensive market segments increased, indicating overshifting of the tax increases that resulted in decreased sales volume. This industry strategy ensures that the most price-sensitive consumers remain addicted, while encouraging initiation and discouraging cessation. Furthermore, segmenting the market further by overshifting the tax increase on premium brands while undershifting it for cheaper brands mitigates the impact of declining consumption resulting from higher taxes while increasing overall industry margins and profitability.

Another situation where setting minimum prices can be a useful policy is specific to the United States. Banning marketing and promotions¹¹ is not possible under the freedom of expression protections of the Constitution of the United States (Amendment I), and it was estimated in 2008 that more than 82% of all advertising and promotional spending by the tobacco industry was focused on reducing the price of their products at the point of sale (62). This limitation on how government can set policy has paved the way for the implementation of minimum price policies in many states and cities to counter the detrimental impact of price promotions on consumption and on the tax policy itself. Huang et al. (55) found that the presence of minimum price laws was associated with higher cigarette prices. They also noted that cigarette prices were even higher than prices resulting from minimum price laws in states that also prohibit industry from engaging in other price-reduction strategies,

10 See, for example, the PMI strategy of setting up the Foundation for a Smoke-Free World and grant proposals for related research.

11 See section below on banning promotional discounts for tobacco products for further discussion about marketing and promotions.

such as below-cost combination sales, using trade discounts to reduce the base cost of cigarettes and distributing below-cost coupons to consumers.

In the contexts of both price segmentation and price promotions, the imposition of minimum prices as a complementary policy to excise tax increases – not as a policy alternative – may help guarantee that taxes do indeed lead to the intended reduction in consumption. Nonetheless, more evidence is needed to support the effectiveness of this policy.

- Price ceiling – Concerns about differential tax shifting have led to suggestions that a price cap may benefit public health by limiting the tobacco industry's ability to reduce average prices by differentially shifting tax increases among various price segments (63–64). Because tobacco manufacturers operate across international markets, however, they could maintain low prices in one country but maintain overall profitability by selling more premium products in another country. Additionally, limiting price increases does not fit the public health purpose of reducing consumption. It is worth noting that maximum retail prices are sometimes used as a base for calculating the ad valorem tax payments in countries with ad valorem or mixed tax systems.

In a systematic review of the literature on non-tax policy approaches to raising prices, Golden et al. (63) hypothesized how such policies would influence price dispersion and average prices. Their study found that minimum price policies combined with promotion bans have the potential to increase average prices. This is, of course, relevant in a context where price promotions are present. From either a theoretical or a practical standpoint, however, it is clear that price policies cannot be used alone and should always be considered as complements to excise tax increases. Significantly increasing taxes is the most effective way to dissuade consumption, correcting whatever bias may exist. Significant tax increases also provide the added benefit of raising money for the government rather than profits for the tobacco industry. Nonetheless, a minimum price might help narrow the gap between cheap and premium cigarettes when applied to all tobacco products to avoid product substitution.

Other non-tax regulation

- Banning promotional discounts for tobacco products – The sale of tobacco products at a discount rate – such as through reduced-price coupons or buy-one-get-one-free offers – encourages consumption and undermines tax increases. Such practices should be completely banned. They often exist outside the realm of the finance sector because they are considered a type of marketing – promotional discounts are usually addressed in tobacco control laws under the Tobacco Advertising, Promotion and Sponsorship provision.

According to the 2019 RGTE (1), 118 countries out of 195 with all levels of income had such a provision implemented as of 31 December 2018.

- Banning the sale of single sticks of cigarettes – Article 16 of the WHO FCTC, “Sales to and by minors,” paragraph 3, requires Parties to “prohibit the sale of cigarettes individually or in small packets which increase the affordability of such products to minors”.

Some smokers opt for buying single sticks partly because of the lower immediate costs of buying cigarettes individually (65). Internal (unpublished) analysis of single-stick prices collected by WHO for the 2012, 2014 and 2016 editions of the WHO RGTE shows that, in fact, the aggregate price of 20 single sticks of cigarettes sold separately is generally higher than the price of a 20-cigarette pack sold in the market of a specific country. Despite this fact, single-stick sales – and sales of small-sized packs – make cigarettes accessible to consumers with limited disposable income. De Ojeda (66) found in a study conducted in Guatemala that single-cigarette sales are associated with increased cigarette accessibility for less-educated, lower-income populations and minors. Single-stick sales are also a feature of many markets in South-East Asia, including most notably Bangladesh and India, but also in other parts of the world, e.g. South Africa.

Single-stick sales also reduce the impact of a tax increase, since the increase per stick is much smaller than the increase per pack (67). In a study investigating how smokers in New York City responded to a tax increase of US\$ 1.25 per pack in 2008, Coady et al. (68) found that 15% of smokers bought more single cigarettes than they had previously.¹² By allowing single stick sales, governments risk losing part of the ad valorem taxes if the tax base is the retail selling price; the retail price of single sticks is much more difficult to monitor than the retail price of packs of cigarettes, on which, for example, tax stamps with prices can be applied.

An internal WHO analysis of the most recent tobacco control laws in 2018 in 195 countries found that 86 countries impose by law a ban on the sale of single sticks of cigarettes (36% of the countries are high-income, and 64% are LMICs). In addition to banning the sale of single sticks of cigarettes, 67 of the 86 countries specify a minimum size for packs of cigarettes. Most (52 countries) use the 20 cigarettes per pack standard, but minimum sizes

12 Before 2018, the use of single sticks was possible, but it has since been banned. See New York City Administrative Code, chapter 7: regulation of tobacco products, subchapter 1: Tobacco Product Regulation Act, §17-704.a-1. New York: New York Legal Publishing Corporation; 2020 ([http://library.amlegal.com/nxt/gateway.dll/New%20York/admin/title17health/chapter7regulationoftobaccoproducts?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:newyork_ny\\$anc=JD_T17C007](http://library.amlegal.com/nxt/gateway.dll/New%20York/admin/title17health/chapter7regulationoftobaccoproducts?f=templates$fn=default.htm$3.0$vid=amlegal:newyork_ny$anc=JD_T17C007), accessed 29 September 2020).

range from five sticks in Ghana up to 25 sticks in Papua New Guinea. Another 15 countries do not specifically ban the sale of single sticks but do specify the minimum size for packs of cigarettes.

According to the WHO FCTC, in order to reduce affordability, single stick sales should be banned and a minimum number of cigarettes contained per pack should also be defined.

KEY TAKEAWAY 11

A number of non-tax measures are closely connected to tax policies, including price regulations, bans on promotional discounts for tobacco products and bans on the sale of single sticks of cigarettes.

The price policies discussed are (1) minimum mark-up, (2) price floors and (3) price ceilings. Current evidence does not yet demonstrate that minimum mark-ups and price floors lead to increases in average price. Nonetheless, they may be relevant in some specific contexts as complementary policies to excise tax increases. Price ceilings limit price increases, which can mitigate their impact on consumption.

Price marketing strategies such as promotional discounts and the sale of single sticks undermine the effect of tax policies and should be banned. A minimum pack size should also be required by regulators.

Tax increases and their possible impact on inflation

At times, the inflationary impact of tax increases on cigarettes and other tobacco products is raised as an argument for not increasing these taxes. This may be a concern in countries where wages and/or a significant share of government spending is indexed to inflation (e.g. for public pension payments) or where government policy is to keep inflation low. The extent to which tobacco product tax increases lead to increases in inflation depends on several factors, most notably the share of these taxes in prices and the weight tobacco prices are given in computing a price index. For example, if taxes account for 25% of tobacco product prices, a doubling of the tax (100% increase) will increase prices by 25%. If the weight given to tobacco products in the price index is 3%, the index will rise by 0.75% in response to the tax increase. As tobacco taxes account for a larger share of tobacco product prices, the inflationary impact of a tax increase will be greater. Similarly, as tobacco products are given more weight in computing a price index, a given tax increase will have a greater inflationary effect. In general, for most countries, the inflationary impact of tobacco product tax increases would be relatively small (47).

Consumer price indexes have multiple purposes. They are an important economic indicator for most countries and are often a key determinant of monetary policy. Inflation rates have a direct impact on interest rates and exchange rates. In many countries, changes in wages, social security benefits and other payments are tied to inflation as measured by a price index. Price indexes are used to provide more accurate comparisons of changes in expenditures, incomes and prices for specific goods over time, as well as to allow comparisons across countries.

Given the many uses of consumer price indexes and the potential inflationary impact of tobacco tax increases, some governments have developed alternatives that exclude tobacco (and sometimes other goods) for some uses. For example, since 1992, France has excluded tobacco products from the price index used for adjusting minimum wages (47). However, many countries continue to include tobacco product prices in their consumer price indexes. Excluding tobacco products from the basket of goods used in developing key price indexes would greatly reduce concerns about their impact on inflation. In addition, with declining consumption of tobacco products, the inclusion of their prices in key price indexes results in a distorted measure of price for many consumers.

KEY TAKEAWAY 12

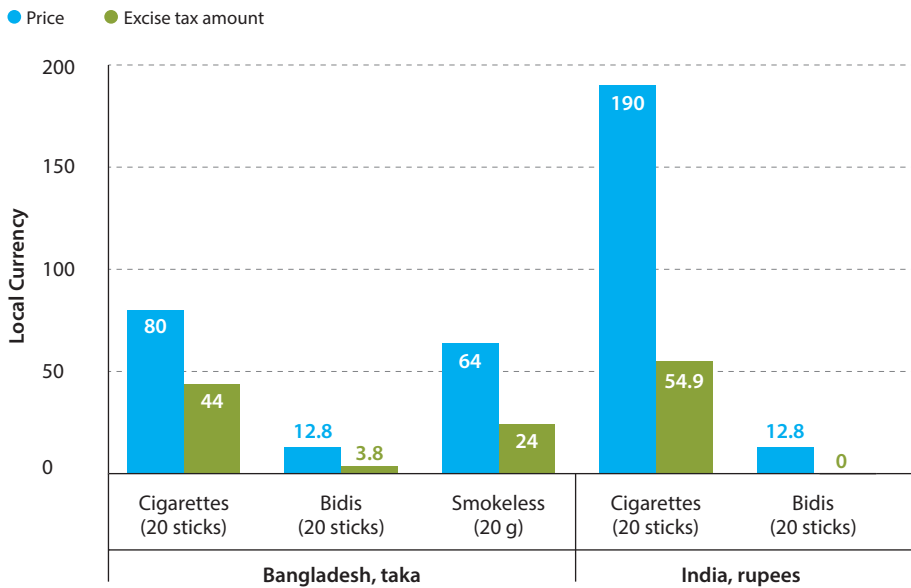
If governments are concerned about the potential inflationary impact of a tobacco tax increase because wages or some government spending may be tied to a price index, they can use a price index that excludes tobacco products.

The importance of taxing cigarettes and other tobacco products in a comparable way

While cigarettes are the most commonly used tobacco product globally, other tobacco products are as prevalent and sometimes more prevalent than cigarettes in some parts of the world. Bidis and smokeless tobacco are the main products consumed in some countries in South-East Asia – Bangladesh and India in particular – and waterpipes are widely used for smoking tobacco in the Eastern Mediterranean region (4). These products, as well as RYO, have historically been taxed much less than cigarettes (see, for example, Fig. 2.10 for Bangladesh and India, where the excise tax and prices of bidis and smokeless tobacco are much lower than those for cigarettes). This differential taxation undermines the health impact of excise taxes on tobacco products because (1) it encourages users to switch from cigarettes to the lower-taxed product (see the case of Thailand below); (2) it is not effective in reducing tobacco use in general, especially if the most widely used product in the country is not cigarettes; (3) it can encourage tax avoidance by companies that may

redefine products that are similar to cigarettes so that they fall within the lower-taxed product category (see the EU example below) and (4) it reduces the size of government revenues since those products could have been taxed at higher levels.

Fig. 2.10 Price and tax of the most-sold brand of cigarettes, bidis and smokeless tobacco in Bangladesh and India, 2018



Source: (1).

In Thailand, for example, the price of cigarettes has been raised quite successfully through taxation over a number of years, while taxes and prices of loose or RYO tobacco have until very recently remained unchanged. Indigenous tobacco used for RYO cigarettes has historically been exempt from excise, while foreign tobacco was taxed at a low level relative to that of manufactured cigarettes. Consequently, Thailand experienced growth in the RYO market even though cigarette consumption had been falling.¹³ The Thai government eventually took strong action to address this issue. First, the exemption for indigenous tobacco was removed in 2018. The Cabinet then approved an increase in the excise rate on small producers (of indigenous tobacco) from 0.005 baht per gram to 0.025 baht per gram in 2020, with another increase to 0.1 baht per gram scheduled for 2021 (69).

In the EU, the minimum excise duty levels for cigars and cigarillos is significantly lower than that for cigarettes. The Member States of the EU are required to levy an

13 WHO Country Office for Thailand, personal communication, 2019.

excise duty of at least €90 per 1 000 cigarettes, which should be 60% of the weighted average retail selling price of cigarettes released for consumption. For cigars and cigarillos, only €12 per 1 000 items, or an excise duty of 5% of the retail selling price, is required. As a result, the excise tax share on cigarettes is much higher in many EU countries than the share for cigars and cigarillos. In response, some companies started to market so-called borderline cigarillos. These products have characteristics similar to cigarettes but can be sold at a lower price because for excise purposes, they are considered as cigarillos. Although this issue seems to be largely solved by amendments to the definitions of these products at the EU level and a change in tax structures in some countries, it is important to be aware of the unintended incentives that can be created by large gaps in excise tax levels between product categories (70–71). For more details on industry tactics to undermine tax increases, see Box 2.1.

KEY TAKEAWAY 13

To make excise tax on tobacco products more effective in reducing overall tobacco use and to avoid substitution between products, all tobacco products need to be taxed in a comparable way.

The Guidelines for implementation of Article 6 of the WHO FCTC (Price and tax measures to reduce the demand for tobacco) (73) recommend that all tobacco products should be taxed in a comparable way.

Box 2.1 Industry tactics used to undermine tax increases

Tax increases reduce the demand for tobacco products and present a threat to the tobacco industry's high profits. The industry responds by using various strategies (17, 46, 48), including the following (46):

Stockpiling (forestalling/front-loading) – Before the implementation of an announced tax increase, manufacturers overproduce tobacco products, paying the pre-tax-increase rate. As a consequence, sales and tax revenue decline immediately but temporarily after the tax increase (while sales and revenues had increased substantially just before the tax increase) and the industry attributes this drop in revenue to the emergence or increase of illicit trade. This practice results in tax avoidance if there is no law prohibiting it (see also the discussion on anti-forestalling in Chapter 3).

Changing certain product characteristics (for example, weight or length) and/or adjusting the production process – When tobacco products are taxed at different rates or are subject to different tax increases, the industry can, for example, re-label one type of tobacco product as another product that has a lower tax burden (as in the example of the EU above).

Choosing the time of a price increase announcement strategically – The industry may raise prices in anticipation of a tax rate increase, generating extra profits in the period until the tax is actually implemented. When the tax increase is implemented, consumption and tax revenue will fall, but prices will not change, so the industry can claim that the tax policy was ineffective in reducing demand.

Adopting price-discriminating strategies or price-related promotions – The industry may offer discounts, retailer rebates or added value (gifts) to tobacco purchases to minimize the loss of price-sensitive consumers. This, however, is not possible in countries where strict bans on tobacco advertising, promotions and sponsorship are implemented.

Using brand proliferation (for example, launching a low-priced brand) and price segmentation – Manufacturers can choose to reduce prices of certain brands or introduce new, even cheaper ones to keep price-sensitive consumers in the market. There is evidence that firms introduce new cheaper products and use price-marking – printing the price directly on packs of tobacco products – to lock in their price (48). Such practices compromise both public health and revenue objectives.

Differential shifting of tax increases across different price segments, depending on the market circumstances – The industry may increase the price of a product by more than the amount of the tax increase (tax overshifting) and blame the government for the total increase. Tax overshifting is profitable when demand is inelastic, that is, when the price increase more than offsets the reduction in sales. The industry may overshift the tax increase for higher-priced brands, which are expected to be more price inelastic than lower-priced brands. Additionally, to keep price-sensitive consumers in the market, the industry may temporarily absorb part (or all) of the tax increase on lower-priced brands. The differential tax shifting will lead to different responses in the demand for the different brands (37, 48).

Lobbying government to distort interventions – Government policy might be influenced by tobacco industry lobbying, directly or indirectly. Policy-makers are not simply welfare or revenue maximizers; they also value political support. Industry lobbying might lead to adopting a favourable type of taxation, postponing tobacco tax increases or distorting the tax rate downwards (17). Article 5.3 of the WHO FCTC, “On the protection of public health policies with respect to tobacco control from commercial and other vested interests of the tobacco industry”, and its guidelines provide useful guidance on how to address tobacco industry interference. In fact, all 181 countries that are Parties to the WHO FCTC have a legal obligation to implement the requirements of Article 5.3.

Having correct expectations about industry responses is important for estimating the impact of a tax increase on consumption and tax revenue.

2.2.3 MEASURING IMPACT AND RECOMMENDED INDICATORS

Governments need to consider a number of indicators when formulating policy changes. Inappropriate assumptions about consumer behaviour, market structure and industry behaviour can lead to faulty policy analysis.

Measuring impact on price and demand

Consumption habits, local traditions and industry characteristics – such as the number of different brands offered, the possibilities of cross-border shopping and the presence and level of illicit trade – all affect the shape of the demand and supply of tobacco products, thereby determining the value of the price elasticities. Price elasticity, together with the industry's pricing strategies – for example, the degree of tax shifting – and the tax share in the retail price, determine the elasticity of the tax base, regardless of whether the base is determined by quantity (for specific taxation) or transaction value (for ad valorem taxation).

The importance of elasticity estimates

Different types of elasticity should be considered:

- price elasticity
 - own-price elasticity – measures the response of consumers' demand for a product following a change in the price of the product.
 - cross-price elasticity – measures the response of consumers' demand for a product when the price of another product changes. Cross-price elasticity can also occur between different brands or price segments for the same product.
- income elasticity – the response of consumers' demand for a product when their income level changes.

Correct estimates of price and income elasticities are important for policy-makers who need to anticipate the impact of a tax increase on consumption and tax revenue. Estimates will vary depending on a number of factors, including whether responses are considered in the short run versus the long run, the functional form of the demand function used, whether factors such as addiction or tax evasion are accounted for and the way data are constructed. For example, details such as the degree of aggregation of data, whether gender- or age-specific data are used, the time span covered and which estimation procedures are used (e.g. ordinary least squares, two-stage least squares or generalized method of moments) will all affect the results of the estimate (72).

Price elasticities may change over time, as well because of changes in any of the other factors affecting demand, such as income or tobacco control measures, and also because of changes in estimation techniques and the types or sources of data used.

Moreover, what is of most interest is the price elasticity of total demand. A tax increase may reduce tax-paid retail sales but not necessarily total consumption. For example, smuggling can significantly bias price elasticities when the elasticities are estimated using legal sales data; not accounting for possible illicit trade might lead to overestimation. Similarly, when cross-border shopping is included, the price elasticity of demand is lower (in absolute value) (74). Estimating the total price elasticity of demand for legal and illegal consumption can be done by using cross-sectional data from nationally representative household surveys. However, this approach also has its weaknesses. For example, respondents tend to underreport their consumption of tobacco, which leads to bias in the size of demand. Price endogeneity¹⁴ is another technical problem that can be challenging to address.

To comprehensively estimate the total effect of a tax increase on demand for all tobacco products as well as on tax revenue, the degree of substitutability between them needs to be estimated (55). Cross-price elasticity measures how the quantity demanded of a particular tobacco product changes when the price of another tobacco product increases. When this elasticity is positive, the products are substitutes; the higher the value of the elasticity, the closer substitutes the products are to one another. For example, positive cross-price elasticity between RYO and manufactured cigarettes implies that the demand for RYO increases as the price for cigarettes increases. Substitutability may also arise between different cigarette brands – when the relative price of economy brands increases, demand for premium brands may increase. This effect can be exacerbated when differential (tiered) taxation is applied on different types of cigarettes, further widening the gap in prices between brands and segments and encouraging substitution. The substitutability between traditional and new and emerging tobacco and nicotine products is currently of great interest (see section 2.4 below). In some countries, different tobacco products can also be complementary rather than substitute goods. This means that when the price of a tobacco product increases, the demand for its complement drops because users are unlikely to use the complementary tobacco product alone. For example, a number of studies have found manufactured and indigenous bidi cigarettes to be complementary goods in India (75–76).

The sign and magnitude of income elasticity vary across time, countries and demographic groups. For example, in the United States, a high-income country, income elasticity over time has changed from positive to negative, and cigarettes have switched from being a normal good to an inferior good (77–78). On the other hand, among LMICs, where prevalence of smoking tends to be relatively higher,

14 Price is endogenous because it is not an independent variable: it is estimated by dividing expenditure on tobacco by consumption of tobacco, with consumption being a dependent variable in the estimation of price elasticity.

cigarettes might still be a normal good, with consumption increasing as income levels increase (positive income elasticity) (79–80).

There are unobservable characteristics that differentiate higher-income smokers from lower-income smokers, such as differences in time and risk preferences, differences in associating a social stigma with smoking and differences in taste for smoking as a pleasurable activity. When these characteristics are ignored, estimates of the correlation between income and smoking-related outcomes are biased. Kenkel et al. (81), using techniques that estimate the causal effect of income on smoking among low-income adults, found that tobacco is a normal (even a luxury) good: higher income is associated with a higher probability of smoking participation and a lower probability of smoking cessation.

These results are consistent with those regarding the impact of the business cycle – periods of expansion or recession in economic activity – on health behaviour and outcomes. Ruhm (82–83), for example, found that smoking declines during temporary economic downturns and increases during economic expansions. Tarantilis et al. (84) found that estimates of income elasticities of demand in Greece were higher after the economic crisis of 2010 than before it. The financial crisis and the austerity measures shifted the demand for cigarettes downwards and turned cigarettes into a more income-elastic good. Interestingly, evidence from Germany suggests that the propensity to become a smoker significantly increases during an economic downturn. However, among those who are already smokers, cigarette consumption actually decreases (85).

Ideally, when estimating price and income elasticities, the effect of non-price policies should also be accounted for. A recent study from South Africa shows that failing to take non-price policies into account will overstate the price effect (86).

The NCI/WHO Monograph (4) suggests that price elasticity of demand for tobacco is on average -0.4 in high-income countries (ranging from -0.2 to -0.6). Estimates for LMICs are more variable, clustering around -0.5 (ranging from -0.2 to -0.8). A price elasticity of -0.5 means that a 10% increase in price would lead to a 5% reduction in consumption.

KEY TAKEAWAY 14

Policy-makers need to know the elasticity of demand – including price elasticity (own-price and cross-price) and income elasticity – for tobacco products in their country in order to correctly assess the impacts of potential policy changes on consumption and subsequent revenues. These estimates need to be made on a regular basis to capture changes in demand over time.

The importance of the tax base elasticity

The tax base elasticity measures the sensitivity to a change in the tax rate of the base on which the tax is imposed – the base being tobacco consumption in the case of specific taxation and tobacco expenditure in the case of ad valorem taxation. The magnitude of the elasticity of the tax base depends on price elasticity of demand, the tax structure, the level of the tax rate and its share in price, along with the industry response through its decision to absorb, pass through or overshift the tax on to the retail price. Consumers' preferences and income, the availability of substitutes and other non-price tobacco control measures also influence the tax base elasticity, essentially through the price elasticity of demand.

The magnitude of the elasticity of the tax base also depends on social motivations, including price and tax expectations, which are ultimately impacted by successful tobacco control measures that affect consumers' willingness to pay taxes or prices. In addition, the tax-base elasticity depends on smokers' perceptions of the probability of detection and tax enforcement when using illegal products, as well as the availability and accessibility of opportunities for tax evasion and avoidance. Finally, consumers' willingness to pay taxes depends on their perceptions regarding the use of the tax revenue (87). Therefore, the tax base elasticity is largely influenced by government policy choices.

Increasing the tax share in prices is recommended by WHO as a tool to achieve the public health objective of reduced tobacco use: a higher tax share in prices increases the tax base elasticity, all else remaining constant, and therefore increases the reduction in the tax base through the resulting reduction in smoking. However, manufacturers can be expected to attempt to manipulate the tax base elasticity through their pricing policies, such as tax shifting. As discussed earlier in this chapter, industry behaviour is itself affected by government tax policy and regulations.

A number of factors need to be taken into account when considering tax pass-through. As discussed earlier, tax is more likely to be overshifted within a specific tax structure than within an ad valorem structure. There is also evidence of industry overshifting the tax for premium or expensive cigarette brands while undershifting the tax for cheaper brands. This indicates that within a given market, the industry's decision on the extent of tax pass-through will vary based not only on the tax structure but also on the structure of the market. It will also vary by brand. But this does not give an indication about the impact of the tax increase on the average price of a tobacco product. In the context of the tax base elasticity and the impact of tax increases on revenues, it is important to assess how tax increases affect average prices.

The example of South Africa is very useful here. Over the past two decades, South Africa has been consistently increasing its specific excise tax on cigarettes, which has led to large price increases. An analysis of the effect of excise tax increases on

cigarette prices between 2001 and 2015 (26) shows that while there is evidence of tax overshifting, at least within a specified period of time, overall, the tax has been undershifted in real terms. This undershifting is due partly to increased competitiveness in the market and partly to the introduction of low-priced brands. Of course, this encouraged some consumers to downshift their consumption to cheaper products, but it also pushed manufacturers of more expensive brands to absorb part of the tax increase to reduce the impact on price.

A change in the level of the tax rate – with all other factors that influence consumption held constant – will result in a change in the tax revenue.¹⁵ Estimates of tax base elasticity help governments predict changes in tobacco tax revenues following a tax increase (see details in Annex 2.2).

Under specific taxation:

- tobacco consumption – the tax base – is expected to be price inelastic (17, 47);
- prices increase by less than the tax increase, on average (there is no tax overshifting overall); and
- consumption – the tax base – is also expected to be tax inelastic: the quantity of consumption falls less than proportionately to the tax increase, and the tax revenue increases.

Under ad valorem taxation:

- the tax base is the total consumer expenditure (or, equivalently, the industry sales revenue) on (legal) tobacco consumption – that is, the tax base under ad valorem taxation is determined by both price and quantity, which is itself a function of price;
- the sign of the tax base elasticity – which can be either negative or positive – depends on the magnitude of the price elasticity of demand;
- since evidence suggests that tobacco demand is price inelastic, the tax base elasticity is positive;
- when the ad valorem tax rate increases, both price and quantity adjust, but quantity falls less than proportionately to the price increase, and tax revenue increases; and
- a tax rate increase leads to both a higher level of revenue and a lower level of consumption; the value of the elasticity – and hence the tax revenue – increases with the degree of tax shifting.

¹⁵ This concept has been used by Laffer to argue that tax increases that are too high will reduce excise tax revenues (the so-called Laffer curve). For a detailed discussion on the Laffer curve, see section 4.4 in Chapter 4.

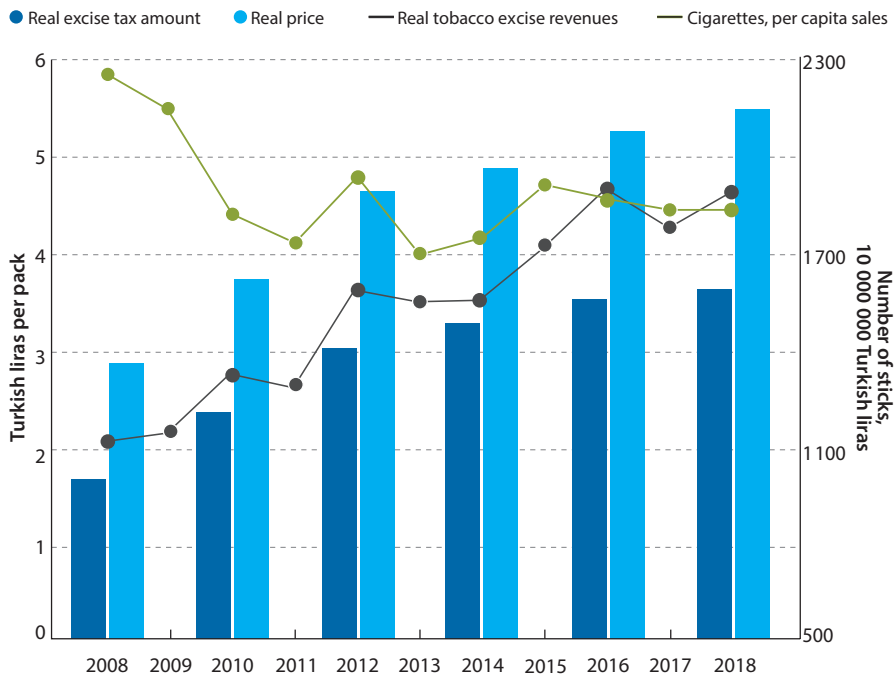
Taxation serves as an instrument for achieving both fiscal and public health objectives. If, after successful tobacco control interventions, prices reach levels where demand becomes elastic, the tax base is still most likely to be inelastic due to tax undershifting, since overshifting is not a good pricing policy when demand is elastic. In other words, a tax rate increase – in combination with non-price tobacco control measures that make consumers more sensitive to price (tax) increases – leads to decelerating but still positive marginal revenues. For an example of a tobacco taxation success story, see Box 2.2. For further details of countries' experiences with tax increases and their impact on revenues, see section 4.4 in Chapter 4.

KEY TAKEAWAY 15

Policy-makers' key policy tool to control demand is tax. Therefore, it is essential they assess not only the impact of price on demand but, more appropriately, the impact of tax on demand: this is the tax base elasticity. The tax base elasticity is essentially determined by (1) the price elasticity of demand, (2) the degree to which the industry will pass the tax on to the retail price and (3) the tax as a share of the retail price. The degree to which these elements are affected by a tax increase will impact demand and revenues. Currently, the three components combined are not high enough in any country for a tax increase to lead to a reduction in excise tax revenues.

Box 2.2 A tobacco taxation success story: Turkey

Turkey is an example of a country that has been increasing taxes regularly and significantly over a relatively short period of time and has reaped the benefits of this policy. As shown in Fig. 2.11, the excise tax per pack of cigarettes more than doubled in real terms over 10 years, with the real price almost doubling as well. In parallel, tobacco excise revenues increased by 67% and cigarette sales decreased by 20%. Since the beginning of the country's Health Transformation Program in 2003, Turkey has successfully increased public health spending and collected more tobacco tax revenue. According to the latest available figures, in 2015, tobacco tax revenue was equivalent to 42% of the country's public health expenditure and 1.5% of GDP (88).

Fig. 2.11 Tobacco excise revenue and consumption in Turkey (base year 2008), 2008–2018

Sources: Reference 1 for the price of the most-sold brand, Ministry of Finance for the sales and revenue data and IMF world economic outlook, April 2020. See <https://www.imf.org/en/Publications/WEO/weo-database/2020/April> for the adjustment for inflation.

Impact on affordability

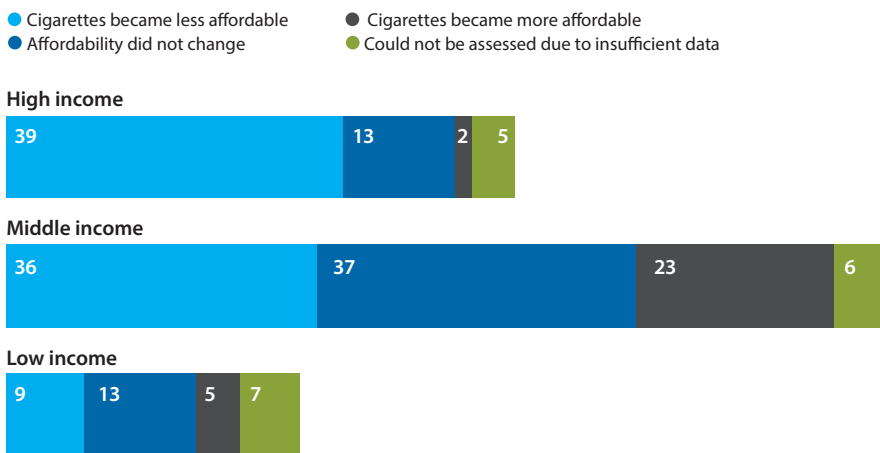
While price increases clearly have an impact on consumption, when the effects of increasing per capita income of a population are not considered, the price impact may not be as strong as expected. Increases in a population's income also increase its purchasing power. And, as indicated earlier, tobacco products generally behave like a normal good. Consequently, as income increases, it is expected that tobacco consumption will increase as well. To mitigate this effect, price increases (following tax increases) need to be greater than increases in income. This is where the concept of affordability comes in. Affordability examines the effects of both increasing prices and increasing incomes on consumer behaviour.

A common and easy way to calculate affordability, made popular by Blecher and van Walbeek (89), is to use the percentage of GDP per capita required to buy 2000 cigarettes (or 100 packs of 20 cigarettes) in a given year. An increase in this proportion over time will indicate that cigarettes are becoming less affordable and should lead to reductions in consumption. Changes in trends in affordability of cigarettes over time help policy-makers understand how prices are evolving

relative to a population's ability to purchase cigarettes and enable them to revise their policies accordingly. Recent studies in India, for example, highlight the wide price differential between manufactured cigarettes and indigenous tobacco products such as bidis and chewing tobacco, as well as the propensity for these indigenous products to become more affordable over time due to favourable or more lenient tax policies towards them (90–91).

Figure 2.12 shows the change in affordability of a pack of the most-sold brand of cigarettes by country income group between 2008 and 2018. During this time period, affordability declined in almost 70% of high-income countries, while it declined in slightly more than 35% of middle-income countries and only 26% of low-income countries.

Fig. 2.12 Number of countries that have experienced a change in affordability of cigarettes between 2008–2018, by income level



Note: Change in affordability was computed as the least squares rate of change in the per capita GDP required to purchase 2000 cigarettes of the most-sold brand in local currency in a given year. The trend rate of growth was computed for countries with four or more years of data, including 2018. Affordability was assessed as not having changed if the least squares trend in the per capita GDP required to purchase 2000 cigarettes over the period 2008–2018 was not statistically significant at the 5% level.

Source: (1).

KEY TAKEAWAY 16

From a health perspective, in addition to examining the impact of a tax increase on the levels of price, demand and revenues, policy-makers should consider a tax hike that will lead to prices rising more than increases in their population's income; a tax increase should make tobacco products less affordable to consumers so that demand will be effectively reduced.

Projecting impact on consumption, smoking prevalence and lives saved

The WHO interactive smoking projection and target-setting tool (WHO ISPT)

The WHO ISPT enables national policy-makers and tobacco control experts to explore the potential impact of proposed tobacco control policies. It uses impact factors of selected WHO FCTC demand-reduction measures derived from published literature, trends in tobacco smoking rates, national demographic information and tobacco-related mortality risk. The WHO ISPT provides projections of (1) tobacco smoking rates and (2) tobacco-smoking-related deaths in a country under different policy settings and for different time periods. It was designed to promote multisectoral collaboration within countries by enabling experts from various ministries (for example, health, education, finance, national statistics), civil society, academia and media to explore options for medium- and long-term tobacco control planning together with WHO experts. Use of the WHO ISPT enables strong partnerships for policy change advocacy, program development and evaluation.¹⁶ In particular, it can help policy-makers in the Ministry of Finance assess the specific contribution of tax policies – within overall tobacco control policies – towards achieving specific targets in tobacco prevalence reduction.

Projecting impact on excise revenue

The WHO tobacco tax simulation model (WHO TaXSiM)

The WHO TaXSiM is a simple but data-intensive Excel-based tool that helps policy-makers analyse their tobacco tax policy and assess the impact of any excise tax increase or change in excise tax structure on price levels, legal sales and revenues from excise and other taxes on tobacco products. Using detailed data about the market – including the majority of brands found in the market, their market share and price levels and the applicable tax – and assumptions about price elasticity of demand, the WHO TaXSiM predicts the impact of tax changes on consumer prices, consumption volume and tax revenues generated by each brand and market segment for the following year. The exercise can be done for multiple years.¹⁷

By exploring market data in detail, in addition to assessing the potential revenue impact of changes in excise tax, the WHO TaXSiM is a useful instrument for highlighting weaknesses and opportunities in an existing tax system and market. It can also encourage policy-makers to create administrative databases that can be periodically updated to monitor the dynamics of the cigarette market.

16 The WHO ISPT is not available publicly, but WHO will work directly with interested countries upon request to use it to produce data-to-action-type plans.

17 For more information about the methodology, see https://www.who.int/tobacco/economics/tax-sim_background.pdf, accessed 29 September 2020.

KEY TAKEAWAY 17

Policy-makers can use available tools to simulate the impact of tax increases on prices, consumption and revenues, as well as smoking prevalence and lives saved.

Recommended indicators to monitor tobacco taxation progress

MPOWER

WHO publishes a biannual RGTE, which monitors global progress in tobacco control. In particular, the report focuses on the implementation of the policy package MPOWER, a set of proven demand-reduction measures in line with the key provisions of the WHO FCTC (1).

While raising taxes on tobacco (component R) is proven to be the most effective and cost-effective policy to reduce tobacco use (4), implementing the entire MPOWER package at the best practice level will reinforce the impact of R. For example, as mentioned earlier in this chapter, banning promotional discounts as part of the E measure (enforce bans on tobacco advertising, promotion and sponsorship) will favour price increases following a tax increase. If all the MPOWER tobacco control measures except R were implemented at the best practice level, all else remaining constant, revenues would be expected to decline. Thus, in order to maintain revenue levels, it is important to raise excise taxes on tobacco products regularly to compensate for the decline in tobacco use from the other four tobacco control measures.

Tax share

The main indicator in the R policy in the RGTE (1) is the total share of indirect taxes in the retail price of the most-sold brand of cigarettes.¹⁸ Countries whose most-sold brand of cigarettes has a total tax that is equal to or greater than 75% of the retail price are considered to be at the highest level of achievement.

While total taxes include excise taxes, VAT (or sales taxes), import duties (when applicable) and other indirect taxes (where applicable), it is preferable to focus on excise taxes, since they are the component that most influences the relative price of tobacco. The share of excise tax in the retail price can be extracted from the RGTE database.¹⁹ The 2010 WHO technical manual on tobacco tax administration recommended making excise taxes account for at least a 70% share of excise taxes in the retail price of tobacco products (47).

18 For more details about how this indicator was compiled, see Technical Note III of the RGTE 2019 (https://www.who.int/tobacco/global_report/Technical-Note-III.pdf?ua=1).

19 See taxes and retail price for a pack of 20 cigarettes, globally, in *WHO report on the global tobacco epidemic 2019* (https://www.who.int/tobacco/global_report/Table-9.1-Taxes-and-retail-price-for-a-pack-of-20-cigarette-most-sold-brand.xls?ua=1, accessed 29 September 2020).

Affordability

As discussed previously, the share of tax in the retail price is not enough to ensure that a policy will be successful in reducing demand. Any tax increase should lead to an increase in price that will effectively discourage consumption. While global trends indicate that a high tax share is positively correlated with a high price level (see Fig. 2.2 in section 2.1.2), this may not necessarily apply to a particular country; a tax share can be high, while at the same time tobacco products remain affordable. For this reason, it is important to monitor not only tax increases but also whether those increases led to a price increase that is greater than income increases. As described in section 2.2.3 of this chapter, a common indicator is the percentage of GDP per capita required to buy 100 packs of 20 cigarettes in a given year.²⁰

Other indicators

As discussed in detail in sections 2.2.1 and 2.2.2, a good tax structure can make a tax policy more effective in increasing prices and decreasing affordability of tobacco products. Indicators can include whether a uniform excise is applied, whether it is a specific excise and whether it is adjusted regularly for inflation. A number of such indicators are also monitored through the RGTE and can be downloaded online.²¹

A tobacco tax indicator compiled in 2020 combines the various elements that form a good tobacco tax policy. The *Tobacconomics Cigarette Tax Scorecard (92)* rates a country's tobacco tax policy performance based on best practices. The four components that determine the level of performance are (1) cigarette price (in PPP), (2) changes in the affordability of cigarettes over time, (3) the share of taxes (total and excise) in retail cigarette prices and (4) the structure of cigarette taxes (i.e. whether excise is applied; whether it is uniform or tiered; whether excise is specific, ad valorem or mixed; and, for the ad valorem component, if the tax is applied on the retail price and if there is a minimum specific excise and, for the specific component, if tax is automatically adjusted upwards). Each of the four components is given a score, using a five-point index, with the total score reflecting an average of the four component scores. The closer the total score is to 5, the better the tobacco tax policy performance is in a given country. While this published scorecard is currently applied only on cigarettes, it can be easily applied on other tobacco products, provided the needed data are available.

20 This indicator has also been compiled in the RGTE; see (https://www.who.int/tobacco/global_report/Table-9.6-Affordability.xls?ua=1, accessed 29 September 2020).

21 See supplementary information on taxation, globally, in *WHO report on the global tobacco epidemic 2019* (https://www.who.int/tobacco/global_report/Table-9.5-Supplementary-information-on-taxation.xls?ua=1, accessed 29 September 2020).

KEY TAKEAWAY 18

Tobacco taxation works best if implemented as part of a comprehensive MPOWER package. MPOWER is an overall indicator that incorporates all the key demand-side tobacco control measures.

KEY TAKEAWAY 19

In addition to assessing the potential impact of a tax increase, policy-makers need to monitor progress over time. The share of the tax in the retail price is an indicator of progress. However, it is important to remember that an effective tax increase must translate into higher prices in order to make tobacco products less affordable. Combining all the components of a good tax policy into one scorecard can also be useful for assessing tobacco tax policy as a whole.

2.3 DOMESTIC AND REGIONAL POLICY INTEGRATION

While it is essential to design tobacco tax policies with the utmost consideration of all the aforementioned factors, it is also important to consider how external factors can impact or even impede public health policy objectives. As Chapter 3 explains, cooperation among the various agencies that are directly involved in tax administration, collection and enforcement is important for effective and efficient tax policy implementation. But in the design phase, it is also essential to engage with agencies and other policy-makers that are not directly involved with taxation. Domestically, coordination is required to ensure that policies in non-health sectors do not negatively impact or even counteract tobacco control initiatives. For countries that are part of a regional bloc, harmonization of tobacco taxation is essential to protect the single market – as well as the health of the population – and to prevent tax revenue erosion, tax avoidance and tax evasion.

2.3.1 INTERSECTORAL COOPERATION ON DOMESTIC POLICY

Domestic policies in agriculture, industry, trade, finance and labour have the potential to create or support incentives at different stages of tobacco production, manufacturing and distribution that can be counterproductive to the objectives of tobacco control and taxation. For example, subsidies provided to farmers or manufacturers involved in growing or processing tobacco can reduce prices and incentivize continued participation or even increase development in these areas, which is counterproductive to the goals of making tobacco products less affordable and reducing tobacco consumption. Multisectoral integration and policy coherence are needed at the country level to ensure that public policies and interventions in non-health sectors do not act against the intended public health impact of tobacco control and taxation.

KEY TAKEAWAY 20

Greater policy coherence in agriculture, industry, trade, finance and labour should be promoted to ensure that public policies and interventions in these sectors do not counteract the intended public health impact of tobacco control and taxation.

2.3.2 REGIONAL TOBACCO TAX HARMONIZATION

Policy integration is driven by the recognition that cooperation on domestic policies can substantially increase the gains from forming a regional bloc. Harmonization is desirable and may be necessary in certain areas with spillover effects, such as tax policy, the possibility of a so-called “race to the bottom” or threats to public health. Harmonization could be as simple as setting minimum standards and requirements based on global norms and best practices.

Harmonization of tobacco taxation is required to ensure the establishment and proper functioning of a single market, prevent tax revenue erosion, prevent tax avoidance and tax evasion and protect people. When barriers to trade between countries are removed, harmonized tax rates support the single market because they improve the ability of consumers, producers and investors to make decisions that are not distorted by taxation but reflect real opportunity costs. Tax competition – where countries simply undercut each other’s tax rate – could prevent governments from raising sufficient funds to pursue social policy. To avoid such a race to the bottom, countries can establish minimum tax rates within the customs union (93). Even if tax competition is not present, when substantial tax differences exist in neighbouring countries, there is a clear incentive to trade across borders in order to reduce tax payments legally or illegally.

The experiences of established regional economic communities offer important policy lessons, not only in terms of the general integration process but also for the process and extent of tax policy coordination.

The EU implemented a successful regional tax harmonization scheme. Over the years, the focus in harmonization of tobacco taxes has broadened from the elimination of tax obstacles to the fight against harmful tax competition, tax avoidance and tax evasion and, more recently, to public health protection. Naturally, addressing these issues requires increasing convergence in fiscal policy and tax administration.

Although price differentials still exist, setting a minimum on the share of taxes in the final price of tobacco products as well as a minimum excise tax has helped countries reach some level of harmonization. The EU experience confirms that both a declining tobacco consumption trend and stable revenues can be achieved with harmonized minimum excise rates (94). Moreover, the harmonization process has

offered opportunities for the enforcement authorities (tax or customs) to obtain information that can be used in the fight against fraud and tax evasion.

On the other hand, the experience of harmonization efforts in the West African Economic and Monetary Union (WAEMU) shows how the absence of a supranational body (like the EU) or a hegemonic member state (see the SACU example below) can slow down policy integration that would benefit all member countries (95). The eight countries of the WAEMU are bound by a Tax Directive²² that requires them to impose an ad valorem excise on the CIF value or producer price of tobacco products, which is subject to under-declaration and is difficult to ascertain. Additionally, a maximum excise rate is imposed, and some members apply additional taxes to deal with this constraint. The Directive was revised in 2017 (96), but unfortunately the tax structure remains the same, and the maximum rate was not removed but rather has been increased.

The Southern African Customs Union (SACU), which has five member countries, is the oldest existing customs union, established in 1910. Thanks to the hegemonic lead of South Africa, a country with a sophisticated administration system and an aggressive tobacco tax policy, SACU adopted a well-integrated tax policy that has benefited all its members (95).

The GCC, established in 1981, is a regional intergovernmental political and economic union consisting of six states of the Persian Gulf. Home to one fifth of the global oil supply (97), the GCC has never relied on taxation as a source of revenue; no direct or indirect taxes were applicable in the region. Although there was no excise on tobacco products, as a customs union, the GCC countries have a common external tariff. This common tariff includes harmonized rates but also a harmonized structure. The import duty is 100% of the CIF value of tobacco products imported in the region, with a minimum tax per quantity imported.

However, in recent years, to reduce their dependence on income from oil, GCC countries have considered diversifying their sources of income, including by developing reliance on indirect taxes such as excise and VAT. In 2015, a decision was adopted at the 36th GCC summit meeting to implement selective taxes on all imported tobacco products and cultivated raw tobacco grown domestically (GCC Decision number 963/1). A follow-up decision in December 2016 formally agreed to the introduction of an excise tax on tobacco and other products such as sugary and energy drinks, as well as special goods (alcohol and pork meat), in all GCC countries.

The decisions at the national level to implement this subregional decision came into force gradually in all GCC countries, starting with Saudi Arabia, which began

22 Directive No. 03/98/CM/WAEMU on the harmonization of Member States' legislation of excise duties was adopted 22 December 1998. It was amended by Directive No. 03/2009/CM/WAEMU of 27 March 2009 with the objective of harmonizing excise duties within WAEMU.

implementation in June 2017, followed by Bahrain and the United Arab Emirates (UAE) later that year, Qatar in 2018 and Oman in 2019 (1). Only Kuwait has yet to adapt its national laws accordingly. The excise introduced by the GCC countries has a structure somewhat similar to the import duty on tobacco products: the rate is 100%, but the base was changed from the CIF value to the retail price excluding taxes. The introduction of the excise led to large increases in the price of the most-sold brand of cigarettes in member countries between 2016 and 2018 – by 33% in Bahrain, more than 80% in the UAE and more than 100% in Saudi Arabia (1).

In federations such as Canada and the United States – where the central government has real taxing power and some financial and regulatory control over the states or provinces – tobacco taxes are not harmonized (98–99). Even though there are significant interjurisdictional differences in taxes and prices, and tax harmonization holds great potential to reduce the scope of illicit transactions in the tobacco market, there is little evidence that Canadian provinces or individual states in the United States are interested in tobacco tax harmonization.

Tax harmonization is most relevant in the context of further economic integration within a group of countries that are already part of a customs union, but it needs to be planned well to be effective. Discrepancies in law interpretation and a lack of standardization of tobacco product definitions and tax base lead to suboptimal situations. Tax rate alignment, or setting minimum rates, should come after tax structure alignment. It is important that governments support the move towards harmonization and are committed to dedicating enough financial resources and skilled personnel to oversee the entire process.

KEY TAKEAWAY 21

In the context of regional economic integration and ongoing discussions regarding the possibility of harmonizing tobacco excise taxation among member countries, the experiences of existing groups can be instructive. So far, only the EU, SACU, WAEMU and, more recently, the GCC have effectively implemented a harmonized approach to excise taxation of tobacco products. Lessons learned indicate that harmonization should be planned well and should not come at the expense of tobacco control.

Setting a common minimum specific excise tax, adjusted over time, is the best approach. This ensures that taxes and prices are above a minimum level, encouraging equalization of price levels and at the same time reducing affordability across countries. On the other hand, agreeing on maximum tax rates is a bad policy.

Countries that wish to raise their taxes further for revenue purposes, health concerns or both should be given the space to do so.

Concerns about illicit trade provoked by higher tax rates are best dealt with by strong cooperation in administration and enforcement, information sharing and adoption of new technology with common or interoperable information systems.

2.4 NEW AND EMERGING NICOTINE AND TOBACCO PRODUCTS

In recent years, awareness of tobacco risks and harms, implementation of tobacco control provisions – especially under the WHO FCTC – and tightening of regulations have resulted in declining sales of cigarettes, primarily in high-income economies. This has changed the dynamics of the tobacco market. In response to these effective tobacco control measures, the tobacco industry has diversified its business by promoting a new portfolio of products, which they claim to be technological innovations that supposedly reduce the harms and risks associated with conventional tobacco products, particularly cigarettes.

So-called novel tobacco products have been promoted by the tobacco industry as “cleaner alternatives,” “safer alternatives” and “reduced harm/risk products” with no smoke and no ash. On the basis of these claims, they negotiate for less-restrictive regulatory environments within countries. Some of the new products are also marketed or promoted for smoking cessation, despite the evidence of this outcome being inconclusive. Where these products are not banned, one of the debates in the global health community concerns the issue of their regulation and taxation.

2.4.1 HEATED TOBACCO PRODUCTS (HTPs)

HTPs are tobacco products that produce aerosols containing nicotine and toxic chemicals upon heating of the tobacco or activation of a device containing the tobacco. These aerosols are inhaled by users sucking on or smoking the device. They contain the highly addictive substance nicotine (found in tobacco) as well as non-tobacco additives and are often flavoured.

The tobacco in HTPs may be in the form of specially designed cigarettes (e.g. so-called heat sticks or Neo sticks) or pods or plugs. These products include IQOS from PMI, Ploom TECH from Japan Tobacco International (JTI), glo from British American Tobacco (BAT) and PAX from PAX Labs. HTPs differ not only from conventional cigarettes but also from ENDS – some of which are called e-cigarettes – as ENDS do not contain tobacco but rather a nicotine solution (see next subsection). However, the boundaries between the different products are becoming increasingly

difficult to define, given the emergence of so-called hybrid tobacco products that contain both nicotine solution and tobacco.

HTPs are currently available in more than 40 countries and are banned in fewer than 10 countries. Even in countries where they are regulated, there is significant variation in the approaches taken to regulation. A variety of factors affect a country's ability to control and regulate the use of HTPs, including national regulatory powers, enforcement capacity regulatory frameworks, country capacity and tobacco industry interference (1).

Most countries tax HTPs at a lower rate than cigarettes and on the kilogram of tobacco as a base when applying a specific or mixed excise (see Table 2.4). The use of such a base may be quite challenging for tax collection, especially because of the difficulty of checking the tobacco content in each stick. In the past, some countries taxed cigarettes per kilogram of tobacco, but today it is common practice to tax them per stick regardless of tobacco content.

Table 2.4 Excise taxation of HTPs, first collected for July 2018 – updated for July 2020

Type of excise	OVERALL COMPARISON WITH CIGARETTES			
	Base unit is kg, overall rate lower than cigarettes	Base unit is sticks, rate is the same as cigarettes	Base unit is sticks, rate is lower than cigarettes	Other
Specific excise	Albania, Austria, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Greece, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Montenegro, Netherlands, New Zealand, North Macedonia, Romania, Russian Federation, Slovakia, Slovenia, Sweden, United Kingdom	Azerbaijan ^a , Japan, Ukraine ^b	Armenia, Hungary, Jordan, Italy ^c , Philippines, Republic of Korea ^d	Montenegro ^e , Republic of Moldova ^f , Serbia ^g
Ad valorem excise (base is retail price unless specified otherwise between brackets)	Spain, Switzerland	Saudi Arabia and United Arab Emirates (base is retail price exclusive of excise and VAT)		Indonesia ^h

Mixed system (ad valorem component based on retail price unless specified otherwise between brackets)	France, Germany, Poland, Portugal	Colombia, Georgia, Israel and West Bank and Gaza Strip (ad valorem excise base is wholesale price)		
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^aThe specific excise rate applied is the same as for imported cigarettes, higher than the rate applied to domestically produced cigarettes.

^bThe rate is the same as the minimum excise on cigarettes per 1 000 pieces. Rate and structure were effective as of 1 January 2021.

^cThe specific excise rate is defined as 25% of the excise tax on cigarettes based on an equivalency used between cigarettes and HTPs. There are planned increases of this proportion to 40% by 2023.

^dIn 2020 the specific excise rate was only 11% lower than cigarettes.

^eThe specific excise tax is based on the weight (kg) of tobacco mixture and is calculated at 40% of the minimum excise tax per 1000 cigarettes.

^fSpecific excise rate is higher than for cigarettes but, unlike HTPs, cigarettes also face an ad valorem excise. Overall effect of excise is a slightly lower for HTPs.

^gThe specific excise tax is based on the weight (kg) of tobacco mixture and is calculated at 40% of the minimum excise tax per 1000 cigarettes. There is a planned phased increase of this proportion aiming equalization with cigarettes by 2025.

^hWhile cigarettes face a specific excise tax rate, HTPs face an ad valorem rate, the highest rate as defined by law, on the basis of a pre-defined minimum price.

Sources: (1, 100, 101, WHO data collection of price and tax of cigarettes and HTPs in 2020, unpublished as of April 2021 and the Campaign for Tobacco-Free Kids website on Taxation and Price for Heated Tobacco Products <https://www.tobaccofreekids.org/what-we-do/global/taxation-price/staging-tax-gap>).

A study by Liber (102) compared prices of HTPs and cigarettes in 34 countries and showed that while taxes have been systematically lower for HTPs than for cigarettes, prices were higher in half of the countries surveyed.

KEY TAKEAWAY 22

HTPs, when taxed, are usually taxed lower than cigarettes, although they generally seem to be priced higher than cigarettes.

It is important to remember that HTPs are tobacco products, and the same provisions that apply to tobacco products should apply to them as well. This is articulated in WHO's information sheet on HTPs (103), which provides guidance on how these products should be regulated, as well as Decision FCTC/COP8(22) for novel and emerging tobacco products. Moreover, MPOWER measures, which help WHO Member States to implement the demand-reduction articles of the WHO FCTC, are applicable to HTPs, in particular, Article 6 for taxation. Currently, there is no evidence demonstrating that HTPs are less harmful than conventional tobacco products. Furthermore, HTPs contain chemicals not found in cigarette smoke, the health effects of which are not yet known. Independent assessment of industry data demonstrates that more than 20 harmful and potentially harmful chemicals

are significantly higher in HTP emissions than in cigarette smoke (104). Therefore, there is a need to learn more about these products and the health impacts of their emissions, as well as the impacts of exposure to these emissions.

KEY TAKEAWAY 23

Currently, there is no evidence demonstrating that HTPs are less harmful than conventional tobacco products.

From both public health and tax administration perspectives, HTPs should be taxed at the same level and in the same way as tobacco cigarettes. Some countries have already adopted this approach and are taxing HTPs at the same rate per stick as cigarettes (Azerbaijan, Colombia, Georgia, Israel, Japan, Ukraine and West Bank and Gaza Strip). Saudi Arabia and the UAE, which have recently introduced an excise tax on tobacco products as part of the GCC, are now applying the same import duty rate and excise tax structure for cigarettes and HTPs.

Continuing developments in technology and changes in products have led to a recommendation to tax HTPs per unit. The definition of unit may vary by product within the HTP category. For example, one unit of IQOS is one heat stick, for Glo it is one Neo Stick and for Ploom TECH it is one tobacco pod. Governments will need to determine the exact definition of a unit for each product allowed on the market. The potential complexity of the market strongly supports limiting the types of HTPs allowed in a country and setting strict regulations to standardize the products as much as possible.

Countries can also consider taxing the devices used to consume HTPs, i.e. the holder and the charger (see product description in Annex 3.1).

KEY TAKEAWAY 24

HTPs are tobacco products, and they need to be treated as such. Where they are not banned, HTPs need to be strictly regulated and taxed. The recommendation is to tax them at the same level as cigarettes on a per-unit basis. Countries can also consider taxing the devices used for HTP consumption.

2.4.2 ELECTRONIC NICOTINE AND NON-NICOTINE DELIVERY SYSTEMS (ENDS/ENNDS)²³

Products like ENDS and ENNDS have evolved rapidly over the past decade. ENDS heat a solution (e-liquid) containing nicotine, but not tobacco, and other chemicals that may be toxic to people's health to create an aerosol, which is inhaled by the user. Examples of ENDS include Juul from Juul Labs, Vype from BAT and blu from Imperial Brands (1).

Electronic non-nicotine delivery systems (ENNDS) are essentially the same as ENDS, but the e-liquid used generally does not contain nicotine. Upon testing, however, many so-called zero-nicotine solutions are found to contain nicotine (105–107).

While generally considered as a single product class, ENDS products constitute a diverse group with potentially significant differences in the production of toxicants and delivery of nicotine. There are several coexisting types of devices for ENDS/ENNDS on the market, including first-generation or so-called cigalikes, second-generation tank systems and even-larger third-generation or personal vaporizers. Collectively, they are also often referred to as e-cigarettes, vapes or vape pens. Other categories of ENDS include e-hookahs, e-pipes and e-cigars – hence, ENDS is an all-encompassing term for multiple product categories. Some of the products resemble their conventional tobacco counterparts – cigarettes, cigars, cigarillos, pipes or hookahs – while others are shaped more generically like pens, USB memory sticks or basic cylinders. Different forms of nicotine are also used in these ENDS, the most recent one being nicotine salts, which deliver high levels of nicotine (1).

There are two types of ENDS/ENNDS products: open systems and closed systems. Open systems are devices that allow the user to buy e-liquids and fill their device with the mixtures they want (with no nicotine, different nicotine concentrations and/or flavours). Closed systems are products that come with a prefilled container (called a cartridge, pod or tank).

For the past decade, divisive debates have been waged over the effectiveness of ENDS as smoking cessation aids – especially for tobacco users who are unable to give up the habit – as well as the possibility of ENDS playing a role in public health. However, the evidence remains inconclusive. Despite the tobacco industry and other related industries promoting these products as tools for quitting smoking, current evidence does not support their use as part of a population-based cessation strategy (108). Accordingly, the United States Surgeon General, in January 2020, concluded that

23 It is worth noting that ENDS are not tobacco products and not exactly new products – the technology has been around since the late 1980s (e.g. Premier, Eclipse and Accord). However, the recent generation of these products is new and has more or less piggybacked on the success of e-cigarettes.

E-cigarettes, a continually changing and heterogeneous group of products, are used in a variety of ways. Consequently, it is difficult to make generalizations about efficacy for cessation based on clinical trials involving a particular e-cigarette, and there is presently inadequate evidence to conclude that e-cigarettes, in general, increase smoking cessation (109).

The evidence on the adverse health effects associated with use of ENDS is mounting, and when ENDS are used in combination with smoking – which is the practice of the majority of ENDS users (110) – the adverse health effects of two or more products are combined. However, there are insufficient data to understand the full breadth of these effects, as ENDS have not been on the market long enough for their long-term effects to be established.

Nevertheless, the evidence is clear that the aerosols of the majority of ENDS and ENNDS, some of which are cancer causing chemicals. ENDS also contain nicotine, which is highly addictive. In addition, ENDS are associated with increased risk of cardiovascular diseases and lung disorders, as well as adverse effects on the developing fetus during pregnancy (108, 110). For adolescents, the use of nicotine can lead to dependence and may harm brain development. Use of ENDS could also lead to a new generation of nicotine and tobacco users, as seen in some countries, especially since these products are designed to appeal to young people. Although the specific level of risk associated with ENDS has not yet been determined conclusively, these products are undoubtedly harmful. Therefore they should be strictly regulated if allowed to be sold in domestic markets, and must be kept away from children. Taxation will be a key component of regulation, since it is an effective tool for influencing consumer behaviour.

Some countries have taken the bold decision to completely ban these products. Approaches that have been taken range from partial to comprehensive bans, and ENDS/ENNDS products were banned in more than 30 countries in 2018.²⁴ In other countries, they are regulated as, for example, consumer products, pharmaceutical products or tobacco products, or they are completely unregulated. WHO recommends that where ENDS/ENNDS are not banned, they should be regulated to achieve the following objectives:

1. prevent the initiation of ENDS/ENNDS by non-smokers and youth, with special attention to vulnerable groups;
2. minimize as much as possible potential health risks for ENDS/ENNDS users and protect non-users from exposure to their emissions;
3. prevent unproven health claims being made about ENDS/ENNDS; and

24 Data collected for the *WHO RGTE 2019*.

4. protect tobacco control activities from all commercial and other vested interests related to ENDS/ENNDS, including the interests of the tobacco industry.

ENDS/ENNDS present a risk to youth, who have taken up their use in high numbers in some countries, including Canada and the United States (1, 111). The Juul brand, for example, has quickly gained a significant e-cigarette market share in the United States (112–113). Its marketing and popularity have led the United States Food and Drug Administration (FDA) to raise serious concerns and to seek solutions to effectively prevent youth from taking up the use of ENDS/ENNDS (114). The city of San Francisco banned the sale of e-cigarettes in June 2019 (115).

In addition to posing a risk for initiation by youth, ENDS can attract non-tobacco users or prevent current smokers from quitting. Taxation could play a role in preventing the uptake of these products, specifically among non-smokers, vulnerable groups, children and adolescents.

KEY TAKEAWAY 25

The long-term health effects of ENDS/ENNDS products are still unknown, but they are clearly harmful to health. Furthermore, evidence on the effectiveness of ENDS products as a smoking-cessation aid remains inconclusive. Taxing these products could play a role in preventing their uptake, specifically among non-smokers, vulnerable groups, children and adolescents.

Price elasticity of demand for ENDS products

In the context of taxation, it is important to ask whether demand for ENDS is price-responsive. Preliminary evidence, although almost exclusively focused on e-cigarette data from the United States, indicates that this is the case: demand for e-cigarettes may be even more price-responsive than the demand for conventional cigarettes, so taxes can be used to deter initiation by never-users (116–123). Most of the studies of price elasticity of demand for ENDS products also demonstrate that e-cigarettes and conventional cigarettes are partial substitutes – that is, they show positive cross-price elasticity. The magnitude of the elasticity indicates the degree of substitutability between products: the higher its value, the closer the products are to being substitutes, with higher cigarette prices being associated with increased e-cigarette sales. Some of the studies also show a substitutability effect in the other direction, with increased prices for e-cigarettes leading to an increase in conventional cigarette use (117, 120). All of the studies show evidence of substitutability except for one (124), which differentiates between exclusive and dual users and shows no evidence of substitution between e-cigarettes and conventional cigarettes.

The presence of concurrent (or dual) use – consumers using both conventional cigarettes and ENDS products – complicates results and highlights the need for more research in this area to better disentangle the different effects.

Liber et al. (125) analysed sales prices in a sample of 45 countries and concluded that comparable units of conventional cigarettes cost less than disposable e-cigarettes. The units considered for pricing e-cigarettes included both the e-liquid and the rechargeable device. Taken alone, the price of e-liquids is on average much lower than that of cigarettes in high-income countries and the same in LMICs. The time needed to buy back a rechargeable device is estimated to be less than two weeks in most countries.

One can argue that increasing price differentials by further increasing taxes on regular cigarettes could be effective in driving current smokers of regular cigarettes to e-cigarettes (126) as a potentially lower-risk alternative (127). However, the effectiveness of ENDS as smoking cessation devices is still being debated; a study by Sweet et al. (128) shows that dual use of e-cigarettes as a potential tool for cessation was effective only in the short term. Moreover, significantly more smokers said they would quit if cigarette prices doubled and e-cigarettes were not available (122) or that they would never have become addicted to nicotine if e-cigarettes had not been so readily available (129). Once an e-cigarette user is addicted to nicotine, there is a risk of initiating traditional tobacco products use (130). In general, cessation can be better facilitated by governments via stronger implementation of the other tobacco control policies that have been proven effective at reducing use.

KEY TAKEAWAY 26

Few studies are available on the price elasticity of ENDS products, and the available data come almost exclusively from the United States.

These early studies indicate that demand for e-cigarettes will go down as the price of e-cigarettes increases. Generally, the results also show that cigarettes and e-cigarettes are partial substitutes, where an increase in cigarette price would increase the demand for e-cigarettes while reducing demand for cigarettes.

But these results do not differentiate between people who are exclusive cigarettes or e-cigarette users and those who are users of both products.

Tax structure

Different countries impose different tax structures on ENDS/ENNDS products²⁵ (see details in Table 2.5). The Republic of Korea, for example, imposes a specific tax per millilitre of ENDS/ENNDS e-liquid (131), while Indonesia imposes an ad valorem tax on the retail price of the e-liquid; the maximum rate allowed by law for tobacco products (132). In the United States, there is no common way to tax e-cigarettes among the states that do tax them (133–134). The situation is similar in the EU, where new and emerging nicotine and tobacco products are not currently covered by the tobacco tax directive, and Member States may apply a national tax as they see fit under their own rules. All the EU countries that tax ENDS products apply a specific excise per millilitre of e-liquid.

These different tax treatments have the potential to distort the functioning of the internal market. In February 2020, the European Commission concluded that the current provisions of the harmonized directive are no longer relevant for the taxation of ENDS and HTPs, and this is a source of concern from the internal market perspective (135). In June 2020, the Member States of the EU reiterated that it is urgent and necessary to upgrade the EU regulatory framework by harmonizing definitions and the tax treatment of novel products such as ENDS/ENNDS and HTPs (2).

Table 2.5 Types of excises applied on ENDS/ENNDS products e-liquids globally and in individual states in the United States, as of July 2019 (updated as of July 2020 for all countries except the United States)

TYPE OF EXCISE	COUNTRIES	
	Taxing only nicotine-containing e-liquids (ENDS products)	Taxing all e-liquids (ENDS and ENNDS products)
Specific (based on volume per mL)	Albania, Kazakhstan, Kyrgyzstan, Pakistan, Portugal, Republic of Korea, Romania, Russian Federation, Slovenia, Sweden	Azerbaijan, Cyprus, Estonia, Finland, Georgia, Greece, Hungary, Italy ^b , Latvia, Lithuania, Montenegro, Morocco, North Macedonia, Philippines, Serbia
Ad valorem (% of retail price or import value)	Bahrain ^a	Indonesia, Jordan, United Arab Emirates, Yemen
TYPE OF EXCISE	INDIVIDUAL STATES IN THE UNITED STATES	
	Taxing only nicotine-containing e-liquids (ENDS products)	Taxing all e-liquids (ENDS and ENNDS products)
Specific (based on volume per mL)	Delaware, Illinois (Chicago), Cook County, Louisiana, Ohio, Puerto Rico ^c , Connecticut ^c	Kansas, North Carolina, Washington, West Virginia, Wisconsin

25 The focus is on the e-liquid used for ENDS/ENNDS products.

Ad valorem (% of wholesale/ distributor price)	Alaska (Juneau, Matanuska- Susitna Borough), California, Illinois, Maine, Maryland (Montgomery County), Minnesota, Nevada, Pennsylvania, Vermont, Washington DC, Virgin Islands ^c	New York
Mixed	New Jersey, New Mexico	

^a Tax applied to e-shisha (or e-hookah) because e-cigarettes are banned in Bahrain.

^b Italy imposes differential rates for nicotine and non-nicotine containing liquids.

^c States in which it is unclear if only ENDS or both ENDS and ENNDS products are taxed with an excise.

Sources: (1, 135, complementary data from Frank Chaloupka and WHO data collection of price and tax of cigarettes and HTPs in 2020, unpublished as of April 2021).

Table 2.6 provides reference material on the pros and cons of different considerations for determining the tax structure and base of ENDS/ENNDS products e-liquids.

Table 2.6 Excise tax options for ENDS/ENNDS products e-liquids

TYPE OF EXCISE	BASE	ADVANTAGES	DISADVANTAGES
Specific	Volume of nicotine-containing e-liquid (regardless of concentration)	<ol style="list-style-type: none"> 1. Reduces the price gap between similar products 2. Simple from a tax administration perspective, as only the volume needs to be determined 	<ol style="list-style-type: none"> 1. Difficult to compare if tax equivalency^a with cigarettes is sought 2. Requires laboratory capacity to detect the presence of nicotine in e-liquids, as there is currently no simple way to determine whether the e-liquid contains nicotine (self-declarations by industry are not sufficient) 3. Does not cover non-nicotine-containing e-liquids, which are also harmful when inhaled via e-cigarettes and during independent tests have often been found to contain nicotine, contrary to product labelling or representations by the industry 4. Potentially favours products with a higher nicotine concentration per mL, which also tend to be the products most responsible for the rapid uptake in youth initiation in countries where these products are available and aggressively marketed 5. May encourage more do-it-yourself (DIY) products where e-liquids are mixed by the users themselves, which increases the risk of accidents, illness and death

TYPE OF EXCISE	BASE	ADVANTAGES	DISADVANTAGES
	Volume of e-liquid regardless of nicotine presence	<ol style="list-style-type: none"> 1. Reduces the price gap between similar products 2. Simple from a tax administration perspective, as only volume needs to be determined 3. Covers non-nicotine-containing e-liquids, which are also harmful when inhaled and during independent tests have often been found to contain nicotine, contrary to product labelling or representations by the industry 4. Does not require laboratory capacity to detect the presence of nicotine in liquids 	<ol style="list-style-type: none"> 1. Difficult to compare if tax equivalency with cigarettes is sought 2. Challenge in detecting and differentiating whether the liquids (e.g. propylene glycol and vegetable glycerine) to be used in ENDS/ENNDS are falsely declared as being for other purposes (e.g. food, cosmetics or pharmaceuticals) at import and manufacturing levels 3. Potentially favours products with a higher nicotine concentration per mL, which also tend to be the products most responsible for the rapid uptake in youth initiation in countries where these products are available and aggressively marketed
	Volume of all e-liquids with an additional tax per unit of nicotine concentration	<ol style="list-style-type: none"> 1. More likely to serve as barrier to youth initiation by affecting the lowest price category, and products with a higher nicotine concentration per mL are affected the most; also reduces the price gap between different products 2. Covers non-nicotine-containing e-liquids, which are also harmful when inhaled and during independent tests have often been found to contain nicotine, contrary to product labelling or representations by industry 3. Current market observations (2019) within the same product categories indicate that nicotine concentration is not a major determinant of price; increasing taxes as nicotine concentration becomes higher may change this and would reinforce the health justification that nicotine is addictive and not harmless 4. Reduces manufacturers' incentive to increase nicotine concentration in order to reduce the tax burden 5. Reduces DIY incentives, as increasing nicotine concentration for personal consumption will increase cost to user 	<ol style="list-style-type: none"> 1. Difficult to compare with cigarettes if tax equivalency with cigarettes is sought 2. Challenge in detecting and differentiating whether the e-liquids (e.g. propylene glycol and vegetable glycerine) to be used in ENDS/ENNDS are falsely declared as being for other purposes (e.g. food, cosmetics or pharmaceuticals) at import and manufacturing levels 3. Requires laboratory capacity to measure the amount of nicotine concentration in e-liquid solutions 4. More complicated from a tax administration perspective, as both volume and nicotine content need to be assessed

TYPE OF EXCISE	BASE	ADVANTAGES	DISADVANTAGES
	Volume of nicotine-containing e-liquids with an additional tax per unit of nicotine concentration	<ol style="list-style-type: none"> 1. More likely to serve as barrier to youth initiation by affecting the lowest price category, and products with a higher nicotine concentration per mL affected the most; also reduces the price gap between different products 2. Current market observations (2019) within the same product categories indicate that nicotine concentration is not a major determinant of price; increasing taxes as the nicotine concentration becomes higher may change this and would reinforce the health justification that nicotine is addictive and not harmless 3. Reduces manufacturers' incentive to increase nicotine concentration in order to reduce the tax burden 4. Reduces DIY incentives, as increasing nicotine concentration for personal consumption will increase cost to the user 	<ol style="list-style-type: none"> 1. Difficult to compare if tax equivalency with cigarettes is being sought 2. Requires laboratory capacity to detect the presence of nicotine in e-liquids as there is no simple way currently available to determine whether the e-liquid contains nicotine; self-declarations by industry are not sufficient 3. Requires laboratory capacity to measure the amount of nicotine concentration in e-liquid solutions 4. More complicated from a tax administration perspective, as both volume and nicotine content need to be assessed
Ad valorem	Producer price/ CIF value of nicotine-containing e-liquid (regardless of nicotine concentration)	<ol style="list-style-type: none"> 1. Easier to compute and regulate for tax equivalency between ENDS products and cigarettes in the context of a large heterogeneity of products (especially if tax on cigarettes is ad valorem – although this does not change the long-standing recommendation that specific taxes are better for conventional cigarettes) 	<ol style="list-style-type: none"> 1. Prone to undervaluation because the true value of the tax base is difficult to ascertain 2. Requires strong tax administration capacity to implement effectively – in particular, capacity to assess the validity of declared tax base value 3. Requires laboratory capacity to detect the presence of nicotine in e-liquids, as there is currently no simple way to determine whether the e-liquid contains nicotine (self-declarations by industry are not sufficient) 4. May encourage more DIY products where e-liquids are mixed by users themselves, which increases the risks of accidents, illness and death

TYPE OF EXCISE	BASE	ADVANTAGES	DISADVANTAGES
	<p>Producer price/ CIF value of all e-liquids regardless of nicotine presence</p>	<ol style="list-style-type: none"> 1. Easier to compute and regulate for tax equivalency between ENDS/ENNDS products and cigarettes in the context of a large heterogeneity of products (especially if tax on cigarettes is ad valorem – although this does not change the long-standing recommendation that specific taxes are better for conventional cigarettes) 2. Does not require laboratory capacity to detect the presence of nicotine in all e-liquid solutions sold 3. Covers non-nicotine-containing e-liquids, which are also harmful when inhaled and during independent tests have often been found to contain nicotine, contrary to product labelling or representations by industry 	<ol style="list-style-type: none"> 1. Prone to undervaluation because the true value of the tax base is difficult to ascertain 2. Requires strong tax administration capacity to implement effectively – in particular, capacity to assess the validity of declared tax base value 3. Challenge in detecting and differentiating whether the e-liquids (e.g. propylene glycol and vegetable glycerine) to be used in ENDS/ENNDS are falsely declared as being for other purposes (e.g. food, cosmetics or pharmaceuticals) at import and manufacturing levels
	<p>Retail price of nicotine-containing e-liquids (regardless of nicotine concentration)</p>	<ol style="list-style-type: none"> 1. Easier to compute and regulate for tax equivalency between ENDS products and cigarettes in the context of a large heterogeneity of products (especially if tax on cigarettes is ad valorem – although this does not change the long-standing recommendation that specific taxes are better for conventional cigarettes) 2. Less prone to undervaluation as tax base is easier to assess (compared with a CIF/producer price base) 	<ol style="list-style-type: none"> 1. Requires laboratory capacity to detect the presence of nicotine in e-liquids, as there is currently no simple way to determine whether the e-liquid contains nicotine (self-declarations by industry are not sufficient) 2. Requires capacity to monitor the market to assess market prices 3. Does not cover non-nicotine-containing e-liquids, which are also harmful when inhaled in an e-cigarette and during independent tests have often been found to contain nicotine, contrary to product labelling or representations by the industry 4. May encourage more DIY products where e-liquids are mixed by users themselves, which increases the risk of accidents, illness and death

TYPE OF EXCISE	BASE	ADVANTAGES	DISADVANTAGES
	Retail price of all e-liquids regardless of nicotine presence	<ol style="list-style-type: none"> 1. Easier to compute and regulate for tax equivalency between ENDS/ENNDS products and cigarettes in the context of a large heterogeneity of products (especially if tax on cigarettes is ad valorem – although this does not change the long-standing recommendation that specific taxes are better for conventional cigarettes) 2. Does not require laboratory capacity to detect the presence of nicotine in all e-liquid solutions sold 3. Less prone to undervaluation as tax base is easier to assess (compared with a CIF/producer price base) 	<ol style="list-style-type: none"> 1. Requires capacity to monitor the market to assess retail prices 2. Challenge in detecting and differentiating whether the e-liquids (e.g. propylene glycol and vegetable glycerine) to be used in ENDS/ENNDS are falsely declared as being for other purposes (e.g. food, cosmetics or pharmaceuticals) at import and manufacturing levels
Ad valorem with minimum specific or mixed	<p>Ad valorem + min specific</p> <ol style="list-style-type: none"> 1. Volume of nicotine-containing e-liquids will be the base for the minimum specific. 2. Retail price will be the base for the ad valorem excise.^b <p>or</p> <p>Mixed</p> <ol style="list-style-type: none"> 1. Volume of nicotine-containing e-liquids will be the base for the specific excise. 2. Retail price will be the base for the ad valorem excise.^b 	<p>1. This system aims to exploit the best characteristics of both the specific and the ad valorem tax systems:</p> <ol style="list-style-type: none"> a. Specific component guarantees a minimum tax and pushes all prices up. b. Ad valorem component is easier to compute and regulate for tax equivalency between ENDS products and cigarettes in the context of a large heterogeneity of products 	<ol style="list-style-type: none"> 1. Requires capacity to monitor the market to assess retail prices 2. Requires laboratory capacity to detect the presence of nicotine in e-liquids, as there is currently no simple way to determine whether the e-liquid contains nicotine; (self-declarations by industry are not sufficient) 3. Does not cover non-nicotine-containing e-liquids, which are also harmful when inhaled via e-cigarette and during independent tests have often been found to contain nicotine, contrary to product labelling or representations by the industry 4. Difficult to set a minimum specific excise amount/specific excise amount, especially if tax equivalency with cigarettes is sought 5. May encourage more DIY products where e-liquids are mixed by users themselves, which increases the risks of accidents, illness and death

TYPE OF EXCISE	BASE	ADVANTAGES	DISADVANTAGES
	Ad valorem + min specific 1. Volume of all e-liquids regardless of nicotine presence will be the base for the minimum specific. 2. Retail price will be the base for the ad valorem excise. ^b or Mixed 1. Volume of all e-liquids regardless of nicotine presence will be the base for the specific excise. 2. Retail price will be the base for the ad valorem excise. ^b	1. This system aims to exploit the best characteristics of both the specific and the ad valorem tax systems: a. Specific component guarantees a minimum tax and pushes all prices up b. Ad valorem component is easier to compute and regulate for tax equivalency between ENDS/ENNDS products and cigarettes in the context of a large heterogeneity of products 2. Does not require laboratory capacity to detect the presence of nicotine in all e-liquid solutions sold	1. Requires capacity to monitor the market to assess retail prices 2. Difficult to set a minimum specific excise amount/specific excise amount, especially if equivalency with cigarettes is sought 3. Challenge in detecting and differentiating whether the e-liquids (e.g. propylene glycol and vegetable glycerine) to be used in ENDS/ENNDS are falsely declared as being for other purposes (e.g. food, cosmetics or pharmaceuticals) at import and manufacturing levels

^a Tax equivalency can be measured in different ways: (1) in terms of tax burden (as % of the retail price) or (2) as the exact amount of tax for equivalent quantities (assuming an equivalency between a certain volume of e-liquid and a pack of cigarettes).

^b There is also the option to use the producer price/CIF value as a base for the ad valorem component, but it is a weaker option because the base is difficult to ascertain and therefore prone to undervaluation.

Note: Table compiled following a WHO Expert Meeting on Taxation of Electronic Nicotine and Non-Nicotine Delivery Systems (ENDS/ENNDS), Geneva, Switzerland, 2–4 September 2019.

There is currently a lack of evidence on the practical challenges being faced by countries favouring one approach over the other. Furthermore, such data are difficult to obtain because the nature of the market is constantly changing.

However, a clear recommendation can be made with regard to which e-liquids to tax. As indicated in Table 2.5, some countries tax all e-liquids – whether or not they contain nicotine (ENDS and ENNDS products) – while some tax only nicotine-containing e-liquids (ENDS products). As shown in Table 2.6, there is evidence that in a number of instances, ENNDS products do contain some nicotine. Additionally, ENNDS products are not harmless (136–137). It is therefore recommended that all e-liquids be taxed for both ENDS and ENNDS products.

The question of whether to employ differential taxation based on nicotine content seems reasonable from a health perspective, since nicotine is a toxic substance. However, this would likely create an additional burden for tax administrators as

they would need to determine the nicotine concentration of e-liquids on the market. Additionally, this may no longer be relevant, as advancements in technology indicate that other features of the product can influence nicotine delivery beyond the actual concentration of the e-liquid. It is now possible to increase nicotine delivery at low nicotine concentrations by increasing battery power (by reducing resistance or increasing voltage) (138).

In terms of implementation, while most countries seem to have adopted a specific excise tax on ENDS/ENNDS e-liquids per millilitre, one benefit of implementing ad valorem taxation is that it seems relatively easier to regulate in the context of a large heterogeneity of products. However, it is essential that the tax be applied on the retail price value of the products, as this base is easier to ascertain than any other value that could be declared by the manufacturer.

It is also important to add that regulation of the characteristics of ENDS/ENNDS products is essential, and it should be implemented along with any tax policy adopted. Regulations should include:

1. setting a maximum nicotine concentration per millilitre to safeguard public health, including reducing the risk of dependence, especially among youth;
2. setting a maximum volume for cartridges to reduce toxicants exposure and possibly limit use;
3. setting a maximum capacity for refill containers to reduce toxicants exposure and possibly limit use;
4. setting a maximum battery power to reduce the possibility of influencing nicotine and toxicant delivery; and
5. taxing nicotine regardless of its source (e.g. tobacco, eggplant, synthetic).

Countries may choose to impose an excise tax on ENDS and ENNDS devices²⁶ as well. The easiest type of tax would be an ad valorem tax based on the declared retail price. If countries choose not to impose an excise tax on these products, they should at least impose the regular VAT or sales tax rate. Imposing an excise tax on devices can be challenging from an administrative perspective, as all components need to be clearly defined and classified as devices for ENDS/ENNDS consumption. For example, if the device is assembled after importation and some parts may be used for other purposes than ENDS/ENNDS consumption, authorities may face a challenge in detecting and differentiating which component parts would be subject to excise tax and which would not.

26 See Annex 2.3 for an overview of elements of devices used in ENDS/ENNDS products.

KEY TAKEAWAY 27

There is currently not enough evidence to recommend one tax structure over another for ENDS/ENNDS products. However, it is clear that taxing the e-liquids used for consumption is key. The excise tax should be applied on all e-liquids, whether or not they contain nicotine. If the preferred type of excise tax is ad valorem, it should be applied to the retail price. Countries can consider taxing devices as well, but they need to adequately assess their administrative capacity to do so.

Policy-makers need to be mindful of the diversity and rapid evolution of ENDS/ENNDS products and adjust accordingly. Regulation must reflect this reality so that loopholes will not be exploited by the industry. For example, ENDS/ENNDS products include not only e-cigarettes, vapes and vape pens but also other categories such as e-hookahs, e-pipes and e-cigars. Lawmakers need to be clear about how ENDS/ENNDS products are defined so that subcategories do not fall under the radar when regulation comes into effect. Definitions will also be relevant when it comes to taxation. An unclear definition can lead to a seemingly contradictory situation, such as in Bahrain, where e-cigarettes are banned but e-hookahs are not.²⁷

Finally, while policy-makers need to be mindful of the emergence of new products and must take appropriate actions to protect the health of their citizens, it is important to remember that the overwhelming share of nicotine consumption remains that of tobacco products, especially cigarettes. The total market value of ENDS/ENNDS and HTPs sales in 2018 was less than 2.2% of the total market value, while cigarette sales alone accounted for 91% of the same total market value (139–140).

2.5 CONCLUSIONS

An overview of excise tax application globally reveals a broad variety of price and tax levels, as well as structures used for taxing tobacco products, in particular, cigarettes. Some trends, however, indicate that tax and price levels are higher among higher-income countries. The rate of taxes also matters: higher tax rates are correlated with higher prices, and higher prices change behaviour, which leads to a reduction in consumption. More countries are moving away from ad valorem taxes and towards either mixed or specific excise systems, and there are few countries that do not impose any excise tax on cigarettes.

²⁷ In Bahrain, the Ministry of Production and Trade Decision 38 of 2013 banned e-cigarettes, while the official list of excisable products from the Ministry of Finance includes e-shishas (or e-hookahs), making them apt to be taxed and therefore considered legal.

Significantly increasing the taxes and prices of tobacco products is the most effective and cost-effective policy to control tobacco use. Increased taxes – which are passed on to smokers as higher prices – reduce consumption.

When designing tobacco tax policy or reforming tobacco tax systems, policy-makers face several challenges, ranging from technical issues – such as determining what tax structure and rates to apply – to political economy issues, as well as the perceived contribution of the tobacco sector to economic development.

In designing tax policy, the tax structure adopted not only affects consumption overall, it also shapes the market structure.

Ad valorem taxation incentivizes industry to set prices lower than specific taxation does.

Evidence suggests that under a specific tax, the price gap between premium and lower-priced products is narrower, therefore reducing incentives for substitution to lower-priced products following a tax increase. However, as industry consolidates producers and widens its portfolio of products, new evidence indicates that the industry is introducing cheaper brands while increasing the price of its expensive brands, therefore, paradoxically, widening the price gap between its products.

Evidence also suggests that prices are higher under a specific excise tax structure. Additionally, from a tax administration perspective, a specific tax is easier to implement, since only the quantity produced needs to be ascertained rather than the value of the product.

Another aspect of tax structure is the use of tiered taxation – that is, tax rates that vary on the basis of different product characteristics. Evidence suggests that the average cigarette price and the average excise level for a pack of cigarettes tend to be much lower in countries that use a tiered excise structure than in countries that use a uniform excise tax. Tiered taxation encourages substitution from premium to cheaper brands, maintaining smoking prevalence and reducing the health impact of tax rate increases. In addition to leading to lower prices, tiered taxation is difficult to administer and creates opportunities for the tobacco industry to avoid and evade taxes.

The design of a tax structure must also consider the base on which tax is applied. The choice of base should lead to the highest possible effect on price and revenue. For specific taxation, the tax base is the quantity. When the tax is ad valorem, the

choice of the tax base is important not only for health considerations, through its effect on consumption, but also for tax revenue generation, as well as industry profits. An ad valorem tax based on the producer price, or CIF value, gives tobacco manufacturers opportunities to reduce their tax liability, especially when they control the distribution system through related parties. The best practice in an ad valorem (or mixed) excise structure is to use the retail price as the tax base and introduce a minimum excise tax per pack.

Other tax design considerations include the importance of using automatic adjustments and indexation to inflation and income growth for the specific excise tax in order to avoid erosion of the tax over time.

Emerging evidence indicates that tobacco taxation does not always achieve the intended results, because the tobacco industry finds ways to circumvent it. Non-tax policies such as pricing regulation (in particular, minimum mark-ups or price floors/minimum prices) may be seen as a complementary approach to ensuring a high price level and discouraging consumption of tobacco products. So far, these policies have not proven to increase average prices. A price floor is likely to lead to increased industry profits, giving the industry greater funds for its marketing strategies (such as the introduction of new products), and lower tax revenues for governments. By reducing price competition, a price floor allows firms to compete aggressively for market share in other dimensions (e.g. product specifications).

However, where powerful multinationals are operating in certain markets with presence in all market segments and with the capability to overshift a tax on some brands while undershifting the tax on others, or where price promotions cannot be banned, minimum price policies may help increase the effectiveness of tax increases.

Other non-tax policies affecting price levels are those relating to promotional discounts for tobacco products and the sale of single sticks of cigarettes. Both should be completely banned. The ban of promotional discounts is usually dealt with in tobacco control laws under the Tobacco Advertising, Promotion and Sponsorship provision.

Higher taxes are the most effective way to dissuade consumption, with the added benefit of raising money for the government – money that can be earmarked for health and education programs, rather than going as profits to the tobacco industry. Additionally, in order to make excise tax on tobacco products more effective in reducing overall tobacco use and in line with the recommendation of the Guidelines for implementation of Article 6 of the WHO FCTC (Price and tax measures to reduce

the demand for tobacco), all tobacco products need to be taxed in a comparable way; the focus should not be on cigarettes only.

Tax choices and reforms have various and sometimes conflicting consequences for the market. For example, there might be a trade-off between quantity and variety or perceived quality implications. It is important for the government to recognize that firms respond strategically to changes in tax policy. Close monitoring of the market is necessary to form correct expectations about industry responses and enable estimates of the impact of a tax increase on consumption and tax revenue.

To estimate the total effect of a tax increase on demand for tobacco products and tax revenue, it is important to use correct estimates of the own-price elasticity of demand, the cross-price elasticity and the income elasticity of demand. It is also important to use updated estimates of demand elasticities, as the environment within which consumers make decisions continues to change. For example, financial crises or successful tobacco control interventions can be expected to shift demand and change elasticity.

Another key measure of the impact of tax policy is the tax base elasticity. Policy-makers need to be mindful of the three key components of tax base elasticity: (1) the price elasticity of demand of tobacco, (2) the share of the tax in the consumer price and (3) the degree of pass-through of the excise tax rate increase to consumer price. The degree to which these elements are affected by a tax increase will impact demand and revenues. Currently, the three components combined are not high enough in any country for a tax increase to lead to a reduction in excise tax revenues.

It is important to acknowledge that if tax increases lead to increases in prices below concurrent increases in income levels, they will not be effective in reducing consumption, as tobacco remains a normal good in most countries. Policy-makers need to account for affordability when considering tax increases. They should ensure that tax increases are high enough to increase prices above income growth so that consumption goes down effectively.

When designing tax policy and deciding on the right level to impose, policy-makers need to assess and project the impact of their policy decisions. Monitoring and evaluation are important. Tools for measuring impact can be very helpful, and several such tools exist. The WHO ISPT, for example, looks not only at the impact of tax policy but also at a set of tobacco control policies, and this enables national policy-makers and other tobacco control experts to explore the potential impact of

future tobacco control policies. The tool uses impact factors of selected WHO FCTC demand-reduction measures derived from published literature, trends in tobacco smoking rates, national demographic information and tobacco-related mortality risk. More specific to tobacco tax policy, the WHO TaXSiM assesses the impact of any excise tax increase and change in excise tax structure on price levels, legal sales and revenues from excise and other taxes on tobacco products.

Building and monitoring indicators of tax and tobacco control policies helps policy-makers assess the effectiveness of their policies and whether those policies have an impact on tobacco use over time. The implementation of the MPOWER package is one useful indicator for assessing tobacco control overall. Tobacco taxation works best if it is implemented as part of a comprehensive MPOWER package.

The tax share in the retail price of a selected tobacco product is one indicator of the effectiveness of tax policy, but a more important one is affordability, that is, whether tax increases do lead to price increases that are above income and general price increases. A useful indicator to assess the performance of the tax policy overall is the *Tobacconomics Cigarette Tax Scorecard*, which synthesizes best practices in tobacco taxation by combining the four key components of tax policy (price level, change in affordability over time, total and excise tax share in the retail price and tobacco tax structure).

Domestic policies in agriculture, industry, trade, finance and labour all have the potential to create or support incentives at different stages in tobacco production, manufacturing and distribution that can be counterproductive to the objectives of tobacco control and taxation. Greater domestic policy coherence should be promoted across different sectors of the government to ensure that public policies and interventions in these sectors do not counteract the intended public health impact of tobacco control and taxation.

Differential tax structures and rates have the potential to distort the functioning of the internal market. Harmonization of tobacco taxation ensures the establishment and proper functioning of a single market; prevents tax revenue erosion, tax avoidance and tax evasion; and protects people's health. In this context, tax competition, where countries simply undercut each other's tax rate, might prevent governments from achieving their tobacco control objectives and raising sufficient funds to pursue public health policies. To avoid such a race to the bottom, countries can establish minimum tax rates on all tobacco products. A common high minimum specific excise tax is the best approach to ensure that taxes and prices are above a minimal level.

In recent years, the world has experienced the rise of new and emerging tobacco and nicotine products, including ENDS/ENNDS and HTPs, which the industry claims are safer than traditional tobacco products. The evidence so far suggests that these products could pose a threat to public health, especially if they attract new or young users or prevent current smokers from quitting.

The market and demand dynamics of these products as well as initiation, cessation and switching of tobacco use behaviours among different socioeconomic groups, are not yet clear. Until more evidence for the claimed benefits of these tobacco products is available, caution should be taken in developing tax policy. Therefore, the current recommendation is for HTPs to be taxed at the same level as cigarettes on a per-unit basis regardless of tobacco content. In countries where they are not banned, ENDS/ENNDS products must be regulated and taxed in a manner that discourages uptake by youth and non-users. Taxing e-liquids is a key component of ENDS/ENNDS products taxation. Nicotine- and non-nicotine-containing e-liquids should be taxed equally. If ad valorem excise is chosen as the structure, the base should be applied on the retail price. Countries can also consider taxing the devices used for ENDS/ENNDS and HTP consumption, but they need to adequately assess their administrative capacity to do so.

While the evolution of new and emerging tobacco and nicotine delivery systems merits the attention of administrators and regulators, it is worth remembering that the bulk of the world's tobacco consumption is still in conventional cigarettes.

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ANNEX 2.1

Table A2.1 Countries that apply different types of cigarette excise tax structures, 2018

SPECIFIC EXCISE (65 COUNTRIES)	AD VALOREM EXCISE (42 COUNTRIES)	MIXED EXCISE (63 COUNTRIES)	NO EXCISE (15 COUNTRIES)
Albania, Andorra, Australia, Azerbaijan, Barbados, Belarus, Belize, Bolivia (Plurinational State of), Burundi, Canada, Cook Islands, Dominica, Ecuador, Eswatini, Fiji, Gambia, Honduras, Iceland, India, Indonesia, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kiribati, Kyrgyzstan, Lesotho, Malaysia, Mauritius, Mongolia, Mozambique, Myanmar, Namibia, Nepal, New Zealand, Nicaragua, Norway, Pakistan, Palau, Papua New Guinea, Peru, Philippines, Republic of Korea, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Seychelles, Singapore, Solomon Islands, South Africa, Sri Lanka, Suriname, Tajikistan, Timor-Leste, Tonga, Trinidad and Tobago, Uganda, United Republic of Tanzania, USA, Uruguay, Uzbekistan, Vanuatu, Yemen, Zimbabwe	Argentina, Armenia, Bahrain, Bangladesh, Benin, Burkina Faso, Cabo Verde, Cambodia, Cameroon, Chad, Comoros, Côte d'Ivoire, Cuba, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Ghana, Grenada, Guatemala, Guinea-Bissau, Liberia, Madagascar, Mali, Mauritania, Niger, Panama, Paraguay, Saint Kitts and Nevis, Saudi Arabia, Senegal, Sierra Leone, Sudan, Syrian Arab Republic, Togo, Turkmenistan, Tuvalu, United Arab Emirates, Venezuela (Bolivarian Republic of), Viet Nam, Zambia	Algeria, Austria, Belgium, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Central African Republic, Chile, China, Colombia, Congo, Costa Rica, Croatia, Cyprus, Czechia, Denmark, Dominican Republic, Egypt, El Salvador, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iran (Islamic Republic of), Ireland, Israel, Italy, Lao People's Democratic Republic, Latvia, Lebanon, Lithuania, Luxembourg, Malta, Mexico, Montenegro, Morocco, Netherlands, Nigeria, North Macedonia, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Rwanda, Sao Tome and Principe, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand, Tunisia, Turkey, Ukraine, United Kingdom, West Bank and Gaza Strip	Afghanistan, Angola, Antigua and Barbuda, Democratic People's Republic of Korea, Iraq, Kuwait, Libya, Maldives, Marshall Islands, Micronesia (Federated States of), Nauru, Niue, Oman, ^a Qatar, ^a Somalia

^a This table shows the status of cigarette excise tax structures as of July 2018 and does not account for changes occurring after that date, in particular for the cases of Qatar and Oman, which introduced excise on tobacco in January 2019 and June 2019, respectively.

Source: WHO RGTE.

ANNEX 2.2 THE ANALYTICS OF THE TAX BASE ELASTICITY

Assume tax revenue $R = t_s Q$ or $R = t_v P Q$, where Q is the quantity consumed, t_s is the specific tax, t_v is the ad valorem tax and P is the consumer price.

The following equations can help to illustrate the different components of the tax base elasticity.

Under a specific excise regime, change in revenue depends essentially on the change in consumption:

$$\frac{\partial R}{\partial t_s} = Q(1 + \eta_s)$$

where R is the tobacco tax revenue, t_s is the specific excise tax and η_s is the tobacco tax base elasticity.

The tax base elasticity is made of:

$$\eta_s = \varepsilon \frac{\partial P}{\partial t_s} \frac{t_s}{P}$$

where ε , the price elasticity = $\frac{\Delta Q}{\Delta P} \frac{P}{Q}$,

$\frac{\partial P}{\partial t_s}$ is the degree of pass-through of the specific excise tax rate increase on consumer price

and $\frac{t_s}{P}$ is the tax-price ratio.

Under an ad valorem excise regime, change in revenue depends essentially on the change in tobacco expenditure:

$$\frac{\partial R}{\partial t_{av}} = P Q (1 + \eta_{av})$$

where R is the tobacco tax revenue, t_{av} is ad valorem excise tax and η_{av} is the tobacco tax base elasticity.

The tax base elasticity here is made of:

$$\eta_{av} = \frac{\partial P}{\partial t_{av}} \frac{t_{av}}{P} (1 + \varepsilon)$$

where $\frac{\partial P}{\partial t_{av}}$ is the degree of pass-through of the ad valorem excise tax rate increase on consumer price,

$\frac{t_{av}}{P}$ is the tax-price ratio

and ε the price elasticity = $\frac{\Delta Q}{\Delta P} \frac{P}{Q}$.

ANNEX 2.3 ELEMENTS OF THE DEVICES THAT MAKE UP ENDS/ENNDS PRODUCTS

The main components of any ENDS/ENNDS kit include essentially:

- USB charger (not a car charger)
- Inbuilt battery

Additionally,

For open systems

- Tanks (refillable containers) with removable atomizer (often sold bundled with atomizers)
- Clearomizers/refillable pods (no removable atomizer)
- E-liquid

For closed systems

- Disposable e-cigarettes: not rechargeable, thrown away after e-liquid is finished
- Nondisposable e-cigarettes:
 - Pre-filled cartomizers (cartridges designed to go with the cigalike kit)
 - Pre-filled tank refills/pods (pods or cartridges designed to go with the prefilled tank/pod kits)

Some definitions:

- Atomizer: uses a heating element to vaporize the e-liquid
- Cartomizer: combines the cartridge/tank and the atomizer
- Clearomizer: same as cartomizer, uses different technology
- Cartridge/tank/pod: container that includes the e-liquid

In summary, ENDS/ENNDS product devices include the following:

- USB charger (not a car charger)
- Inbuilt battery
- Disposable e-cigarettes
- Atomizer
- Cartomizer/clearomizer
- Cartridge/tank/pod with or without atomizer
- Pre-filled cartridge/tank/pod (for closed systems, includes e-liquid)
- E-liquid (added in the cartridge/tank/pod in open systems)

Source: ECigIntelligence, 2020. Information also obtained from vaping websites, including <https://www.misthub.com/blogs/vape-tutorials/76788357-tutorial-atomizer-vs-cartomizer-vs-clearomizer>, <http://www.bestclearomizer.com/clearomizer-vs-cartomizer-vs-atomizer/>, <https://wayofleaf.com/accessories/vapes/atomizer-vs-clearomizer-vs-cartomizer>, <https://wayofleaf.com/accessories/vapes/atomizer-vs-clearomizer-vs-cartomizer>, accessed 15 July 2020.

CHAPTER 3. Tobacco tax administration

3.1 INTRODUCTION

Imposing excise taxes on tobacco products usually serves more than one purpose. Governments often find themselves balancing interests between financial and public health objectives. Both objectives can best be achieved by an efficient and effective competent authority with strong technical capacity to enforce and collect taxes. A competent authority is the agency, organization or department that is legally assigned to complete a particular activity; in the case of administering tobacco taxes, the competent authority is often a tax administration, revenue authority, customs department or ministry of finance.

Article 6 of the WHO FCTC (1), along with its guidelines (2), provides a solid foundation for sound tax administration. As stated under section 1.5 in the guidelines, tobacco tax systems should be efficient and effective. They

should be structured to minimize the costs of compliance and administration, while ensuring that the desired level of tax revenue is raised and health objectives are achieved. Efficient and effective administration of tobacco tax systems enhances tax compliance and collection of tax revenue while reducing tax evasion and the risk of illicit trade.

Efficiency in tax administration refers to minimizing the costs per unit of tax revenue collected. It is measured by comparing the resources used with the revenues generated. Effectiveness in tax administration refers to a high level of compliance – also described as taxpayers meeting their obligations. Thus, an efficient and effective competent authority collects the tax at a minimum cost while ensuring conformity to the rules.

Tobacco taxation is the single most effective tobacco control measure for reducing tobacco use and is best implemented as part of a comprehensive tobacco control plan (3). Illicit trade – including smuggling and illicit manufacturing – and tax avoidance undermine the effectiveness of tax policies and their objectives (4). The impact on illicit trade is often cited by opponents of tax increases, who argue that increasing taxes increases illicit trade. They contend that illicit trade can lead

to lower revenues for governments and lower prices. The challenge faced by the competent authorities is to ensure that due taxes are declared and collected on all tobacco products that are manufactured in and/or imported into its jurisdiction, while at the same time detecting tobacco products that are illegally manufactured in and/or imported into its jurisdiction, stopping such activity and prosecuting the responsible parties.

This chapter describes the shared characteristics of good tax administrations, including best practices based on country experiences. It regularly refers to the WHO FCTC, and – given the close linkages between tax administration and efforts to fight tax evasion resulting from illicit trade – draws extensively from the Protocol to Eliminate Illicit Trade in Tobacco Products (5). Any practice or conduct prohibited by law and related to production, shipment, receipt, possession, distribution, sale or purchase of tobacco products – including any practice or conduct intended to facilitate such activity – is considered as illicit trade (Article 1). The objective of the Protocol is to eliminate and prevent all forms of illicit trade in tobacco products. At the same time, the Protocol includes measures for tobacco tax administration based on international best practices, which makes it relevant for all countries, even those that are not Parties to it.

The Protocol was adopted at the fifth session of the COP to the WHO FCTC in 2012 and entered into force on 25 September 2018. As indicated in the Preamble, it was developed in response to the increasing international illicit trade in tobacco products (5). The Protocol covers three main areas: (1) measures to control the supply chain (Part III); (2) measures dealing with offences, including sanctions (Part IV) and (3) international cooperation (Part V). Different provisions of the Protocol are discussed in detail throughout this chapter, and section 3.4 is devoted specifically to control and enforcement.

3.2 INSTITUTIONAL ARRANGEMENTS

Competent authorities that collect taxes effectively in an efficient way share a number of attributes. The organizational structures of these authorities contain clearly defined roles, responsibilities and rules for coordination among relevant bodies. Moreover, competent authorities collect data regularly and manage information needed for assessing risks. The key to successful risk management is to share this information among relevant authorities both within a country and between countries. Effective and efficient competent authorities also regularly evaluate their performance and accountability according to key performance indicators to identify areas for improvement. These characteristics are discussed in greater detail in the following sections.

3.2.1. CLEARLY DEFINED ROLES AND RESPONSIBILITIES OF COMPETENT AUTHORITIES

The designation of competent authorities for the implementation and enforcement of tax laws – including clear definitions of the boundaries of authority among numerous agencies within a country – is essential for efficient collection of taxes. Areas where different agencies need to cooperate and share data must also be defined. Overlap of activities by different authorities leads to inefficient use of resources, whereas gaps create opportunities for fraud, leading to ineffective tax laws. The importance of clearly defined roles and responsibilities applies not only to tax authorities and customs but also to law enforcement agencies, including police and border control forces.

The implementation and enforcement of taxation is organized differently in various countries. The most common structure separates customs and tax administration. The trend since the 1990s, however, has been to combine these functions into one agency, such as Her Majesty's Revenue and Customs (HMRC) in the United Kingdom, SUNAT in Peru¹ and AFIP in Argentina.² Several countries have increased coordination between tax and customs by creating a revenue secretariat and also implementing systems to share tax records as a single taxpayer account. Coordination between tax policy and tax administration authorities has also increased. One can think of combining both into one department within the ministry of finance or ensure that tax administration authorities are consulted during the tax policy process. Some tasks, such as licensing, may be handled by other ministries such as the ministries of health, agriculture or trade. For example, the Ministry of Health of Brunei and the Health Science Authority of Singapore are responsible for the licensing of importers of tobacco products (6). In some federal countries, including Colombia and the United States, excise taxes – including tobacco taxes – are collected and enforced by local or state tax administrations. Other countries have organized the administration of national taxes by establishing a single unified revenue body. Particularly in larger economies, that body is often responsible for both direct and indirect taxes, including excise taxes, and reports to the ministry of finance. All the functions needed for effective and efficient tax administration are established within these bodies (7). No matter what the institutional arrangements may be, it is vital that the agencies cooperate and exchange information and that their competencies find their basis in law. More information on this topic is provided in section 3.2.2.

1 Law Decreto Supremo 061-2002-PCM - Disponen fusión por absorción de la Superintendencia Nacional de Administración Tributaria – SUNAT con la Superintendencia Nacional de Aduanas - Aduanas [Supreme decree year 2002 about the merger between Tax and Customs Administration]. Lima: El Peruano, 12, July 2002 (in Spanish) (<http://www.sunat.gob.pe/legislacion/sunat/ds061-2002-PCM.pdf>, accessed 13 November 2020).

2 Administracion Federal de Ingresos Publicos, Decreto 618/1997 [Federal Administration of Public Revenue, Decree 618] (in Spanish) (<http://servicios.infoleg.gob.ar/infolegInternet/anexos/40000-44999/44432/norma.htm>, accessed 13 November 2020).

Many countries, however, have separate bodies for the collection of taxes and customs duties. A 2015 survey of 135 tax administrations worldwide found that only 36% of them were responsible for both tax administration and customs administration (8). In most countries, customs authorities are more likely to collect excise duties on imports, and in many countries, VAT or sales tax is collected jointly with tobacco tax, particularly for imported products. This simplifies controls and creates synergy by unifying common processes and procedures, resulting in cost savings for tax administrations and taxpayers. The involvement of multiple bodies in tax collection requires especially good collaboration and information-sharing to ensure efficient and effective collection of taxes and duties.

KEY TAKEAWAY 1

Institutional arrangements with clearly defined roles and responsibilities – designed to prevent overlaps and voids – contribute to effective and efficient tax administration.

3.2.2. EFFECTIVE COORDINATION AMONG RELEVANT BODIES

Coordination at the national level

Coordination among relevant bodies is key to effective tobacco tax administration. This means not only clearly defined roles and responsibilities, as described in the previous section, but also coordination among the competent authority, customs and those responsible for formulating, analysing and implementing tax policy. Regardless of the institutional arrangements – whether the responsible parties are all within the ministry of finance or in separate government agencies – all parties need to cooperate and exchange information to optimize tax collection and enforcement of tax policy. In practice, this means that information should be shared among, for example, customs, local government units that issue licences and health authorities – particularly those that regulate the sale of tobacco products.

For tax authorities, the most relevant information concerning excise taxes includes the identity of taxpayers and those involved in the trade of tobacco (import and export data, licences, criminal records, tax returns, bank statements, etc.); the category, quantity, value and location of manufactured goods; and the movement of those goods until all taxes are paid. Legal impediments to obtaining this information – such as bank secrecy or privacy regulations – should be kept in mind, and where needed, exceptions for fiscal procedures should be incorporated into law. Seizure data are also a valuable source of information; more details on this are provided in section 3.4.

Tax authorities should regularly coordinate with law enforcement agencies – such as the police and border control forces, depending on a country's laws – to properly monitor tobacco-related activities and enforce the tax laws. Often, the competent tax authority and customs authorities work in close cooperation with anti-fraud teams.³ Coordination and sharing of information can be required in legislation or regulations to ensure a streamlined process and avoid confusion. This can be done on an ad hoc basis as needed or with formal planned exchanges of information and regular meetings. It is recommended that at least a legal basis for exchange or access to information among government bodies be established to prevent claims during legal procedures that evidence was obtained unlawfully.

Some countries go beyond exchanging information and cooperation. In the Netherlands, for example, customs authorities not only carry out work for the Ministry of Finance, they also carry out non-fiscal tasks for seven other departments, including the Ministry of Agriculture, Nature and Food Quality; the Ministry of Justice and Security; and the Ministry of Foreign Affairs (9). These activities are often based on bilateral agreements between the Ministry of Finance and the other departments. In other countries, such as the United States and Canada, Customs and Border Protection are not part of the Ministry of Finance; they are part of the Department of Homeland Security in the United States and the Ministry of Public Safety and Emergency Preparedness in Canada. These agencies also carry out many non-fiscal tasks.

Along with the implementation of new tobacco control and tax laws, several countries have also created high-level committees to ensure good coordination and implementation of the laws. Led by health and finance ministries, committees ensure coordination and fine-tuning to achieve desired results. Botswana, Chile, Colombia, Indonesia and Senegal, among other countries, have successfully started with coordination, planning and monitoring of tobacco laws' implementation through periodic committee meetings. The committees usually include representatives from the ministries of health, finance, tax and customs, police, transport and, in some cases, education.

Coordination across borders

Effective approaches to control smuggling in tobacco products require interventions at the borders of jurisdictions and therefore must involve the border agencies. However, with the globalization of trade, there is a need for close coordination not only between tax and border control authorities but also between different jurisdictions. Recent cases have demonstrated that an absence of formal cooperation frameworks may expose a market to financial crime, including money-laundering and financing of terrorism (10).

³ See, for example, Focus on tax fraud. Customs administration of the Netherlands, tax and customs administration. 2017;2 (<https://customsnl-insight.nl/article/309563676>, accessed 3 October 2020).

Accession to international cooperation agreements such as the Protocol, the Organisation for Economic Co-operation and Development (OECD) Multilateral Convention on Mutual Administrative Assistance in Tax Matters and other regional arrangements will contribute greatly to the effective exchange of information and cooperation among enforcement agencies. An effective exchange of market data and information from participating jurisdictions can prevent potential cross-border crimes and loss of domestic revenue. International cooperation reinforces domestic measures to stop illicit trade and raise much-needed revenues. Parties to the Protocol have a commitment to cooperate with one another and to share information to meet their obligations under the Protocol (Article 20). The Protocol itself is the legal instrument that allows Parties to cooperate and share information across borders. Authorities of governments that are not Parties to the Protocol or another cooperation agreement that represents a legal instrument to exchange information could conclude a mutual assistance agreement or exchange of information agreement to guide the procedures under which information exchange can take place effectively.

The Revised Kyoto Convention of 2010 promulgated by the World Customs Organization (WCO) recommends that jurisdictions that enter into bilateral agreements require the other jurisdiction to provide pre-arrival information on goods bound for their customs territory. A survey of 87 WCO members in 2013 found that the vast majority of customs administrations had the legal authority to share information related to the supply chain of tobacco products with other administrations (11). Some economic blocs have also established harmonized legislation applying to all of their Member States to provide administrative cooperation to efficiently cooperate on tax matters (12).

Coordination can include the establishment of a special agency to ensure the safety and proper functioning of external borders, such as the European Border and Coast Guard Agency, also known as Frontex (from the French *frontières extérieures*, “external borders”). In some of the Frontex-led operations, EU and non-EU countries cooperate together with international organizations to target cross-border crime, including the smuggling of cigarettes and raw tobacco (13).

Criminals who engage in illicit trade of tobacco products are usually also engaged in related criminal activities such as bribery, money laundering, corruption, obstruction of justice and even financing of terrorist organizations (14). A number of international treaties provide the legal framework for addressing such conduct through mechanisms that tackle illicit trade from a criminal justice perspective, such as the United Nations Convention against Transnational Organized Crime, the United Nations Convention against Corruption and the International Convention for the Suppression of the Financing of Terrorism. Table 3.1 summarizes the types of structures available for such coordination.

Table 3.1 Structures for coordinating mechanisms

TYPE OF COORDINATION	BASIS	INVOLVED ACTORS
National coordination	Agreements with a basis in law between national agencies	Customs authorities, ministries of finance and those responsible for formulating, analysing and implementing tax policy; law enforcement agencies, such as police and border control forces; and anti-fraud teams
	Agreements between ministries or a basis in law or regulation on the establishment of high-level committees	Ministry of health, finance, revenue, justice, transport and sometimes education and enforcement entities such as customs and police
Bilateral coordination	Bilateral cooperation agreements	National governments
Regional coordination	Regional arrangements such as <ul style="list-style-type: none"> • Harmonized legislation applying to all Member States of an economic bloc to provide administrative cooperation in taxation to efficiently cooperate on tax matters • Regulation to jointly establish a special agency to ensure the safety and functioning of external borders 	EU Member States, the European Border and Coast Guard Agency (Frontex), customs, law and border enforcement agencies
International coordination	International treaties or conventions such as <ul style="list-style-type: none"> • The Protocol • OECD multilateral Convention on Mutual Administrative Assistance in Tax Matters • United Nations Convention against Transnational Organized Crime • United Nations Convention against Corruption • International Convention for the Suppression of the Financing of Terrorism 	Parties to international treaties and conventions, law and border enforcement agencies

KEY TAKEAWAY 2

Regardless of differing institutional arrangements, coordination and cooperation within a country and across jurisdictions are essential to optimize tax collection and enforcement of tax policy.

3.2.3. EVALUATION OF PERFORMANCE AND ACCOUNTABILITY

Key strategic indicators are useful for assessing the performance of a competent authority. Performance indicators can include measures such as net revenue collected, total expenditures compared with budgeted amounts, the ratio of costs to collection, measures of filing and payment compliance and taxpayer satisfaction (15). Several international organizations, including the IMF, the World Bank, the Inter-American Development Bank and OECD have developed tools to evaluate tax and customs with key performance indicators. This section provides information on some of the indicators that are particularly useful for measuring performance related to tobacco taxes, including the cost of collection ratio, tax gap analysis and tax revenue targets.

Cost of collection ratio

Collection costs vary among countries. The cost of collection ratio is the total expenditure as a percentage of the total net taxes collected. This ratio is often used as a measure of efficiency and effectiveness of competent authorities. In Table 3.2, the cost of collection ratio is calculated for country groups by income level, based on an annual IMF survey. The numbers in the table give an indication of resources used and revenues collected for taxes in general. The same definition of cost of collection was used for all countries. The tax revenue excludes VAT and excise taxes on imported products, so it reflects internal taxes only: personal and corporate income taxes, VAT and excise on domestic production. Customs duties are also not included. The results show the differences among countries at various income levels. Other contributing factors include differences between tax systems, economic situations and compliance levels.

Table 3.2 Cost of collection ratio in 2015 per 100 units (ratio of average recurrent budget to revenue collected^a)

GROUP (SAMPLE SIZE)	2015
Low-income countries (6)	1.3
Lower-middle-income countries (15)	1.6
Upper-middle income countries (18)	0.9
High-income countries (36)	0.9
All (76)	1.1

^a Does not include VAT or excise on imports
 Source: (Reference 8, Appendix Table 12).

As one would expect, given lower levels of automation and resources, the ratio is higher for low- and lower-middle-income countries, greater than 1.0 (more than 1.0 currency unit needed to collect 100 currency units). The ratios for upper-middle income and high-income countries are below 1.0, indicating more efficient and/or effective collection systems.

The cost of collection might be less relevant for taxes that are introduced with other than solely financial objectives, such as influencing a change in behaviour. In particular, in the case of excise taxes applied on tobacco products, the cost of tax collection does not reveal the full picture. If excise tax rates are increased substantially – or at least increased above inflation and income growth – consumption will be reduced. As a result, health care costs will be reduced due to reduced tobacco-related mortality and morbidity and increased productivity. These savings are not factored into the ratio of cost of collection to revenue, but governments do benefit from these lower expenses overall. Nevertheless, the cost of collection can be used as an indicator of the efficiency of a competent authority.

Tax gap analysis

Tax gap analysis is another method of determining how effectively taxes on tobacco products are collected. The tax gap is the difference between the tax due and the tax that is collected. For example, the theoretical tax due under an ad valorem tax on the retail price of cigarettes would be the average price of a pack of cigarettes multiplied by the number of packs sold (estimated from household expenditure surveys, for example) multiplied by the tax rate. This outcome can then be compared to the actual revenues collected (16).

The effectiveness of tax collection can also be determined by using the macro-economic input-output matrix, measuring the added value of the economic sector – tobacco in this case – and the theoretical VAT due and then comparing the result with the real VAT collection. This methodology is valid for measuring domestic tax evasion (more information on the use of this method to estimate illicit trade is provided in Chapter 4, section 4.1).

Tax revenue target

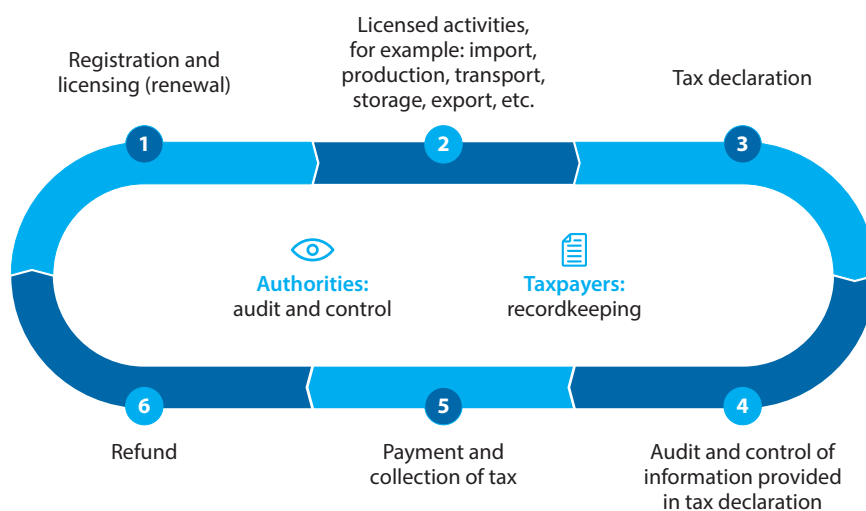
The performance of a competent authority can also be evaluated by determining whether the tax revenue target has been met, if mandated, for a given tax period. Although revenue forecasts are often used as targets, caution is advised. Forecast revenues could include assumptions such as economic growth, inflation and amount collected. Forecasting is a good practice, however, and competent authorities should provide input to the government for the forecasting of revenues to improve the quality of the estimates. Competent authorities should monitor the actual collections

in comparison with the forecasted revenues, but the theoretical base may not be attainable for a variety of reasons. In addition, a revenue target could provide an incentive for some customs and competent authorities to simply aim to reach the target amount, rather than making efforts to collect the maximum amount possible with the available resources.

3.3 THE TAX COMPLIANCE CYCLE

For any tax, there are associated compliance, control and enforcement processes. The compliance cycle usually includes registration and licensing, tax declarations, recordkeeping, storage in warehouses, duty suspension, collection of tax and tax refunds. Figure 3.1 illustrates the typical stages of the tax compliance cycle.

Fig. 3.1 Tax compliance cycle



3.3.1 REGISTRATION AND LICENSING

Along with regulating and ensuring the integrity of those who deal with controlled substances or goods, the main objective of licensing is to regulate the supply chain. Licensing is a powerful tool for obtaining more information and securing the supply chain of tobacco products.

Parties to the Protocol are committed to licensing the manufacturing, import and export of tobacco products and manufacturing equipment (Article 6). In addition, Parties are committed to endeavouring to license – as considered appropriate – the persons involved in the growing of tobacco and the retailing, transporting, wholesaling, brokering, warehousing and distribution of tobacco products or manufacturing

equipment (Article 6). To ensure an effective licensing system, Parties shall monitor and collect, where applicable, any licence fees that may be levied and consider using them in effective administration and enforcement of the licensing system, for public health or for any other related activity in accordance with national law. If feasible, each Party shall require that retailers and tobacco growers – except for traditional growers working on a noncommercial basis – maintain complete and accurate records of all relevant transactions in which they engage, in accordance with its national law (Article 9.4).

Article 6.3(b) of the Protocol provides a list of information to be requested from the applicant of the licence, including:

- relevant identity information on the applicant
- business location of the manufacturing unit or warehouse and production capacity
- detailed list of tobacco products and equipment used
- description of where the manufacturing equipment will be installed and used
- documentation or declaration of any criminal records
- information on bank accounts to be used for transactions and payments
- description of intended use and intended market of sale of the tobacco products.

To make it easier for authorities to collect all the information they need, rules of confidentiality could be exempted in the licensing process.

Licences can be general – covering all activities requiring a licence – or issued for each activity separately, such as different licences for manufacturing, importing and retail. A general licence is less burdensome for the licensing authority, whereas licences for each type of activity offer greater control but at the cost of more administration (17). The cost of implementing the licensing system should be proportionate to the potential impact of the system. Not only should the type of licences be taken into consideration, the process and information needed to obtain a licence should be carefully considered to ensure proportionality. The more stringent the process is – in terms of the information required and the obligations the system imposes on licensees – the more burdensome the regime will be on both businesses and the authorities who must administer and enforce it. The more information is collected, the higher the compliance and administrative burden will be. It is recommended that the added value of the information be balanced with the additional compliance, administrative and/or enforcement burden.

The level of stringency should be decided with consideration of factors such as the level of risk of the activity and the availability of enforcement capacity. A more stringent regime might be justifiable for activities that pose a higher risk for the

government in terms of potential loss of tax revenues – such as the import, production and handling of excisable products on which the excise taxes have not yet been paid. Authorities could consider setting licence fees at a high enough level to cover the costs of administering and enforcing the system. For an example of a system that relies mainly on licensing and permissions, see the case study of Australia in Box 3.1.

Wholesalers, distributors and retailers of tobacco products could also be required to obtain a licence before they can engage in the trade of those products. This would enable the competent authority to require reports on, for example, transactions relating to the purchase and sale of tobacco products. Moreover, it would allow the authorities to complete the audit trail of the entire supply chain and to obtain data that will help tax and health policy-makers properly and effectively monitor tobacco products.

Governments could also require a licence for entities dealing with raw materials or growing tobacco, including farmers. If licensing of tobacco farmers is deemed appropriate and subsequently required in a country, the farmers have to identify and register their farm areas and location to obtain a licence. The benefit of requiring licences for farmers is that the control of the legitimate supply chain is extended to the identification of the source of the raw material for tobacco products. It also makes it more difficult to divert raw tobacco from the licit to the illicit supply chain.

Licences are issued by different agencies across the world. In Brazil, for example, the Health Surveillance Agency is responsible for providing licences. Operators need to obtain approval of the layout of manufacturing and warehousing facilities before they can operate. In addition, they must demonstrate how they will comply with other laws and regulations – for example, by showing the design of product packaging, including the pack, carton and master case. The factory location must be identified before manufacturers can obtain a licence. Finally, a licence is required for the importation of machinery to produce tobacco products (18).

Licences can be a source of useful information if authorities establish the information that applicants must supply in order to obtain the licence. Such information could include the quantity, price and how the tobacco harvests are disposed, as well as the identity of the buyers. It is recommended that an effective licensing regime collect information to establish both the identity and characteristics of applicants by requiring criminal records on relevant offences, such as previous noncompliance with tobacco licences or fraud.

To avoid loopholes for monitoring raw tobacco, importers of tobacco leaf could also be licensed or at least required to register and report information on quantities, sources and sales. In some countries, this information is already collected by a government agency other than tax authorities, for example, by the ministry of agriculture. Duplication of requirements and reporting should be avoided through

legislation and coordination among agencies. If licensing of (small-scale) farmers is difficult to implement, subsequent purchasers (first processors) in the supply chain could be licensed and regulated instead. Licensing first processors is often less burdensome to enforce for competent authorities because, in general, there are far fewer first processors than there are growers. For example, in the EU, between 50 and 100 first processors have been identified, compared with 55 000 farmers (19).

Countries could also consider requiring registration of persons or entities engaged in the manufacture and import or sale of materials used for the manufacturing of tobacco products, such as cigarette papers, tobacco leaves, additives, adhesives, acetate or any other type of filters used for cigarettes, tipping paper and cellophane or plastic wraps, as well as materials for packing the cigarettes into packs, reams and master cases. In addition, tobacco manufacturers could be required to obtain a licence before they can purchase these materials. The Parties to the Protocol should decide on appropriate measures, depending on research as to whether key inputs that are essential for manufacturing of tobacco products exist and can be identified and subject to effective controls.

KEY TAKEAWAY 3

The objective of licensing is to regulate and secure the supply chain. It is a powerful tool for obtaining information for verification, further investigation and audits. Ideally, all persons involved in the growing of tobacco and retailing, transporting, wholesaling, brokering, warehousing and distribution of tobacco products or manufacturing equipment should be licensed.

Licensing requisites

Based on case studies and best practices – including experiences from managing bonded warehouses where the value of merchandise or suspended duties or taxes is high – the following kinds of information could be required to obtain a licence, in particular, for producers, warehouses and distributors of tobacco products:

- certification of safety of installations, perimeter security for production and storage (may include CCTV [closed-circuit television]⁴ access for tax administration)
- certification of financial solvency
- detailed online, real-time inventory of tobacco products and main raw materials, accessible by tax administration
- electronic accounting systems

⁴ The term “closed-circuit television” is used generically to describe surveillance camera systems.

- detailed lists of owners and managers
- banking and other financial records
- periodic electronic reports of transactions for tobacco products
- anytime tax administration right of entry for inventories
- mandatory electronic tax returns and payments
- mandatory prior-to-arrival customs declarations for tobacco products
- declarations of compliance with the tax stamp system (if applicable)
- for those involved in import or export, authorized economic operator (AEO) certification
- proof of compliance with the bond or guarantee regime
- agreement to finance reasonable cost of inspections and tracking and tracing.

Box 3.1 Case study of licensing in Australia

Australia has taken an approach to controlling tobacco taxes that differs from that in many other countries. It has not used fiscal marks or tracking and tracing.⁵ Instead, it administers tobacco taxes through licensing and permission-based systems aimed at facilitating operations by lower-risk entities while preventing or tightly controlling commerce involving higher-risk entities. The domestic tax agency, the Australian Taxation Office (ATO), is responsible for most of the controls. These controls cover tobacco that is grown or manufactured and imported as finished goods or as leaf for manufacturing in Australia. In fact, the legal tobacco market in Australia consists only of imported finished tobacco products. In 2006, all tobacco-growing licences were cancelled by the ATO because manufacturers switched to cheaper leaf from external suppliers. The last domestic cigarette manufacturers closed in 2015 and 2016, and there has been no legal domestic tobacco growing or manufacture since then.

The ATO administers all other functions relating to the import of tobacco and tobacco products, including licensing of bonded warehouses used to store imported products and issuance of permissions to undertake movement of bonded tobacco products between licensed bonded warehouses or to places of export.

Importers must apply for a licence for a bonded warehouse to store imported tobacco. The applicant must meet general criteria such as fitness, recordkeeping and security.⁶ These criteria are designed to ensure that only low-risk entities are able to enter the excise tax system. Risk levels are also kept at an acceptable level through provisions allowing the suspension or cancellation of licences, subject to appeal. Licences are valid for a

5 See sections 3.4.4 and 3.4.5 for detailed discussions on fiscal marks and tracking and tracing.

6 The entity must not have been charged with an offence under the Excise Act or any Commonwealth, State or Territory Act that carries a penalty in excess of US\$ 105 000 in the previous 12 months (or convicted in the previous 10 years), has shown a history of compliance with tax law in the previous four years, has had no previous cancellation of a licence, has adequate financial resources and is not in receivership.

three-year period, with automatic renewal for licensees with demonstrated compliance.

The permission system relies on post-transaction audits of commercial records. Criteria used to assess risk include the size of the duty liability, the compliance record of both parties and the possibility of diversion into the market. When there is a perceived risk of revenue loss, the application can be denied or a financial security deposit can be required.

Exports of tobacco products are also subject to an export declaration process with the Australian Border Force. An approved export declaration is required for the products to be able to leave the country.

Following recommendations from a government task force in 2017, the status of tax-suspended, bonded tobacco was eliminated as of 1 July 2019. In addition, an import licensing regime was introduced, and commercial tobacco imports without a licence are banned. Importers are required to identify their duty liabilities at import and make immediate payment; there are no credit terms available. Full payment of duties and taxes to the Australian Border Force are required prior to a release of tobacco products into the country.

Sources: (20–21).

As mentioned above, certification as an AEO could be requested as part of the licensing process. Most customs authorities are familiar with the concept of AEOs. Created by the WCO, AEO principles were initially focused on security concerns (22). Having a special licensing regime for operators of the tobacco supply chain is recommended due to the special nature of the product. For countries that have no system in place, AEO certification could be a starting point for setting up such a regime.

An AEO is defined by the WCO SAFE Framework of Standards (22) as a party involved in the international movement of goods – in whatever function – that has been approved by, or on behalf of, a national customs administration as complying with WCO or equivalent supply chain security standards. AEOs include, *inter alia*, manufacturers, importers, exporters, brokers, carriers, consolidators, intermediaries, ports, airports, terminal operators, integrated operators, warehousemen and distributors.

For many years – in some cases, even since the 1970s – customs administrations have been increasingly involved in the security of the international trade supply chain. More recently, customs administrations have developed security programmes in a global context. The AEO is part of these programmes, and in 2005, the WCO adopted the SAFE Framework of Standards. Since then, a number of traders have been required to make substantial investments in order to obtain AEO status and must continue to invest to maintain that status.

The AEO program is also recognized by the Trade Facilitation Agreement, a multilateral agreement signed by 174 countries (23).

Some regional blocs have further specified the standards for AEOs and provide clear and well-structured information on their websites to guide and encourage operators to apply for AEO status. A good example of this practice is the website of the Revenue Commissioners of the Republic of Ireland, which contains the information shown in Box 3.2.

Box 3.2 AEO: Republic of Ireland Tax and Customs

What are AEOs?

AEO status is a certified standard authorization issued by customs administrations in the European Union (EU). It certifies that an economic operator has met certain standards in relation to:

- safety and security
- systems to manage commercial records
- compliance with customs rules
- financial solvency
- practical standards of competence or professional qualifications.

This is primarily a trade facilitation measure that recognizes reliable operators and encourages best practices in the international supply chain. As an AEO, an operator could benefit from:

- recognition worldwide as a safe, secure and compliant business partner in international trade;
- lower risk scores in risk analysis systems when profiling;
- priority treatment if physical controls are conducted;
- mutual recognition of AEO programmes under Joint Customs Cooperation Agreements, which could result in faster movement of goods through third-country borders;
- reduced data sets for entry and exit summary declarations (this applies only to AEO safety and security);
- easier access to simplified procedures;
- reduction or waiver of comprehensive guarantees.

The conditions for AEO status apply to all businesses regardless of size. Manufacturers, exporters, freight forwarders, warehouse keepers, clearance agents, carriers and importers may all apply for AEO status.

Source: (24).

3.3.2 DATA COLLECTION, DECLARATIONS AND ACCOUNTING

The effectiveness of risk analysis depends on the quality and reliability of the available data. This is also the case for risk analysis in relation to tobacco taxes. Obtaining reliable data can be a challenge in many countries, but the use of electronic systems to collect and manage data is increasing in most competent authorities. The introduction of VAT in many countries around the world has greatly improved the availability of data that can be used for tobacco tax analysis, since reporting is done along the supply chain on, for example, the value, quantity of goods and transaction date. Most countries applying excise duties also have a VAT system in place. In addition, more countries are becoming Parties to the Protocol. With the implementation of the Protocol, more data will become available because countries will be obliged to implement, among other measures, licensing systems with reporting requirements and tracking and tracing systems. More information on tracking and tracing systems is provided in section 3.4. The obligations of the Protocol will also assist in monitoring the stock of tobacco products.

Ideally, all entities involved in the tobacco product supply and distribution chains should be licensed and required to record every transaction that occurs. As this might be burdensome for both tax authorities and taxpayers, the use of automated and electronic systems is recommended in order to decrease the costs of compliance. An accurate inventory system for all raw materials, machinery, goods in process and finished products can be required. It is even more important to have good recordkeeping of the required data. As the volume of reported data increases, a good information technology (IT) system will be needed. The use of IT for periodic tax declarations, accounting, inventory and financial data is critical for obtaining accurate information and decreasing costs for the entire reporting system.

Most countries now have some level of automation that can facilitate data analysis. An emerging trend is the use of electronic invoices, issued by traders, as part of online real-time information for tax administration. Countries generally start by using electronic invoices at public utility companies and then later expand the use to large companies. Electronic invoices minimize the use of paper, contribute to automated recordkeeping and give accurate and timely information about transactions for tax administration. Several countries began using electronic invoices for companies on a voluntary basis and later made their use mandatory, especially for large companies with a high number of transactions – including the tobacco industry. Electronic invoices have been implemented successfully in EU countries and almost all Latin American countries, as well as several Asian countries.⁷

⁷ Electronic Invoicing in Latin America: English Summary of the Spanish Document; Inter-American Development Bank, Inter-American Center of Tax Administrations, 2018 (<https://publications.iadb.org/publications/english/document/Electronic-Invoicing-in-Latin-America.pdf>).

To verify that information is accurate, competent authorities could systematically cross-check declared information against third-party information (e.g. from banks, financial institutions, employers) or match the data with the information in registers of other government agencies. Processes of cross-checking and data matching could also be automated to minimize the administrative burden (25).

KEY TAKEAWAY 4

Reliable data are essential for effective risk analysis. While obtaining these data can be challenging, electronic systems can help reduce the burden by automating procedures of data collection and cross-checking of information with different sources.

3.3.3 RECORDKEEPING

Parties to the Protocol are committed to requiring, as appropriate, that all persons or entities engaged in the supply chain of tobacco, tobacco products and manufacturing equipment keep complete, detailed and accurate records of all relevant transactions and details of materials used in the production of tobacco products (Article 9). Relevant information includes market volumes, trends, forecasts of tobacco products and quantities of tobacco products and manufacturing equipment kept in stock in tax and customs warehouses in transit, transshipment and under duty suspension. This information should be required from the persons and entities engaged in the supply chain and submitted to the competent authority on a regular basis, as provided for in the law. The competent authority can use the submitted information to monitor compliance with tobacco regulations and payment of taxes. A registry with this level of detail can realistically be kept only in electronic form.

Records must provide full accountability for materials used in the production of tobacco products. The intention is that tax authorities and manufacturers should be able to reconcile the production quantities with the inputs used in production – thereby providing confidence that no unrecorded or illicit production has occurred. Obligations should also be imposed on suppliers of key inputs to show that supply is commensurate with demand (17).

KEY TAKEAWAY 5

To monitor compliance and payment of taxes, all persons or entities engaged in the supply chain of tobacco, tobacco products and manufacturing equipment should keep complete, detailed and accurate records of all relevant transactions, as well as details of materials used in the production of tobacco products.

3.3.4 WAREHOUSING, STORAGE AND DISTRIBUTION

According to Article 6.2 of the Protocol, all Parties shall endeavour to license persons involved in any wholesaling, brokering, warehousing or distribution of tobacco and tobacco products or manufacturing equipment. Maintaining a system of authorization allows the authorities to carry out controls in production and storage facilities to ensure that taxes are paid (2). The approval process to obtain an authorization could include an evaluation of the layout of the plant or warehouse, the machinery that will be used and the flow of production, warehousing and shipping, including the points of entry and exit of raw materials and finished products. The basic method of monitoring production and ensuring that only tax-paid products are released to the market from the premises is to identify the production facilities and to control the entry and exit points.

From time to time, the competent authority should conduct a physical inventory of the goods contained therein to check whether all documentation was duly prepared and approved and to determine the accuracy and completeness of the records kept. If the jurisdiction requires tax stamps to be placed on the tobacco products, only products with the proper stamps affixed can be withdrawn.

Generally, tobacco products for which the required taxes have not been paid and, if required, fiscal marks have not been affixed should not be allowed into warehouses. For practical reasons, many countries allow suspension of excise duties, meaning that prior authorized persons can produce, send, receive and store tobacco products on which the excise duty has not yet been paid. The relevant authorities could also require that products on which the taxes have been paid should not be stored in the same areas as the products under duty suspension. Obviously, products under suspension of payment of excise duties are at high risk, which could justify stricter requirements for production, trade, storage and handling.

Australia, which has a strict system of licensing and requirements for permission to move tobacco products, has migrated to a new system that eliminates bonded warehouses from the supply chain as of 1 July 2019. Importers are required to have an import licence and to pay excise taxes on cigarettes immediately upon import (see Box 3.1 in section 3.3.1).

3.3.5 DUTY SUSPENSION

Many countries require authorization of natural or legal persons (as authorized warehouse keepers) to produce, process, hold, receive and dispatch products subject to excise duty during their business. Producing, processing, holding, receiving and dispatching excise goods often take place under suspension of the excise duty. Guarantees can be requested from authorized persons to secure the payment of taxes. Features of such a system may include strict criteria for granting authorization,

warehouse pre-authorization visits, adequate stock control measures, checking the origin of excise products and the entire production process and coding and marking products. The use of a computerized system for monitoring movements of excise goods under suspension of excise duty can be a control as well.

Different licences for products under duty suspension could also be considered. This would make enforcement easier and less burdensome for both authorities and operators. In general, it is recommended to allow the handling of excise goods under suspension of duties only if strict criteria are met. Such criteria could include pre-authorization visits, adequate stock control measures, checking the origin of excise products and the entire production process and coding and marking products. In principle, the movements of tobacco products should also be covered by the tracking and tracing system. Considering the high risk related to these products, additional monitoring could be considered appropriate, such as a computerized system monitoring the movements of excise goods under suspension of excise duty. In the design of such a system, it is recommended that close attention be paid to customs procedures for import and export to ensure alignment and avoid a vacuum in monitoring.

An example of a computerized system is the EU's Excise Movement and Control System, which follows the movement of all excise products – including manufactured tobacco products – for which excise taxes have not been paid. The system records the movement in real time and is thereby an important tool for combatting fraud. In addition, this system is indispensable for the exchange of information and co-operation between the relevant authorities of Member States of the EU (26). Finally, authorization is required before tobacco products can be produced, imported or stored under suspension of excise duties (27).

KEY TAKEAWAY 6

Products under duty suspension of excise taxes are at a higher risk of tax evasion, which can justify stringent measures such as requesting guarantees to ensure the payment of taxes, additional licensing requirements, compliance with computerized systems to monitor the movement of excise goods under suspension and on-site authorization and audits.

3.3.6 COLLECTION OF TAXES

To reduce the complexity of tax collection systems, it is recommended that excise taxes be imposed at the point of manufacture, import or release from storage or production warehouses for consumption. This is common practice in the majority of countries that impose excise taxes. Collecting taxes at this level of the supply chain

greatly limits the number of taxpayers and thus the resources needed to control them. Encouraging taxpayers to use electronic payment methods can also increase the chances of collecting all taxes.

The same applies to requiring guarantees for certain high-risk activities, such as the handling of goods under duty suspension. Many countries decide on a case-by-case basis the level of the guarantee, depending on the situation of the requestor and the level of risk (quantity or value and potentially due excise taxes) that the regular business activities represent in a given time frame. Some countries allow a reduction of guarantees for operators with a track record of good compliance. It should be noted that a guarantee is not a limitation of the liability; taxpayers can still be requested and liable to pay an amount far above the level of the guarantee.

Tax payments should be required by law to be remitted at fixed intervals after sales or on a fixed date each month (2). Many countries have a specialized collection enforcement unit that works full-time on the collection of taxes. It is important to have a stop-filer or payment control that can act immediately when noncompliance occurs, by sending a message and phone call of late declaration or late payment to the taxpayer. This increases the likelihood of keeping taxpayers compliant. If nondeclaration or nonpayment persists, the bond or guarantee could be executed.

Another reason for collecting excise taxes around the time of production or import is that quantities can be monitored more effectively at these points. There are different options for monitoring the supply chain of tobacco products. The decision about what kind of monitoring system to use depends on the country's financial, technical and human resources. The weakest form of monitoring is industry self-declaration. Activities to verify compliance and ensure the collection of the full amount of taxes due can include, for example, physical checks, audits, cross-checking of declared information with third-party data and inspection of administration and recordkeeping.

In general, in countries with poor administration systems, enforced compliance is carried out by imposing physical control over the production or manufacturing process. The cost of physical control increases when there is a potential for fraud by excise officers. However, fraud can be diminished significantly when excise officers are rotated frequently among different locations and supervisors make surprise visits. Historically, some countries (e.g. India) have posted tax administration staff at production facilities to monitor production and removals. In India, a staff member of the competent authority is placed in cigarette and large bidi manufacturing facilities around the clock. Each officer records the daily production and the quantity of cigarettes/bidis that leaves the factory and reports to the next officer.⁸

⁸ Ministry of Finance India, personal communication, 2009.

A better option is to monitor production remotely. The competent authority can require the installation of CCTV cameras in strategic places throughout the manufacturing and warehousing facilities. With these, the authority can establish a central command post from which the facilities and activities can be continuously monitored and documented. In addition, the competent authority can carry out physical inventory controls from time to time and – if electronic invoices are implemented – cross-checking between invoices and declared inventory. This is also an effective way to prevent collusion between staff of a competent authority and manufacturers or importers. For example, in 2015, the Bureau of Internal Revenue of the Philippines required all tobacco companies to install CCTV cameras in their production lines and warehouses. This decision was taken in response to large seizures of untaxed cigarettes, with the objective of monitoring production to ensure the payment of all taxes.

The collection process must also be supported by IT systems. These systems must provide for transparency and accuracy to ensure a safe process for the flow of payments from taxpayers to the tax treasury. Most countries have implemented automated electronic systems for tax payments linked to each declaration, for both domestic and import. It is key for tax administrations to have a comprehensive agreement with the banking system in order to obtain lower transaction costs, if applicable. Some countries have implemented a state payment web portal that allows citizens to pay their taxes and other fees such as county fees, fees for car permits and licences and agricultural, health and environmental fees online.

KEY TAKEAWAY 7

Excise taxes should be imposed at the point of manufacture, import or release from storage or production warehouses for consumption, to ensure that quantities can be monitored effectively. This also reduces the complexity of tax collection systems by limiting the number of taxpayers and thus the resources needed to control them.

3.3.7 TAX REFUNDS

Refunds for VAT, excise taxes and customs duties are a common process in most countries, under the principle that consumption taxes are not exported. Frequency and methods of refund vary by country. It is common to have monthly refunds (if there are exports during the period), and the reimbursements may be sent directly to the exporter or reserved as a credit to pay other taxes. An alternative used by some countries that have a high volume of exports is a so-called zero rate, or suspension, meaning that indirect taxes (VAT, excise taxes and customs duties) are suspended for the whole chain – from import of raw materials to production and packing until

export. This regime requires a special licensing process. Since the tobacco industry has an export component, the refund process for this sector requires special attention for tax administration.

3.4 CONTROL AND ENFORCEMENT

Control and enforcement are the main functions of tax administration. In fact, most tax laws include the objective “to control and enforce tax compliance” and, for customs, “to control and enforce tax and duty payments at the border” or similar phrases. The Protocol provides guidance for control and enforcement of tobacco taxes. Efficient and effective competent authorities often have a strategic plan to ensure compliance, a risk-based approach to identify the problematic points in the chain and the ability to direct resources accordingly to high-risk or high-value areas.

Tasks that can play a role in control and enforcement include controlling the registration and licensing process, due diligence, verifying declarations and collection of taxes. Production and distribution controls including tracking and tracing, fiscal markings, audits and import and export controls all play a role in control and enforcement. This section describes the main activities for improving control and enforcement, focusing on the tobacco supply chain. The procedures and penalties that can be enacted once illicit trade in tobacco has been detected are also discussed.

3.4.1 CONTROL AND ENFORCEMENT PLANNING

Strategic plan

In modern tax administrations, it is common to have a strategic plan, with control and enforcement as pillars. Appropriate control of the compliance cycle is key to keeping taxpayers in compliance and preventing illicit trade and tax avoidance. For this reason, most tax administrations focus a majority of their resources on preventive policy. Some examples of this can be found in the strategic plans of the United Kingdom and the United States’ Internal Revenue Service (IRS).

In the United Kingdom, HMRC has had a well-developed strategic plan for years. A key pillar of the plan focuses on keeping taxpayers compliant. This is the concept of prevention: controlling initial minor noncompliant behaviour for the majority of taxpayers, while using strong enforcement for the minority on the noncompliant side (28).

The strategic plan of the IRS has a similar approach, with a focus on control. If noncompliance is detected, data analysis and behavioural insights are used to identify the best way to address noncompliance. Early intervention or self-correction are examples of ways to address detected noncompliance. The IRS also highlights the importance of resolving noncompliance to ensure taxpayer confidence in the tax system and protecting the integrity of the system (29).

Risk-based approach

Following the establishment of a strategic plan, an enforcement and control plan must be drafted. This plan should include definitions of the activities that will be enforced, the taxpayers upon whom they will be enforced and the circumstances under which they will be enforced, as well as allocating resources for staffing, auditing, infrastructure and IT. Targets must also be defined, including the number of interventions and the amount of additional collected revenue or reduction of tax evasion. Several tax administrations elaborate annual plans with periodic performance reviews aimed at improving results, and they correct allocations and targets as needed. Clear targeting of interventions is needed for better results, more efficient use of resources, lower costs for taxpayers and more effective collection. In other words, the point is to focus interventions on those who have a higher probability of noncompliance. Using a risk-based approach can be particularly beneficial.

Tax risk management is a key element of control strategy in modern tax administration. A risk is a possible threat to reaching objectives such as collecting taxes in an effective and efficient way for competent authorities. Risk assessment is the process of analysing risks and deciding on the best way to manage an identified risk. The responses can vary from acceptance to mitigation to avoidance. Proper risk assessment allows competent authorities to use their available resources most efficiently and to become more effective in dealing with risks. It can be used to improve compliance by identifying taxpayers or types of activities with a high risk of noncompliance. Groups of taxpayers with the same characteristics often have similar risks. Groups with a high risk of noncompliance could then be subject to greater review.

Areas of potentially greater risk of noncompliance in the tobacco supply chain include import, export and transfers to and from warehouses, particularly when they take place under duty suspension.

Gathering risk-related information from internal and external sources is a best practice in compliance risk management. Such sources could include third-party information (e.g. from banks, credit card companies, transport companies), studies on taxpayer behaviour and research on compliance issues, tax gap analysis, tax audits and declarations (30).

Risk management uses these different sources of data along with algorithms to find patterns of high noncompliance. Risk analysis can indicate reduced risk as well. Lower-risk areas are likely to need less governance to ensure compliance, which allows for resources to be directed elsewhere. Risk assessment can therefore help with strategic allocation of limited resources to the areas of greatest risk while at the same time reducing the burden on lower-risk taxpayers.

Risk management has always been done by competent authorities, but data availability and statistical methods to identify patterns have changed the way risks

can be assessed. Although many risk assessment systems are still done manually or include manual elements, the use of intensive data techniques allows systematic, deeper and more targeted analysis (31).

Modern risk assessment makes use of electronic data on taxpayers, tax payments, declarations from other taxes, such as VAT, and third-party information. With these data, tax authorities can identify indicators that suggest where further activities might be required to ensure compliance. For example, VAT invoices can be used to match reported purchases of inputs of tobacco leaf to sales invoices of tobacco leaf wholesalers. For taxpayers (i.e. those who are licensed and provide required reports), competent authorities can create a business analytics program to determine whether the data reported are consistent on each side of the transactions. Moreover, in countries with a VAT system, competent authorities can compare the data reported by taxpayers under the VAT system with data reported under the tobacco excise tax system to detect any inconsistency. VAT invoices can also be used to verify inputs and sales data. If VAT is collected at all levels of the supply chain, it is easier for governments to monitor the supply chain for the enforcement of excise duty obligations.

Regular surveys on tobacco consumption that use the same methodology can also provide indications about the level of compliance with excise tax policy. A sudden drop in revenue that is not reflected in consumption data could be an indication of illicit manufacturing, illegal imports, cross-border shopping or forestalling. In addition, seizure data can provide valuable information on areas and activities at high risk of noncompliance.

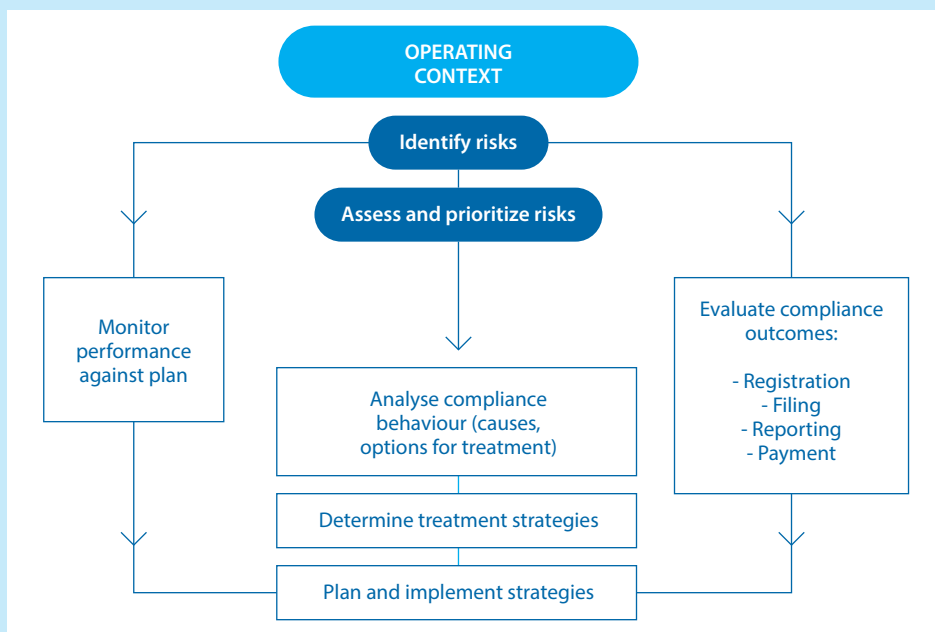
The structure of tobacco tax policies should also be taken into account when conducting risk analyses. If excise tax rates are increased, there might be a greater risk of forestalling or front-loading (see the discussion on anti-forestalling later in this section). Differentiated excise tax rates based on product or packaging characteristics – such as distinctions between soft and hard packs or filter and nonfilter cigarettes – are also prone to manipulation by operators, which could affect tax revenues. One of the options to mitigate these risks is to amend the excise tax policy and apply a uniform tax rate.

For customs transactions, the use of risk management is a key element in targeting merchandise and support declarations to be inspected. Before the 1990s, most customs agencies used random criteria for selecting targets for inspection. Since that time, many countries have implemented risk-based approaches for selecting inspections. Historical data on importers and trade communities, complemented by artificial intelligence technology, show that risk management tools dramatically increased the effectiveness of physical inspections. Most modern customs agencies have implemented such techniques, allowing for more effective control processes while facilitating smoother processes for those transactions that are in compliance. Box 3.3 details some of the recent changes in risk management processes.

Box 3.3 Changes in risk management

The OECD developed Fig. 3.2 to show the framework and key steps for understanding compliance risks in 2004 (32). The same approach is still used to identify, assess and prioritize risk. However, many competent authorities now use new technologies and advanced data analytics, along with more information sources, including external data from banks, employers and sales invoices for VAT, for example.

Fig. 3.2 Compliance risk management process



Source: (32).

The methods of identifying risks and the analysis of compliance behaviour have also changed. Traditionally, competent authorities used audits to identify high-risk cases. With more diverse and better data, competent authorities can now use more evidence-based approaches to examine risk patterns. Success of compliance activities is now more often measured in terms of their impact on the overall compliance environment, rather than only on increased revenues.⁹

⁹ For more information on effective risk management with several indicators and a checklist of questions, see the Tax Administration Diagnostic Assessment Tool (68).

In Indonesia, use of the compliance risk management process reduced the share of illicit trade in total consumption of cigarettes from 12% to 3%. More information on this can be found in the case study of Indonesia in Box 3.13 later in this chapter.

Understanding the products – as well as the supply and distribution chains – allows competent authorities to identify which areas along a chain pose the greatest risk and therefore require more resources. Detailed information on the composition of selected tobacco products is given in Annex 3.1.

KEY TAKEAWAY 8

Risk analysis helps identify the points of intervention that have higher probabilities of noncompliance. A risk-based approach with targeted interventions allows for better results and more efficient use of resources to ensure effectiveness of tax collection.

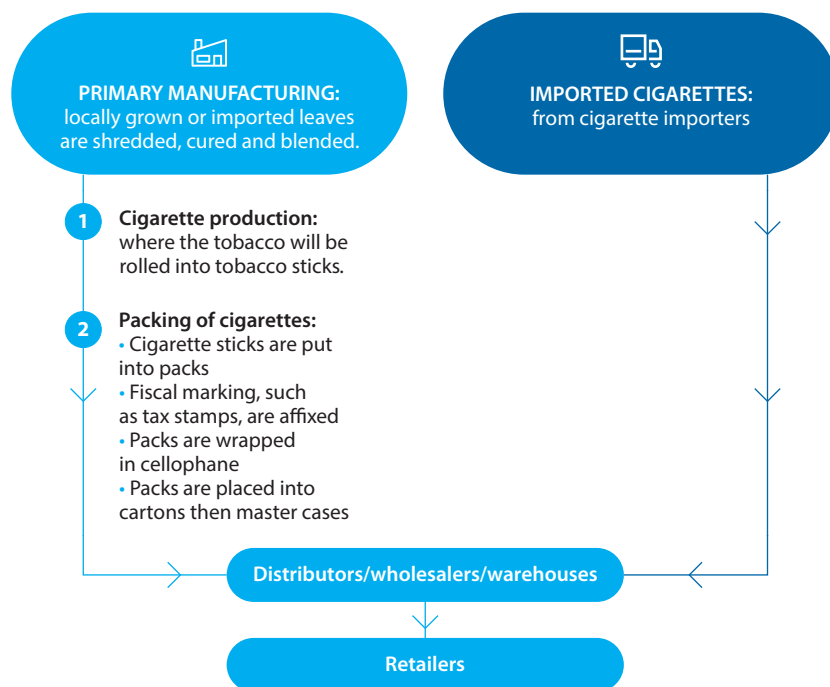
3.4.2 CONTROLS OVER THE TOBACCO SUPPLY CHAIN

As defined in Article 1 of the Protocol, the supply chain covers the manufacture of tobacco products and manufacturing equipment – as well as their import or export – and may be extended, where relevant, to one or more of the following activities when so decided by a Party:

1. retailing of tobacco products
2. growing of tobacco, with the exception of traditional small-scale growers, farmers and producers
3. transporting of commercial quantities of tobacco products or manufacturing equipment
4. wholesaling, brokering, warehousing or distribution of tobacco and tobacco products or manufacturing equipment.

Article 4.1 of the Protocol requires parties to “adopt and implement effective measures to control or regulate the supply chain of tobacco products to prevent, deter, detect, investigate and prosecute illicit trade in such goods and to cooperate with one another to this end”. Concrete measures to regulate the supply chain, as well as best practices in this regard, are discussed further below.

Figure 3.3 shows the main places for reporting and monitoring along the supply chain: import, ex-factory and removals from warehouses. Manufacturers could be required to report imported inputs at the border, as importers of finished products do. If components are subject to licensing, information can be required as part of the licensing process. The arrows in Fig. 3.3 represent transporting, which is also part of the supply chain.

Fig. 3.3 Cigarette supply chain from manufacture or import to retail sale

3.4.3 LICENSING¹⁰ AND DUE DILIGENCE

A licensing system is effective only if it is properly controlled. Most tax administrations have experience with licensing processes for excise taxes on products such as alcoholic beverages and energy products. It is strongly recommended that lessons learned with the licensing process of such products be applied when implementing and enforcing tobacco-related licensing.

Licensing provides timely and accurate data that can serve as the basis for audits because it identifies and controls legitimate operators. For new operators, the process to obtain a licence could include visits and verification of production factories, storage facilities and distribution premises. Countries that have no licensing system in place and would like to start applying licences could allow a transitional period for existing operators to comply with the new licensing requirements. The process of licensing control must be carried out and updated periodically, in particular by controlling the validity of bonds or guarantees, the proper functioning of the required systems (CCTV, for example) and recordkeeping.

¹⁰ Licensing is discussed here in the context of due diligence and enforcement. Details about how licensing can be set up and what information could be requested are presented in section 3.3.1.

Where licences are required, the law should include a provision specifying that purchases from unlicensed suppliers – or sales to unlicensed purchasers – are not allowed. This means that both suppliers and purchasers would need to verify those with whom they are doing business. This requirement provides enforcement authorities with an entry point to enforce the licensing system at both ends. Also, a licensing requirement for manufacturing equipment assists authorities in identifying and prosecuting illegal manufacturing of tobacco products, reducing the burden of proof substantially. In many countries, the presence of manufacturing equipment is not sufficient proof that illegal manufacturing is taking place; the machinery has to be in operation and producing illegal tobacco products when authorities inspect the location. With a licensing requirement, however, the presence of machinery without a licence is sufficient for authorities to act.

The validity of licences should be time-limited, requiring renewals or reapplication, to maintain a high level of control. Adherence to the conditions required for a licence should be controlled by the authorities, and penalties for noncompliance – for example, suspension or withdrawal of a licence – should be severe enough to act as a deterrent (33). Regulations for licensing should provide for inspection of the licensee's products and premises, with penalties for noncompliance, which could include criminal and civil prosecution for serious or repeated offences.

As stated in Article 6.3(a) of the Protocol, Parties need to establish or designate a single authority or multiple authorities to issue, renew, suspend, revoke and/or cancel licences.

In accordance with Article 7 of the Protocol, persons engaged in the supply chain are required by law to conduct due diligence before and during business relationships. They also must report to the competent authorities any evidence that a customer is engaged in activities in contravention of its obligations arising from the Protocol. This requirement includes customer identification, monitoring of sales to ensure that the quantities are commensurate with demand for such products within the intended market and taking measures to ensure compliance. Knowledge of the demand of a market is indispensable for determining if there is a case of oversupplying. If the supply of tobacco products to a lower-taxing foreign market exceeds the demand, it creates a higher risk that these products will be smuggled back into a higher-taxing country, undermining the objectives and effectiveness of the higher-taxing jurisdiction. In the past, some governments decided to impose a fine on tobacco companies if the quantities supplied were significantly higher than the demand and the risk of being smuggled back into their jurisdiction was judged to be high (34,35).¹¹

11 Excise duty rates applied in all the EU countries can be found on the European Commission's webpage: https://ec.europa.eu/taxation_customs/business/excise-duties-alcohol-tobacco-energy/excise-duties-tobacco_en.

KEY TAKEAWAY 9

Licensing helps to identify and control legitimate operators. The data obtained from licensing can serve as a basis for audits. Licences should be controlled on a regular basis and updated periodically to ensure their validity.

3.4.4 FISCAL MARKINGS (E.G. TAX STAMPS)

Fiscal markings are another important tool for controlling and monitoring production and import of tobacco products. Their use is generally considered to be appropriate for increasing compliance with tax laws. Fiscal markings can also be of help in distinguishing between genuine and illicit tobacco products. Tax stamps or other fiscal markings affixed to packs of cigarettes or tobacco products facilitate the collection of excise taxes, as well as audits and enforcement actions. The presence of fiscal markings enables both the competent authority and the public to monitor whether the taxes on tobacco products were properly paid. It thus assists the competent authority in investigating illicit trade and prosecuting violations.

Fiscal markings include tax stamps, enhanced tax stamps (banderols) and digital tax stamps. Examples of fiscal marks are tobacco stamps, tax stamps, excise stamps, tax stickers and banderols. Box 3.4 presents details on the different types and features of tax stamps. Tobacco products for export are often required to be marked that they are for export. Box 3.5 provides useful information regarding the International Organization for Standardization (ISO) standard for excise tax stamps.

The terminology “fiscal mark” holds no indication of the characteristics of the mark. A fiscal marking is affixed to each pack of tobacco product. Requiring a standard package size can facilitate the application of the markings (2). Fraudsters can be deterred from attempting to re-use fiscal markings (in particular stamps) by having the marking affixed to each pack of cigarettes (or other tobacco product) before the pack is wrapped with cellophane (36).

In most cases, tax stamps are purchased by the producer or importer and applied to each product sold as proof of excise tax payment (33). Fiscal markings should be issued to the manufacturer or importer of tobacco products only when excise taxes for the products have been fully paid or a guarantee is established.

Box 3.4 Types and features of tax stamps

Over time, tax stamps and markings have become more sophisticated. In the past, tax stamps were often paper-based and easy to counterfeit. New tax stamps use additional security features to make them more difficult to counterfeit. Authentication solutions against counterfeiting can utilize various security features, including:

- overt features – features that can be verified by the naked eye;

- covert features – features that can be authenticated only by using dedicated and specialized electronic readers;
- semi-covert features – features requiring a simple tool that does not involve extensive training; and
- forensic features – features that can be identified through laboratory analysis.

Tax markings can be either physical or digital:

- physical markings – the information is contained in the document or device attached to the package.
- digital markings – information is obtained through a link with a database and by decrypting with the tools and keys used for creation of the data. The term “digital tax stamp” sometimes leads to confusion, as some paper-based stamps with digital components are also described as digital tax stamps. Tax markings that are fully digital do not contain information in the document or device attached to the package.

It is probably too simplistic to say that digital tax stamps are more secure than paper-based tax stamps. Both types have advantages and weaknesses. For instance, both physical and digital tax stamps can be weak or strong on security features. Nevertheless, the management, production, sales, transport and monitoring of physical tax stamps require increased attention. Tax stamps have the same value as banknotes and are a possible attraction for theft, loss and fraud.

In Belgium, for example, the Court of Audit severely criticized the lack of control of the production and stock management of tax stamps in 2015. The Court of Audit concluded that tax stamps issuance should operate under recognized security practices and procedures relative to the security risk associated with the various production, distribution and issuance processes. Moreover, it was noted that new printing technology of digital tax stamps on packs may facilitate stock management and lead to less fraud. In March 2016, Belgium changed its stamps. The printing became an in-house process by the financial federal government department. The new stamps are still printed with a watermark, but they also have a digital component. The change resulted in a cost reduction by standardizing the sizes and optimizing the production process.

Some of the more advanced fiscal marking technologies include embedded threads and watermarks; special inks and coatings, such as so-called invisible inks, holograms and foils; and calculated or changeable content. Because of their enhanced security features, these stamps can be more expensive than traditional stamps. In the state of California in the United States, the traditional stamps cost US\$ 0.42 per 1 000 stamps. The cost of the first generation of high-tech stamps was 10 times higher, at US\$ 4.77 per 1 000 stamps. This price nearly doubled for the second-generation encrypted stamp, to US\$ 8.20 per 1 000 stamps. Nevertheless, California collected

about US\$ 450 million of additional tax revenue in the first decade following the implementation of encrypted tax stamps. This additional revenue was far greater than the costs of implementation and enforcement.

Other jurisdictions have also revised their tax stamps to incorporate new technologies. The state of Michigan, for instance, replaced heat-applied cigarette tax stamps with digital pressure-applied stamps in 2015. Michigan deployed a tax stamp with several overt and covert security features and a unique quick response (QR) code and serial number. QR codes (machine-readable codes consisting of an array of black and white squares, typically used for storing URLs or other information) can have purposes beyond tracking and tracing. The QR code can be read by consumers with a smartphone or tablet application to access information on smoking-cessation programs, report violations of the state's youth access policies, connect to a tip line to report noncompliant packs and learn about the harms from illicit tobacco sales and purchases. Enforcement authorities can validate stamps using the smartphone-based eTRACS (Electronic Tax Reporting and Audit Compliance System). As part of the system's implementation, the Michigan State Police department created teams of enforcement officers in each of the state's seven districts and the state Department of Treasury created its own enforcement team.

Sources: (37–42).

Box 3.5 The ISO standard on excise tax stamps

The ISO published its excise tax stamp standard (ISO/TC 292/SC) in October 2018. The purpose of the ISO standard is to assist tax and finance authorities in enhancing compliance with excise tax regulations.

A tax stamp is defined as a visible tax stamp, label or mark placed on certain types of consumer goods to show that the applicable excise tax has been paid. The ISO standard applies to tax stamps that are physical in nature – not to digital markings, which are directly printed on to packs without a physical component. “Authentication” in this standard refers to the authentication of the tax stamp, not the product on which the tax stamp is affixed. In other words, authentication of a tax stamp on a cigarette pack means that the tax stamp is authentic but does not guarantee that the pack is authentic. In addition, control measures are needed at the time of the application of the stamp to verify the conformity of the tax stamp with the corresponding product.

The standard provides guidance on the content, security, issuance and examination of physical tax stamps used to indicate that the required taxes have been paid and that the tax stamp is authentic. The use of stamps to facilitate tracking and tracing within the supply chain is not described.

Specifically, the ISO standard deals with the following issues:

- defining the functions of a tax stamp
- identifying and consulting with stakeholders
- planning the procurement process and selection of suppliers
- the design and construction of tax stamps
- the overt and covert security features that provide protection of the tax stamp
- the finishing and application processes for the tax stamp
- security of the tax stamp supply chain
- serialization and unique identifier codes for tax stamps
- examination of tax stamps
- monitoring and assessing tax stamp performance.

A stamp may fulfil many functions, but the core business of tax stamps is to ensure and facilitate the collection of revenue. The tax stamp must use a combination of security features. The tax authority should ensure that the tax stamp can be authenticated and that counterfeit, altered, tampered or otherwise fraudulent tax stamps can be detected.

The standard provides detailed information on the different components of the tax stamp such as the substrate, inks, adhesives, laminate, authentication or security features and the unique identifier that should enable checks on the payments of the required tax.

The process of procurement is discussed in detail in the standard. The tax authority should ensure that the procurement process is open, transparent and meets the sustainability objectives. The tax authority should set out the goals and requirements to give tendering organizations more leeway in proposing optimum solutions that might be different from those the authority would specify.

The standard is not prescriptive; rather, it provides a catalogue of options. It does not, for instance, recommend specific security features, but it does describe the different types of features that are necessary for a tax stamp to be secure. Tax officials still need to make decisions and choose the option that suits them best, but the standard remains recommended reading for those who would like to introduce tax stamp programmes in their jurisdiction.

ISO standards are not freely available but can be purchased at the ISO Store (www.ISO.org) or from an ISO national member body.

Source: (43).

According to Article 8 of the Protocol, each Party shall require that unique, secure and nonremovable identification markings – such as codes or stamps – are affixed to or form part of all unit packets, packages and any outside packaging of cigarettes for the implementation of the tracking and tracing system within a period of five

years, and of other tobacco products within a period of 10 years, of entry into force of the Protocol for that Party.

The Protocol specifies that at least the following information shall form part of the unique marking:

- date and location of manufacture
- manufacturing facility
- product description
- where available, the intended market of retail sale.

In several countries, QR codes are used as fiscal markings for tobacco and alcohol tax control. Each stamp has a unique identifier code and a QR code. The data stored in the QR code provide the following product information:

- manufacturer
- production location
- stamp order date
- tax status and class
- brand
- intended market
- unique identifier (serial number).

KEY TAKEAWAY 10

The use of fiscal markings is generally considered to be an appropriate tool for increasing compliance with tax laws.

Fiscal markings can also be helpful for distinguishing between genuine and illicit tobacco products.

3.4.5 TRACKING AND TRACING

A tracking and tracing system assists authorities in determining the origin of tobacco products – and the point of diversion, if applicable – as well as monitoring and controlling the movement of tobacco products and their legal status. The objective of a tracking and tracing system is to enable authorities to have information on all transactions through the entire tobacco product supply chain until duties are paid or other obligations are discharged.

Traceability is not used only for tobacco products. It is also used to improve the supply chain function, as in the case of parcel services, as well as for product safety reasons, to manage potential product recalls and for regulatory reasons.

Tracking is the process that monitors where a product is at all times while also creating a time and location record for all movements. Tracing is the ability to identify the past locations of a product, so that the product's route can be followed

back to its origin (44). In other words, traceability is “the ability to trace the history, application or location of an object” (45).

A tracking and tracing system must be able to uniquely identify individual products. By marking a product with a unique code or identifier, it is possible to unambiguously register that product’s movements.

Other necessary characteristics include the ability to share the registered movement information and to authenticate products. This enables a product’s status to be captured through the supply chain and its history to be identified and verified retrospectively.

According to Article 8.4.1 of the Protocol, Parties should require the following information to be available:

- the date and location of manufacture
- the manufacturing facility
- the machine used
- the production shift or time of manufacture
- the name, invoice, order number and payment records of the first customer not affiliated with the manufacturer
- the product description and intended market of retail sale
- any warehousing and shipping
- the identity of any known subsequent purchaser
- the intended shipment route, date, destination, point of departure and consignee.

A good tracking and tracing system enables the government to properly monitor the supply chain, improves its ability to ensure collection of the proper duties and taxes, provides it with the ability to authenticate whether the identification marking is genuine and matches the product and improves its ability to enforce the law and provide sufficient evidence to prove noncompliance by a violator.

The following elements are required for an effective tracking and tracing system (46):

- A serialized unique identification marking for each package of product. These identifiers are a distinctive combination of numbers, letters or both. They cannot be predictable or used more than once. The representation of the identifier on the package can be human-readable (letters or numbers) or machine-readable (barcodes). Generation of codes and encryption that are part of a tobacco industry patent should be excluded.
- A data carrier with the serialized unique identifier and other information such as date and location of manufacture, manufacturing facility, product description and, where available, the intended retail market. This information should be readable by authorized agencies of any Party to the Protocol. The data carrier should comply with quality standards and be suitable for

high-speed production lines. Two-dimensional barcodes, for example, meet these standards and are readable with inexpensive equipment.

- A link and parent-child relationship (called aggregation) between different packaging units that offers the option to trace a pallet without the need to scan all the packs and master cases of that pallet.
- Recordkeeping of all shipping and receiving events along the supply chain. This includes, for example, the departure location and the arrival location, as well as the involved operators. International standards from the ISO are recommended for the capture and exchange of data and events.
- The use of international standards for key information that is encoded in the data carrier (5). An example of a unique and internationally recognized identifier for products is a Global Trade Item Number.

The following details on information storage and sharing are drawn from various sections of the Protocol. Data and events along the supply chain must be stored in an independent database that is controlled by competent government authorities. At the global level, national and/or regional databases can be interconnected to facilitate international inquiries by competent authorities. Parties to the Protocol agree to establish a global information-sharing focal point located at the Convention Secretariat of the WHO FCTC, accessible to all Parties, enabling them to make enquiries and receive relevant information. Each Party shall ensure that the information recorded under paragraph 5 of Article 8 of the Protocol is accessible to the global information-sharing focal point on request, subject to paragraph 9, through a standard electronic secure interface with its national and/or regional central point. The global information-sharing focal point shall compile a list of the competent authorities of Parties and make the list available to all Parties.

The cost of tracking and tracing systems is a concern for many countries, but as indicated in paragraph 14 of Article 8 of the Protocol, jurisdictions may require the tobacco industry to bear any costs associated with putting in place the tracking and tracing system in a country (46). In Brazil, the cost for cigarette manufacturers was US\$0.0185 per pack (42). In Kenya, the cost for manufacturers was US\$0.024 per pack (42).

Along with considering the characteristics of a tracking and tracing system in selecting a particular one, it is important to avoid conflicts of interest, ensure fair and transparent dealing with suppliers, implement a zero-tolerance policy for corruption or anti-competitive behaviour and ensure compliance.

Any tracking and tracing system should be compliant with Article 5.3 of the FCTC, which deals with industry interference, and Article 8 of the Protocol. Article 8.13, which states that “each Party shall ensure that its competent authorities, in participating

in the tracking and tracing regime, interact with the tobacco industry and those representing the interests of the tobacco industry only to the extent strictly necessary in the implementation of this Article”. Box 3.8 provides a cautionary example of a tracking and tracing system that is not compliant with Article 5.3 of the WHO FCTC.

While the Protocol contains a great deal of information on the requirements that a tracking and tracing system should meet, questions come up in relation to the implementation of such systems. To achieve the objectives of the Protocol, the Meeting of the Parties (MOP) to the Protocol, as the governing body of the treaty, has the prerogative to establish subsidiary bodies, such as expert groups and working groups. In decision FCTC/MOP1(6), the MOP established a working group for the development and implementation of tracking and tracing systems in accordance with Article 8 of the Protocol, including the global information-sharing focal point (Article 8.1) and unique identification markings for cigarette packets and packages (Article 8.3), to further elaborate on the next steps. The working group will produce a comprehensive report compiling good practices and experiences on the implementation of tracking and tracing systems, as well as unique identification markings for cigarette packets and packages at national or regional levels. The working group was also given a mandate to prepare a conceptual analysis of how a global information-sharing focal point could be set up.

Implementing a complete tracking and tracing system with fiscal markings takes time. In most of the countries that have already implemented tracking and tracing, it took several years from starting with the legal framework to final implementation. Several hurdles need to be overcome:

- Legal framework approval is usually delayed by the tobacco industry.
- Knowledge of tracking and tracing and associated technologies is scarce at tax administrations.
- Tender and bidding processes are complex.
- Coordination between domestic tax authorities and customs is weak.

Even though the process might be lengthy, the investment in a tracking and tracing system will be repaid with the amount of tobacco taxes that are not lost due to evasion.

When implementing a new tracking and tracing system, tax administration should ask for collaboration and technical assistance from intergovernmental organizations and countries that have successfully implemented such systems, in order to speed up and ensure success of the process. Examples of tracking and tracing systems implementation in Chile, Kenya and the EU are detailed in Boxes 3.8, 3.9 and 3.10. For countries that already have fiscal markings in place, the potential interaction between the markings and the implementation of a tracking and tracing system should be taken into account. Further information on this interaction is presented in Box 3.6.

Box 3.6 Tracking and tracing and fiscal markings

It is becoming increasingly common for stamps to contain some tracking and tracing features, such as unique identification markings and basic information on the product that describes the company, tax status or the product itself. The intention is to mark each pack with a unique identification marking so it can be monitored from the point of production to the retailer, including each step in between, thereby creating a complete time and location history.

Although a tax stamp could meet the requirements of Article 8 of the Protocol and have tracking and tracing features, in general, the focus of tax stamp systems differs from that of tracking and tracing systems. Tracking and tracing is more than the unique, secure and nonremovable identification markings on the packages of tobacco products. It implies reading or scanning the codes; linking the codes between packs, cartons, master cases and pallets; uploading the information to a database; recording of any shipping and receiving events along the supply chain; and interconnecting the different databases.

While new tax stamp programs contain tracking and tracing features, they are primarily intended to facilitate tax collection on the domestic market and not to track duty-suspended cross-border trade or the export of products. The focus of tax stamp systems is on authenticity and the proof that taxes are paid. The focus of tracking and tracing systems is on unique identification and on control of the movements in the supply chain by monitoring and investigating the past and future location of products. Tax stamp programs focus on stock management, verification (that the stamps correspond to the product) and authentication (that the stamps are genuine), while the focus of tracking and tracing systems is on the origin, intended route, first customer and final destination. The focus of tax stamps is primarily on individual packs intended for the duty-paid domestic market, while the focus of tracking and tracing systems is on all packaging (packs, cartons, master cases, pallets) and certainly – but not exclusively – for the duty-suspended export market.

Nevertheless, sometimes there can be synergies. For example, the EU countries that require a tax stamp or national identification mark for fiscal purposes have the option to use it as the security feature for tracking and tracing purposes, provided that the requirements are met. In summary, tax stamps can be converted to or be part of a tracking and tracing system when the converted system provides aggregation between packs, cartons and master cases and records all movement along the supply chain. For the export market, a unique identification marking should be added.

Sources: (39–42).

Box 3.7 What *not* to do: use the industry solution to tracking and tracing

Codentify is a serialization system used to produce cigarette pack markers for the purpose of verifying whether cigarette packs are legal. It was patented by PMI but subsequently licensed at no cost to other major cigarette manufacturers. In 2016, Codentify was transferred to Inexto, which is an affiliate of the French group Impala.

What is the problem with Codentify/Inexto?

The main issue is that Codentify/Inexto's links to the tobacco industry make it incompatible with the Protocol, which came into force in September 2018. The Protocol specifies that obligations assigned to a Party shall not be performed by or delegated to the tobacco industry.

Additionally, many elements indicate it is an ineffective means of authentication. For example, the 12-character digital codes generated by Codentify can be easily duplicated or cloned and used as originals on either a counterfeit or genuine pack, which can then pass the system's basic verification test. The codes are also produced by relatively unsecured, commercially available equipment and do not include high-security features capable of protecting the authenticity of identifier numbers. Systems that use multilayered, advanced security solutions that enable distributors, retailers, customers and authorities to identify noncompliant products are more secure.

Another problem is that Codentify/Inexto cannot track products as efficiently as other available systems. It requires a much larger enforcement capacity to achieve the same detection rates as other systems that are not linked to the tobacco industry. Authorities would have to inspect significantly more packs marked under the Codentify system than is necessary under some other systems to achieve the same certainty of not missing a fraudulent pack. In addition, not all stakeholders will be able to verify that a pack marked under the Codentify system is genuine, while other available systems do offer this possibility.

Source: (47).

Box 3.8 A successful tobacco traceability system: SITRAF, Chile

The Servicio de Impuestos Internos (SII, Internal Revenue Service of Chile) has successfully coordinated and implemented a tracking and tracing system for tobacco products.

Application of a compliance management model

In the framework of a compliance management model, a traceability system for tobacco products utilizes a structural measure to reduce tax evasion. It is estimated that evasion of taxes (VAT and excise taxes) in the cigarette market in Chile amounts to 16.6% of the country's total market annually – approximately US\$ 300 million.

The traceability system implemented in Chile (SITRAF (TAB2)) allows authorities to know in a certain and timely manner the quantities of cigarettes produced or imported into the country. Moreover, it helps authorities to distinguish between counterfeit products and original products that did not comply with payment of the tax. In 2018, the implementation of the traceability system was awarded to a company through public bidding. The company is in charge of the implementation and operation of the system for five years, according to a contract signed with the SII, and must maintain a team of 20 people available for the project.

Direct markings are applied to items produced in Chile for national consumption, and stamps are used for imported products. For both types of product, the marking is based on a data matrix code, which is printed using security ink that is distinguishable from any other type of ink with specific devices that are provided by the awarded company. Although products for export are not subject to marking, they are controlled and accounted for by the traceability system.

For national production, devices are installed on each production line that recognize the type of pack being produced, print a unique code on each pack and then read it (activation) to save all the information on servers located in the production plant. This information is transmitted to the central servers of the system and then to the SII. It is also available for on-site inspection.

In the case of imported products, the stamps must be acquired in Chile by each importer and then sent to its producer abroad, which is responsible for adhering them to each pack of cigarettes prior to wrapping the packs with cellophane, using applicators on the production lines. Once the cigarettes enter Chile, the tax determination process has been completed in the service (Provisional Free Transit Guide) and the corresponding taxes have been paid to customs (Import Declaration), the importer must enter the data on the stamps used by the importer on the platform of the traceability system. After validation, the stamps can be activated in the system – that is, they are recognized as valid for commercialization.

In addition to the devices provided by the company, SII has developed a smart-phone application for verification by citizens. Although the application cannot verify the authenticity of the ink used, it is able to verify whether a code is correctly generated and display the information contained in the traceability system for the code (brand, variety, quantity of cigarettes, products/importer) so that the taxpayer can verify its consistency.

Progress of the compliance management model

Implementation of the traceability system has required a coordinated effort both within the service – for the generation of instructions, procedures and computer developments – and with other institutions, such as the National Customs Service and the Ministry of Health. It is an unprecedented project in terms of coordinating the implementation of the system in the production lines of the different tobacco companies in the country and the provider company. Some of the main milestones of the project are:

September 2014: Law 20,780 on Tax Reform establishes an obligation to implement the system within a term of six months, after the publication of the resolution determining the obligated tax payers.

May 2015: Resolution No. 47 determines obligated taxpayers.

June 2015: Circular No. 47 describes obligation to incorporate stamps or distinctive marks as a traceability mechanism.

February 2016: Law 20,899 on Tax Reform simplifies the definition of the system, allowing the system to be outsourced or provided by the SII, in addition to making the type of traceability more flexible.

August 2016: Traceability system regulation D.S. 1,027 is issued (published on 28 December 2016).

March 2017: Exempt Resolution No. 49 of the Ministry of Finance authorizes the SII to outsource all or part of the traceability system.

June 2017: Bidding bases in public market are published.

February 2018: Tender is awarded to selected company.

June 2018: Decision of contract is made by General Comptroller of the Republic.

August 2018: Resolution No. 61 determines taxpayers obliged to apply the traceability system.

August 2018: Holding of first workshops for detailed definitions of the project, with the participation of Customs, Ministry of Health, provider and SII.

September – October 2018: Visits of plants to coordinate with producers and define adaptations to production lines for system implementation.

January 2019: Resolutions No. 6, 7 and 8 passed, with response to a request for an

extension of producers; start of system implementation in all production lines in the country.

February 2019: Resolution No. 16 establishes a term to commercialize the remaining stock without marking.

2019: Resolution No. 24, with request for extension to importer, includes training of customs staff.

March 2019: The traceability system is started up.

June 2019: Stamp process begins for all imported cigarettes.

Currently, the system is installed and operating in all production lines in the country, placing traceability markings on virtually 100% of the cigarettes produced and imported. During 2019, the traceability system enabled controlling approximately 1 175 million packs: 744 million produced for national consumption, 409 million produced for export and 22 million imported yearly.

Source: (48).

Box 3.9 Case study of Kenya's implementation of a tracking and tracing system

Kenya's current tracking and tracing system was preceded by a series of reforms in both tax structure and administration of excise taxes. The reforms included electronic cargo monitoring of exports, which allowed for automatic monitoring and reporting. The system appears to be highly effective because it requires less capacity and is less prone to manipulation than earlier systems. The experience of Kenya shows that a lower-middle-income country can successfully implement a sophisticated system capable of decreasing illicit trade. It also shows the importance of other measures such as strengthening enforcement, increasing cooperation and communication among different agencies and increasing penalties for noncompliance. Illicit trade, as measured by the Kenya Revenue Authority (KRA), was estimated to be around 15% of total consumption in the market during the initial reform period. After the introduction of the new system in 2015, it dropped to 5%.

Timeline of the major reforms:

2003: In this period, the paper tax stamps used had a unique identifier and were colour-coded to indicate the type of product. Regular compliance checks were introduced. In 2007, the cost of a stamp was 2.124 Kenyan shillings or US\$ 0.023 per pack. However, the stamps were found to be easily counterfeited and could not be linked to specific brands.

2008: The KRA proposed a tracking and tracing system and increasing tax rates. The new system was introduced gradually.

2010: Enhanced security features, including ultraviolet markings, were added to the paper stamps. The stamps were to be clearly visible when packs were displayed for sale and placed so that opening a pack would destroy the stamp. The stamps were verified at four different points along the supply chain. The costs were just slightly higher than those of the previous stamps at US\$ 0.024 per pack.

Licensing was introduced for domestic manufacturers, subject to annual renewal. Importers were required to register with the KRA. Licences required submission of details on the company directors, inventories and equipment, accounting systems, input-to-production ratios and brands produced. Penalties for noncompliance were increased and included up to three years in prison.

An electronic cargo tracking system was launched. Electronic seals were affixed on containers or trucks, and GPS technology was used for tracking. A bond was payable on exports to cover excise and VAT taxes. The bond was released only when the goods reached the final destination and taxes were paid.

Verification involving both countries of the business deal takes place at the borders. The electronic system provides information about the departure and arrival of the goods and the disarming of the seals. Authorities in the importing country are notified before the shipment leaves the domestic production facility. The system reduces the number of checkpoints and staff needed and generates arrival reports that can be verified with VAT refund requests.

As a result of these changes, three factories and seven of the 10 importers were shut down due to noncompliance. Exports to Côte d'Ivoire, Eritrea, Mali and Sudan stopped because companies could not provide evidence that the goods reached the final destination and taxes were paid. More than US\$ 11 million in excise tax losses was recovered in 2011. The KRA estimated that illicit trade dropped to 8%.

2013: A contract was signed to introduce a tracking and tracing system for tobacco and alcohol, the Excisable Goods Management System, in April. The system added production counting, tracking and tracing, stock control, processing and other data collection to the existing system. Infrastructure requirements included high-speed broadband internet at production facilities, warehouses, the KRA and ports, along with reliable power or backup generators at those points. Implementation was planned in three stages:

- Stage 1 – A new electronic digital stamp with a unique identifier was introduced. It included a data matrix code plus overt markings (holograms, fluorescent fibres, a security link for KRA authentication and visible two-dimensional codes for verification and activation), semi-covert markings (UV features, fluorescent prints detectable by specialized devices, mini text printing for retailers and

distributors) and forensic taggants for use in prosecutions. The stamp also included human-readable codes for verification by short message service using the KRA web portal.

- Stage 2 – Control and monitoring systems were automated in February 2014. Manufacturers had to install photosensitive readers on production lines, with data automatically sent to the KRA in real time. Each stamp was activated and associated with a brand and package size on the line. The KRA database is automatically updated every 15 minutes.
- Stage 3 – Market surveillance began, with 83 officers given powers to seize illicit cigarettes and make arrests. The officers were equipped with hand-held devices that transmitted data to the KRA for authentication. Distributors and retailers became liable for selling products without an excise stamp and were subject to fines plus prison sentences of up to three years for noncompliance. In 2016, a smartphone application became available with which the public could authenticate cigarette packs. Importers must now buy digital stamps and send them to export facilities in other countries to be affixed. Tax liability is due at removal from a factory or at import. The electronic cargo monitoring system is still in effect.

2016: The Excise Duty and Tax Procedures Acts clarified new obligations and penalties.

2017: A new integrated customs management system was launched.

The KRA estimates that illicit trade levels are now around 5%. The current, more comprehensive digital system is cheaper than the previous paper tax stamp system. Manufacturers pay for the production monitoring system, but it counts as a business expense on corporate tax returns. In 2018, two manufacturers and 10 licensed importers were operating in Kenya.

In 2018, aggregation between the markings of packs, cartons and master cases had not yet been implemented but was expected to be forthcoming.

Source: (36)

Box 3.10 Case study of the new EU tracking and tracing system, May 2019

Cigarette smuggling and other forms of illicit trade in the EU is estimated to cause a loss of €10 billion in revenue annually. In 2018, 4.2 million packs (20 sticks per pack) of illegal cigarettes were seized by customs in the EU. Illicit tobacco production was also increasing: an illegal factory in Ireland, dismantled in 2018, was capable of producing 250 000 cigarettes per hour.

The EU tobacco control policy is described in the Tobacco Products Directive and is influenced by the Protocol. Article 15 of the Directive calls for the traceability of cigarettes and RYO tobacco products by May 2019 and of other tobacco products by May 2024. The EU tracking and tracing system is sufficiently flexible to be implemented at both the regional and the single-country level. Countries can choose among providers as long as the basic requirements are met. The policy provides a high level of protection against any attempts at manipulating the data. The reporting obligations cover all the economic operators involved in the manufacture and distribution of tobacco products.

The EU system requires all unit packets of tobacco products to be marked with a unique identifier. Information on the movements of those products is to be stored by third-party data storage providers. The suppliers of the unique identifiers and data storage are to be financially and legally independent from the tobacco industry. The data are to be fully accessible to authorities of EU Member States for enforcement purposes.

The generation of unique identifiers, as well as all other codes required for pre-registration of economic operators, facilities and machines, will be done at the Member State level by designated identifier issuers. Manufacturers and importers are required to supply information relating to the product and production lines when requesting unique identifiers from the issuers. The issuers will then generate and deliver batches of unique identifiers. On the production line, manufacturers of tobacco products will complete each unique identifier with a marking indicating the date and time. The unique identifier will be a machine-readable, optical, one- or two-dimensional barcode. An anti-tampering device, capable of creating an unalterable independent record of the verification process, must have been installed previously. This additional record will be accessible to public authorities for potential investigation and inspection.

Unit packets, as well as aggregated packages such as cartons, master cases or pallets, can be tracked and traced throughout the supply chain. Tracking is also allowed at an aggregated packaging level as long as unit packets remain traceable.

During transport, each dispatch and arrival up to the final dispatch to the first retail outlet must be recorded and reported. All recorded information must be submitted to the independent third-party data storage facility, generally within three hours, and 24 hours before dispatch and transloading.

Costs, including operational costs, are shifted to the tobacco industry, in line with Article 8 of the Protocol. The EU system of tobacco traceability and security features became operational on 20 May 2019.

Sources: (36, 49–50).

KEY TAKEAWAY 11

A tracking and tracing system assists authorities in determining the origin of tobacco products and the point of diversion, if applicable, as well as monitoring and controlling the movement of tobacco products and their legal status.

3.4.6 ANTI-FORESTALLING

“Forestalling” is a term that describes increases in the production or stock of products in anticipation of a tax increase (2). Other terms referring to this practice include “stockpiling” and “front-loading”. Forestalling occurs when manufacturers or importers increase their tax-paid stock or oversupply the market by increasing production or imports in order to pay the previous lower rate. It reduces and delays the effectiveness of tax measures. The effective starting date of the new tax rate will be delayed, revenues will be lower and the possible effect on prices and thus consumer behaviour will also be postponed. To illustrate how anti-forestalling measures function, an example is presented in Annex 3.2.

A legal basis must exist for anti-forestalling measures; otherwise, the government cannot prevent the industry from forestalling. Legal measures to deal with forestalling include (51–52):

1. Limiting the amount of tobacco products that can be released subject to the old tax rate and levying the new tax on the products exceeding that limit.
2. Levying the new tax rate on all goods that are still in stock and not yet supplied to the final consumer.
3. Limiting the number of tax stamps issued at the rate that was in effect before the increase or limiting the time that products with a tax stamp with the old rate can be sold.
4. Requiring producers and importers to buy new tax stamps annually or after a tax increase.

Under the first three measures, the competent authority determines the limit for taxation at the previous (lower) rate. The quantity allowed may be based on the shelf life of tobacco products – around six months for cigarettes – or normal inventory levels, such as an average over the previous three years.

The first measure, limiting the amount of tobacco products that can be released, requires resources from the competent authority for enforcement. Authorities may decide to post inspectors in each production facility, but even without posting inspectors, procedures are necessary for determining when the allowed quantity has been exceeded and what subsequent actions to take.

The second measure, levying the new tax on goods in stock and not yet supplied to the final consumer, might be difficult to implement. The competent authority is required to monitor the manufacturing process and, at the very least, to conduct a stock-taking of all players in the supply chain – including the various manufacturers, importers, wholesalers and retailers – in a very short window of time. If monitoring covers only the stock of manufacturers and importers, this measure could easily be circumvented by ensuring the stock is sold to others in the supply chain or by setting up separate distribution companies to purchase the stock. Controlling stock at the retail level is burdensome and might not be administratively feasible given the large number of cigarette retailers. It becomes even more burdensome if there is no licensing requirement for retailers because they will first have to be identified.

The third measure accomplishes the same thing as the first if a country uses tax stamps. The fourth also requires tax stamps and is simpler for the competent authority but somewhat more burdensome for the tobacco companies, since stamps must be purchased every year. Box 3.11 provides examples of anti-forestalling measures in EU countries.

Box 3.11 Examples of anti-forestalling measures in EU countries

Several EU Member States have taken measures to limit forestalling. A cautious approach seems to be required for designing such measures to ensure that they comply with EU legislation and the general principles of EU law – in particular, the principle of proportionality. No disputes have occurred concerning the right of initiative of EU Member States to implement anti-forestalling measures. Nevertheless, several EU Member States had to defend their measures in front of the Court of Justice of the European Union, the institution that ensures all national legislation is in line with EU law and a consistent application of that law (53). The Court acknowledged that anti-forestalling measures are appropriate to combat tax evasion and tax avoidance. Moreover, the Court emphasized that fiscal legislation is an important and effective instrument for discouraging consumption of tobacco products and therefore for protecting public health (54–55). However, the measures taken should be proportionate to the objectives. The principle of proportionality means that only the action needed to achieve the objective should be taken, and it should not exceed what is necessary. This principle regulates the measures taken within the EU and is included in the Treaty on the European Union.

The Court demanded that Portugal amend its legislation to ensure compliance with the principle of proportionality. Belgium, Estonia and Hungary were also urged to change their anti-forestalling measures to bring them in line with EU legislation (56–57).

The majority of the EU Member States have anti-forestalling measures in place, but there is no harmonization of these measures. The following are some examples:¹²

- Portugal limits the quantity of cigarettes that can be released in the last four months of a year to the average of the previous 12 months plus 10%. In addition, manufacturers and importers must sell cigarette packages with a tax marking of the preceding calendar year within three months. For other tobacco products, longer limits apply.
- Denmark limits the number of tax stamps issued before a tax increase at the old rate to 20% more than are usually purchased in the two months before the end of the year.
- In Poland, tax stamps are valid only for the current calendar year, and cigarettes with the old stamp can be sold only through February of the following year.
- In Romania, companies must apply for approval to release for consumption from the customs office.

Source: (58).

KEY TAKEAWAY 12

Forestalling reduces and delays the effectiveness of tax measures. Implementing anti-forestalling measures can limit the delay of a tax increase and its intended effect on revenues and consumer behaviour.

3.4.7 ADDITIONAL NATIONAL AUDITS AND CONTROLS

In addition to the previously described measures, several periodic audits and controls could be implemented to increase compliance with tax laws. The most common audits and controls are the following:

- Cost audit – The cost audit method provides expected VAT and tobacco tax collection by simulating the intermediate and final cost of cigarettes. It starts with the inventories of raw materials and estimates added values and final cost, then matches the results with real collection from the tobacco supply chain. Annex 3.1 provides more information about the components that make up some selected (tobacco) products.
- Transfer pricing audit – To ensure companies pay their fair share of tax, prices of transactions between related companies should be assessed, and when prices are not in line with the market conditions, they should be corrected. Companies that operate at the international level (transnational companies), including many tobacco companies, can manipulate import or export prices

12 Considering the frequency of court cases concerning anti-forestalling incidents, these measures might have been replaced or amended.

of merchandise or raw material to related companies or branches in other countries, with the objective of lowering profits in countries with higher tax rates, and can transfer those profits to countries with lower taxes.

- Price and market monitoring – Retail price surveys can provide information about variance from the market price in certain locations, highlighting areas of potential tax avoidance or illicit trade. Physical control of such locations requires rapid response teams, as implemented in the Philippines. To monitor the tax compliance of its taxpayers, the competent authority in the Philippines needs to understand the tobacco market; it must have information on brands, market segments and prices of products. This information enables authorities to estimate the impact of tax and price changes on consumer behaviour and revenues. Market data can be analysed as part of risk management and anti-fraud analysis to determine whom to investigate for noncompliance and when to do so. Sales data can be triangulated to validate other data sources, such as household surveys on prevalence. Market data and trends are also useful indicators for determining whether there is a case of oversupplying. See also section 3.4.3.
- Consumer control – Involving the public via awareness campaigns has also been shown to be effective. Consumers have the right to be assured that the products available in the market are authentic and come from legitimate sources. Thus, it is in the consumers' interest to understand and be able to verify that they are buying genuine products. The features of the fiscal marks on tobacco products should help consumers distinguish between genuine and illicit products. Some countries – Kenya, for example (see the case study in Box 3.9) – use a smartphone application to allow anyone to check both covert and overt features and to report any cigarettes with incorrect markings. Other countries, such as the Netherlands, have developed a smartphone application that allows anyone to report a suspected case of excise tax fraud.
- Cross-check controls – Competent authorities should consider using multiple sources to obtain market data and determine if these data are consistent with tax declarations. VAT declarations can be used to verify that suppliers and purchasers of raw materials and final products are reporting the same amounts. Bank information can be used to verify both sides of transactions along the supply chain. Any discrepancy can alert the competent authority to conduct further investigation for possible illicit trade of tobacco or tax evasion.

KEY TAKEAWAY 13

Several different types of periodic audits and controls that can be carried out to increase compliance, including cost audits, transfer pricing audits, price and market monitoring, consumer controls and cross-check controls.

3.4.8 IMPORT AND EXPORT CONTROLS

Parties to the Protocol should allow import and export of tobacco products and manufacturing equipment only by duly licensed natural persons or legal entities (Article 6.1). A well-known strategy used by fraudsters is to declare products for export so that no duties are due to the country of export. These products are subsequently transported through other countries, using the in-transit regime that allows temporary suspension of duties until the goods arrive at their final destination. Before arriving at their final destination – where the excise duties would be due – the goods disappear or are lost while being diverted to the illegal supply chain. The goods may never leave the country, or they may be smuggled back into the country from which they were exported without declaring or paying duties. This risk of loss of revenue can be mitigated by requiring a guarantee or bond, which will be released only if payment of duties in another country is proven.

No tobacco product should be allowed into a jurisdiction unless the required fiscal marking (such as a tax stamp or export label) is affixed on the pack, according to the national law. Tobacco products for export should bear a marking indicating that the product is destined for the export market.

Illicit tobacco trade could be decreased significantly if the various competent authorities that have jurisdiction over manufacturers and exporters of tobacco products and manufacturing equipment would provide the competent authority at the destination with prior information when a shipment has been authorized and is about to take place. The information could include the name of the consignee, a description of the item shipped and the quantity. Also, the competent authority at the destination should inform the competent authority having jurisdiction over the shipper that a shipment was received along with the pertinent information relating to the shipment.

A good IT system is also required for import and export. Electronic processing of prior-to-arrival manifest and import declarations is recommended. Most countries have implemented an online customs system to process import and export declarations, including all required data such as country of origin or export, description of merchandise, value, weight, cargo insurance, carrier, importer or exporter and broker identification, detailed tax duties to pay and final destination.

The World Trade Organization (WTO) Trade Facilitation Agreement provides several tools for better controls, including collaboration between customs administrations,

exchange of information, use of non-invasive devices and prior-to-arrival import declaration (23).

Non-invasive detection equipment at customs posts is highly capable of detecting contraband merchandise. The most common tools are X-ray scanners that are used for small parcels, containers, trucks and trains. Most modern ports have also implemented the use of X-ray scanners, and such technology is improving the speed of controls to as little as two minutes per container. Although the cost of scanners is declining, it remains inaccessibly high for countries with limited resources. Fortunately, scanners are often available for lease, making them accessible for tax administrations in those countries.

Less sophisticated and less costly detection equipment includes endoscopes, mirrors, night vision equipment, cameras and automatic licence plate readers (33). A still less expensive alternative is the use of dogs, which can be trained to detect cigarettes and other organic products. Many countries use both scanners and dogs to detect contraband tobacco products.

Special physical control measures can also be applied in order to reduce contraband. These include the separation of processing operations from the sealed storage of taxed and untaxed products. Physical and direct control by officials of the excise authority during a part or the whole of an operation can be applied (for example, physical escort of the transit consignment from border to border by individual trucks or in a convoy, or application of radio or satellite tracking systems such as GPS-enabled devices to goods, conveyances, vehicles or containers).

Control at borders is essential and should include integrated technology and cooperation with agencies at the border station. Frontline officers should be supported by appropriate intelligence, guidance and supervision from management, as well as technical aids to enforcement.

Within a country, mobile excise control units are helpful for verifying excisable goods as they are transported domestically. These units should be dispatched to important transport corridors, communication centres and areas of congestion, such as bridges, ferries and passes. These operations require close coordination between police, border guards and other public services.

Exports also require special attention, in particular if VAT and tax refunds are granted to the export of tobacco products. Validating the real exit in the declared amount is essential to avoid illegal re-entry to a territory and the improper refund of taxes. For any tax refund, an audit including tax credit information must be carried out. The audit may include the invoices for the whole chain involved in the export, including tobacco farmers, first processors, manufacturers, wholesalers, storage and transport.

KEY TAKEAWAY 14

To ensure control of import and export, it is recommended that only duly licensed persons and entities be allowed to import and export tobacco products and manufacturing equipment.

3.4.9 FREE ZONES AND TRANSHIPMENT POINTS

The term “free zone” is very broad and can refer to a number of different types of areas. The Financial Action Task Force listed the following types in its 2010 report (59): free trade, export processing, enterprise, free ports, foreign trade, special economic zones and bonded warehouses. A number of these areas can include tobacco manufacturing and trade. By definition, controls such as regulation and oversight within free zones are less strict than in other areas. This can make them appealing to persons involved in illegal cigarette manufacturing or trade (17). In fact, illicit activities related to free zones (not limited to tobacco) are regularly documented by organizations that recognize the linkage. These activities include money laundering, tax evasion and trade in counterfeit goods or other illicit goods (60). A report from the European Parliament (61) referring to free ports in particular, mentioned that the motivation for using them included a “high degree of secrecy and deferral of import duty and indirect taxes”. The report even proposed the “urgent phasing out of free ports”. In the European Parliament report, free ports are free zones that function as (semi-) permanent storage areas for high-value goods.

The Protocol includes a time-bound provision of effective controls on all manufacturing and transactions of tobacco products in free zones (Article 12). Free zones are defined as a part of the territory of a Party where goods are considered to be outside the customs territory for import duties and taxes (Article 1.5). This is the same definition used in the International Convention on the Simplification and Harmonization of Customs Procedures (Revised Kyoto Convention) (62). Parties to the Protocol must implement effective controls in free zones within three years of entry into force of the Protocol. For countries not yet Parties to the Protocol, stringent controls of manufacturing and transactions involving tobacco products in free zones are an important component of an effective and efficient tax administration.

One of the measures for dealing with free zones within the Protocol includes implementing “effective controls on all manufacturing of, and transactions in, tobacco and tobacco products, in free zones, by use of all relevant measures as provided in this Protocol”. As indicated in an Interpol report (17), a significant vulnerability of free zones is the fact that different economic operations (e.g. manufacturing, assembly, re-packaging and warehousing) take place outside the control of authorities. It is therefore essential for customs administrations to exercise their authority in free zones

to effectively identify and fight illicit trade in tobacco products. Relevant measures listed in the Protocol should be applied. These include licensing, due diligence and recordkeeping for all operators within free zones, as well as implementing a tracking and tracing regime. Removing exemptions on excise taxes is an additional way to increase control and remove incentives for using free zones as a means for tax evasion. Indonesia, for example, imposes excise taxes on cigarette manufacturing in its free trade zone.¹³

Parties to the Protocol shall also prohibit the intermingling of tobacco products with non-tobacco products in a single container or any other such similar transportation unit when removed from free zones. Finally, each Party is to “adopt and apply control and verification measures to the international transit or transshipment of tobacco products and manufacturing equipment in conformity with the provisions of the Protocol”.

Article 13 of the Protocol, which covers all duty-free sales of tobacco products, requires Parties to the WHO FCTC to consider prohibiting or restricting the sale to or import by international travellers of tax-free or duty-free tobacco products, as mentioned in Article 6 of the WHO FCTC. These sales erode the effects of tax and price measures aimed at reducing the demand for tobacco products and also adversely affect government revenues by creating a loophole in the tax structure (2).

KEY TAKEAWAY 15

Customs administrations should exercise their authority in free zones to prevent different economic operations from taking place outside the control of authorities. Relevant measures include licensing, due diligence and recordkeeping for all operators within free zones, as well as implementing a tracking and tracing regime.

3.4.10 PROCEDURES AFTER DETECTING ILLICIT TRADE OF TOBACCO

The procedures described in previous sections are intended to increase compliance and to prevent illicit trade. When smuggling or illicit trade is detected – through, for example, audits, tracking and tracing systems, verification of declarations or border control – actions such as seizing and destroying smuggled and/or illicit tobacco and collecting due taxes must be taken immediately. To deter further illegal behaviour, a comprehensive audit of everyone and everything involved in the illicit acts must also be carried out. Assets and vessels involved in the illicit activity can be seized, and financial accounts can be frozen. Some countries, including the United Kingdom, Canada and Chile, have also adopted a strategy known as “follow the

13 Indonesian Ministry of Finance, personal communication, January 2020.

money” to obtain more information on those who finance illicit trade. This strategy is intended to have a further-reaching effect by targeting those who finance the transport, production and storage of illicit products. The United Kingdom, Canada and Chile all created special teams tasked with identifying and targeting the offenders.

Furthermore, Article 18 of the Protocol provides for the confiscation and destruction of tobacco, tobacco products and manufacturing equipment. One of the difficulties faced by competent authorities in exercising the authority to seize and forfeit products and/or equipment used in the manufacture or distribution of tobacco products is the cost of keeping or storing the goods and/or machinery before destruction. Thus, the law should also provide for a mechanism and timetable for the disposal and/or destruction of seized and forfeited goods or machinery, while prescribing a mechanism by which these properties can still be presented as admissible evidence in a judicial proceeding. Boxes 3.12 and 3.13 provide examples of successful efforts to combat illicit trade in the United Kingdom and Indonesia.

KEY TAKEAWAY 16

As soon as smuggling or illicit trade in tobacco products is detected, actions such as collecting taxes and seizing and destroying smuggled and/or illicit tobacco must be taken.

Box 3.12 The United Kingdom’s experience in fighting illicit trade in tobacco products

In 2000, illicit cigarettes accounted for 22% of the cigarette market in the United Kingdom. To deal with the problem, Her Majesty’s Customs and Excise¹⁴ implemented a major anti-smuggling effort. The strategy was refreshed with additional resources and measures in 2011 and reviewed in 2015. The result was a steady decline in the illicit cigarette market to 10% by 2013/2014.

The measures taken were comprehensive and included hiring 1 000 new customs officers and investigators. In addition, tobacco supply chain legislation was introduced, aimed at discouraging tobacco manufacturers from facilitating smuggling.

Tougher sanctions included increased fines of up to £5 million levied on a manufacturer, criminal prosecution with sentences up to seven years, confiscation of assets as part of the proceeds of the crime, payment of duty on the confiscated goods plus penalties up to 100% of the duty, prohibition of the sale of tobacco products for

¹⁴ By the time of the renewed strategy, the respective bodies were the HMRC and the United Kingdom Border Agency.

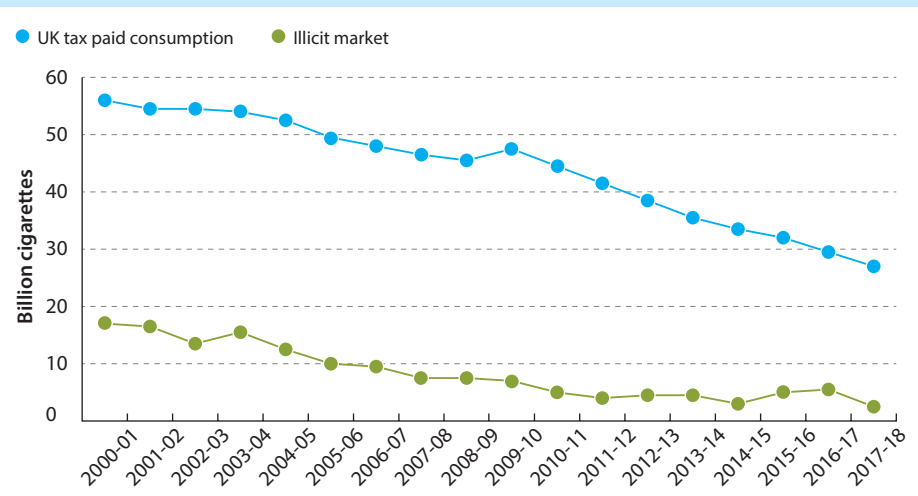
up to six months, unlimited fines for selling tobacco without the United Kingdom duty-paid fiscal mark after 13 March 2015, referral for withdrawal of the transporter's licence, use of immigration sanctions to refuse entry to the United Kingdom for tobacco smugglers and civil action, including bankruptcy.

The cost of these measures was £209 million over the first three years of the program and around £100 million annually by 2008/2009. This figure covers only HMRC and excludes any costing of the United Kingdom Border Agency. In 2013/2014, tobacco tax revenues were £9.5 billion.

After a review of the strategy in 2015, the controls on raw tobacco were strengthened by the introduction of an approval system in 2017. Anyone who manufactures, purchases, acquires, owns or is in the possession of a tobacco products manufacturing machine must be licensed with customs as of 1 August 2018 (63).

The United Kingdom ratified the Protocol on 27 June 2018. It was the 40th country to ratify, which was the trigger point for the Protocol to enter into force.

Fig. 3.4 Estimate of the illicit cigarette market and United Kingdom tax-paid consumption



Sources: (16, 64).

Box 3.13 A success story: Indonesia reduced illegal cigarettes from 12% to 3% of the market

In some countries, most of the illegal cigarettes are imported, but in Indonesia most of them are produced within the country by unregistered manufacturers that are usually home-based and relatively small. In several territories, specifically on the Island of Java, illegal cigarettes have been produced for generations. This practice is supported by the availability of raw tobacco materials and cloves, as well as cheap labour costs, especially for female workers. Indonesia also produces cigarette products that are not available in most other countries. These products – known as handmade clove cigarettes (sigaret kretek tangan) – contain cloves, and the production process covers blending, rolling and packing. Parts of the process are done by hand, and 99% of the labourers are women.

The strategy for combatting the illegal cigarette trade in Indonesia is divided into two main parts: preventive actions and responsive actions. Indonesia's success in effectively tackling illicit trade is attributed to the following key factors.

Monitoring and surveillance

Preventive actions consist of administrative measures – such as issuance of permits and the excise stamp purchasing mechanism – that use risk management by optimizing the Excise Service Information System (ExSis). With this IT system, the Directorate General of Customs and Excise (DGCE) can oversee both daily transactions and daily production from factories. When information of suspicious activities is obtained, DGCE can suspend the purchase of excise stamps. The efforts to fight the illegal cigarette trade also invite stakeholders to be involved by supplying information regarding high-risk areas and regional governments.

Strategic communications and community involvement

DGCE continuously disseminates information and conducts public education to fight illegal cigarettes. These efforts are conducted every year, using a special campaign slogan. In 2019, the slogan was “Gempur Rokok Ilegal” (“Fight Illegal Cigarettes”).

Key performance indicators for DGCE units and offices

Parallel with the above-mentioned preventive actions, DGCE also continuously conducts responsive actions: enforcement, investigation and audit activities in cigarette factories. Enforcement activities are planned and measured by considering the limited human resources and the large scale of the monitored territories. To demonstrate the effectiveness of administrative and enforcement measures in curbing the trade of illegal cigarettes, both types of activities are translated into key

performance indicators for all DGCE working units and offices, including regional offices and personnel.

Use of technology and intelligence

Coordination between different DGCE offices responsible for monitoring the production and marketing of cigarettes is maintained by sophisticated IT applications that enable efficient distribution of information and investigation activities. The applications are the Customs Intelligence and Tactical Centre for data and analysis and the Centre for Command and Control (Pusat Komando dan Pengendalian/Puskodal) for ensuring that sea patrols work effectively and efficiently.

Independent evaluation

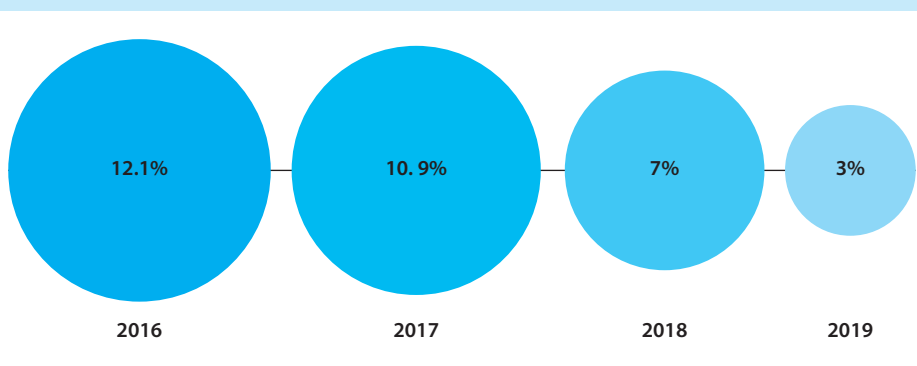
To evaluate the efforts and activities to reduce the circulation of illegal cigarettes in Indonesia (e.g. cigarettes without stamps, with fake stamps or with used stamps), in 2016, the government commissioned the University of Gadjah Mada in Yogyakarta to conduct a survey using a stratified random sampling method. To maintain objectivity and independence, an independent body from this well-known university was appointed to conduct the survey.

The survey results showed that the level of illegal cigarette circulation in Indonesia was 12.1% of total consumption.

In 2018, the DGCE commissioned the University of Gadjah Mada to conduct another survey. Results showed that circulation of illegal cigarettes had been reduced to 7.0%. In 2019, using the same method the university used, DGCE conducted a survey that showed a reduction to 3.0%.

Fig. 3.5 shows the results of the surveys.

Fig. 3.5 Share of illicit trade in total cigarette consumption in Indonesia, 2016–2019



Source: Customs and excise department, Ministry of Finance, Indonesia, personal communication, 2020.

The results of the actions taken can be used as feedback for DGCE in developing excise policies for both service and enforcement, including policies for excise tariffs. DGCE will provide recommendations for an optimum policy format for controlling consumption, maintaining labour protections, optimizing revenue and, most importantly, constantly reducing the consumption of illegal cigarettes on a national level.

3.4.11 PENALTIES

Penalties and sanctions must be sufficient to deter illegal activities. Otherwise, financial penalties may simply be paid as a cost of doing business while the illegal activity continues. The Protocol specifies commitments for Parties and provides information on best practices for non-Parties. Article 14.1 in Part IV of the Protocol requires each Party to establish unlawful activities, including manufacturing, wholesaling, brokering, selling, transporting, distributing, storing, shipping and importing or exporting tobacco products or manufacturing equipment without the payment of applicable duties or taxes or without using fiscal stamps or other required markings or labels.

Articles 14.2 and 15 of the Protocol mandate Parties to determine which of the types of unlawful conduct set out in Article 14.1 shall be criminal offences. Parties must adopt legislative and other measures to give effect to such determinations, as well as to define whether the liability for committing illicit trade in tobacco is a criminal, civil or administrative offence. Article 17 further provides that the Parties shall consider adopting measures as needed to authorize competent authorities to levy penalties in an amount proportionate to lost taxes and duties resulting from the commission of illicit trade. Box 3.14 provides a case study of how Colombia used penalties to fight illicit trade.

Box 3.14 The use of penalties to combat illicit trade in Colombia

In 2017, the specific tax on cigarettes in Colombia was doubled, increasing from COL\$ 700 per pack in 2016 to COL\$ 1 400 in 2017. The tax rate was tripled from 2016 levels in 2018, reaching COL\$ 2 100 per pack. A provision was added to increase taxes annually after 2018 at the rate of inflation plus 4%.

In 2015, before the tax increase, Law 1762 introduced a number of measures to fight illicit trade more effectively. The length of imprisonment for dealing in contraband cigarettes was increased from 3–5 years to 4–12 years. Moreover, government officials who facilitate illicit trade – or anyone involved in transporting or retail sales of illicit tobacco – face similar prison terms. The law allows vehicles used for smuggling to be confiscated, and penalties were increased for illicit trade that is conducted through areas such as special economic zones.

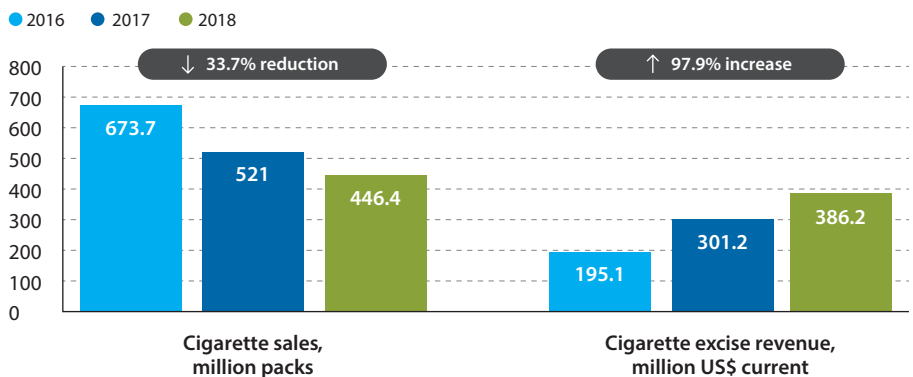
Under the law, illicit trade is considered to be a source of money laundering, which means that the Financial Intelligence Unit can use the same methods it uses to investigate other illegal financial activities. This practice is not common.

The law specifically created new sanctions related to alcohol and tobacco excise tax evasion, including the seizure of goods, fines, closure of retail outlets and the suspension or cancellation of licences, authorizations or registries.

Arrests and seizures have increased under the new law. Indeed, since its enactment, law authorities reported that between 2016 and 2018, five criminal organizations were dismantled, 53 individuals were apprehended and 72 assets were confiscated. In addition, 2 236 individuals were apprehended and 503 vehicles transporting smuggled goods were confiscated, as transport of such goods is now also considered a crime under the law.

More importantly, thanks to the large tax increases, consumption decreased while revenues increased substantially in 2017 and 2018 (see Fig. 3.6). It is estimated that illicit trade in cigarettes in five Colombian cities in 2016 constituted 3.5% of total consumption, a much lower estimate than the industry data suggest. In 2017, after nine months of the tax increase implementation, a similar study found that illicit cigarettes remained low, at 6.4% of total consumption.

Fig. 3.6 Packs sold and tobacco tax revenue before and after the tax increase in Colombia, 2016–2018



Sources: (65–67 and Ministry of Finance, Colombia (Direccion de Apoyo Fiscal), personal communication, 2020).

For consumers in possession of illicit tobacco, the minimum penalty should be confiscation and destruction of the illicit tobacco products found in their possession, with payment required for the unpaid tax and duties on those products.

In the state of California in the United States, it is illegal to possess a tobacco product on which taxes are due and not yet paid. The burden of proving that taxes have been paid is on those who have the products in their possession. The provision is enforced by the California Department of Tax and Fee Administration and local law enforcement agencies. A violation is a misdemeanour, with a maximum fine of US\$ 5 000 and/or up to one year in prison. Illegal packages are subject to seizure and forfeiture.

Most countries have adopted legislation to combat organized crime and money laundering. Some countries are using this type of legislation to address illicit trade of tobacco. Asset confiscation and increased penalties for involvement in illicit trade are becoming more common as well. Withholding or even confiscation of trucks involved in smuggling is also common in several countries.

KEY TAKEAWAY 17

Penalties and sanctions imposed should be sufficient to deter illegal tobacco trade activities. Penalties should be levied in amounts proportionate to lost taxes and duties resulting from illicit trade.

3.5 TAX ADMINISTRATION OF OTHER TOBACCO PRODUCTS

In principle, administering tobacco taxes on tobacco products other than cigarettes is similar to administering them on cigarettes. However, there is a lack of standardization of other products and sometimes large informal markets. For example, it is estimated that two thirds of waterpipe tobacco in the EU is non-duty-paid (19). Other tobacco products – such as bidis in South-East Asia, waterpipe tobacco in the Eastern Mediterranean region and snus in Sweden – are considered part of a country's traditions. This sometimes leads to situations where governments are hesitant to strongly regulate and tax these products.

Some products, such as kreteks (clove cigarettes) in Indonesia and bidis in India and Bangladesh, are mainly sold in one market. Other tobacco products are more likely to be produced by hand on a small scale, making it difficult to detect and collect taxes on them. The same applies to RYO tobacco, which can be produced on a small scale by hand or with the use of small machinery. The trade in raw tobacco and small-scale home production of tobacco often take place outside of monitoring and control systems (19). As mentioned in section 3.3.1, countries have found various solutions to address this problem, including prior approval for purchase or sale of raw materials and registering, authorizing or licensing of all operators and growers that handle raw tobacco.

3.5.1 NEW AND EMERGING NICOTINE AND TOBACCO PRODUCTS

In principle, adding a product to an existing tax framework is not likely to impose significant costs. It is reasonable to expect that challenges similar to those faced in dealing with conventional tobacco products will be faced in the collection of taxes on new products, as market players will attempt to use loopholes in tax regulation to avoid or evade taxes whenever possible. However, new challenges are expected to arise when those new products involve rapidly changing technology and where their market dynamics are widely unknown.

Furthermore, taxation of new tobacco products may require additional capacity, as a country may need to identify new agencies or authorities, given the different characteristics of the taxable items and the tax base.

3.5.2 HEATED TOBACCO PRODUCTS (HTPs)

Many countries apply a specific excise on tobacco products according to tobacco weight (see Table 2.4 in Chapter 2). With HTPs, this is likely to impose a challenge, since assessing the content of tobacco in a heated tobacco stick will be an additional burden. From a tax administration perspective, it will be easier for authorities to apply taxes per stick or per unit, as is done for cigarettes.

3.5.3 ELECTRONIC NICOTINE AND NON-NICOTINE DELIVERY SYSTEMS (ENDS/ENNDS) PRODUCTS

Some countries tax only nicotine-containing e-liquids while others tax both nicotine- and non-nicotine-containing e-liquids. Taxing only nicotine-containing e-liquids requires laboratory capacity to detect the presence of nicotine (see Table 2.5 of Chapter 2). Self-declarations by industry are not sufficient, since some e-liquids labelled as nicotine-free have been found to contain nicotine (see section 2.4.2). Therefore, it is simpler to tax both nicotine- and non-nicotine-containing e-liquids. One likely challenge of taxing all e-liquids will be the capacity to detect and differentiate whether the e-liquids used in ENDS/ENNDS are falsely declared as being for other purposes at the import and manufacturing levels. More information on advantages and disadvantages of different excise tax policies is given in Table 2.6 of Chapter 2.

The challenge in taxing the other components of ENDS/ENNDS products is their diversity (see section 2.4.2 of Chapter 2) and the possibility that some parts may be used for other purposes (e.g. in batteries). As indicated earlier, rapidly changing technology and the lack of control and knowledge of the market make taxation of ENDS/ENNDS devices challenging. It may be for this reason that the majority of countries that tax those products address only the e-liquids.

When applying a tax on these newer products, countries should be aware that many customers buy their products online. It is therefore recommended that countries

deciding to tax these products draw up a proper implementation plan, including how taxes will be collected on imported products and online sales. Online cross-border sales of tobacco products are not permitted in all countries. Several EU countries have banned such sales, which include online sales from retail outlets to consumers in another country. Of course, such bans makes sense only if there is also capacity to enforce them.

As in the case of taxing tobacco products, the following actions will be important to more effectively impose taxes on these products:

1. implementing strong enforcement mechanisms such as licensing, recordkeeping and control of the supply chain, which can include but is not limited to:
 - a) imposing strict licensing of retailers, importers and manufacturers; ideally, licensing of all those involved in the supply chain and developing a tracking and tracing regime for ENDS/ENNDS products and HTPs (to share cost, this can be done in tandem with the system developed for cigarettes);
 - b) exercising the right to set the frequency and type of audits or controls;
 - c) exercising the right to confiscate goods; and
 - d) imposing sanctions such as penalties, fines and/or withdrawal of licences (if applicable) if legislation is not respected.

Specific to ENDS/ENNDS products:

2. implementing highly consequential sanctions for producers who declare nicotine-containing e-liquids as “non-nicotine-containing”; and
3. requiring a fee (contribution to the costs) for laboratory tests when a new product is brought on the market or when there are significant modifications to an existing one.

More information on the policy options to apply excise taxes on ENDS/ENNDS is given in Chapter 2, section 2.4.2, Table 2.6.

KEY TAKEAWAY 18

In principle, the administration of taxes on new and emerging nicotine products and tobacco products should be similar to that for cigarettes.

Due to the lack of standardization of these products, however, a rapid and constantly evolving understanding of them and their supply chain will be required to achieve effective and efficient administration of taxes.

3.6 THE BROADER ELEMENTS OF A GOOD TAX SYSTEM

3.6.1 PROPER RESOURCING OF COMPETENT AUTHORITIES

In addition to legal tools and a legal basis on which to act and enforce, the authorities in charge of implementing excise tax laws should be provided with sufficient resources to hire the necessary staff to properly implement and enforce them. The necessary staffing could encompass multiple agencies and will often require cooperation between agencies, since some aspects – such as regulation, licensing and border control – may be performed by agencies other than the competent authority.

Staff of competent authorities need the necessary tools, equipment, training and supplies to carry out their functions. This requirement includes the means to build or purchase and maintain a software system that will allow taxpayers to submit required information electronically. Electronic filing has benefits for both taxpayers and authorities. It minimizes the compliance cost for taxpayers and can therefore support voluntary compliance (68). To identify risks of noncompliance, the software system should offer competent authorities the ability to analyse the data submitted by taxpayers and cross-check it with data from other taxes – such as VAT – and third-party sources, such as banks and household surveys.

Another option for authorities is to make more efficient use of existing resources. For example, an authority could optimize the risk management system by switching to a risk-based approach: resources could be saved by auditing taxpayers who are more likely to be noncompliant based on risk analysis rather than auditing all of them.

Other problems that challenge the effective functioning of a competent authority are lack of a coherent strategy and problems with professionalism related to lack of training or corruption (69). Having a strategy avoids directing resources towards less-important areas. The strategy should always be aligned with the objectives, so that competent authorities can identify which steps they should take and in which order they should take them to reach these objectives. A strategy is indispensable to prioritizing and organizing resources so that identified issues or risks can be addressed efficiently.

3.6.2 CORRUPTION

Competent authorities should implement tax laws with integrity and have strict rules and regulations for detecting corruption. Strict rules and regulations should also be in place for the punishment of both agency personnel and taxpayers who engage in corrupt practices. Corruption within a competent authority results in the improper monitoring of tax compliance and is one of the causes of the proliferation of illicit trade in tobacco products. It also erodes confidence in competent authorities and ultimately in governments overall. In addition to effective laws and regulation, strong internal audits covering prevention, investigation and sanctions should be

implemented. To improve prevention, a risk map should be created that highlights areas of misconduct and possible leakages. An action plan to update controls should be established to improve areas of weakness detected in procedures and systems. The audits should also be scheduled regularly. Prepared internal auditors with powers to conduct investigations are necessary. Sanctions for corruption, including administrative sanctions and criminal prosecution, must be strong.

3.6.3 A STRONG JUDICIARY

The judicial system should be honest and independent in fact and in perception. Disputes should be solved rapidly – not in years, as is the case in some countries. The appeals process should have limits so that appeals cannot continue for years. The use of criminal rather than civil charges should also be considered, especially in the context of illicit trade.

KEY TAKEAWAY 19

Broader elements of a good tax system include (1) proper resourcing of competent authorities to hire staff and obtain necessary equipment and systems, (2) strict rules and regulations to detect and punish corruption among both agency personnel and taxpayers and (3) ensuring that the judicial system is honest and independent, with disputes being solved as quickly as possible.

3.7 CONCLUSIONS

Policies are more effective if they are properly implemented and enforced. Competent authorities have a key role in the achievement of financial and public health objectives of excise taxes. Given the close linkages between tax administration and efforts to fight tax evasion resulting from illicit trade, this chapter draws extensively from the Protocol to Eliminate Illicit Trade in Tobacco Products (i.e. the Protocol). The Protocol provides a blueprint of measures to address the problem of illicit trade and can be used as a model even by countries that are not Parties to it.

Qualities of an effective and efficient tax administration include institutional arrangements where roles and responsibilities of competent authorities are clearly defined to avoid overlap and voids. Additionally, effective collaboration among relevant bodies must be facilitated. At the national level, within any organizational arrangement, it is vital that agencies cooperate and exchange information and that their competences find their basis in law. A legal basis for exchange or access to information between government bodies should be ensured. At the international level, especially for border control, the role of customs is key, and access to international

cooperation agreements such as the Protocol is very useful. An organizational tax administration structure must include a system of performance evaluation and accountability through pre-defined key indicators.

To ensure compliance, the accuracy of information for the tax compliance cycle is key, including clear and straightforward taxpayer registration and licensing, declaration, recordkeeping, warehousing, distribution, collection and tax refund processes.

- Licensing is a powerful tool for obtaining information and securing the supply chain of tobacco products. Ideally, all persons involved in the growing of tobacco and the retailing, transporting, wholesaling, brokering, warehousing and distribution of tobacco products or manufacturing equipment should be licensed.
- Collecting as much information as possible on the business of tobacco and recording all transactions are key to reducing tax evasion, but this may be burdensome for authorities. The use of IT for periodic tax declarations, accounting, inventory and financial information is critical for obtaining accurate information and can help decrease the cost of the whole reporting system.
- Recordkeeping should be ensured. All persons or entities engaged in the supply chain of tobacco, tobacco products and manufacturing equipment should keep complete, detailed and accurate records of all relevant transactions and details of materials used in the production of those products.
- Maintaining a system of authorization for warehousing allows the authorities to carry out controls in production and storage facilities to ensure that taxes are paid. Ideally, bonded warehouses should be eliminated from the supply chain.
- Duty suspension – which is often applied during the producing, processing, holding, receiving and dispatching of excise goods – should be granted only if strict criteria are met (e.g. for granting authorization, warehouse pre-authorization visits, adequate stock control measures, checking the origin of excise products and the entire production process and coding and marking of products).
- To limit the number of taxpayers a competent authority has to manage, tax collection should take place close to the point of production and import.
- Refunds for VAT, excise taxes and customs duties are common in most countries, under the principle that taxes are not exported. The refund process must be closely monitored to avoid opportunities for tax evasion.

Control and enforcement – key components of tax administration – include a number of measures to secure the supply chain: licensing and due diligence, fiscal markings,

track and trace, anti-forestalling measures, audits and controls, import and export control and attention to free zones and transshipment points. Control and enforcement need to be included as pillars in the strategic plan of the tax administration. Enforcement and control plans must be designed to define the activities and taxpayers that are subject to enforcement and to allocate staffing, auditing, infrastructure and IT resources. Targets must be defined, including the number of interventions and any additional collection or reduction of tax evasion. This includes choosing interventions for those who have a higher probability of noncompliance (the risk-based approach). In the tobacco supply chain, import, export and transfers to and from warehouses may be areas at greater risk of noncompliance.

- Licensing provides timely and accurate data that can serve as the basis for audits, since it identifies and controls legitimate operators. The process of licensing control must be carried out and updated periodically – in particular, by controlling the validity of bonds or guarantees and the proper functioning of the required systems and recordkeeping. Where licences are required, the law should include a provision that disallows purchases from unlicensed suppliers or sales to unlicensed purchasers. This means that both suppliers and purchasers will need to verify those with whom they are doing business. This will substantially help to reduce the burden of proof for authorities. In addition, to maintain a high level of control, the validity of licences should be limited in time, making renewals or reapplication required.
- Another important measure for controlling and monitoring production and import of tobacco products is the use of fiscal markings (e.g. tax stamps). In addition to increasing compliance with tax laws, fiscal markings can help distinguish between genuine and illicit tobacco products. The use of fiscal marks enables both the competent authority and the public to monitor whether the taxes on tobacco products have been properly paid. In addition to locally produced and imported products, tobacco products for export should also be required to be marked, but with an indication that they are for export. Requiring a standard package size can facilitate the application of fiscal markings. To lower the chance that fraudsters attempt to re-use fiscal markings (in particular, stamps) the marking should be applied to each pack of cigarettes (and other tobacco products) before the pack is wrapped with cellophane. Fiscal markings should be issued to the manufacturer or importer of tobacco products only when excise taxes for the products have been fully paid or a guarantee is established. Fiscal markings should include several security features to make them more difficult to counterfeit. These can include overt, covert, semi-covert and/or forensic features.

- Tracking and tracing systems assist authorities in determining the origin of tobacco products and the point of diversion, if applicable, as well as in monitoring and controlling the movement of tobacco products and their legal status. The objective of a tracking and tracing system is to provide authorities with information on all transactions throughout the entire tobacco product supply chain until duties are paid or other obligations are discharged. Any tracking and tracing system must be able to uniquely identify individual products. By marking a product with a unique code or identifier, it becomes possible to unambiguously register that product's movements.

A good tracking and tracing system enables the government to properly monitor the supply chain, improve its ability to ensure collection of the proper duties and taxes, authenticate whether the identification marking is genuine and matches the product, improve its ability to enforce the law and provide sufficient evidence to prove noncompliance by a violator. To reduce the financial burden of implementing such a system, jurisdictions could require the tobacco industry to bear the cost. Any tracking and tracing system should be compliant with Article 5.3 of the FCTC, and governments should ensure that the system is independent from the tobacco industry. While the objectives of fiscal markings and tracking and tracing systems are different, stamps increasingly contain tracking and tracing features.

- Implementing legal measures to prevent forestalling can limit the delay of a tax increase and its intended effect on revenues and consumer behaviour. Forestalling, stockpiling or front-loading occur when manufacturers or importers increase their tax-paid stock or oversupply the market by increasing production or imports before a tax increase in order to pay the previous lower rate.
- Periodic audits and controls can be implemented to increase compliance. These include cost audits, transfer price audits, price and market monitoring, consumer controls and cross-check controls.
- Import and export of tobacco products and manufacturing equipment should be allowed only for duly licensed natural persons or legal entities. The risk of loss of revenue can be mitigated by requiring a guarantee or bond that will be released only if payment of duties in another country is proven. No tobacco product should be allowed into a jurisdiction unless required fiscal markings (such as tax stamps or export labels) are affixed on the pack, according to the law. Tobacco products for export should bear a marking indicating that the product is destined for the export market. Exchange of information between jurisdictions on the movement of goods can also reduce the risk of evasion.

Non-invasive detection equipment (such as X-ray scanners) can be used at customs posts to detect contraband merchandise. A cheaper alternative is the use of dogs that are trained to detect cigarettes and other organic products. Many countries use both scanners and dogs to detect contraband tobacco products. Special physical control measures can also be applied to reduce contraband. Such measures include the separation of processing operations from the sealed storage of taxed and untaxed products. Within a country, mobile excise control units are helpful in verifying excisable goods as they are transported domestically. These units should be dispatched to important transport corridors, communication centres and areas of congestion, such as bridges, ferries and passes. Physical control operations require close coordination between police, border guards and other public services.

- Controls such as regulation and oversight are usually less strict in free zones and transshipment points. This can make free zones appealing to persons involved in illegal cigarette manufacturing or trade. Customs administrations should exercise their authority in free zones to effectively identify and fight illicit trade in tobacco products. Relevant measures include licensing, due diligence and recordkeeping for all operators within free zones, as well as implementing tracking and tracing regimes and removing exemptions from excise taxes. Other actions include the prohibition of intermingling of tobacco products with non-tobacco products in a single container or other similar transportation unit when the products are removed from free zones. Sale of tax-free or duty-free tobacco products to international travellers should be prohibited, as these sales erode the effects of tax and price measures aimed at reducing the demand for tobacco products and also adversely affect government revenues by creating a loophole in the tax structure.

Procedures after detection of illicit trade of tobacco products should be clearly defined. If smuggling or illicit trade is detected through audits, tracking and tracing systems, verification of declarations or border control, actions such as seizing and destroying smuggled and/or illicit tobacco and collecting due taxes must be taken immediately. It is also important that penalties and sanctions be sufficient to deter illegal activities. Low financial penalties may simply be paid as a cost of doing business while the illegal activity continues. The minimum penalty for consumers in possession of illicit tobacco products should be confiscation and destruction of the products found in their possession and required payment for the unpaid tax and duties on those products. Most countries have adopted legislation to combat organized crime and money laundering. Some countries are taking advantage of this type of legislation and using it to address illicit trade of tobacco as well.

In principle, administering tobacco taxes on tobacco products other than cigarettes is similar to administering them on cigarettes. The challenge for taxation of other products includes the lack of standardization of those products and sometimes large informal markets. Knowledge of the product and the supply chain greatly help to facilitate effective tax administration. The trade in raw tobacco and small-scale home production of RYO and other products such as bidis often takes place outside of monitoring and control systems. The best way to address this challenge is to enforce prior approval for purchase or sale of raw materials and a requirement to register, obtain an authorization or license all operators and growers handling raw tobacco.

In principle, adding new and emerging nicotine and tobacco products to an existing tax framework is not expected to impose significant costs. It is reasonable to expect that similar challenges will be faced in the collection of taxes on these newer products, as market players will attempt to use the current loopholes in tax regulation to avoid or evade taxes on these products whenever possible. However, challenges are expected to arise, as newer products involve rapidly changing technology, and their market dynamics are widely unknown. Furthermore, additional capacity may be required, since a country may need to identify new agencies or authorities, given the different characteristics of the taxable items and the tax base. Because the newer nicotine and tobacco products are widely purchased online, countries deciding to tax these products should draw up a proper implementation plan that includes rules on how taxes will be collected on imported products and online sales. Online cross-border sales are not permitted in some countries.

The elements of a good tax system include (1) proper resourcing of competent authorities sufficient for hiring the necessary staff to properly implement and enforce excise tax laws; (2) implementation of tax laws with integrity and with strict rules and regulations to detect corruption and for the punishment of both agency personnel and taxpayers who are engaged in corrupt practices; and (3) ensuring that the judicial system is honest and independent in fact and in perception. Disputes should be solved rapidly – not in years, as is the case in some countries.

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ANNEX 3.1 COMPOSITION OF TOBACCO PRODUCTS

To implement and enforce tobacco taxes in the most efficient way, competent authorities should be familiar with all of the components of tobacco products, including each of the raw materials used in their manufacture, production inputs and tobacco manufacturing machinery. Knowledge of the components of excisable products and machinery provides valuable information to identify activities at high risk for non-compliance, implement measures to ensure all taxes are paid and prevent illicit trade.

Nicotine, non-nicotine and tobacco products and their component parts

In most countries, the ministry of finance determines tax policy, including which tobacco products are taxed, while the ministry of health is responsible for product and use regulation. This could lead to different definitions of the same product, depending on which ministry is responsible for a given law or regulation. Wherever possible, a clear and common definition should be developed to simplify procedures and avoid confusion. Tobacco products take various forms, and not all may be regulated or subject to excise tax in a specific jurisdiction. In addition to cigarettes, other traditional tobacco products include smokeless tobacco – such as chewing tobacco, snuff and snus – as well as bidis and kreteks (clove cigarettes), which can be hand-rolled or manufactured, pipes, hookah or waterpipe and cigars.

Cigarettes

It is important to understand the materials and component parts of the tobacco products most commonly used in a particular country. Cigarettes are the most common and significant tobacco products in terms of volume and tax revenues in most jurisdictions.

A cigarette stick is composed of:

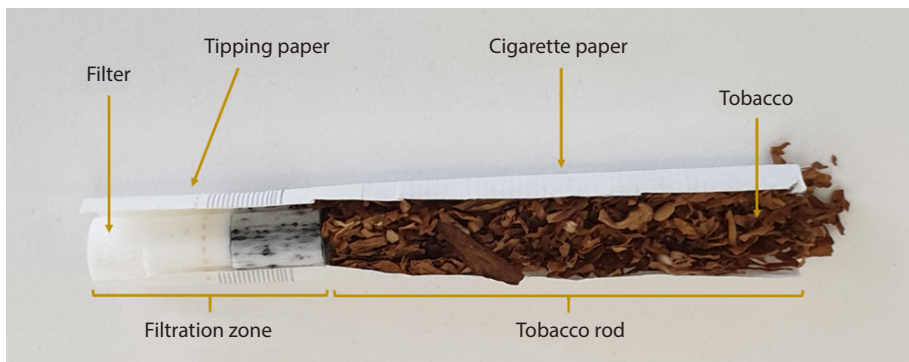
- the tobacco blend of various types of tobacco plant (leaves and stem and other plant parts) and additives (including flavours);
- the cigarette paper used to wrap the tobacco blend to make up the tobacco rod;
- the acetate filter that forms the white portion at the tip of a filtered cigarette, which is in direct contact with the smoker's mouth;
- the tipping paper or wraps around the filter; and
- the adhesive that secures the cigarette paper around the tobacco blend and the tipping (1).

Each manufacturer follows a specific process to produce cigarettes. Aside from the tobacco blend, manufacturers also vary the size of cigarette paper and tipping paper and the length of acetate filter used per stick (1). In some countries, these elements are standardized. In an ideal regulatory framework, a manufacturer would

be required to submit information on the specific process for each brand and variant of the tobacco product that it manufactures to the competent authorities as part of the licensing requirement (see section 3.4.3). Authorities could, for example, require manufacturers to submit this information in order to obtain a licence. The minimum requirements of the administration and the information that should be included could be laid down in law or lower regulation to ensure that authorities have the information in their possession for all licensed manufacturers. This information contributes to verifying whether a company is reporting the actual quantity of cigarettes manufactured for sale and sold cigarettes by comparing the amount of materials used for production and the quantities used per cigarette with the total number of manufactured cigarettes. Eventually, this information also contributes to validating whether the taxes are properly paid.

Figure A3.1 shows the component parts of a typical machine-made traditional cigarette.

Fig. A3.1 Component parts of a machine-made cigarette



Source: Author's compilation. Photo by Walter Klerx.

Not all parts of tobacco products are subject to the same level of control. According to Article 6.5 of the Protocol, five years following the entry into force of this Protocol, the MOP shall ensure at its next session that evidence-based research is conducted to ascertain whether any key inputs exist that are essential to the manufacture of tobacco products, are identifiable and can be subject to an effective control mechanism. On the basis of such research, the MOP shall consider appropriate action.

In addition to the component parts of tobacco products, materials needed for packaging a specific number of sticks into a pack of cigarettes, usually 20 per pack, can be monitored. These materials include the foil paper, the package paper (which could bear the brand name, design and health warnings), the fiscal marking (if required) and the plastic or cellophane wrap. A fixed number of packs of cigarettes,

normally 10 packs, are packed into cartons, also called reams. These cartons are usually made of soft paperboard or cardboard, possibly with branding, and are wrapped in plastic wrap or cellophane. Fifty cartons are packed in master cases, which are made of sturdier and thicker paperboard and stacked on pallets (usually 50 master cases to a pallet). An effective regulatory framework would require manufacturers and importers to provide information to the competent authorities on packaging and design, as well as the number of sticks per pack, carton and master case.

Prior approval for purchase or sale of materials used in the cigarette production process can also be required. In the Philippines, suppliers of such raw materials, including those providing tobacco papers and filter components, are required to have a licence (2). In some of the Member States of the EU, raw tobacco is also subject to fiscal and legal requirements. For example, in Slovakia and Poland, raw tobacco can be handled only by authorized operators. While authorized operators do not have to pay excise duties on raw tobacco, if raw tobacco is detected by an unauthorized operator, excise duties will be due. Hungary, Italy and the United Kingdom require registration or authorization for all operators and growers handling raw tobacco (3).

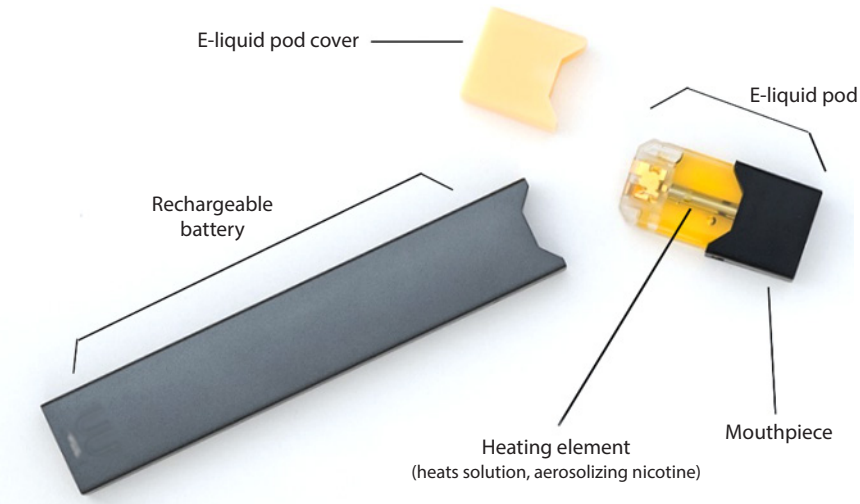
In addition to knowing the quantities of inputs required to produce a specific amount of a regulated product (e.g. cigarettes), the competent authority also needs to understand the supply, manufacturing and distribution chains to be able to properly monitor, regulate and determine whether taxes have been paid (see also Fig. 3.3).

Novel and emerging nicotine, non-nicotine and tobacco products

In recent times, new products have been introduced to several markets, namely, ENDS, ENNDS and HTPs.

ENDS usually comprise a nicotine-containing e-liquid but do not contain tobacco. ENNDS are essentially the same but do not (ostensibly) contain nicotine. The WHO COP requested the Convention Secretariat to invite Parties to monitor and report on scientific, regulatory and market developments such as initiation, cessation, advertising and promotion of ENDS and ENNDS. Furthermore, the COP requested WHO to report on the development of methods by regional and international standards-development organizations for the testing and measuring of contents and emissions of these products (4).

There are different types of e-cigarettes – the most common type of ENDS and ENNDS – and currently there are four generations of products. However, they can be divided into two broad categories: open systems and closed systems. Both types of e-cigarette use a wick and a heat source to generate an aerosol. The wick is saturated with e-liquid, and a microprocessor is used to control operations (not all include this). Some e-cigarettes also have an LED light to imitate the burning end of a conventional cigarette (5). Fig. A3.2 presents examples of open and closed systems.

Fig. A3.2 Examples of open and closed systems of ENDS/ENNDS products**Open ENDS/ENNDS system (e-cigarette)****Closed ENDS system (e-cigarette)**

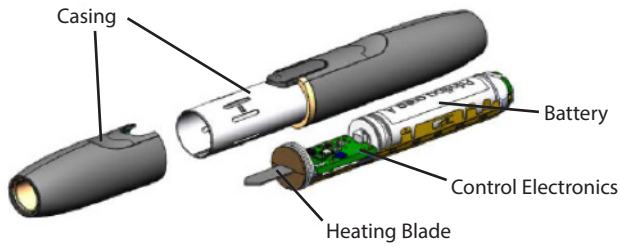
Source: (6).

Unlike ENDS/ENNDS, HTPs do contain tobacco. HTPs produce aerosols containing nicotine and toxic chemicals when tobacco is heated or when a device containing tobacco is activated (7). HTPs are composed of two elements: the sticks or pods that contain the tobacco and the device used to heat the tobacco. Both are necessary for the product to be used. Fig. A3.3 shows an example of a heated tobacco product. HTPs are tobacco products and are therefore subject to the regulatory measures contained in the WHO FCTC.

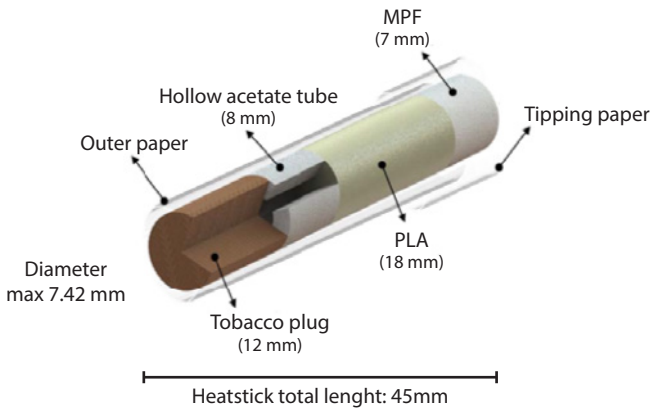
Fig. A3.3 Components of an HTP



Holder:



Tobacco stick:



Note: PLA: polylactic acid, MPF: mouthpiece filter.

Sources: (8-9).

More information on tax administration of other tobacco products is presented in section 3.5.

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ANNEX 3.2 EXAMPLE OF FORESTALLING AND COUNTERMEASURES

This example is hypothetical but inspired from the situation in the Philippines. The amounts and prices have been altered, however, and it is assumed that the normal inventory kept by a tobacco manufacturer is two months.

The excise tax imposed on a pack of cigarettes in the current year is US\$ 3.00; it will be increased to US\$ 3.30 at the beginning of the new fiscal year (January in this example). The monthly production of Brand Y cigarettes of company X, which it declares for tax purposes, is as follows:

MONTH OF THE CURRENT YEAR	PACKS OF CIGARETTES
January	10 000 000
February	10 500 000
March	9 900 000
April	11 000 000
May	10 200 000
June	10 600 000
July	9 700 000
August	10 100 000
September	9 900 000
October	10 100 000
November	20 000 000
December	25 000 000

Since the normal inventory is two months, the quantity in the two months prior to the implementation of the new excise tax rate is disregarded. The shelf life of tobacco products is approximately six months. The average of the six months prior to November is computed to obtain the quantity presumed to be produced or imported if there was no tax increase. The quantity from May to October (inclusive) divided by 6 is 10 100 000 packs. Thus, any quantity produced beyond 10 100 000 packs for the months of November and December (the months prior to the implementation of the new tax rate) is assessed using the new tax rate.

In this example, 10 100 000 of the packs produced in November will be taxed at the old rate of \$3.00, and 9 900 000 packs will be taxed at the new rate of \$3.30. For December, 10 100 000 packs will be taxed at \$3.00, while 14 900 000 packs will be taxed at \$3.30. Without imposing these measures, the government would have been deprived of the excise tax increase on 24 800 000 packs. In addition, the effect of the increase on prices and consumers would have been delayed by approximately two months.

In countries using tax stamps, the withholding of the issuance of stamps is a well-known approach to counter forestalling. Another practical solution is to allow the competent authorities to request advances from the industry to cover revenue shortfalls, provided there is a legal basis for such requests.

CHAPTER 4. Political economy

As with any proposed government action, policy-makers need to navigate the political environment of tobacco taxation at every stage of policy development, implementation and administration. While every country's distinct history, culture, systems and structural forces shape its unique political landscape, there are some universal themes when it comes to tobacco control and particularly tobacco taxation. These themes boil down to the distribution of money, power and resources. The tobacco industry, as both a political and economic player, understands these themes well.

The industry has been effective in using principles of the political economy of tobacco taxation in its efforts to block important advancements in tobacco control. Nevertheless, the savvy policy-maker can see through the industry arguments by considering who benefits from industry-favoured policy measures and interventions. The industry's challenges to tobacco tax policies can be organized into the five categories of SCARE tactics. This chapter provides a road map to help policy-makers navigate the political economy of tobacco taxation through each of these themes.

The first five sections dissect the tobacco industry framing of each issue, pinpointing the flaws in each argument, identifying the extent to which each concern has merit and suggesting how a responsible government can address each one. These discussions are supported by unbiased evidence from independent, peer-reviewed research, as well as specific examples from country experiences. Sections 4.1 through 4.5 on SCARE tactics will equip policy-makers with the tools they need to proceed with confidence that their tobacco tax policy – developed and implemented following the guidelines spelled out in this technical manual – will bring about the greatest health and economic benefits for their constituents, regardless of industry attempts to thwart them. Section 4.6 further buoys policy-makers' efforts to ensure the beneficial impacts of their policies, as it describes how earmarking can improve the political economy of tobacco taxation by funding programmes and initiatives that promote and support the health and well-being of the population.

4.1 SCARE TACTIC 5: SMUGGLING AND ILLICIT TRADE

4.1.1 INTRODUCTION

The tobacco industry and its allies argue that tobacco tax increases will inevitably result in an increase in the illicit trade in tobacco products (1–2). They claim that higher tax rates and higher prices strengthen the financial incentives for criminal enterprises to supply cigarettes from lower-tax jurisdictions, boost domestic tax evasion and encourage smokers to seek cheaper illegal cigarettes. The industry also challenges the argument that tobacco tax hikes increase government revenue by claiming that the presence of an illicit tobacco market will actually reduce revenue collection following a tax increase. More recent versions of this argument – adapted to address public health concerns about tobacco use – claim that illicit market growth also offsets reductions in smoking prevalence that would otherwise be brought about by tobacco tax increases. In summary, the tobacco industry and its allies claim that raising tobacco taxes are ineffective – and even counterproductive – because they are circumvented by illicit markets, which prevents the government from achieving its public health objective and reduces rather than increases tax revenues.

When a country considers a proposal to increase tobacco excises, the tobacco industry and its allies frequently make exaggerated claims about the size and scope of illicit tobacco trade in that country. Opponents of tobacco tax increases argue that price differentials are the exclusive – or at least the dominant – cause of illicit trade. Influenced by this fear-inducing faulty diagnosis, tax authorities frequently find it difficult to make decisions about tobacco taxes. However, the industry diagnosis always contains the same erroneous elements. First, the illicit trade in a country is frequently less than the industry portrays it to be, and the country's tax enforcement policy towards tobacco products is rarely unique or in any way different from the norm in the country (3). Second, the scale of illicit trade in tobacco is not exclusively or even primarily determined by tax or price differentials. Typically, it results from a set of governance problems characterized by government corruption, weak regulatory frameworks, poor tobacco tax administration, ineffective criminal justice systems, lack of dissuasive sanctions and/or weak norms regarding participation in illegal and informal markets (4–7).

This section provides guidance for tax and other relevant authorities on how to respond to the tobacco industry SCARE tactic that increasing tobacco taxes will lead to smuggling and illicit trade in their countries. Tax authorities need to know the nature, causes and extent of illicit trade so that they can define the problem properly and formulate an appropriate response. This chapter addresses the available tools for better defining and understanding specific illicit trade problems, particularly tools that facilitate independent assessment of the magnitude of that trade. Improvements

to governance within the realm of tax authorities – such as best practices in tobacco tax administration and policies to improve the effectiveness of fiscal regulations or norms regarding participation in informal and illegal markets – are discussed in Chapter 3.

This section first describes the nature of the illicit tobacco trade to highlight some of its complexities and identify complementary policies for tackling the problem. Next, evidence that calls into question the link between illicit trade and high prices or tax rate changes is discussed. Finally, to help tax authorities assess their own situation, several different methodologies are presented to estimate the scope of the illicit tobacco trade and to evaluate estimates of that trade for a particular country or tax jurisdiction.

4.1.2 THE NATURE AND EXTENT OF THE ILLICIT TOBACCO TRADE

The WHO FCTC defines illicit trade as:

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 (8).

Non-duty-paid tobacco products found in a jurisdiction (i.e. through littered-pack surveys) could be the result of either of two related but distinct activities: tax evasion and tax avoidance. Tax evasion is a set of unlawful actions seeking the non-payment of tobacco taxes and duties, whereas tax avoidance comprises legal actions with the purpose of avoiding payment of some or all taxes, such as bringing an amount of cigarettes up to the legal allowance from a lower- into a higher-tax jurisdiction. Tax avoidance is not illegal and is therefore not considered part of illicit trade in tobacco products.¹

The focus of this section is on tax evasion activities, which can occur in the movement across borders or in domestic production and distribution. When tax evasion happens across borders, it is known as smuggling (9) and can be done on a large scale or a small scale. Tax evasion in the domestic market can be partial, when licensed and authorized producers or distributors comply with only part of their tax obligations, or total, when the whole production and distribution system is illegal and out of sight of tax administrators (5, 10–14).² Large-scale tax evasion schemes can be run by different types of producers and their associated distributors, such as the transnational tobacco companies (TTCs) and their national subsidiaries,

1 Tax avoidance practices –common among states in the United States and countries in the EU – are not analysed in this section.

2 Tax evasion is normally considered as illicit manufacturing in the literature (14).

other local tobacco companies producing their own brands and illegal factories that normally counterfeit other brands or produce illicit brands.

Large-scale smuggling involves, for example, taking advantage of tax-free zones and mislabelling shipping products prior to or during transit (11) or using sophisticated clandestine networks. This form of tax evasion is systemic and can be carried out by TTCs (12), by local companies producing in countries with low tax enforcement, e.g. Paraguay (15) that feed neighbouring countries and regional illicit hubs through a network of clandestine distributors (15) or by companies located in tax-free zones like Jebel Ali and Dubai in the UAE (16) or such zones in Russia or Cyprus (17). The origins, routes and quantities of large-scale smuggling frequently change as affected countries or markets react by strengthening enforcement and seeking bilateral cooperation with the jurisdictions of origin. For example, the 2013 comprehensive strategy of the EU (10) enhanced bilateral cooperation with major source and transit countries of illicit cigarettes coming to Europe, including Russia, Belarus and Ukraine. These agreements improved day-to-day cross-border cooperation, reduced illegal flows and introduced gradual tobacco excise rate adjustments in those three countries to bring them to European levels.

Small-scale smuggling (also known as ant smuggling or bootlegging) is the cross-border trafficking of cigarettes in quantities that are larger than the allowable limits (e.g. two cartons) but smaller than large shipments (e.g. truckloads, cargo containers), normally for the purpose of selling at a profit (11). This type of illicit trade may exist in places where there are opportunities within neighbouring tax jurisdictions. For example, small-scale smuggling is commonly done by individuals living in French and German provinces near lower-taxed countries (e.g. Belgium, Luxembourg, Switzerland, Spain, Poland and Czechia) (18).

Counterfeiting is a form of illicit manufacturing that involves the production of tobacco products (including packaging and tobacco filler) without the approval of the trademark holder (13).

Another product of illicit manufacturing is so-called cheap or illicit whites. Cheap whites are branded (e.g. Jin Ling) or unbranded cigarettes that are legally or illegally produced³ and knowingly sold in the illicit market (17). Cheap whites are not usually produced by TTCs (17, 19).⁴ They are produced by small tobacco production companies in one country and often sold in illegal markets of neighbouring

3 Ross et al. (17) analysed this issue and found that the sale to the first purchaser is usually legal. Their analysis covers the production in free zones (i.e. in the UAE, Russia and Cyprus) and production exported from Viet Nam, Indonesia and China. In those cases, there is no need to make the first sale illegally. However, cheap white production in Paraguay is sold to domestic distributors, and most of those sales are completely illegal.

4 Ross et al. (17) and Gilmore et al. (19) identify some cheap white brands sold by TTCs, such as President (PMI), produced in Ukraine, and Esse (Korea Tobacco & Ginseng Company, KT&G), produced in Indonesia.

countries. For example, in Paraguay, cheap whites are produced on a large scale by a few companies under the guise that they are marketed domestically, but a large share is smuggled into Uruguay and Brazil (4). Iglesias et al. (20) showed how TTCs' cheap brands were illicitly shipped through Paraguay to be sold in the Brazilian and Argentine markets in the 1990s. This contributed to increased production of cheap whites in Paraguayan firms, which continued the illicit business even after Brazilian legislation obstructed the illegal activity of the TTCs.

Domestic tax evasion is a pervasive phenomenon, particularly in LMICs. Partial tax evasion in tobacco products can be found at any level of tax rates or prices and is generally the result of defective legislation or weak tax enforcement.⁵ Complete or total tax evasion occurs when producers and distributors are clandestine or when there are serious institutional challenges to tax enforcement between two tax jurisdictions, such as between the United States and Native American Reservations. Evidence of illicit manufacturing has increased in recent years in several places in the world, including the EU (10) and Brazil (21).

TTCs were predominant in illicit trade activity until the end of the 20th century, and even with the entrance of new actors into the illicit business, TTCs have not entirely exited. Gilmore et al. (22) analysed industry-funded data and seizure data and concluded that TTCs are still involved in illicit trade in Europe, despite the Anti-Contraband and Anti-Counterfeit Agreements (the "Agreements") signed between the four TTCs and the EU (23).⁶ Using industry-funded data, Gilmore et al. show that 58% of illicit EU cigarettes can be attributed to the four main TTCs. When seizure data are used, 69% to 73% of illicit EU cigarettes can be attributed to these firms (22).

It is always difficult to assess the extent of the global illicit tobacco trade because of its illegality, its global and changing nature and problems with data collection (24). Before the 21st century, when TTCs were almost unique actors in the large-scale smuggling of well-known cigarette brands, the difference between global exports and imports of cigarettes could provide a good approximation of the size of this problem globally (7). However, with the growth of illicit manufacturing in general, the manufacturing of cheap whites and the illegal movements of those products

5 This occurs when licensed and authorized producers underreport actual quantities and sell the non-duty-paid produced quantities through illegal channels. It can also include instances when producers do not report quantities at all, as in many ad valorem systems of LMICs.

6 From 2000 on, the European Commission and 10 Member States launched court cases regarding smuggling and money laundering against several TTCs. To end the court cases, the Anti-Contraband and Anti-Counterfeit Agreements were signed, which required the TTCs to exercise stringent control over their supply chain (through tracking and tracing, due diligence and anti-money-laundering and reporting obligations), share operational intelligence with Member States and the EU and pay penalties for seizures, as well as annual payments over a period of 12 years. The agreement with PMI has ended, the one with JTI will end in 2022 and the others with Imperial Tobacco and BAT will run until 2030 (23).

over the past two decades, trade statistics are no longer as useful as they were in the past. Joossens et al. (25) tried to estimate the size of the global illicit cigarette market by adding different types of national estimations prepared around 2007. They found that the estimated size was 657 billion cigarettes per year, or 11.6% of the global cigarette market. According to Joossens et al., illicit trade costs governments US\$ 40.5 billion in tax revenue worldwide, and eliminating illicit tobacco trade would recover US\$ 13 billion in immediate revenue in high-income countries and US\$ 18.3 billion in LMICs.⁷

Descriptions of the types of illicit trade are useful for developing the first component of a strategy to fight it: assess the nature and size of the problem. Table 4.1 presents all the main components of a strategy to fight illicit trade. To make progress in this first component – knowing the problem – authorities could use and adapt existing instruments of health surveillance or seek partnerships with academia and independent specialists to investigate the issues involved, using different methodologies (see subsection 4.1.4 and Annex 4.1 on methodologies to assess the nature and size of the problem). Knowing the nature of the problem requires the cooperation of different government actors – for example, to investigate both the financial and criminal operations of organized crime behind the illicit trade. The gathering of qualitative information on the nature of the illicit trade should start simultaneously with the statistical work of measuring the magnitude of the problem.

Table 4.1 Components of a strategy to fight the illicit tobacco trade

1. Assess the nature and size of the problem

Use and adapt existing health surveillance and other existing national surveys to assess the problem

Seek partnerships with academia and independent specialists to find ways to rigorously study illicit trade

Use financial and police investigations to identify and fight organized crime operating in illicit trade

2. Start identifying and implementing appropriate country-specific policies and strategies to address illicit trade

Improve tax and customs administration to close the legal and administrative loopholes facilitating illicit trade

Implement other appropriate policies to deal with country-specific problems

3. Become a Party and/or implement the Protocol to Eliminate Illicit Trade in Tobacco Products

Adapt the Protocol supply-chain control obligations

Adjust national penalties for illicit trade offences

Seek and build international cooperation

⁷ The WCO publishes an Illicit Trade Report annually, with the main characteristics and trends of illicit flows in key products, including tobacco, using data based on customs seizures.

Methodologies available to estimate the nature and size of illicit trade are discussed in subsection 4.1.4. This is the first step for dealing with SCARE tactic S. Chapter 3 discusses at length the relevant tax administration measures and best practices to minimize opportunities for illicit trade in tobacco products. Table 4.2 presents examples of appropriate policies and strategies targeted to address specific types of illicit trade in addition to the best practices described in Chapter 3.

After completing the first step of this strategy, tax, health and justice authorities should discuss how to face country-specific problems, considering not only tax and customs administration measures but also social, law enforcement and international cooperation policies and strategies.

Table 4.2 Suggested policies and strategies to address country-specific illicit trade problems

MAIN TYPE OF ILLICIT TRADE IN THE JURISDICTION	PROBLEMS	POLICIES/STRATEGIES TO USE
Bootlegging	Neighbouring low-tax jurisdiction	Bilateral negotiations to harmonize tobacco tax systems
	Difficulty of controlling people's movements in countries with extensive land borders	Identify and establish suitable social protection or employment policies for targeted populations in border regions
	Extensive land border with multiple accesses	Bilateral cooperation with law enforcement and border control forces, monitoring of access routes to main consumption markets
Large-scale smuggling from neighbouring jurisdiction	Neighbouring low-tax jurisdiction and difficulties in controlling borders	Bilateral negotiations to harmonize tobacco tax systems and bilateral law enforcement cooperation
	Producers and distributors in the lower-tax jurisdiction aiming to supply the high-tax jurisdiction	Bilateral cooperation to harmonize tax systems and control producers and distributors in the origin country, create conditions for legal exports and taxed imports
Large-scale smuggling from a third country or tax-free zones	Producers and distributors aiming to supply non-duty-paid tobacco products wherever possible	Customs and other forms of international cooperation to control and monitor exports from identified areas
Domestic tax evasion	Existence of many small informal or semi-formal producers	Encourage business concentration through producer associations and cooperatives, create incentives for formalization and establish licensing rules and basic electronic information systems for raw material and production

Underreporting from formal producers	Improve tax administration with policies such as basic electronic information systems for inputs and production, establish neutral procedures to verify production, improve audit systems, increase third-party information on inputs and production of tobacco products
Clandestine factories	Law enforcement investigation of commercial associations with raw-material and machine producers and distributors

Governments should try to identify the incentives and governance problems that encourage and allow illicit trade movement inside their country. As seen in Table 4.2, the design and implementation of policies to deal with those problems do not depend exclusively on tax and customs authorities; they also depend on the efforts of the police and law enforcement, the Justice Department and the judicial apparatus. In other words, a great deal of coordination and consultation among different types of government bodies and expertise is needed to produce an adequate response. It is also clear from Table 4.2 that domestic tax evasion by formal producers can be tackled by tax authorities and is mainly related to the supply-chain-control provisions of the Protocol.

The Protocol (26) builds upon and complements Article 15 of the WHO FCTC, which addresses means of countering illicit trade in tobacco products as a key aspect of a comprehensive tobacco control strategy. The Protocol is a blueprint of measures to deal with this problem, and its provisions should be part of any strategy for fighting the illicit market. It is a legally binding treaty in its own right that entered into force on 25 September 2018. As described in detail in Chapter 3, the Protocol has three main lines of action: supply-chain controls, recommendations on how to treat unlawful conduct related to the illicit tobacco trade and suggested mechanisms to seek and build international cooperation to fight that trade. Countries can start implementing Article 15 of the WHO FCTC and the appropriate policies or strategies recommended by the Protocol even before acceding to it, selecting those most suitable to the nature and extent of their particular problem. Such transitional work will facilitate the eventual implementation of the Protocol, because any plan to correct loopholes in tax and customs practices will bring government authorities closer to the best practices recommended in the Protocol.

4.1.3 DETERMINANTS OF TAX EVASION: THE ROLE OF PRICE LEVELS

The argument that price and tax rates are the main determinants of the illicit tobacco trade has persuaded some governments (e.g. Uruguay and Georgia in the past) to avoid policies that may lead to cigarette price increases (e.g. excise tax rate increases) (4).

Some governments (e.g. Canada in 1994, Brazil in 1999 and Pakistan in 2017) (20, 27) have even reduced tax rates in attempt to reduce the illicit trade.

The wider scholarly literature demonstrates that illicit trade is not a monocausal phenomenon (7) but is the result of many factors, most of them related to governance issues. Government corruption, weak regulatory frameworks, poor tobacco tax administration, ineffective criminal justice systems, weak norms regarding participation in illegal and informal markets and conflicts between neighbouring countries (5) all contribute to the existence and growth of the illicit tobacco trade.

It is difficult to isolate the role of price from each of the other factors because (1) obtaining prices and quantity measures of illicit trade is inherently challenging; (2) in most countries, there are many cigarette brands, and prices vary between and even among brands; and (3) there is a lack of good measures to deal with nonprice factors affecting illicit trade, such as government corruption and ineffective criminal justice. These constraints make it challenging to develop rigorous empirical evidence about how price and other factors affect illicit trade. Despite these fundamental challenges, the economic literature has produced credible evidence that price is always only one factor – and often not the most important factor – determining the extent of illicit trade.

Many econometric studies about the influence of price and other factors have focused on cross-border shopping (or small-scale bootlegging from low- to high-tax jurisdictions), given the availability in the United States and Europe⁸ of sales data for low- and high-tax jurisdictions, classified in a convenient way by geographical zones – i.e. close to or far from the borders. Those studies attempted to explain the illicit trade flows or the relatively higher sales in low-tax jurisdictions as a function of price and tax differentials between the lower-tax and surrounding higher-tax jurisdictions, after controlling for other important factors affecting cross-border sales such as proximity to borders and levels of corruption (6, 7, 11, 28).⁹ The main conclusion of the studies is that illicit trade flows are not linked solely to price (29). Some show a significant effect of price differentials together with other factors, but others do not find significant price differential effects. The important policy implication of these analyses is that decreasing tobacco tax rates and real prices in higher-tax jurisdictions could have minimal or no effect on illicit market shares.¹⁰

8 This was a traditional strand of the literature in the United States on trade among states, and to a lesser extent in European countries, most of which used conventional but inaccurate illicit trade measurements.

9 Recently, PMI-Altria financed some studies of factors affecting cross-border sales. One of those studies, Prieger and Kulic (28), criticized Merriman et al. (2000) (9) and arrived at the conclusion that in cross-border shopping, price differentials are important for determining the magnitude of illicit trade.

10 Brazil decreased tax rates and real prices at the beginning of the 21st century to fight illicit trade coming from lower-tax jurisdictions. After this action, however, the government lost revenues, and the size and scope of illicit trade remained unaltered, according to industry sources (20).

Observational and case studies provide information that may improve public policy even when they are unable to produce compelling evidence of causal relationships. Some observational studies have correlated price levels with illicit market shares, using large samples of countries. Joossens et al. (25) found that countries with high taxes and prices normally have lower shares of illicit trade than countries with lower tax shares and prices. In their sample, high-income countries generally have relatively high cigarette prices and tax shares, but their favourable results (i.e. lower levels of illicit trade) are related to effective tax administration and lower corruption levels. In contrast, LMICs generally have lower prices and tax shares, along with significant illegal market shares. Joossens et al. attribute difficulties in fighting illicit trade to weak tax and customs administrations and, in most cases, institutional and legal challenges (25).

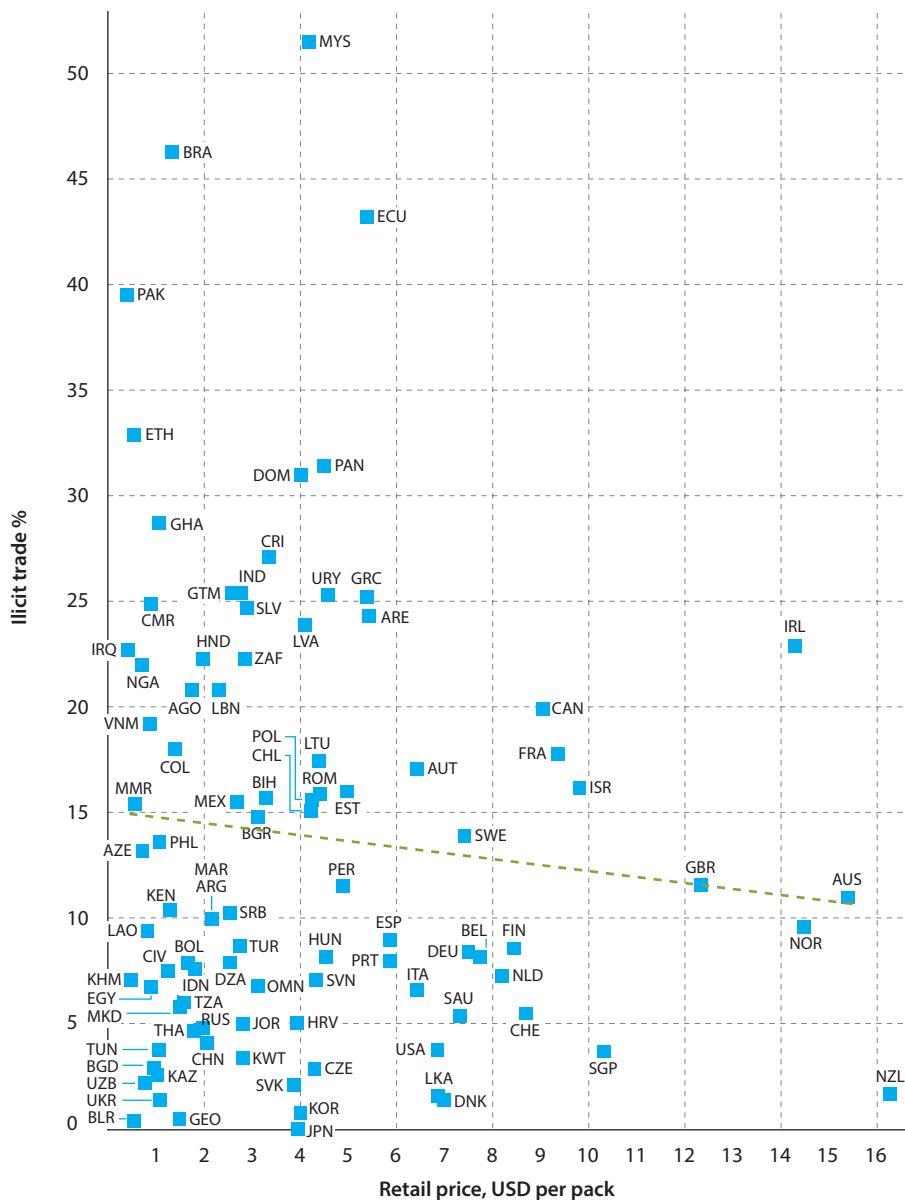
Figure 4.1.1 illustrates the relationship between price and illicit trade, using the price (in US\$) per pack of the most-sold brand of cigarettes and the estimated level of illicit trade for 94 countries in 2018.¹¹ There is no apparent unique association between the two variables. Running a linear regression with retail price as the explanatory variable and share of illicit trade as the dependent variable shows an inverse, but not statistically significant, relationship between price and illicit market share.¹² Figure 4.1.1 illustrates some particular cases:

- Many countries with low prices (i.e. lower than US\$ 2 per pack) have the highest levels of illicit trade in the sample, e.g. Brazil (BRA) (\$1.33 and 46.3% illicit share), Pakistan (PAK) (\$0.39 and 40%), Ethiopia (ETH) (\$0.55 and 32.9%), Ghana (GHA) (\$1.06 and 29%) and Cameroon (CMR) (\$0.89 and 25%).
- In contrast, many of the countries with prices between US\$ 4 and \$8 – which could be considered high enough for financial incentives to operate – have illicit trade shares of less than 10% of total consumption. These countries include the Republic of Korea (KOR) (\$4.02 and 0.8%), Czechia (CZE) (\$4.31 and 2.9%) and Sri Lanka (LKA) (\$6.89 and 1.6%).
- All countries that have very high prices – higher than US\$ 8 – except for Ireland, register illicit trade shares below 20%. These countries include France (FRA) (\$9.39 and 17.8%), Switzerland (CHE) (\$8.71 and 5.5%), Singapore (SGP) (\$10.35 and 3.7%) and Norway (NOR) (\$14.51 and 9.6%).

11 National estimates of the magnitude of illicit trade are controversial. The tobacco industry's numbers overestimate the problem and are based on questionable methodologies. Estimates with a rigorous and transparent methodology are not available for a large sample of countries for the same year. In order to compare price levels with illicit market shares, Euromonitor's estimations of illicit market share were selected, for two reasons: they are comparable estimates for a large sample of countries in a given year, and no one could argue that they are biased towards tobacco control's points of view. The use of Euromonitor data does not imply that WHO fully agrees with all the details and methodologies used to obtain them.

12 Other factors must be taken into account to transform this observational analysis into a rigorous analysis of cause and effect.

Fig. 4.1.1 Share of illicit trade versus retail price of the most-sold brand of cigarettes in US\$, by country, 2018



Note: The extent of illicit trade in cigarettes is measured by Euromonitor as the estimated quantity of illegal cigarettes consumed in a country divided by the estimated total consumption of cigarettes in that country.
Sources: (27, 30).

As indicated in numerous studies and analyses of illicit trade in tobacco products (4–5), the most effective way to tackle the problem is not to forgo tax increases but rather to strengthen the capacity to fight the trade. Therefore, it is important to consider the relationship between good governance and illicit trade. The more capacity a country has to counter illicit trade in general, the lower the level of that trade will be.

An index compiled by the Economist Intelligence Unit (EIU), the Global Illicit Trade Environment Index, measures countries' structural capacity to fight illicit trade overall. The EIU indicator is a combination of four indicators or categories designed to assess countries' performance in those areas; the closer the overall indicator is to 100, the better the country's capacity to fight illicit trade. The four categories are:¹³

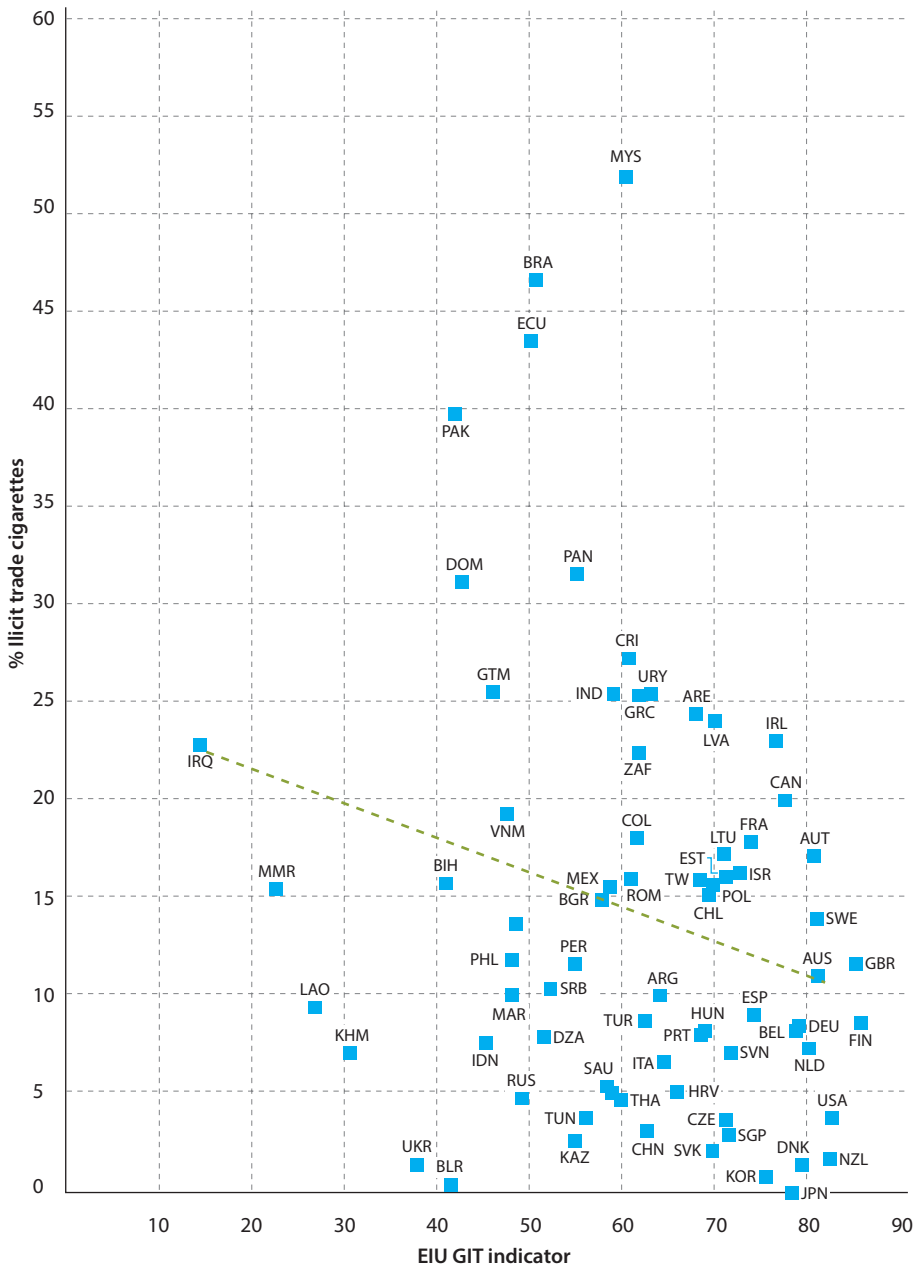
1. government policy, which measures the government's commitment to proactively monitoring and preventing illicit trade;
2. supply and demand, which measures the extent to which the domestic environment discourages or encourages supply and demand for illicit goods;
3. transparency and trade, which measures transparency and the degree of governance applicable to free-trade zones and transshipments; and
4. customs environment, which measures how effectively customs services facilitate legitimate trade while at the same time preventing illicit trade.

Figure 4.1.2 illustrates the relationship between the EIU indicator and the estimated level of illicit trade in cigarettes in a set of countries. There is an inverse and statistically significant relationship between the indicator and the estimated level of illicit trade in cigarettes. This suggests that as the capacity to fight illicit trade in general increases, the illicit trade in cigarettes falls.¹⁴

13 For more details about this indicator, visit <http://illicittradeindex.eiu.com/>.

14 The association was significantly different from zero at a 90% confidence level, using a linear regression between the two variables.

Fig. 4.1.2 Share of illicit trade versus the EIU indicator in 70 countries, by country, 2018



Sources: (30–31).

Rigorous independent research has established that despite the challenges of illicit trade, taxation of tobacco products is an effective public health intervention that substantially reduces tobacco use and generates government revenue (5). Further, when cigarette taxes increase, governments generate higher revenue and consumption is reduced (32–33). However, ineffective tax administration can allow illicit trade to grow and can undermine some of the benefits of tobacco taxation by making cheaper cigarettes available. For example, the average street price of smuggled cigarettes in Malaysia is 55% lower than its legal tax-paid equivalent (34). Illicit tobacco trade also reduces government tax revenue and may increase health costs associated with smoking and costs associated with policing.

4.1.4 MEASURING ILLICIT TRADE IN TOBACCO PRODUCTS

The magnitude of illicit trade is a powerful argument in tax policy discussions, and for this reason the tobacco industry funds estimation of illicit trade in countries or regions of particular interest to itself (i.e. Project Sun and Project Star in the EU and Oxford Economics in East Asia). However, a recent systematic review of industry data on illicit trade finds substantial methodological weaknesses in industry-commissioned reports (24). Furthermore, Blecher et al. (35) argue that industry-funded studies tend to systematically overestimate the size of illicit trade to persuade authorities to abandon tobacco tax reforms. Independent researchers have also uncovered inconsistencies in tobacco-industry-funded estimates (36).

Some examples of inflated industry-linked illicit trade estimates are given in Table 4.3, which compares peer-reviewed and independent studies with estimates funded by the tobacco industry. Because some countries have several industry estimates from different sources or years, Table 4.3 presents the estimate included in the article that published the independent study, because it was considered as representative and adequate to illustrate the overestimation. In all cases, the industry estimates exceed those of the independent studies.

Measuring the scale of illicit trade can be a daunting task for governments because different methods are employed by independent researchers, governments and the tobacco industry. Nonetheless, it is worth investing in these studies because they drive policy discussions and can be used to evaluate the impact of policies (e.g. tax increases, plain packaging and health warnings).

Table 4.3 Illicit market share estimated in independent studies compared with estimates in tobacco-industry-funded studies

COUNTRY	SIZE OF THE ILLICIT MARKET AND YEAR OF THE ESTIMATION – INDEPENDENT STUDIES	SOURCE OF THE INDEPENDENT STUDY	SIZE OF THE ILLICIT MARKET AND YEAR OF THE ESTIMATION – INDUSTRY-FUNDED STUDIES	INSTITUTION RESPONSIBLE FOR THE INDUSTRY-FUNDED STUDIES
Colombia	3.5% of the total market in five cities, 2016	Maldonado et al., 2018 (37)	13% of the total market, 2014	FND and INVAMER, 2015
Chile	16.3% of the total market in the Metropolitan Region of Santiago, 2017	Paraje et al., 2020 (38)	24.3% of the total market, 2017	Observatorio del Comercio Ilícito BATC, 2017
Brazil	28.8% of the total market, 2014	Iglesias et al, 2017 (39)	34%, of the total market, 2014	BAT public statement, 2015
Mexico	8.8% of the total market in eight major cities, 2017	Saenz de Miera Juarez et al., 2020 (40)	16.6% of the total market, 2012	Confederación de Cámaras Industriales, 2012

As shown in Table 4.4, methodologies to measure illicit trade can be grouped into three types: (1) direct measurement; (2) residual methods and (3) expert opinion (12). Direct measurements rely on evidence directly linked to actual illicit behaviour and pack observation; residual methods infer evasion based on theory and evidence about consumption and legal sales; and expert opinion distills information garnered from talking to individuals with the most direct knowledge of the tobacco market. Each method has advantages and disadvantages. No single method is unambiguously superior to others, but direct measurement and residual methods are more conducive to determining the size of the illicit market, whereas expert opinion could provide insight into the details of the market's operations.¹⁵

Table 4.4 presents the relative amount of resources and the degree of expertise required to implement each main measurement method, as well as the primary purpose, data collection characteristics, sampling features and unit of analysis. A brief description of each of the methods is presented in Annex 4.1. Merriman (11) and Ross (9) provide more expansive details.

There is no simple selection rule for deciding what measurement method to use. The major factors to consider when selecting a method or methods include (1) the nature and characteristics of the illicit trade problem (i.e. where and how the

¹⁵ In interviews with experts from the tobacco industry, provisions of Article 5.3 of the FCTC and its Guidelines need to be followed.

problem manifests and whether domestic tax evasion or illegal inflows of foreign brands or a combination of both predominates), (2) previously collected data, (3) available budget and (4) expertise of available analysts.

Available budget and staff skills are often the main restrictions that governments face. Therefore, Table 4.4 orders the measurement methods according to resources needed and available expertise. For example, residual methods and expert opinion can provide crude but useful estimates at low cost and require the lowest levels of technical sophistication. Another low-cost option for countries that employ population health surveillance surveys is to add questions to measure illicit trade, such as brand name, value and quantities of the last purchase. In contrast, the direct measurement approach often requires sophisticated research designs and expensive (and time-consuming) field research.

Table 4.4 Overview of resources and expertise needed and main purpose of measurement methods

METHOD	LEVEL OF RE-SOURCES	EXPERTISE	MAIN PURPOSE OF MEASUREMENT METHOD	DATA COLLECTION	SAMPLING	UNIT OF ANALYSIS
Seizures (D)	\$	Low	Identify trends in types of products, transportation methods, points of entry and brand names	Secondary data use	Non-probability	Shipments
Use of existing health surveillance surveys – self-reported consumption (D)	\$	Low, only additional questions	Size of illicit trade, adding or improving questions on brands, value and quantities of the last purchase	Additional primary data collection	Probability	Individuals
Gap analysis (R)	\$	Medium	Provides a measure of changes in illicit trade	Secondary data use	Universe	Nations
Econometric modelling (R)	\$	High	Estimation of price elasticity of substitution from tax-paid to illicit products	Secondary data use	Universe	Geography
Expert interviews (E)	\$	Low	Characteristics of the illicit trade	Primary data collection	Non-probability	Individuals
Smoker intercepts and pack observation surveys (D)	\$\$\$	Medium	Size and characteristics of illicit trade, probability-based sample to be representative of population	Primary data collection	Probability	Individuals

METHOD	LEVEL OF RE-SOURCES	EXPERTISE	MAIN PURPOSE OF MEASUREMENT METHOD	DATA COLLECTION	SAMPLING	UNIT OF ANALYSIS
Pack return and swap surveys (D)	\$\$\$	Medium	Size and characteristics of illicit trade, probability-based sample to be representative of population	Primary data collection	Probability	Individuals
Littered-pack surveys (D)	\$\$\$	Medium	Size and characteristics of illicit trade, comparability with industry estimation using empty-pack surveys	Primary data collection	Probability	Individuals
Covert purchases (D)	\$\$\$	Medium	Type of products and trade channels of illicit trade	Primary data collection	Probability	Geography
Self-report consumer surveys (D)	\$\$\$	High	Size and characteristics of illicit trade, probability-based sample to be representative of population	Primary data collection	Probability	Individuals

Notes: Universe includes total population; D = direct measurement, R = residual method, E = expert opinion. Scale for resource costs assuming a moderately sized study (e.g. a representative study of a region of several million): \$ (cheapest) – weeks of skilled labour hours; \$\$ (moderately expensive) – 1 to 2 months of skilled labour hours; and \$\$\$ (most expensive) – 6 to 12 months of skilled and unskilled labour hours.

A more detailed description of the different measurement methods is given in Annex 4.1. To further assist responsible authorities in deciding which method to select, Table 4.5 presents the key characteristics of each of the measurement methods, along with the main advantages and disadvantages of each. Countries may begin with methods that require fewer resources and less skills to obtain an overview of the problem. Seizures – which are a by-product of law enforcement efforts – provide a first step, and countries can analyse the information obtained (origin of the products, brands, location, etc.) and report the results to increase public awareness of the problem.¹⁶ Alternatively, countries can add questions related to illicit trade to existing and funded health surveillance surveys conducted regularly by health surveillance authorities and statistical authorities. In that way, cooperation in using existing measurement methods between health authorities – the tobacco control office and health surveillance unit – tax and customs authorities and the national

¹⁶ Seizures are useful for obtaining qualitative information about the illegal activity, but they have to be treated very cautiously in projecting the size of the problem. Countries may think they have a very large problem because they have competent authorities doing an extraordinary job at finding illicit goods. On the other hand, countries can have less-efficient authorities making few seizures, and in these environments, seizures tell nothing about the size and nature of the problem.

statistical office could be a starting point for identifying the nature and size of the illicit trade problem in the country.

Direct observation of packs has been increasingly implemented in many LMICs, through different types of surveys such as intercepts of smokers or retailers, pack return, littered-pack inspections and covert purchases of cigarettes. These activities have expanded the skills of independent researchers and academia and increased knowledge of these methods. Also, increasingly cheaper digital technologies allow interviewers to take pictures and record pack characteristics in direct observation surveys or in larger national self-report consumer surveys.

Table 4.5 Key characteristics, advantages and disadvantages of illicit trade measurement methods

METHOD	KEY CHARACTERISTICS	MAIN ADVANTAGE	MAIN DISADVANTAGE
Seizures (D)	Statistics of tobacco products confiscated by local and national authorities	Readily available from law enforcement agencies	May not provide a representative picture of the size and/or nature of illicit trade
Using existing health surveillance surveys to obtain self-reported consumption (D)	Adding or improving questions about brand names, quantities, prices, locale of purchase and other factors	Produces good estimates at national level	Self-reported data may be biased due to the social stigma of consuming illicit tobacco products
Gap analysis (R)	Compare self-reported consumption data with observed (usually administrative) data about tax-paid sales	When quality data are available, is simple and easily reproduced (providing for measurements over time) and explainable	Data on tax-paid sales and/or consumption are frequently inaccurate and in many cases do not provide information on the size of the illicit market, but only on changes over time
Econometric modelling (R)	Estimated according to the difference between tax-paid sales and predicted consumption given by the model	Because it is consistent with a long tradition of economic theory, empirical estimates can be evaluated	Requires high-quality data on a variety of important variables over a period of time and advanced econometric modelling expertise

METHOD	KEY CHARACTERISTICS	MAIN ADVANTAGE	MAIN DISADVANTAGE
Expert interviews (E)	Experts include researchers (e.g. in economics, criminal justice and public health), journalists, tax and enforcement specialists, product manufacturers and wholesalers	Useful for identifying the nature of and trends in the marketplace (e.g. venues where illicit cigarettes are sold, modes of entry), and the interviews can be useful for defining the method to assess the size of the illicit trade	Information obtained may not be generalizable, and expert knowledge may be outdated or limited by the experts' experience; also, experts often have strong biases
Smoker/retailer intercepts and pack observation surveys (D)	Examining the packs of smokers and cigarette retailers, convenience or probability-based sample	Is direct and objective, and smokers do not suffer from any value judgements	The difficulty of identifying areas representative of the tobacco use population and sampling important subpopulations such as elderly and immobile smokers, but household surveys could overcome sampling issues
Pack return and swap surveys (D)	Also a pack observation study using survey sampling techniques to examine smokers' pack characteristics	May decrease the stigma associated with traditional smoking surveys	In LMICs, survey distribution may be unreliable because of the mail delivery system
Littered pack surveys (D)	Also known as empty-discarded-pack surveys; publicly discarded packs bear characteristics (e.g. tax stamps, public health warnings) that indicate whether they are tax compliant	Yields estimates that are less likely to be biased from issues of social desirability, recall error and confidentiality	Significant budgets could be needed to employ field researchers to collect, code and analyse the data; surveys do not provide information about the smoker and the price paid
Covert purchases (D)	Uses covert purchases of packs and single cigarettes to gauge the availability of illicit cigarettes	Directly identifies sources of illicit cigarettes	It is difficult to create a sampling frame of retailers for illicit sources or to know what smokers are actually buying and how much
Self-report consumer surveys (D)	Surveys can be distributed to individuals or households, using various modes of distribution	Good estimates at national level	Self-reported data may be biased due to the social stigma of consuming illicit tobacco products

Notes: D = direct measurement, R = residual method, E = expert opinion.

Ultimately, when capacity allows, more solid estimates will need to be made using more than one methodology at a given point in time. Ideally, estimates will be made on a regular basis in order to assess the evolution of illicit trade over time and its possible connection to policy changes.

4.1.5 CRITIQUING STUDIES THAT MEASURE THE SIZE OF THE ILLICIT MARKET

Measuring illicit trade is a challenge for researchers, industry and governments, because the trade is, by definition, hidden from plain sight. Buyers and dealers sometimes go to great lengths to ensure that their participation in illicit activity is concealed. Over the years, researchers and government agencies have been increasingly interested in estimating the size of illicit markets and identifying effective interventions. As consumers of research, governments should critically examine available studies and evaluate them on their scientific rigor and methodological transparency. Measurement issues are particularly acute with respect to the illicit tobacco trade because it is a politicized topic. High estimates may raise questions about the tobacco industry's ability to control the supply chain, its involvement in illicit diversion, the impact of taxation policies and the effectiveness of enforcement strategies. While the industry has portrayed itself as taking an active stance in measuring and fighting illicit trade (e.g. Project Star, conducted by KPMG LLC but paid for by PMI, later followed by Project Sun), in the past it has used smuggling as a strategy to enter closed markets – for example, in China and Russia (19, 41). Governments should carefully scrutinize evidence about the illicit tobacco trade produced by industry or quasi-industry sources and are advised to seek alternative evidence. Quasi-industry reports are studies commissioned by the industry but published by private research companies (e.g. Ernst and Young, Oxford Economics) (11).

Characteristics of good analyses

One of the main characteristics of a good analysis is scientific rigor, which involves the use of relevant theoretical frameworks, sound statistical methods and examination of the robustness of findings (e.g. sensitivity analyses). High-quality research reports provide transparent explanations about their methodology and statistical analysis steps undertaken, as well as supplementary analyses that established the robustness of the findings. For example, Joossens et al. (25) clearly describe the data sources used (limitations and advantages and where they can be found) and calculations performed on the number of lives that would be saved if the global market share of illicit cigarettes was eliminated. Explanations should be detailed enough to allow future researchers to scrutinize the analysis and replicate the findings.

Replicability is another hallmark of good science. For example, littered-pack studies should detail where and when data collection took place, how many packs

were collected per geographical unit, the protocol of identifying the illicit packs (e.g. characteristics of the warning labels, brands, tax stamps, etc.) and details of statistical analyses. There should also be explanations of the representativeness of the selected geographical areas. Failure to provide this depth of information may call into question the generalizability of a study and whether there are faults with the chosen method.

In the context of policy decisions regarding illicit trade, the most useful data provide information about a representative sample of individuals and geographies. Studies that are limited to, for example, one group of individuals based on specific characteristics or a given geography may yield biased information. Research reports also should be clear about the study's limitations. For example, studies that measure illicit trade often do not measure product counterfeiting and do not include non-cigarette tobacco products in their estimates (42). When statistical estimates are included, they should provide confidence intervals as well as point estimates to account for uncertainty resulting from simple random chance (11).

Characteristics of flawed analyses

Flawed analyses can convolute and distort scientific knowledge about illicit trade. Flaws usually manifest in the data, methodology, statistical analysis and/or interpretation of the results (11). Studies may be purposefully designed with methodological flaws to yield high or low estimates of the trade. For example, research showing that illicit trade constitutes a large share of the total market may be used to support arguments that taxes cause sharp increases in illicit trade, whereas lower estimates may be used to support arguments that certain governmental interventions (e.g. increased retail inspections) are effective. Pressures to skew data may also be tied to funding. For example, high estimates can sway governments to provide more resources for law enforcement activities. Analyses can be purposefully skewed by using data sources or data collection methods that will provide biased estimates.

Flawed studies sometimes provide incomplete or inaccurate descriptions of their methodology. They may lack detail regarding the quality of the data used or information about how the data were collected and analysed. For example, a common weakness in industry-funded research on discarded packs is that the methods of collection and forensic analysis are not reported, ostensibly because they are "proprietary" information (43). However, these methodological details are key to assessing whether a study's findings are biased by sampling error, model misspecification, measurement error, non-response or other flaws.

It may be impossible to assess measurement error if researchers fail to disclose questions included in a survey instrument. Survey items used to measure the illicit tobacco trade may be imprecise. For example, asking respondents the frequency with

which they purchase “cheap” cigarettes may yield biased estimates, particularly if consumers can purchase cigarettes at discounted prices by using coupons. To more accurately measure tax evasion, surveys must include questions about the location of last purchase, purchase price, presence of public health warning labels and brand names.

There are other ways that flawed studies can inadvertently or purposefully distort estimates of illicit trade. For example, data collectors can intentionally oversample areas known to be hot spots of illicit sales or sites that residents from lower-tax jurisdictions visit. Researchers can collect discarded cigarette packs close to the borders of countries with lower taxes to (inadvertently or purposefully) demonstrate the undesired side effects of tax policies. Studies published in non-peer-reviewed or lightly peer-reviewed outlets such as edited book volumes or policy briefs should be viewed with more scepticism than those published in highly regarded peer-reviewed outlets.

4.1.6 CONCLUSIONS

Globally, the illicit tobacco trade continues to be a major concern for tax administrators because of the challenges it generates to collecting higher revenues as well as the challenges to accurate and independent measurement. Industry figures provide distorted conclusions regarding the extent of the problem – frequently with a monocausal explanation of the link between illicit trade and tobacco taxation. Illicit trade comprises multisystemic issues and requires multiple strategies. Worldwide, countries at different levels of economic development have implemented a variety of effective measures to combat the illicit trade in tobacco products. The Philippines and the United Kingdom, for example, have addressed illicit trade as part of their overall tobacco tax reform (4).

Price (and tax) levels are not a key determinant of illicit trade, the presence of which is exacerbated by the lack of tax administration capacity. Refraining from increasing taxes is not the solution; countries should instead respond with a comprehensive strategy that includes at least these three main components:

1. It should identify – independently from the industry – the nature and dimensions of the problem. It is necessary to assess scientifically and with the best statistical practices the size of the illicit trade to understand the characteristics and scope of the problem.
2. It should identify and implement appropriate policies and strategies targeted at addressing the specific type of illicit trade the country is experiencing. It should address directly the country-specific institutional and/or governance challenges – as well as the lack of multilateral coordination that can exacerbate illicit trade – and improve tax and customs administration practices as described in Chapter 3.

3. It should implement best practices contained in the WHO FCTC Protocol to Eliminate the Illicit Trade in Tobacco Products and accede to the Protocol if the country is not yet a Party.

There are proper methods and policies with which to address the illicit tobacco trade. If countries start implementing the appropriate policies, they can raise tobacco taxes and reap health and revenue benefits even in the presence of illicit trade.

4.2 SCARE TACTIC C: COURT AND LEGAL CHALLENGES

4.2.1 INTRODUCTION

The tobacco industry views well-designed and significant tax increases as a threat to the profit, growth and long-term sustainability of its business. As noted by PMI in 1985:

Of all the concerns there is one – taxation – that alarms us the most. While [other restrictions] ... do depress volume, in our experience taxation depresses it much more severely (44).

The industry is, however, less likely to launch direct legal challenges to excise taxes than to other tobacco control measures (see Box 4.2.1 for details), because taxation – and excise tax in particular – is a comparatively well-established regulatory measure; in many jurisdictions, taxes have been levied on tobacco products for more than a century. There is also less unanimity in opposition to taxes among tobacco industry actors, because differences in the market position of different tobacco companies affect their interests in tax policy. This, in turn, decreases the likelihood that they will act collectively on the issue (45). BAT's stated strategy in the early 1990s was

to influence governments with regard to the level and structure of tobacco taxation in order to promote market growth and to secure competitive advantage (46).

Nevertheless, tobacco industry actors will still legally challenge, or at least legally threaten, significant tax measures when vulnerabilities in their design, adoption or implementation are apparent.

Box 4.2.1 Court and legal challenges to tobacco tax measures

Evidence suggests that the tobacco industry and its allies instigate fewer legal actions against tax measures than against other tobacco control measures:

1. The Campaign for Tobacco-Free Kids' tobacco control laws database contains only a handful of cases concerning tobacco tax measures, but hundreds on other tobacco control topics. This pattern can also be seen in a 2018 review of tobacco control legal challenges that examined this and two other databases to select 96 cases relevant to the question of the WHO FCTC's usefulness in litigation (47). Only 6 of these 96 cases were challenges related to tax measures.

2. A 2013 systematic review of empirical studies on tobacco industry interference with tobacco tax policy found that only 9 of 36 relevant articles reported the specific use of litigation as a tobacco industry tactic (1). All 9 concerned constitutional challenges to earmarking provisions for tobacco tax initiatives in the United States (1).
3. A 2015 study on industry interference in LMICs cited legal challenges to tobacco control measures in 15 countries as examples of industry interference, but none of the challenges concerned a tobacco tax measure (48).
4. A 2016 analysis of papers published in systematic reviews of industry interference with tax and marketing measures found that only 5 of 65 papers concerning tobacco tax related to the use of litigation or threats of litigation to interfere with tobacco tax measures (49).

The tobacco industry makes extensive use of legal experts (1, 50–52) who study all relevant laws and regulations closely to determine their likely and arguable boundaries for the purpose of manipulating regulations and regulators (1, 50–52). Based on this expert advice, tobacco companies know when regulations remain within the bounds of both international and domestic obligations but can still argue that legally permissible tobacco control measures would be defeated in litigation if passed (48, 51–52). As the threat of a legal challenge alone can be used to the industry's advantage, recourse to litigation is seldom needed or desirable (1, 45, 48, 51, 53–56). Even when litigation is launched, the objective may be to delay or weaken a measure rather than to win on the merits of the case (1, 45, 48, 53). To counter actual and threatened legal challenges, policy-makers need to be aware of relevant legal obligations when preparing and implementing tobacco control measures. Fortunately, the tobacco industry playbook is relatively predictable. Tax and other tobacco control measures can thus be designed to strengthen the regulators' legal position against genuine threats and enable them to dismiss baseless industry threats.

4.2.2 COUNTRY EXPERIENCES WITH LEGAL CHALLENGES TO TOBACCO TAXATION

Legal obligations that are relevant to tobacco taxation include those under domestic law and international instruments such as international trade agreements and international investment agreements (IIAs).¹⁷ Some of the legal issues that a tax measure may encounter are outlined in Table 4.6. Case studies from various countries illustrate how these legal issues have and have not been avoided in the

¹⁷ Relevant international trade agreements include the WTO Agreement and custom unions such as the EU, the East African Customs Union and Mercosur. Relevant IIAs include bilateral investment treaties and the investment chapters in free trade agreements and within custom unions.

passage, design and implementation of tobacco taxes. These issues are not the norm, however, and should not give rise to undue apprehension. The case studies are rated as positive, mixed or negative based on the extent to which the legal decision upheld the taxation measure in question.

Table 4.6 Potential legal issues for tobacco tax measures

VULNERABILITIES	LEGAL OBLIGATIONS	CASE STUDIES
Inadequate consultation and other procedural vulnerabilities	Domestic procedural law	1, 2
	Due process protections for investors under IIAs	None
	Procedural requirements under WTO Agreements and Custom Unions	3
Discrimination against imports or investors	Nondiscrimination obligations under WTO Agreements and Customs Unions	8, 9, 10
	Nondiscrimination obligations under IIAs	11
Investment incentives or inducements	Arbitration mechanisms under investor-state contracts	12
	Fair and equitable treatment clauses of IIAs	None
Other substantive breaches	Constitutional rights and restrictions on taxation	4
	Statutory restrictions on the imposition of taxation	6
	Expropriation clauses of IIAs	5
	Ultra vires (the scope of legal authority)	7

Avoiding procedural vulnerabilities in tax laws

Procedural defects can be avoided by taking great care in progressing and implementing regulatory or legislative provisions. Procedural concerns pose a dilemma for tobacco control regulators. Article 5.3 of the WHO FCTC and the COP guidelines for its implementation state that policy-makers and regulators should interact with the tobacco industry only when and to the extent strictly necessary (57). For taxation measures, interaction might be necessary because consultative and deliberative processes could be prescribed under domestic constitutional provisions and procedures for good governance, due process requirements of IIAs and some international trade agreements. The tobacco industry may use these requirements as leverage to delay, distort or hijack the rule-making process in contravention of Article 5.3. Accordingly, interactions with the tobacco industry should be limited to strictly necessary consultation conducted in a transparent or public manner but with care that this does not come at the expense of a measure's defensibility. The proper balance will depend on the jurisdiction in question, since constitutional, statutory and applicable international legal obligations vary.

CASE STUDY 1 (MIXED):**Industry manipulation of legislative procedures**

In 2012, a bill stipulating, among other things, the creation of a new specific excise tax on cigarettes passed its final reading in Costa Rica’s Legislative Assembly. Passage of the bill had, however, proceeded under “urgency” and notwithstanding a pending constitutional enquiry (a constitutional query is meant to prevent passage of a bill).¹⁸

ISSUE	MAJORITY DECISION	MINORITY DECISION	LESSON
Whether the court could consider the enquiry despite passage of the bill and the effect the bill’s passage could have despite the enquiry.	The enquiry was taken up by the Supreme Court’s Constitutional Division’s majority (58). The signing and publication of the bill by the executive was suspended by the Constitutional Division pending their decision on the merits of the case – which, in the end, found any question of the bill’s constitutionality baseless (58).	The enquiry was inadmissible by reason of having been filed too late and notice of its filing having not been received by the legislature prior to the reading of the bill (58). In disagreement with the majority, the minority held that the court could not consider the enquiry or suspend the bill’s signing by the executive – the final step in becoming law.	This challenge demonstrates how the tobacco industry’s defenders may attempt to frustrate and impede a tax measure’s passage. In this case, the challenge seemed to have been a delaying tactic, as it was posted on the same day as the final reading of the bill. Its authors may have either wanted its pending nature to cause the legislature to delay or, as occurred, to create conditions for a procedural and constitutional challenge in the absence of delay. All the grounds of the challenge itself were found to be without merit. Although such frivolous challenges cannot be prevented, they can and should be anticipated to ensure that they do not lead to a tax measure’s defeat.

18 “Urgency” is a procedure under which a bill is progressed through a legislature in an expedited fashion.

CASE STUDY 2 (POSITIVE):**Adhering to domestic procedural requirements**

Kenya's tobacco control regulations required the tobacco industry to pay a levy to compensate the state for health care and other negative externalities of smoking. In a 2016 challenge brought against these regulations, the plaintiff, BAT, was unsuccessful on every count (59–60). Even though the levy was not considered a tax measure by the court, the case study is instructive on how regulators may safeguard tax measures against procedural challenges.

ISSUES	LAWS AND ARGUMENTS	DECISIONS	LESSONS
Whether the government's consultations on the measure were adequate.	Asserting that the Constitution and the Statutory Instruments Act together meant that "appropriate consultations with persons who are likely to be affected" were required because of the measure's likely substantial effect on business. BAT claimed that this standard was not met. Kenya's government claimed that it was under no obligation to undertake special or extensive consultation with the tobacco industry.	The judge found in favour of Kenya's government, noting that (1) the requirement to consult does not imply that any particular view needs to prevail; (2) dissatisfaction with the level of consultation is not decisive; (3) on the facts, industry was allowed, and often invited, to send representatives to all relevant public consultative meetings and parliamentary committee hearings; and (4) consultation on the regulations was adequate (59).	The tobacco industry carefully scrutinizes legislative and regulatory processes for defects. In this case, Kenyan government officials appropriately distanced themselves from the tobacco industry by not permitting its representatives special consideration but did permit their attendance at public meetings and the ability to submit their views under usual procedures. In this way, both the principles behind WHO FCTC Article 5.3 and the requirement for consultation under Kenyan law were observed.

Avoiding procedural issues in tax administration

CASE STUDY 3 (NEGATIVE):

Contravening procedural requirements in international obligations

In 2010, a WTO panel held that Thailand violated the Customs Valuation Agreement (CVA) by the process it used to value cigarettes that Phillip Morris (PM) Thailand imported into the country from a related party, PM Philippines. Customs values are important as they are the tax base for tariffs and can feed into the base for other taxes levied against the value of the good, such as ad valorem excise taxes and VAT. Transaction values declared by PM Thailand were rejected by Thai tax authorities as influenced by the relationship between the parties and a customs value determined by deduction was substituted (61).

ISSUE	LEGAL OBLIGATION	DECISION	LESSONS
Whether Thailand adequately consulted with PM Philippines before rejecting its declared transaction value (61).	The CVA requires good faith exchange of reasons and information, with opportunities for response (61).	Thailand had failed to properly explain its reasons for rejecting the transaction value, as well as its belief that price was influenced by the relationship between the two parties (61). This was a violation of the CVA. Thailand did not appeal these findings.	Thailand's authorities needed to take greater care in their dealings with the tobacco industry to ensure they met the pertinent procedural obligations. In this instance, a specific and high standard of consultation – the provision of detailed reasons and an opportunity for response – was prescribed by the CVA and Thailand failed to meet it.

Ensuring compliance with substantive requirements

Rules found in domestic and international law also establish substantive obligations. This subsection focuses on substantive obligations found in domestic law. International obligations concerning discrimination and investment incentives are considered in the next subsections.

CASE STUDY 4 (POSITIVE):

Tax measure found to be consistent with the Constitution

The Chilean government introduced a substantial increase in tobacco and fuel excise, and in 1995, a coalition of taxpayers brought a Constitutional challenge to the measure (62).

ISSUE	DECISION	LESSON
Whether the tax was, per article 19 of the Chilean Constitution, "obviously disproportionate or unjust" (62).	The excise tax increase did not violate the Constitution, as it was neither confiscatory nor manifestly irrational.	Generally applicable excise taxes are not vulnerable to challenges for being excessive, unfair or disproportionate.

CASE STUDY 5 (POSITIVE):

Failure to grant tax rebates not an expropriation under an IIA

This case study is an example of a claim for breach of an expropriation clause in an investment treaty. Such clauses protect foreign investors against measures that can be construed as directly or indirectly seizing an investment or depriving it of its value (63). In the case, an investor was, for more than a decade, denied tax rebates by the Mexican government. This affected the profitability of the business of purchasing and reselling Mexican cigarettes abroad, and the investor brought the claim to an investment agreement arbitral tribunal in 2002 (64).

ISSUE	DECISION	LESSONS
Whether Mexico's failure to grant rebates to the investor exceeded the bounds of valid regulation to constitute indirect expropriation of the investor's investment (65).	There was no expropriation. The arbitral tribunal noted that not all business problems are violations: the investor had no right to participate in the "grey market" export of cigarettes and there were sound reasons to restrict that market (65). Further, the investor was able to participate in other business ventures and actually continued to have business success (65).	Claims of indirect expropriation made under IIAs are unlikely to be successful, as generally applicable tax measures are a legitimate form of regulation. A mere loss of profit will not suffice. Claims of expropriation will not succeed unless a substantial or significant deprivation of the investment results.

CASE STUDY 6 (NEGATIVE):**A regulation contrary to superior domestic legislation**

In 2011, an Indonesian tobacco industry association group, FORMASI, challenged a new excise regulation. Since 2009, the government had been implementing a tiered specific excise tax system based on a set of characteristics (size of production, type of cigarettes and price levels). In 2011, excise rates were increased in nearly all of the 19 tiers, but the reference prices were not accordingly adjusted. This gave rise to a legal issue.

ISSUE	DECISION	LESSONS
Whether new excise regulations breached a 57% ceiling for the rate of excise on the retail sale price of tobacco products under the superior Excise Law (66–70). The challenge specified that excise exceeded this ceiling for hand-rolled domestic clove cigarettes (kreteks) (68, 71).	The Court found in favour of the tobacco industry association, and the government was required to immediately revoke the 2011 regulation. (69–70).	It is advisable to stay within the rules and be aware of legal hierarchies – including superior domestic legislation. The tobacco industry scrutinizes all increases in tobacco taxes. In this case, a breach of a legislative requirement for a single category of tobacco product resulted in Indonesia suffering lost revenue and a setback in its efforts to reduce tobacco consumption.

Ensuring a tax measure is within an authority's legal power

A tax measure is *ultra vires* when it goes beyond the legal power of the enacting body. As with case study 6, this is a legal issue that involves legal hierarchies. In *ultra vires* cases, however, instead of centring on conflict between inferior and superior law, the issue is whether an authority that enacts a tax measure is authorized to do so. This issue may arise when a tax measure is enacted by a subnational jurisdiction or by an executive acting under a statutory delegation.

CASE STUDY 7 (NEGATIVE):**Tobacco taxation contrary to the Australian Constitution**

ISSUE	DECISION	LESSONS
Whether New South Wales' licensing and penalty fees regime constituted an excise tax by other means contrary to the Australian Constitution's exclusive grant of that power to the federal government (72).	The court found that state licensing fees were excise taxes and that this was contrary to the Australian Constitution (72).	Authorities enacting tobacco tax measures must act within the scope of their legal power.

Avoiding discrimination against imports and foreign investments

Although inherently discriminatory, customs duties may be used subject to the agreed upper limits in a country's trade agreements. Excise and other taxes designed with the aim of raising tobacco prices to reduce demand and advance human health should be origin-neutral: they should not seek to tax local products less than foreign products or aim to treat foreign products differently from one another. Tobacco tax measures are pursuing objectives other than health when they aim to raise the price of imports more than that of local products or seek to burden favoured market participants less than others. Solely health-protective tobacco taxes will not ordinarily violate Articles III:2 and I:1 of the GATT (the WTO's General Agreement on Tariffs and Trade), which prohibit discriminatory taxation (in light of general exceptions). Nor will solely health-protective tobacco taxes directly violate anti-discrimination protections for investors found in the national-treatment (NT), most-favoured-nation (MFN), expropriation and fair-and-equitable-treatment (FET) clauses of IIAs (63, 73–74). It is possible to make claims for breach of international obligations on grounds other than discrimination, but such claims are generally highly unlikely to succeed.

CASE STUDY 8 (NEGATIVE):

BAT v Uganda (2017 East African Court of Justice)

DISCRIMINATION	LESSON
Uganda established a higher level of excise taxes on imported cigarettes – including those from Partner states of the East African Customs Union (75) – than on local cigarettes. Its implementation was discrimination contrary to Article 15 of the Customs Union Protocol (75).	Differential taxation explicitly based on origin can be construed as protectionist discrimination in violation of international obligations. The tobacco industry can also turn to international trade agreements outside of the WTO – in particular, customs union mechanisms.

Difficulties arise when ostensibly origin-neutral and health-protective tobacco taxes result in dissimilar taxation of tobacco products (73). Discrimination does not exist simply because there is dissimilar taxation – the taxation must adversely impact imported goods more than local products, the imports of one nation more than another or a particular investor's products more than comparable products. Where dissimilar taxation between product categories results in discrimination, the tax will ordinarily still be lawful if the dissimilar taxation is based solely on a legitimate regulatory distinction between the product categories in question.¹⁹

¹⁹ The precise applicable rules vary depending on the nature of the legal obligations in question. Under the GATT, dissimilar taxation of like or directly competitive products can be justified based on scientifically grounded distinctions between products under Article III:2 and, in the alternative, discrimination that is necessary under the explicit carve-out for health-protective measures, Article XX(b) (73). For the MFN and NT clauses of IIAs, differential taxation can be argued as nondiscriminatory on the basis that difference in harm means the products are not "alike" or, in the alternative, discrimination is justified based on scientific evidence of differences in harm and rational reasons for the health-protective role of differential taxation (63).

Where discrimination is inadvertent, lack of an intention to discriminate is not sufficient as a defence for breach of obligations under IIAs or the GATT (73, 76). Policy-makers should carefully scrutinize measures to determine:

1. whether an aspect of a tax measure's design or implementation may be more to the detriment of imports or foreign investors than of local products or domestic investors;
2. whether the potentially discriminatory aspect of the tax measure serves any useful purpose in supporting the tax measure (i.e. it is needed to achieve the health goal);
3. whether there is any reasonable alternative that could achieve the same effect without the potential for discrimination; (i.e. it is indispensable) and
4. when it is needed and indispensable there is a good chance that it will be defensible.

The case studies below provide examples of discrimination arising in connection with a tobacco tax measure.

CASE STUDY 9 (NEGATIVE):

Thailand – Customs and Fiscal Measures on Cigarettes from the Philippines (2010 WTO panel)

The facts of this case are presented in case study 3. This case study examines claims of discrimination rather than the procedural issues.

DISCRIMINATION	EXPLANATION	LESSONS
Thailand implemented its policy for determining the tax base for VAT on cigarettes inconsistently (61).	Thailand applied a methodology in fixing the tax base, in particular a marketing cost component, of imported cigarettes that differed from that for local products (61). This resulted in the marketing cost component for the imported cigarettes being higher than it would have been under the general methodology. This difference in treatment was insufficiently justified and therefore considered discriminatory.	As there is potential for inadvertent discrimination when the base for an ad valorem tax is fixed, tax base determinations must be consistent and well-reasoned (61). This case study demonstrates how policy-makers need to take care in designing and implementing ad valorem taxes to ensure they are nondiscriminatory and legally defensible.

<p>Thailand's VAT rebate policy imposed a potentially higher tax burden and also created more burdensome administrative requirements for imported cigarettes (61).</p>	<p>Resellers of cigarettes produced by a government entity were granted an exemption from VAT (61). Although resellers of imported cigarettes would be eligible for a tax credit on their VAT, this was not an automatic process (61). The distinct treatment of resellers of imported cigarettes and those of local cigarettes resulted in the risk that there would be a higher VAT burden for the former (61). The distinct treatment also imposed an additional administrative burden on resellers of imported cigarettes and altered conditions of competition (61).</p>	<p>Rules for the collection and enforcement of tax obligations should be the same, or as similar as practicable, in both form and effect for domestic and imported tobacco products.</p>
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CASE STUDY 10 (NEGATIVE):

Dominican Republic – Measures Affecting the Importation and Internal Sale of Cigarettes (2004 WTO panel; 2005 WTO Appellate Body)

Under article XX(d) of the GATT, discrimination that is necessary to secure compliance with a legitimate tax measure will be justified provided there is no less-discriminatory alternative. In this case, this justification was used unsuccessfully.

DISCRIMINATION	EXPLANATION	LESSONS
<p>The Dominican Republic's tax stamp regulations were discriminatory towards imported goods (77). Under the regulations, all cigarette packs had to be affixed with tax stamps, but imported cigarettes were to be affixed with tax stamps under the supervision of local tax authorities following importation, while locally manufactured cigarettes could be affixed with a tax stamp in the course of production.</p>	<p>This de facto distinction between local and imported products modified the conditions of competition to the detriment of imported cigarettes by (1) increasing costs for importers and (2) impairing the aesthetics of imported products (77). The panel did not consider this discrimination justified: it was not necessary for the enforcement of tax measures, because less restrictive alternatives were available such as permitting importers to affix tax stamps during the course of production (Dominican Republic – measures affecting) (77). The panel's findings were upheld on appeal (78).</p>	<p>Policies crafted to ensure compliance with tax measures need to also be nondiscriminatory. Discrimination claims can arise when compliance costs are higher for imports than for local products and this de facto distinction is avoidable. It is important to consider whether less burdensome alternatives may achieve the same objective.</p>

CASE STUDY 11 (NEGATIVE):***Feldman Karpa v Mexico* (2002 ICSID [International Centre for Settlement of Investment Disputes] Arbitral Tribunal)**

Arbitral tribunals have accepted differences in treatment accorded to investors protected by IIAs when there is a legitimate connection between the distinctions drawn and public welfare objectives (76). The facts of this case are presented in case study 5. This case study examines aspects of the case involving the investor's claim of discrimination, rather than the substantive issue of expropriation. Claims of discrimination are made on different grounds than claims for expropriation, which is why the case was decided differently on this claim.

DISCRIMINATION	LESSONS
Denial of foreign investors' claims for tax rebates. Tax rebate claims were granted to similar local investors (65), which was a violation of an IIA's national treatment clause (65).	Foreign and local investors must be treated similarly, and consistent and well-documented policies must be used to guide administrative decisions. The denial of the rebates may have been justified, but the government was unable to establish this due to a lack of documentation.

Avoiding the investment incentives trap

Investor-state contracts between the tobacco industry and governments should be avoided. They are not merely “contractual” in the domestic law sense, as even in the absence of an applicable IIA, they can be internationalized to provide investors the right to (1) remove dispute settlement from the state's court in favour of independent arbitration and (2) remove the dispute from the state's legal framework in favour of general principles of law (63, 76). Commitments under these clauses cannot, therefore, be legislatively moderated or extinguished, nor can liability be limited within domestic courts that may be more likely to favour the state's right to regulate in favour of public health (76).

Investor-state contracts and other noncontractual inducements can be further internationalized by umbrella clauses within IIAs. Such clauses make renegeing on undertakings assumed towards investors a breach of the IIA (76). Moreover, even in the absence of an umbrella clause, contracts and inducement can underpin a claim for legitimate expectation and breach of fair and equitable treatment and can also strengthen an investor's claim for indirect expropriation (63). Arbitral awards make clear that although taxes can be expected to vary and tobacco will be regulated, investors can have the legitimate expectation that states will abide by formal inducements and written contractual undertakings.

A common clause within investor-state contracts, the stabilization clause, is ruinous to evidence-based tobacco control's most effective measure: excise tax increases. Stabilization clauses purport to freeze specific domestic law from the time

of investment (63). Seemingly less onerous, economic equilibrium clauses require contracting states to compensate for regulatory changes that negatively affect an investment's value (63). There is little difference in effect between these two types of clauses: liability for the cost of breaching an equilibrium economic clause can be onerous enough to make it fiscally challenging and politically unpalatable.

CASE STUDY 12:

An investor-state contract

A state entered into an investment agreement with a TTC in 2001 on the privatization of its state-owned tobacco enterprise and creation of a joint venture. This investment was to provide economic benefits under the agreement: the joint venture would increase exports and profit using the TTC's cash and expertise while also ensuring prioritization of local employment, manufacturing and resources. The final investor-state contract included a form of economic equilibrium clause under which any increase in the excise tax rates applied to the company's tobacco products before a set date would be compensable. While the agreement was not removed from the state's law, it provided for independent arbitration in case of a dispute over its compensation. In addition, there is a bilateral investment treaty between the host state and another state in which the TTC's subsidiary has residence that includes a FET clause – this could buttress, if needed, the protection provided by the stand-alone arrangements of the investor-state contract. There were similar less-formal inducements offered to a separate TTC.

The extent to which incentives have been granted to the tobacco industry is unknown, but contracts and inducements are likely to be offered in the context of the privatization of state-owned tobacco interests and in dealings between investors and state-owned tobacco enterprises (63). Although countries have been entrapped by their incentives to industry, the investor-state contract provides the clearest example of how undertakings and inducements with the tobacco industry undermine tobacco control (56, 79–80). States should avoid offering industry incentives and, in particular, entering into contractual undertakings with the industry. More systematically, government should consider avoiding IIAs that elevate incentives and inducements above sensible and reasonable regulation.

4.2.3 CONCLUSIONS

Health-protective and origin-neutral tobacco excise taxes are legally defensible, and industry threats are usually baseless. There are, however, certain rules governing procedure, design and consultation that governments may need to consider:

1. Governments should be aware of the standard of consultation required under domestic law and any applicable international obligations (case studies 1, 2 and 3).

It is important to distance the tobacco industry from the policy-making process to the extent that this is permissible. Do not grant the industry special consideration, but do ensure that it is consulted with as required – for example, by providing public meetings, timely information and the ability to submit industry views – while being aware of potential procedural manipulation (case studies 1, 2 and 3).

2. Excise tax is generally safe from challenges that claim it is confiscation or expropriation under domestic or international law (case studies 4 and 5). But express limits on taxation can be found in other laws or a country's constitution or in the limits of the power to tax granted to an authority (case studies 6 and 7).
3. Explicit and de facto discrimination against foreign tobacco products or investors must be avoided in the design, implementation or enforcement of tax measures (case studies 8, 9, 10 and 11). Legal issues may arise not from the tax measure itself, but rather from ancillary measures that support its implementation (case studies 9 and 10).
4. Explicit differentiation between products based on their effect on health may be challenged as discrimination if it falls heaviest on imported products and has to be justified on the basis of evidence of impact on health and a lack of alternatives.
5. Investment incentives in the form of inducements or contractual undertakings should not be offered, as these may be binding (case study 12) or may ground a challenge under an IIA; they are also contrary to the WHO FCTC Article 5.3 Guidelines.

4.3 SCARE TACTIC A: ANTI-POOR RHETORIC (REGRESSIVITY)

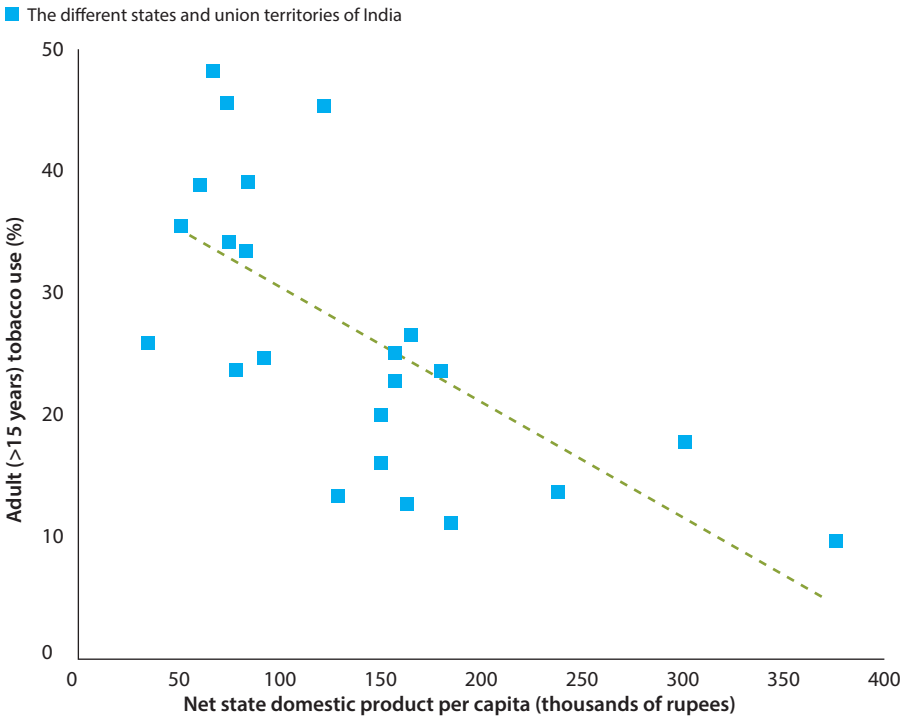
4.3.1 INTRODUCTION

In their efforts to lobby against tax increases, the tobacco industry and its affiliates often claim that increases in tobacco taxation will hurt the poor (81–82). This argument is based on the concept of regressivity in relation to taxation. Conceptually, a tax can be regressive if it means that lower-income people pay a greater proportion of their household income to meet the tax burden than do wealthy people. In other words, the tax burden tends to be relatively higher for lower-income households than for middle- and high-income households. However, there are two limitations to the industry's argument. First, the concept of regressivity based solely on tax burden does not consider the wider health and economic harms caused by tobacco use. Second, higher tobacco taxes and prices can induce behaviour change among the population, as reflected in the price elasticity of demand (83–84). In combination, these broader considerations effectively make tobacco taxation a progressive – rather than regressive – public health intervention.

4.3.2 REGRESSIVITY AND THE BROADER PERSPECTIVE

In a narrow sense, tobacco taxation can be seen as regressive because lower-income people must allocate a relatively greater proportion of their household income than wealthy people to pay for tobacco products when those products become more expensive following a tax increase. In many countries, people from lower-income groups use tobacco more than other people (85). A systematic literature review by WHO found a robust association between lower income and a higher prevalence of current smoking among adults, both men and women (86). This finding was consistent across three decades of studies, across most geographic regions and across countries of different income classifications. For example, in India, high rates of tobacco use – i.e. use by more than 30% of the adult population – are found only in lower-income states such as Assam and Odisha, where net state domestic product is still below 100 000 rupees per capita (see Fig. 4.3.1) (87).

Fig. 4.3.1 Relationship between adult tobacco use and net state domestic product per capita in states and union territories of India, 2016–2017



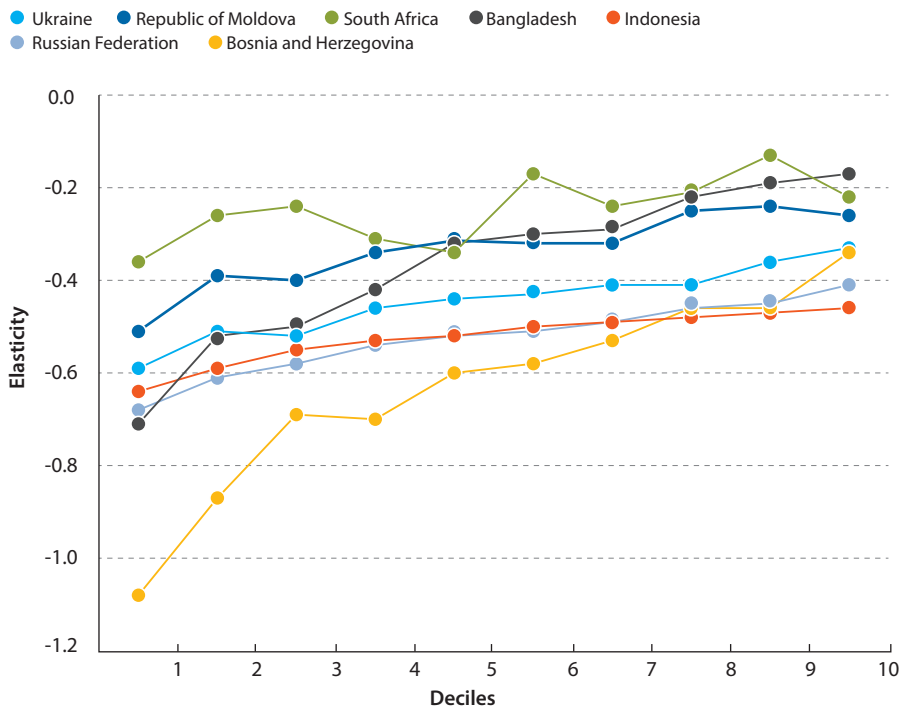
Source: (87).

However, this finding does not account for broader health and economic factors that determine the full impact on households. Tobacco taxation can in fact be viewed as a progressive – or pro-poor – policy when these wider considerations are properly accounted for and explained. In terms of health concerns, the relatively high use of tobacco among low-income populations translates into a much greater burden of tobacco-attributable diseases for these populations, including higher morbidity and mortality.

Low-income groups are also less able to afford medical care to treat tobacco-attributable diseases, and large out-of-pocket medical expenditures can further impoverish many families. Consequently, many poor individuals do not get or even seek the medical care they need. One study found that in Bangladesh, 55% of patients diagnosed with a tobacco-attributable illness did not seek further medical care. This lack of health care utilization was attributed in part to prohibitively high out-of-pocket treatment costs (88). The combination of high rates of tobacco use and lack of access to affordable medical care means that tobacco use measurably contributes to the poverty rate in a number of high-tobacco-burden countries, including China and India (89–90).

The poor are also known to be more price-sensitive than the wealthy; lower-income smokers exhibit higher price elasticities than their higher-income counterparts. This is demonstrated in recent studies by the World Bank, findings of which are shown in Fig. 4.3.2 (91). The poor respond more strongly to higher tobacco taxes and prices by reducing their use of tobacco products more than others, and thus they benefit disproportionately in terms of avoiding tobacco-related deaths, diseases and associated medical costs. A similar conclusion was drawn in a systematic review of the population impact of tobacco control policies on socioeconomic inequities in high-income countries at the late stage of the tobacco epidemic (92). The review found 16 relevant studies relating to taxation, only one of which found a regressive association between tax and the social economic gradient (seven found a progressive impact, while the others produced mixed results).

Fig. 4.3.2 Price elasticity of tobacco consumption, medium estimate, by decile



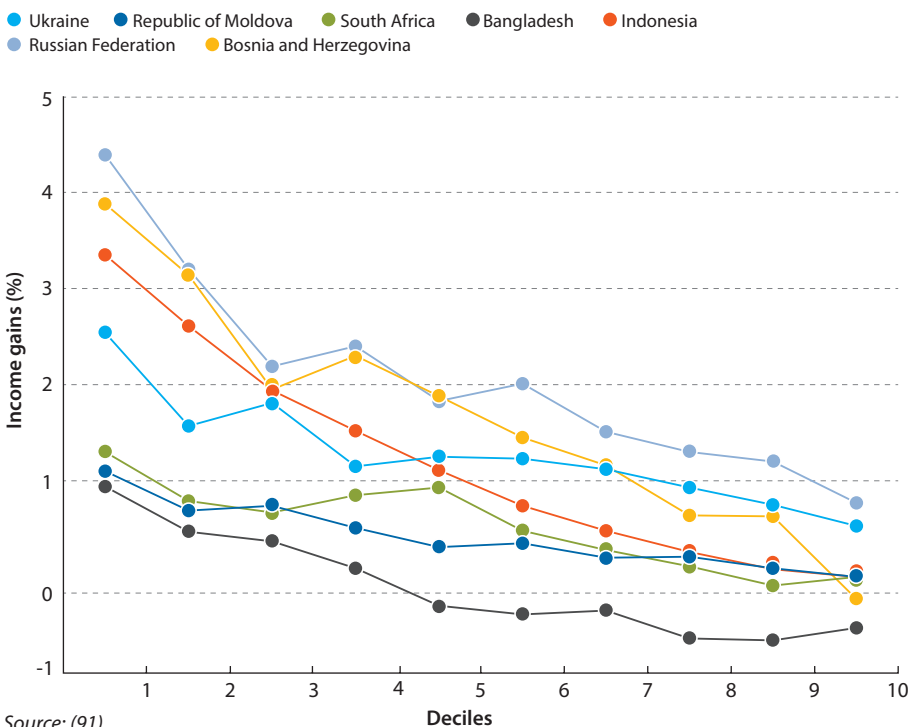
Source: (91).

This wider economic perspective is explained in the World Bank's Extended Cost-Benefit Analysis (ECBA) framework, which assesses the distributional impact of tobacco tax increases on health, among other factors (82, 83). That is, the ECBA framework looks beyond the simple or partial definition of regressivity (i.e. impact

on household expenditure by income levels) to capture the full distribution of benefits, including improved health and income.

The ECBA framework has been applied in studies of various countries, including Bangladesh, Bosnia and Herzegovina, Chile, Indonesia, Republic of Moldova, South Africa, the Russian Federation, Ukraine and Viet Nam. The evidence from these studies supports the view that effective tobacco tax policies can generate pro-poor and welfare-improving outcomes. When reductions in medical expenditures and additional years of working life that result from lower smoking-related mortality are taken into account, the overall policy of tobacco tax increases becomes progressive rather than regressive (see Fig. 4.3.3) (84). A similar conclusion has been reached in studies of high-income countries, such as the United States, where a tobacco tax increase was enacted in 2009 (93).

Fig. 4.3.3 Impact of a 100% price increase, with medium elasticities, by deciles



Tobacco tax increases will also often lead wealthier smokers to contribute relatively more than poorer smokers to the overall amount of tax revenue collected. This is because poorer smokers reduce their consumption the most, since they are more price-sensitive and wealthier smokers also tend to purchase premium (higher-priced and

taxed) tobacco products (94). Hence, higher tobacco taxes can be seen as progressive in terms of additional revenue collection and health gains resulting from cessation, as well as from preventing the young from taking up smoking in the first place. One study from China suggests that a 50% tax increase would raise US\$ 703 billion over 50 years, with just 14% of this increase being borne by smokers in the lowest income quintile (95). In addition, the tax increase would yield a savings of US\$ 24 billion in expenditures on tobacco-related diseases, with about 28% of these savings being enjoyed by smokers in the lowest income quintile.

The ECBA framework actually presents a rather conservative profile of the net benefits of raising tobacco taxes, since it does not include other sources of gain, such as reduced harm from exposure to second-hand smoke, increased productivity and the potential for poor households to benefit from social programmes funded through increased tax revenues (96).

Assessments of the distributive impact of the 2009 tobacco tax increase in the United States found that the overall progressivity of the increase was enhanced by the tax revenue being used to expand health insurance coverage for children of low- and middle-income families (97). Accounting for this expanded coverage added to the progressivity of the overall legislative package, the bottom line being that the impacts are positive for lower-income quintiles and greatest, on average, for low-income households (93).

Similarly, a large proportion of the tobacco tax revenues from the Philippines' so-called Sin Tax Reform was used to subsidize universal health coverage (UHC) for poor and near-poor families. Globally, 37 countries are known to earmark some tobacco tax revenues for health programs, with many of these programs indirectly benefiting the poor and less-advantaged disproportionately more than other groups (27) (for details on earmarking, see section 4.6).

4.3.3 CONCLUSIONS

Contrary to the perception of tobacco taxation being regressive, it is a strong pro-poor policy when the broader economic impacts are taken into consideration. The tax burden is not a complete indicator of regressivity, since it does not include the negative health and economic impacts of tobacco-attributable diseases or the positive impacts of behaviour change in response to tax and price increases.

The health and economic burdens of tobacco-attributable diseases fall disproportionately on the poor, who tend to have higher tobacco use and are also the least able to afford the necessary medical care. Because the poor tend to be more price-sensitive, they curtail their use and consumption more significantly than wealthier smokers in response to tax increases, which in turn reduces their downstream health and economic costs.

Tobacco taxation can be made even more progressive by earmarking or allocating tobacco tax revenues for social goods and services that benefit the poor (see section 4.6).

4.4 SCARE TACTIC R: REVENUE REDUCTION

4.4.1 INTRODUCTION

The tobacco industry and its allies argue that tobacco tax increases result in reduced tax revenues for the government. According to them, the reduction in revenues is caused either by substitution to cheaper, lower-taxed or smuggled tobacco products or by reductions in consumption overall (98–99).

The tobacco industry often refers to the Laffer curve to make this argument. According to this curve, revenues increase along with tax rates up to a certain point, after which further increasing tax rates leads to declining revenues. When considering tobacco taxes, the tobacco industry assumes that countries are already approaching or are even beyond the critical tax rate level (98).

However, the argument rests on a narrow theoretical and empirically unsubstantiated foundation (98–100). The price inelastic demand for tobacco and the relatively low tax share in prices in many countries explain the win-win for public health and finance, i.e. that declines in consumption and increases in revenues can occur simultaneously (98, 101). Furthermore, many country examples (see case studies below) demonstrate that well-designed and well-implemented tobacco tax increases lead to increases in revenue, at least in the short to medium term (98, 100). Although consumption will diminish with a tobacco tax increase, the percentage increase in excise tax per unit is greater than the percentage decrease in tobacco consumption, cancelling out at least some of the effect of reduced consumption on revenue (98–99).

A change in the tax rate, with all other factors influencing consumption kept constant, corresponds to a change in the tax revenue and is represented by a movement along the Laffer curve. As the tax rate changes, so does the elasticity of the tax base; each point on the Laffer curve corresponds to a different tax base elasticity. When one or more of the other factors changes, this affects the position of the curve, and the tax base elasticity changes at a given tax rate. For example, a successful smoke-free policy or advertising ban that reduces the demand for tobacco shifts the curve down, reducing the tax revenue potential for each tax rate.

To demonstrate that few, if any, countries are beyond the revenue-maximizing point on the Laffer curve, Table 4.7 shows the revenue impact of increasing excise taxes under different scenarios, using different price elasticities of demand, different levels of tax increases and different starting tax shares, depending on country income levels. This is the tax base elasticity approach from which the Laffer curve is derived (for more details, see section 2.2.3 and Annex 2.2). The total and excise tax shares shown are weighted averages for each country income group, calculated from the RGTE dataset. The revenue gains were simulated using progressive levels of excise tax increases (25%, 50%, 75% and 100%) and varying price elasticities of demand (-0.4 to -1.2).

Table 4.7 Percent increase in excise revenues under different scenarios of tax levels, tax increases and price elasticities²⁰

Income group	Total tax as % of retail price	Excise tax as % of retail price	Increase in excise tax	Increase in excise revenue when price elasticity of demand is:				
				-0.4	-0.6	-0.8	-1.0	-1.2
LOW INCOME	38%	22%	25%	22%	20%	19%	17%	16%
			50%	43%	39%	36%	33%	29%
			75%	63%	57%	52%	46%	41%
			100%	82%	74%	66%	59%	51%
MIDDLE INCOME	58%	41%	25%	19%	17%	14%	11%	9%
			50%	37%	31%	26%	20%	15%
			75%	54%	45%	36%	27%	19%
			100%	71%	57%	45%	34%	23%
HIGH INCOME	68%	55%	25%	18%	15%	11%	8%	5%
			50%	35%	27%	21%	14%	8%
			75%	50%	39%	29%	19%	10%
			100%	65%	50%	36%	23%	11%

Source: Authors' calculations using data from the RGTE (27).²¹

Substantial revenue increases occurred in all the scenarios that were considered in the simulation. These results reaffirm much of what is already known, i.e. that higher tax increases generate higher revenue gains, and that these gains increase with the increasing inelasticity of demand. Even when demand is relatively price elastic (-1.2), the simulation predicts a gain in revenue. The tax share in price also affects revenue potential. The lower the tax share in price, the larger the revenue potential. This suggests that revenue reductions as a result of an excise tax increase will occur only if the scenario is extreme (i.e. a very elastic demand coupled with a very high current tax share). It is important to note that the vast empirical literature

20 These projections use 2018 data from 185 countries. The countries were classified according to World Bank income group, with the average total tax share, excise tax share and VAT/sales tax share for each country weighted according to the number of current adult cigarette smokers. To calculate the projected revenue for each stated elasticity, it was assumed that there would be full pass-through of the excise tax increase, along with constant percentages of non-excise taxes (VAT/sales tax) as a share of the retail price. The consequent changes in price were multiplied against the respective elasticities to derive the expected change in consumption. The projected revenues could be easily computed by multiplying the new consumption figures against the increased excise tax rates.

21 These calculations do not take into account brand substitution (cross-price elasticities), income effects or illicit trade. The excise tax was assumed to be a specific tax, while the non-excise taxes (VAT and others) were bundled and treated as an ad valorem tax with retail price as the tax base. The difference between retail price minus all taxes was also assumed to be constant, with full pass-through of the tax increase to consumers.

shows tobacco to be universally inelastic; thus the extreme scenario should not be given credence by policy-makers. Furthermore, as demonstrated by the data in Table 4.7, tax shares in most countries are relatively low and reinforce the revenue potential of tobacco tax increases.

The revenue potential of tobacco taxes is indeed quite significant. It is estimated that in 2018, excise taxes on cigarettes generated a total of US\$ 361 billion in revenues worldwide, including US\$ 162 billion in LMICs. If all countries were to raise excise rates by the equivalent of US\$ 1 per pack of cigarettes, the amount of excise revenue would increase by between US\$ 178 billion and US\$ 219 billion, or by 49–61% at 2018 levels. LMICs would gain the most from these tax increases, with excise revenues in these countries increasing by US\$ 133 billion to US\$ 167 billion, or by 82–103%.²²

Revenue reduction in the countries examined was due to other causes, not the tax increase per se. For example, Tonga significantly increased its excise tax on cigarettes in 2016 and saw a very sharp decrease in its consumption (40% decrease), followed by a revenue decrease. This occurred because 20% of smokers switched to an untaxed, cheap local loose tobacco product called *Tapaka Tonga (102)*. The lesson learned was that Tonga needed to tax all its tobacco products at the same level to avoid substitution to lower-price/untaxed tobacco products. Another example of revenue decrease that was not related to tax increases but rather to tax administration mismanagement is the case of South Africa (see explanation in the case study later in this section). Finally, declines in revenue due to long-term declining trends in tobacco use should not be confused with being beyond the revenue-maximizing point of the Laffer curve. For example, in the United Kingdom, where long-term declines in tobacco use are being experienced, a nominal decline in revenues occurred between 2017 and 2018 even though excise taxes remained unchanged. Conversely, even countries with very high tobacco excise rates experience increases in revenues as a result of tobacco tax increases (see the case study of Australia below) (98, 100). This suggests that few countries, if any, are beyond the revenue-maximizing point on the Laffer curve.

Tobacco consumption is expected to be tax inelastic, even if demand becomes effectively price elastic as a result of successful tobacco control interventions. Taxation serves as an instrument for both fiscal and public health objectives. If after successful tobacco control interventions, prices reach levels where demand is elastic, the tax base is still most likely to be inelastic due to tax undershifting, since overshifting is not a good pricing policy when demand is elastic (for a more detailed discussion on the shifting of tax, see section 2.2.2). In other words, a tax rate increase in combination

²² Goodchild M, Perucic AM, Paul J. Tobacco taxation as a strategy to achieve global targets for smoking prevalence. Unpublished manuscript. October 2020.

with non-price tobacco control measures, which make consumers more sensitive to price (tax) increases, leads to declining but still positive marginal revenues.

In the long run, tobacco control policies, including price and tax measures, may be so successful in reducing consumption that revenues will plateau or fall. This is ultimately the long-term policy goal. Reducing the impact of the policies and ending the global tobacco epidemic is the aim of tobacco control and not something to be avoided. However, ending the global tobacco epidemic is unfortunately not foreseen in the short to medium term; therefore, governments can currently rely upon tobacco taxes as a reliable source of revenue (103).

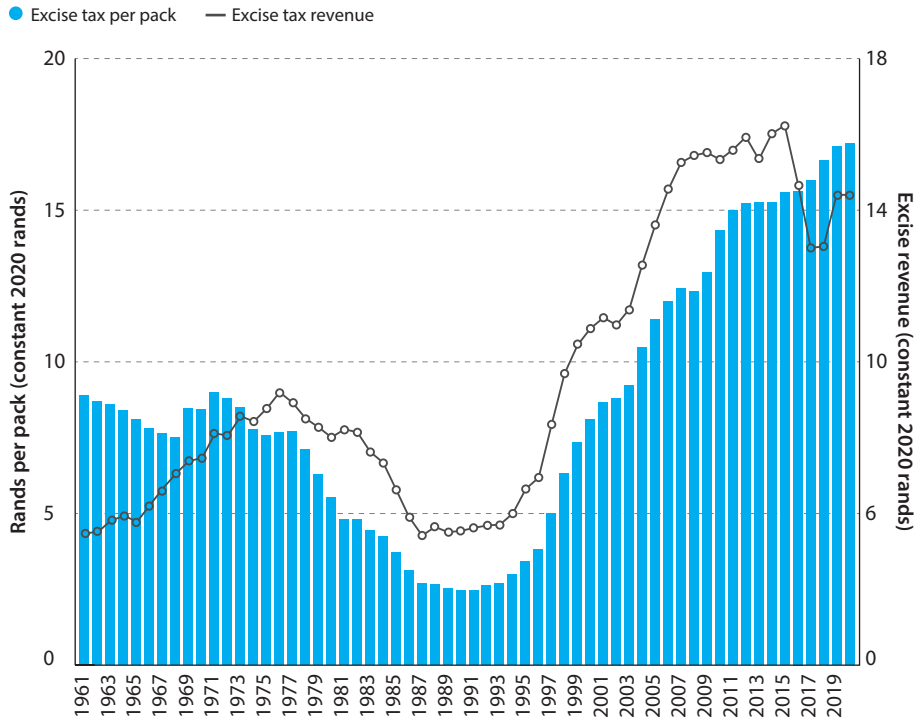
4.4.2 THE REVENUE IMPACT OF EXCISE TAX INCREASES: CASE STUDIES

The following case studies illustrate four key points: (1) large and regular tax increases result in large and consistent revenue increases; (2) countries with high taxes and falling prevalence of tobacco use can still increase revenue with tax increases; (3) countries that reduce taxes experience revenue declines; and (4) countries that increase taxes in the face of illicit trade still increase revenue.

Large and regular tax increases usually mean large and consistent revenue increases

South Africa's experience shows how successive tax increases, well above inflation and year after year, generate additional revenues even after taxes have been increased substantially. After two decades of declining real revenue in the 1970s and 1980s as real excise per pack declined, South Africa implemented successive excise tax increases from 1994 until 2011 (Fig. 4.4.1) (98, 104). After adjusting for inflation, this resulted in a real excise tax revenue increase of 245% (98). Revenues began to plateau from 2012 as tax increases stalled. They began to decline after 2015 – not due to tax increases, however, but due to a dramatic decline in administrative capacity and enforcement measures exacerbated by large-scale corruption in the government, including the tax administration authority (105). The rapid and catastrophic decline in tax administration and enforcement has been the subject of much attention (106).

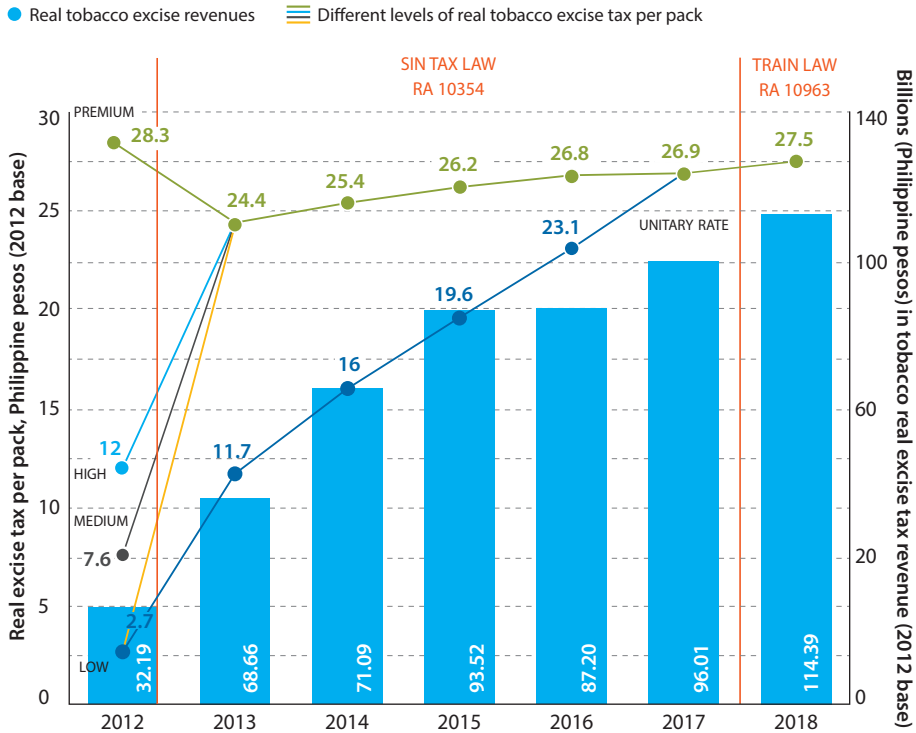
Fig. 4.4.1 Real excise tax per pack of cigarettes and real excise tax revenue in South Africa, 1961–2020



Source: Data shared by University of Cape Town, 2020.

Similarly, the Philippines provides a compelling example of how large and regular tax increases alongside reforms to tax structure can lead to large and consistent revenue increases – in this case, also through an accompanying reform to the tax structure (Fig. 4.4.2) (98). The 2012 Sin Tax Law consolidated the country’s four tax tiers into two by 2013 and established a uniform structure by 2017. The same law provided for large, progressive increases across the board, but in particular for the lowest tax categories (98). Not only were the revenue gains substantial, they exceeded all the projections for 2013–2017 made prior to the law’s passage (98).

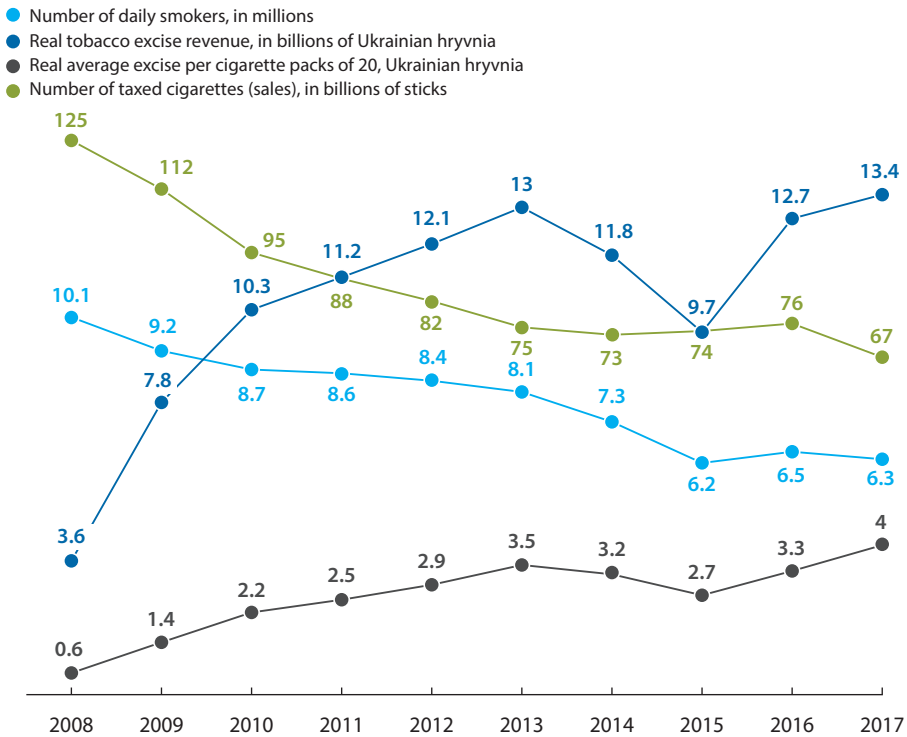
Fig. 4.4.2 Real excise tax per pack of cigarettes (multitier, two-tier, unitary) and total tobacco real excise tax revenue in the Philippines, 2012–2018



Note: Data were adjusted for inflation, using annual percentage change of average consumer prices from the IMF World Economic Outlook, April 2020, and using 2012 as the base year.
Sources: (107, 108 and data shared by the Philippines Department of Finance, September 2020).

Ukraine is another example of a country that has regularly increased taxes over the past 10 years and has experienced increased revenues along with decreases in consumption and the number of smokers. Figure 4.4.3 shows the trends in excise tax, revenues, cigarette sales and number of smokers in 2008–2017. Increases in excise rates were consistently accompanied by increases in revenues. In 2014–2015, excise tax was not increased above inflation (and inflation, especially in 2015, was very high, at 48.7%), so real values of excise and revenues went down. But it is evident from the data that revenues closely follow the path of excise levels even when sales go down.

Fig. 4.4.3 Average real cigarette excise tax rates, real cigarettes excise tax revenues (base year 2008) and cigarette sales and number of cigarette smokers in Ukraine, 2008–2017



Note: Data were adjusted for inflation, using annual percentage change of average consumer prices from the IMF World Economic Outlook, April 2020, and using 2008 as the base year.

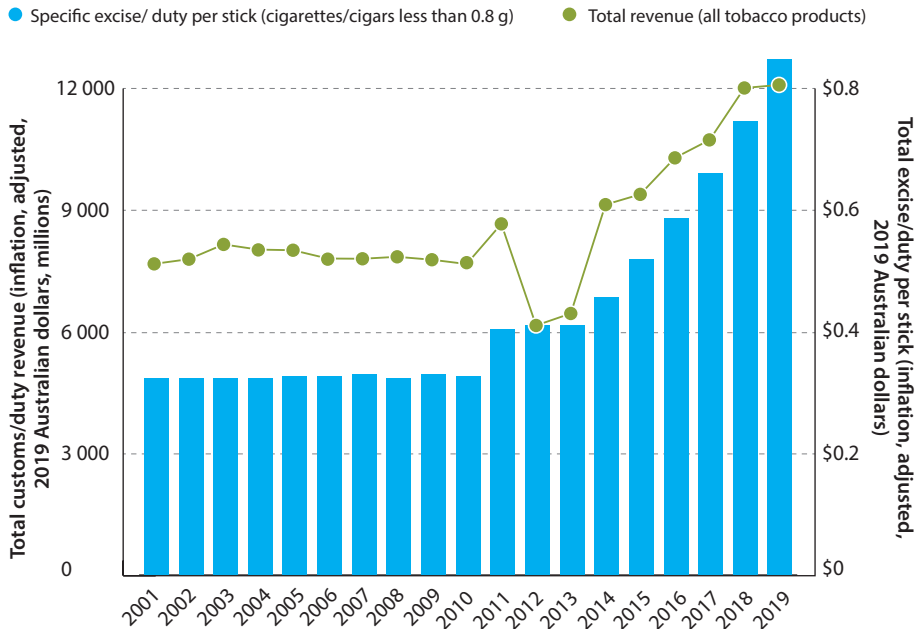
Source: Data provided by Konstantin Krasovsky, July 2020.

Countries with high tax and falling prevalence of tobacco use can still increase revenue with tax increases

Countries with already high tobacco taxes and rapidly diminishing tobacco use can still increase revenue by increasing taxes (98, 109). Australia has implemented comprehensive tobacco control policies and enacted consistent tobacco tax increases on top of what were already some of the highest tax rates in the world (see Fig. 4.4.4). Between 2001 and 2010, revenue increased with increasing tax rates, but in real terms (inflation-adjusted) it remained static (109). Then, in 2010, a 25% excise tax increase was introduced, with large annual increases scheduled from 2013 onward (98, 109). The result of this tax policy has been consistent and large increases in revenue year after year for nearly a decade, even when the increases were being made on already high tax rates.²³

²³ The apparent reduction in revenues in 2012 and 2013 was due to a change in the source of the data for 2001–2011 and 2012–2016. Data for 2012 and 2013 do not include customs duty, while all other years do.

Fig. 4.4.4 Real excise tax and customs duty per stick and real total revenue (all tobacco products) in Australia, 2001–2019



Notes: Rates published by Australian Taxation Office and Australia Department of Immigration and Border Protection, adjusted using Australian Bureau of Statistics Consumer Price Index rates. The 2011–2012 and 2012–2013 figures do not include customs duty, which explains the apparent decline in revenue. Using official disclosures, Scollo and Bayly estimate that duties in these years were \$7397.2 and \$7687.2 respectively (110). Sources: (109, 110).

Countries that reduced taxes and saw revenues decline

Prior to 1982, Canada lowered taxes on cigarettes and experienced declining revenues as well as increased smoking – particularly among youth. Subsequent fivefold increases in cigarette taxes between 1982 and 1992 resulted in more revenue, increases in retail price and substantial reductions in consumption, with teenage smoking declining by nearly two thirds (5). In the early 1990s, a growing illicit trade in cigarettes emerged in which Canadian cigarettes exported to the United States were then smuggled back into Canada (5). The tobacco industry – which was later found to be complicit in and profiting from this illicit trade – sought to frame Canada’s high tax rates as the cause of smuggling (111–112) and succeeded in convincing the federal government, as well as six provincial governments, to make massive reductions in the tobacco tax (111–112). As a result, federal tax revenues fell significantly – more than twice as much as the government had predicted – and smoking rates among both adults and youth began to increase (5, 112). The Canadian government later changed its strategy, and the federal excise tax was restored, resulting in increased

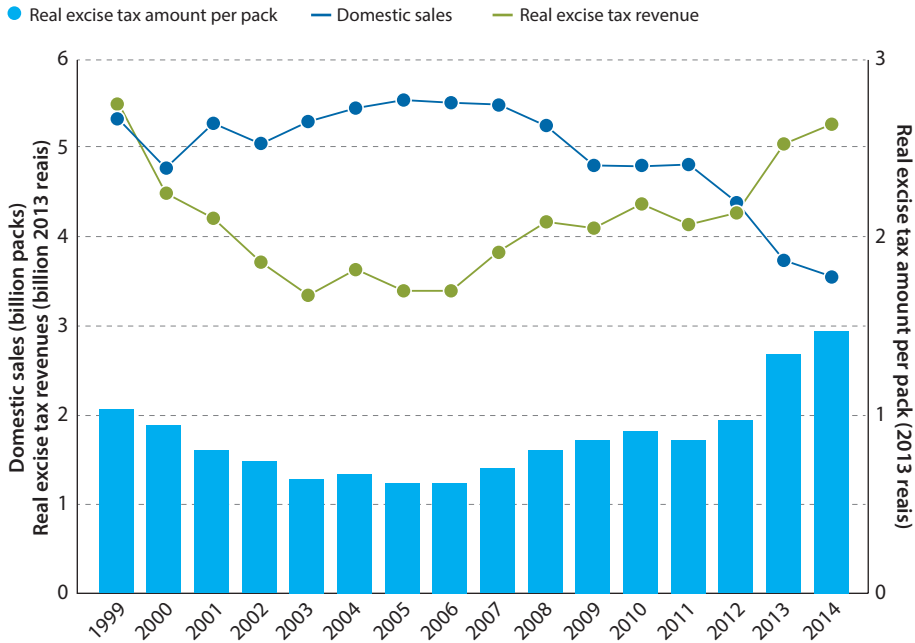
revenues and decreased smoking (5). Canada's focus then shifted to using customs enforcement, rather than tax rates, as the best means of countering illicit trade (5).

Countries that increased taxes in the face of illicit trade and still increased revenue

As discussed in section 4.1, the tobacco industry exploits illicit trade as a strategy to undermine tobacco tax policy, with the goal of deterring governments from increasing tobacco taxes. The narrative that has been created is that higher tobacco tax rates result in increased illicit trade and undermine the policy goals by resulting in lower (or no) declines in tobacco use or lower (or no) increases or even decreases in revenue. However, as shown in section 4.1, the empirical evidence does not support the industry arguments. Furthermore, the evidence shows that the industry and its allies have consistently overstated and exaggerated the scale and extent of illicit trade (see section 4.1).

As was the case in Canada, Brazil's tobacco tax policy suffered from a fear that the illicit market would expand unless it was undercut by price competition in the legal market, which it was thought could be best encouraged through tax cuts (20). Real excise tax rates declined from 1999 until the mid 2000s, as nominal increases were below the rate of inflation. This resulted in declines in real tax revenues (20). In these years, the tobacco industry used the tax cuts to increase profit margins rather than decrease prices and outcompete the illicit market, while also exaggerating the size and scope of the illicit trade problem (20). This caused the industry's argument on illicit trade and revenue to lose credibility and resulted in increases in tax rates from 2007 onwards, with a major reform passed in 2011 (20). Tobacco excise rates and minimum prices were scheduled by the law to increase at levels above expected inflation from 2011 until 2015 (20). This resulted in substantial increases in the tobacco excise per pack, as well as overall revenue, which by 2015 had more than doubled from its low point in 2013 – equating to more than 50% in real terms (see Fig. 4.4.5). The success of this reform shows that revenues can be increased by higher rates despite the presence of a sizeable illicit market (113). More recent data show that revenues in Brazil declined in 2015 and 2016, coinciding with an increase in illicit trade, but also with an exceptionally bad economic recession that saw GDP decline by more than 3% in those years.

Fig. 4.4.5 Average real excise tax per pack, real excise tax revenues and domestic cigarette sales in Brazil, 1999–2014



Notes: Data based on domestic sales and tobacco excise revenues, Federal Revenue Secretariat, indexed to 2013 Brazilian reais, using Consumer Price Index. Revenue collection indexed to 2013 reais, using Consumer Price Index. *Source:* (20).

Improvements in tax administration and enforcement can also generate increases in revenues. In Kenya, several measures, including fiscal markings and, later, an advanced tracking and tracing system, improved collection, resulting in increases in both legal sales and tax revenues and a reduction in illicit sales (114). Moreover, these examples of poor governance indicate that attention should be focused on countries where a significant loss in administrative and enforcement capacity undermined revenue collection.

4.4.3 CONCLUSIONS

The tobacco industry uses revenue concerns as a SCARE tactic to avoid, dilute and/or delay tobacco tax increases. The argument that higher taxes will decrease revenue is theoretically plausible, but real-world examples have demonstrated that this has not occurred. Furthermore, simulations show that even large tax increases in current average tax shares yield substantial revenue gains.

The use of the Laffer curve by the tobacco industry should be challenged and refuted. The relatively price inelastic nature of cigarette demand combined with the

low tax share and no overshifting of the tax means that most – if not all – countries are still far from the revenue-maximizing point, indicating that increases in taxes will lead to increases in revenues.

The case studies in this section refute each of the tobacco industry's arguments regarding alleged potential revenue loss due to tax increases. The experiences of South Africa, the Philippines and Ukraine demonstrate that large and regular tax increases result in large and consistent revenue increases. Well-designed tax structures have also proven to play an important role in generating revenues. The experience of Australia shows that even countries with already high tax rates and declining prevalence of tobacco use can increase revenues with regular, large tax increases. The experience of Canada warns against following the advice of the tobacco industry to decrease taxes as a way to fight illicit trade. It demonstrates clearly that decreasing tobacco taxes will decrease revenue and encourage consumption, rather than counteract illicit trade. The experience of Brazil shows that countries with substantial illicit trade issues can still increase revenue by increasing taxes.

Finally, in the few cases where revenue decreases were seen, the reasons for the decreases were not strictly linked to tax increases. This was the case in Tonga, where the increase in tax was applied only to cigarettes and not to their close substitute, loose tobacco – leading smokers to switch products. In South Africa, a decrease in revenue was the result of the weakening of government institutions. And in Ukraine, real revenues decreased only during the two years when taxes were not increased above inflation.

4.5 SCARE TACTIC E: EMPLOYMENT

4.5.1 INTRODUCTION

In opposing tax increases, the tobacco industry often seeks to frame tobacco taxes as an economic rather than a public health issue (5, 48, 53, 115). Particular emphasis is placed on the alleged threat that tax increases pose to employment in tobacco farming and manufacturing, as well as other related industries (5). This so-called choice between health and jobs is, however, based on several false premises, including (5):

1. tobacco is a significant source of jobs within the context of broader labour markets, and domestic tobacco tax increases will have a drastic effect on domestic employment (48, 53, 116–117);
2. tobacco consumption is an indispensable engine for job creation (5, 48, 54); and
3. tobacco provides highly prosperous, sustainable and irreplaceable livelihoods (5, 53, 118).

In reality, the relationship between tobacco taxation and employment is considerably more complex than the industry makes it out to be. In fact, there is ample evidence to show that tobacco taxes are a win-win for public health and the fiscal space, without measurable risks to employment.

4.5.2 THE LINK BETWEEN TOBACCO EMPLOYMENT AND TOBACCO TAX RATES

Tobacco farming, production and manufacturing (including hand-rolling in some countries, most of them in South-East Asia) constitute a small proportion of the labour force, even in countries where the industry is most heavily concentrated (5, 48, 103, 116). Employment in tobacco farming and manufacturing has been declining globally due to advances in technology, trade liberalization, market consolidation and the privatization of formerly state-owned tobacco companies (5, 103, 119). These same trends have led to the heavy concentration of tobacco growing and manufacturing in only a handful of countries – and within these countries, often in only a small number of regions (103, 119–121). Even in those countries that lead in tobacco growing and manufacturing, tobacco's overall share of total agricultural and manufacturing employment is relatively small and is often decreasing as efficiencies in production reduce labour intensity (5, 117–118, 122).

Similarly, the industry's claim that tobacco taxes reduce employment is exaggerated and typically overlooks wider trends driving tobacco industry employment. Indeed, tobacco industry developments and innovations have played a greater role in the reduction of employment in the tobacco industry than have tobacco control policies (103). Despite industry claims that tobacco taxes can affect employment,

characteristics of the location of production – such as market size, labour costs, growing conditions and leaf preferences – have much more to do with tobacco industry interests than with the tobacco tax rate (103, 123). Moreover, jobs in countries that produce tobacco primarily for export are not greatly affected by reductions in local consumption resulting from tax increases (5, 103, 116, 123). Finally, it has been demonstrated that tobacco tax increases do not have a significant effect on employment in the retail sector, as most retail businesses sell other goods (103).

Estimates of the gross employment impact of tobacco tax hikes demonstrate that job losses that do occur can be more than compensated for by increases in revenue. A 2018 World Bank study estimated that in Indonesia, for example, an ambitious tax reform that would simplify tiers and increase prices by close to 50% would reduce gross employment in the tobacco manufacturing sector by less than 0.5% (a loss of 2 914 jobs). The government could provide income support to the displaced workers (for example, through training, temporary transport/mobility or income support) with less than 2% of the revenue gained from the tax increase (117). Similarly, a 2019 study by Bangladesh's National Board of Revenue estimated that a substantial increase in tobacco taxation would cause 7 012 lost jobs, but that the total income associated with these job losses in the bidi industry would amount to only 3.5% of the revenue gained (120). Accordingly, increased revenue can more than compensate for the expenditure of supporting those who lose jobs and need to acquire new skills before transitioning to new employment (120).

Box 4.5.1 Employment fears deployed to frustrate tobacco tax reform in Indonesia

In 2017, the Indonesian Ministry of Finance decided to implement tobacco tax increases by 2019 and tier simplification by 2021 (124). This resolution was, however, abandoned within a year, after a concerted campaign by tobacco industry actors and their allies to reframe the increase as an economic issue with a focus on, among other things, the effect the tobacco tax increase would have on employment (124). This defeat for the tobacco tax initiative came despite estimations of how the loss of income associated with lost jobs would be dwarfed by the additional revenue gained by the tax (117). Earlier analysis had estimated an overall large net positive impact on employment from tobacco tax increases (125), which illustrates how evidence that challenges assumptions around the negative socioeconomic impacts of tobacco control tends to be discounted (126). In this case, tobacco industry arguments seem to have resonated strongly with politicians from the electoral districts of West Java, East Java, Central Java and West Nusa Tenggara, where employment in tobacco farming and manufacturing is concentrated (124). Although tobacco manufacturing

represented only 5.13% of total manufacturing employment, the concentration of the job and economic activity meant that arguments regarding employment were particularly salient (117,119). Accordingly, tobacco industry arguments that tobacco taxation would negatively impact employment and farmer livelihoods prevailed, despite strong opposing evidence (119). Concentration of tobacco industry activity within countries poses particular obstacles to overcoming industry arguments on employment and needs to be given careful attention.

4.5.3 THE EVIDENCE ON THE NET EFFECT OF TOBACCO TAX INCREASES ON EMPLOYMENT

A proper analysis of the effect of tobacco tax increases on employment must examine their impact on net or economywide employment. Decreases in expenditures on tobacco associated with tobacco control do not mean that expenditures simply disappear; rather, they are redistributed towards consumption of other goods and services, thereby generating employment elsewhere in the economy (5, 103, 123). Similarly, though the effect of higher tobacco taxes on net consumption is arguably more ambiguous, revenues from this intervention do generate spending, investment and employment in public services such as health and education (5). Tobacco control policies usually have a marginal neutral or positive effect on net employment, particularly in countries that are net importers of raw or manufactured tobacco products, as expenditures on these imported items tend to flow out of the country (5). Export-oriented tobacco producers are less sensitive to local demand and are not significantly affected by domestic tobacco tax measures, which likely have a near-neutral net impact (5). In some cases, the net employment impact is a very small negative number, typically less than 1% (127–128).

A recent study estimated that in the United Republic of Tanzania – a large tobacco-producing and exporting country – a 30% reduction in smoking prevalence would result in a net employment decline of just 0.5% across the economy as a whole (129). A similar study of Pakistan found that, with some variance depending on where spending was redistributed from tobacco consumption, the overall net effect on employment from a significant reduction in expenditure on cigarette employment – 1 billion rupees – would be a gain of between 6 651 and 5 803 jobs (122). This increase would occur because expenditure on cigarettes produces much less employment in the broader economy than expenditure on food and education (122). In the United Republic of Tanzania, as elsewhere, increased revenue could be used to assist those who lose employment with transitioning to new livelihoods.

4.5.4 THE VIABILITY OF BETTER LIVELIHOODS

In arguing against tobacco tax increases, the tobacco industry advances the myth that people employed in tobacco production – particularly tobacco farming, but also manufacturing – lack any other prospect for a comparably attractive livelihood. However, studies based on extensive survey data in Indonesia, Kenya, Malawi, the Philippines and Zambia have shown that despite needing to commit significant amounts of labour to their crop, tobacco farmers often suffer losses rather than gain profits (119, 121, 123, 130–132). Furthermore, the Indonesian studies demonstrate that tobacco farming has a negative impact on household income and opportunity compared with the experience of other farming households that have given it up (119).

Declines in consumption as a result of tobacco tax increases are gradual and susceptible to the same progressive adaptation that has occurred for decades (5, 103). While there will be a need in some countries for the government to help farmers transition to other crops or industries in the longer term, this process will not be a major short-term shock to employment or the wider economy (123).

Because tobacco growing and manufacturing can be concentrated in just a few locations within a country, job losses within the tobacco industry might have a disproportionate effect in one location, while employment gains from reduced consumption may be spread across the whole country (120, 123). A study of the employment effects of tobacco tax increases in Bangladesh estimated that up to 60% of all job losses would occur in only two districts – among the poorest in the country – due to the high level of industry concentration (120). Studying the need for support, as well as the means of delivery and funding of support, is particularly necessary in these circumstances. Beyond the need to ensure equity and support employment, a failure to provide for targeted relief can exacerbate fear of job losses and may prove fatal to a tobacco tax proposal (120).

Box 4.5.2: Supporting alternative livelihoods in the Philippines

The Philippines earmarked 15% of the revenue from a 2012 increase in tobacco taxes to supporting economically viable alternative livelihoods for tobacco farmers and workers (5). Tobacco farming in the Philippines is regionally concentrated, and the tobacco industry had previously been successful in deploying concern for smallholder tobacco farmers to undermine tobacco control measures (136). The provision of economic support was a politically effective countermeasure to tobacco industry SCARE tactics and eased the tax increase's passage.

Given the Philippines' integration with global tobacco markets and demand, tobacco farmers have not been seriously affected by the tobacco tax increase and

reduced domestic demand (108, 132). Nevertheless, transfers to tobacco-growing regions from the earmarked tax have been substantial (108). These funds are supporting gradual transitions to alternative livelihoods, with farmers being encouraged to take up alternative crops, as well as establishing infrastructure, such as market-to-farm roads, that will make these alternative crops more economically viable (108, 133–134).

Supporting alternative livelihoods for farmers and other tobacco workers is important because it can offset the political effect of industry arguments, even though domestic tax increases usually have only a modest and gradual effect on employment. There are various models for supporting alternative livelihoods when employment in the tobacco sector gradually diminishes due to decreases in either global or national demand.

The Philippines is exemplary, but many other countries have either implemented or experimented with supporting crop transitions. Turkey's alternative crop programme, implemented in anticipation of the privatization of the country's cigarette monopoly, has proven effective in supporting many tobacco farmers' move to other crops (135). Smaller-scale crop substitution projects in Kenya and Yunnan Province in China have shown how financial, regulatory and infrastructure support from government can contribute to crop transitions (5, 53). Argentina, Bangladesh, Mexico and the state of Maryland in the United States provide additional case studies of how governments can support these transitions (5, 136).

4.5.5 CONCLUSIONS

The tobacco industry exaggerates the importance of tobacco employment and overstates the impact that domestic demand reduction due to local taxes will have on tobacco farmers serving a global market. The industry also simplifies employment's relationship with taxation by focusing only on gross employment in tobacco, which ignores the reality that expenditures on tobacco do not disappear but rather are redistributed for other consumption that can produce a similar or higher number of jobs.

Many detailed studies have found that tobacco growing is much less profitable and sustainable than the tobacco industry claims. Tobacco farmers throughout the world have successfully transitioned to other crops, although the transition often requires temporary or additional support from the government or other stakeholders. The extent of such support is moderated by the reality that transition from tobacco to other crops is a long-term consideration.

4.6 EARMARKING TOBACCO TAX REVENUES TO FUND HEALTH

4.6.1 INTRODUCTION

Earmarking tax revenues involves the separation of all or a portion of revenue from a tax or group of taxes to be put aside for a specific purpose (137). Globally, more than 80 countries earmark for health (138), and 37 earmark tobacco tax revenues for health (27). There are two main types of earmarks: hard – also called substantive – and soft, or symbolic (139). Hard earmarks link the expenditure with a revenue source in legislation. This can limit funding if the earmarked revenues are the main source of funding, or it can cause surpluses to accrue wastefully when more revenues are raised than may be expended for the earmarked purpose. Soft earmarks include dedicated funds or commitments to use funds for a particular purpose. They are not necessarily legally binding. For example, in France, the majority of tobacco tax revenue is used to fund social security (which includes health insurance and health care), but there is no hard, formal earmark (140). Earmarks can also be some combination of hard and soft. In the Philippines, tobacco tax earmarks are legally binding, but earmarked revenues go to the general fund, and the Department of Health must submit an annual budget for covered programs as part of its budget request.

Earmarking is a broad and contentious topic that goes beyond the specifics of tobacco tax earmarking. Discussions on the topic fall within the ambit of public financial management, and earmarking generally is not encouraged. From a tobacco control perspective, however, tobacco tax earmarking is best understood as a way of selling significant tobacco tax increases to the public, politicians and officials. It is a tool to improve the political economy of tobacco taxation; it is a secondary issue only, after the primary goal of reducing demand for tobacco. One way to use earmarking to improve the political economy of tobacco taxation is to link the payment of tax by tobacco users to benefits they will receive through the funding of complementary tobacco control programmes, such as cessation support, or through increased funding for health programmes on which they will rely disproportionately. This is known as the benefit principle.

Earmarking for tobacco control makes sense, as its financial cost is relatively small and tobacco tax reduces demand more effectively when implemented within a package of complementary tobacco control measures. Another way earmarking improves the political economy of tobacco taxation is by safeguarding against any perceived or potential negative ramifications of the tax itself. This is important for neutralizing erroneous but often convincing tobacco industry arguments against effective tobacco tax policies. For example, the Philippines earmarks the bulk of the additional revenues from sin taxes for the health insurance premiums of the poor. In addition, a portion

of the country's tobacco tax revenues is earmarked to provide for the economic well-being of tobacco growers and tobacco growing regions, with the general aim of promoting economically viable alternatives to tobacco farming and manufacturing as a safeguard against the potential for reduced domestic tobacco demand (141).

Tobacco tax earmarks are complex, however, and care is required when determining whether a particular earmark is needed on the grounds of political economy and justified on the grounds of equity and economic efficiency. In assessing tobacco tax earmarks, many of the same criteria that have been used to assess the appropriateness of generic earmarks also apply. In the rest of this section, these criteria are set out and matched with reasons for the ability of well-designed tobacco tax earmarks to fulfil them. The types and structures of tobacco tax earmarking are explored alongside descriptions of country experiences to provide guidance on how tobacco tax earmarks are used, when they are justified and the best ways to design them.

4.6.2 CIRCUMSTANCES IN WHICH EARMARKS MAY BE SUITABLE

Scepticism about earmarking is both long-standing and justified, but much of the debate concerns earmarking generally and is not specifically concerned with the merits of tobacco tax earmarking (138). The main concerns raised about earmarking are listed in Table 4.8, accompanied by suggestions for how earmarks may be structured to address these concerns.

Table 4.8 Concerns about earmarking and suggested safeguards to avoid the concerns

MAJOR CONCERNS RAISED ABOUT EARMARKING	HOW DESIGNING EARMARKING SAFEGUARDS CAN ADDRESS THE CONCERN
Democratic accountability and oversight: earmarks undermine democratic processes by impeding legislative and executive oversight over expenditure.	Establishing proper oversight and accountability procedures is important to ensure funds are not mismanaged (138). Additionally, if a soft earmark structure, which transfers revenue to the general fund from which it is then allocated, is adopted, this will not be a concern.
Budget rigidity: earmarking may create budget rigidity that can lead to inefficient allocation of resources (138).	An earmark's particular design determines how much rigidity is introduced (138). Flexible soft earmarks are less prone to introducing rigidity than hard earmarks. Concerns about rigidity can be reduced by the inclusion of a sunset clause that ensures that the earmark is automatically discontinued or reviewed after a set period of time has elapsed (138). A further safeguard is to establish the earmark as a waterfall account, with any excess revenue over a set amount being allocated to the general fund.

MAJOR CONCERNS RAISED ABOUT EARMARKING	HOW DESIGNING EARMARKING SAFEGUARDS CAN ADDRESS THE CONCERN
Fragmentation: earmarking can result in fragmented and uncoordinated expenditures. This means policies complementary to the earmarked purpose but outside of its purview may be unfunded (138, 142).	This is a legitimate concern. The negatives of fragmentation cannot be entirely eliminated, but they may be outweighed by the other merits of tobacco tax earmarking. That said, proposals for tobacco tax earmarks should be scrutinized to ensure that the funded purpose is at least cost-effective.
Decreased equity: equity will decrease if individual access to benefits is narrowly defined according to payments made.	This issue is not likely to arise with tobacco tax earmarks but is conceivable and something that should be guarded against in an earmark's design.
Capture by special interests: because earmarks are often the result of political expediency, an earmarked purpose may be determined by powerful special interests promoting a tax's passage rather than careful prioritization of resources (138).	Well-designed earmarks will guarantee funding for underresourced programmes and high-priority programmes.

While the above concerns may be valid and design does matter, tobacco tax and other health-promoting taxes are not subject to the same concerns when it comes to the justifiability of earmarking their revenue (138, 143). Some of the factors that distinguish tobacco tax earmarks from more general critiques of earmarking are listed in Table 4.9 (138).

Table 4.9 Concerns about earmarking and distinguishing factor for tobacco tax earmarks

GENERAL CONCERNS RAISED BY EARMARKS	DISTINGUISHING FACTOR FOR TOBACCO TAX EARMARKS
Procyclicality: earmarked revenues are often procyclical and susceptible to booms and busts (138–139, 142).	Tobacco tax revenues are generally not cyclical (they are recession-proof), and revenue is predictable relative to most other indirect and direct taxes (103).
Budget rigidity	Tobacco tax earmarks necessarily involve only a relatively small proportion of the budget; therefore, the effect of any rigidity will be relatively insignificant. Partly because of the relatively small amounts involved, there is only limited real-world evidence of tobacco tax earmarks having introduced harmful rigidity (143). ²⁴

24 See also the subsection on the amount of money associated with tobacco tax earmarks in section 4.6.3.

GENERAL CONCERNS RAISED BY EARMARKS	DISTINGUISHING FACTOR FOR TOBACCO TAX EARMARKS
Capture by special interests	All earmarks should be scrutinized to ensure that their funded purpose is cost-effective. In the case of tobacco tax earmarks, however, political economy considerations may mean that it is sufficient for a low-priority purpose to be funded if the funding will unlock the political will needed for effective tobacco tax increases. In these cases, special interests are being purposefully catered to in order to ensure that tobacco tax increases occur. Of course, arguments against tobacco taxes and tobacco tax earmarking are led by special interests such as the tobacco industry (144–147).
Insufficient revenue: the earmarked revenue source may become insufficient for funding its purpose (139, 142).	Even though revenue may decrease in the long term when more tobacco users quit, such decrease is expected to be gradual. See Section 4.4 for details on how, with effective design, revenue will generally increase even with declining consumption.

In addition to these reasons why general concerns about earmarking do not fully apply to well-designed tobacco tax earmarks, there are a number of compelling reasons for tobacco tax earmarking to finance tobacco control or public health that argue in favour of its implementation:

- Significant increases in excise taxes are the most effective, as well as the most cost-effective mechanism for reducing consumption, but they are best implemented as a part of a package of complementary tobacco control measures, such as the WHO MPOWER package. Earmarking tobacco tax revenue for interventions that may not be funded otherwise can strengthen overall tobacco demand reduction (148).
- The political economy of tobacco tax increases also makes earmarks attractive:
 - People have been shown to be more supportive of tobacco tax increases when they know the revenues will be used for targeted social programmes (143, 149–150). Earmarking tax revenue for health or tobacco control frames tobacco tax as a public health intervention in the minds of the public, which may otherwise view it as merely a revenue source (138). Research has shown that using earmarking to link a tobacco tax to health can also help raise awareness about the dangers of tobacco use (143).
 - When tobacco tax revenue is earmarked for programmes that benefit vulnerable groups, the tax becomes more equity-enhancing. Although lower socioeconomic groups and young adults receive disproportionate health and economic benefits from tobacco tax increases over the medium term, these groups will expend a greater share of their income in the

short term because of tobacco taxes. Earmarking tobacco tax revenue for programmes such as UHC or cessation services that provide immediate benefits to these groups neutralizes some critiques of tobacco taxation (e.g. the 2009 United States federal excise tax increase and the 2012 Philippines Sin Tax Reform illustrate how equity-enhancing earmarking facilitated passage of substantial tax rises) (93, 138, 143, 150).

4.6.3 EARMARKING PRACTICES AND COUNTRY EXAMPLES

Earmarking tax revenues for health is a common practice in 80 countries. In 2018, 37 countries from all regions of the world earmarked tobacco tax revenues for health purposes.²⁵

Case studies in the political economy of tobacco tax earmarking

In 2012, the Philippines comprehensively reformed tobacco and alcohol excise taxes. Tobacco taxes were increased significantly, and numerous tax tiers were reduced to only one tier by 2017. Although increasing revenue was a foremost motive for some officials, the reform was explicitly framed around boosting UHC funding and advancing public health by reducing alcohol and tobacco consumption. Earmarking of tax revenue for UHC was essential to the political compromise that made this trailblazing tax increase a reality. It ensured that the increase, which may have otherwise been perceived as regressive, was framed as a progressive public health measure in the public imagination, while also appeasing tobacco growers and their political representatives. Earmarking was also important because the earmark ensured high-level support for the tax by achieving a key political priority (151). Its soft-earmark structure meant it was not a blank cheque to the Ministry of Health, and this addressed concerns within the Ministry of Finance.

Similarly, in Australia, earmarking of revenue helped overcome community objections to tobacco taxes and tobacco control more generally that resulted from the tobacco industry's sponsorship of sports and the arts in the 1980s. Attempts to completely ban tobacco advertising and sponsorship had been unsuccessful due to strong pressure from sports, arts and racing lobbies that claimed that a ban would harm these activities. States, starting with Victoria, responded by earmarking funding for Health Promotion Foundations that took over the tobacco industry's sponsorship activities and also paid for antismoking campaigns. In 1997, these earmarks ended after a High Court ruling that the Constitution did not allow states to collect excise taxes. However, in recognition of the successful work of the Foundations, the federal

²⁵ Details about earmarked taxes by country are provided at https://www.who.int/tobacco/global_report/Table-9-4-Use-of-earmarked-tobacco-taxes.xls?ua=1.

government began funding them directly from the federal budget (152). Although this example may be difficult to replicate precisely, it shows how earmarks with built-in sunset clauses for piloting cost-effective interventions can potentially graduate to funding from the general budget once they have proven their effectiveness. It also more generally shows how earmarks can disarm community objections, reframe tobacco tax increases and unlock the political will needed to advance effective tobacco control measures.

Structures for managing earmarked tobacco taxes

A 2016 review of nine countries' tobacco tax revenue earmarking experiences identified three arrangements for governance and allocating revenue (151). Table 4.10 presents some examples of these allocation arrangements. In some countries, earmarked tobacco tax revenues are combined with alcohol tax revenues.

Table 4.10 Illustrative arrangements for allocating earmarked tobacco tax revenues

POSSIBILITIES FOR ALLOCATING TOBACCO TAX EARMARK REVENUE			
Forms of budget allocation	Revenue goes to the general fund and is later assigned to the official actor(s) specified in the earmark.	Revenues do not go through the general budget but are instead paid into a separate account belonging to the official actor(s) specified in the earmark.	Earmarked tax revenue is paid directly to the account of the entity managing an autonomous or semi-autonomous fund.
Examples	In the Philippines, revenue goes to the general fund before being allocated to the Ministry of Health following submission of a budget for its use (140).	In Romania, revenue goes directly into a Ministry of Health account that is distinct from the general fund. In Panama, revenue is paid into subaccounts of the three recipient agencies (the Ministry of Health, the National Cancer Institute and the Customs Authority).	In Thailand, ThaiHealth directly receives the earmarked revenues in its own account. In Viet Nam, the Viet Nam Tobacco Control Fund receives the revenues directly into a subaccount it manages but that belongs to the Ministry of Health.

Source: (151).

Where is the money being spent?

Earmarked tobacco tax revenues are used for a variety of health purposes, including tobacco control, health promotion and UHC. A wide variety of other programmes have also been funded with earmarks from tobacco taxes, including disaster relief (e.g. hospital medical supplies and equipment to treat COVID-19 in India), youth programs, sports and craft jobs in Yemen, social cohesion in Morocco, health and social programs in areas dependent on tobacco growing in Argentina, health promotion

and tobacco control in Thailand and alternative livelihood programs for tobacco farmers as well as economic projects in tobacco-growing provinces in the Philippines.

Table 4.11 shows the three main categories of health programmes to which earmarked tobacco tax revenue is allocated, as well as a fourth miscellaneous category, with country-specific examples for each.²⁶

Table 4.11 Programmes to which earmarked tobacco tax revenue is allocated

TOBACCO CONTROL	NCD PREVENTION AND CONTROL PROGRAMMES (otherwise indicated between brackets)	HEALTH COVERAGE EXPANSION (e.g. through health insurance coverage)	OTHER, MORE GENERAL OR UNSPECIFIED HEALTH PROGRAMMES
Costa Rica, Côte d'Ivoire, the Islamic Republic of Iran, Madagascar, Panama (tobacco cessation and fighting illicit trade), Switzerland, Viet Nam	Cook Islands, Costa Rica, Mauritania (anti-cancer research), Palau (NCD prevention only), Panama (National Institute of Oncology), Paraguay	Colombia, Congo, Egypt, Palau, Philippines	Algeria, Argentina, Bangladesh, Botswana, Cabo Verde, Chad (programmes delivering antiretroviral drugs), Colombia (sports), Comoros (sports, hospital emergencies), Congo (sports), Côte d'Ivoire (AIDS programme), El Salvador, Estonia (sports), Guatemala, Indonesia, the Islamic Republic of Iran (sports), Ireland, Jamaica, Lithuania (sports), Madagascar (sports), Morocco, Nepal, Paraguay (sports), Republic of Korea (health promotion), Romania, Thailand (health promotion), United States, Yemen (sports)

Note: Countries appear in more than one column when their earmarked tax revenues are used in more than one specific health programme.

Source: (27).

The amount of money associated with tobacco tax earmarks

Case studies of the experiences of nine countries in tobacco tax earmarking show that earmarked funds are relatively small in comparison with government spending on health (see Table 4.12) and, consequently, even smaller in terms of GDP. Therefore, the argument that tobacco tax earmarks would introduce rigidity into public financial management may not apply.

²⁶ Details about how the tobacco tax revenues are earmarked are given in Annex 4.2.

Table 4.12 Proportion of earmarked tobacco tax funds in government expenditures

COUNTRY	ESTIMATED ANNUAL TOTAL FUNDS FROM EARMARKED TAX	ANNUAL FUNDS FROM TOBACCO TAX EARMARKS as a % of general government expenditure on health in 2013
Botswana	2014–2015: 4 million pula (US\$ 0.48 million)	NA
Egypt	2013–2014: 392 million Egyptian pounds (US\$ 52.06 million); earmarked taxes only 1.8% of total taxes on cigarettes	1.086%
Iceland	2014: 108.3 million kronor (US\$ 0.89 million)	0.083%
Panama	2014: US\$ 27.8 million	1.322%
Philippines	2014: 50.18 billion Philippine pesos (US\$ 1.18 billion)	NA
Poland	2013: 1 million zloty (US\$ 0.316 million) from general budget	0.001%
Romania	2014: 1.1 million lei (US\$ 0.33 million); 14.4% of total health budget	0.004%
Thailand	2014: 4064.74 million baht (US\$ 125.15 million); 1.78% of Ministry of Health budget and 1.84% of National Health Security Fund	0.932%
Viet Nam	2014: 299.171 billion dong (US\$ 13.91 million); 0.5% of national health budget	0.335%

Source: (151).

4.6.4 CONCLUSIONS

Despite the initial principled resistance to earmarking by some ministries of finance, experience has shown that the use of revenue from tobacco taxes and other taxes on the consumption of products that have negative externalities can ensure political as well as public support. Successful earmarking needs a well-developed structure for the use of funds for health purposes. Even intergovernmental organizations that are opposed to earmarking (e.g. the IMF) have acknowledged the justifiability of well-designed tobacco tax earmarks when revenue is directed to specific cost-effective programmes (153–154).

The amounts of tobacco tax revenue effectively earmarked for health have been relatively small and could hardly introduce the feared rigidity in government budgets. Moreover, in some countries, those funds have helped to implement much-needed health programmes (e.g. Australia, the Philippines, Thailand). More governments are considering this option as a stable medium-term source of secure funding for programmes such as tobacco control. The payoffs will be seen in the future as fewer people fall ill and less medical care for tobacco-related illnesses is needed. In Australia,

an earmarked tax was used to fund a needed and underresourced programme that proved to be successful, effective and impactful; the programme is now sustainably funded, embedded in the federal budget.

Earmarking is desirable in a particular political economy when it enables the implementation of effective tobacco taxation that will increase price and reduce consumption. It will, however, also be rational as a matter of public financial management, economic efficiency and democratic governance when concerns such as the following are considered. Although not every question needs an affirmative answer, policy-makers who can answer yes to many of the following questions will likely be considering an effective and rational tobacco tax earmark:²⁷

- Does the tobacco tax earmark's purpose rationally connect with the recipient programme's purpose? Earmarks that fund tobacco control or other health programmes are more economically rational under the benefit principle than those that fund unrelated programmes such as childhood education, even when the popularity of the unrelated programmes may make a tax increase politically palatable.
- Does the tobacco tax earmark's amount rationally connect with the needs of the recipient programme? Earmarked funds that cannot be absorbed by the recipient programme are, in effect, money taken away from other needs.
- When a tobacco tax earmark funds health programmes, is this clearly communicated to the public to ensure that the framing of the tobacco tax increase as a health measure reinforces the demand-reduction effect?
- Is the programme being funded by the tobacco tax earmark a politically neglected but highly cost-effective or crucially needed programme that, once established as a proof of concept, has a chance of being funded out of the general budget?
- Does the tobacco tax earmark's purpose rationally connect with the effects of the tax itself? Earmarks that fund programmes that disproportionately benefit lower socioeconomic groups or that fund alternative livelihoods for former tobacco workers and farmers will have equity-enhancing effects that will reinforce the already progressive nature of tobacco taxes.
- Is the scope of the earmark's purpose narrow enough that it can be funded mostly from the tobacco tax earmark, to ensure that the revenue is additive and does not merely substitute for spending that would otherwise come from the general fund?
- Does the design of the tobacco tax earmark provide for flexibilities that ensure that windfall revenue collection is not squandered on a purpose already saturated with overfunding?

27 Adapted from and informed by References 138–139, 143, 150.

- Does the design of the tobacco tax earmark include a sunset clause that triggers its automatic end or review? The presence of such a clause will guard against inefficiency in allocation arising and being left uncorrected due to political inertia.

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ANNEX 4.1 METHODS TO ASSESS THE NATURE AND SIZE OF THE ILLICIT TOBACCO TRADE

A4.1 DIRECT MEASUREMENT

A4.1.1 SMOKER INTERCEPT AND PACK OBSERVATION SURVEYS

Illicit trade can be measured directly by examining the cigarette packs of smokers. The smokers themselves can provide information on purchasing patterns, brand preferences and prices paid. Researchers can select individuals or retailers to survey based on a convenience sample (i.e. a sample that may not be representative) or a probability-based sample (i.e. a sample selected to be statistically representative of an underlying population).

Data collected from a pack could reveal whether the pack is compliant or non-compliant with the local tax laws. Information can be obtained from objective markings such as brands, public health warning labels, tax stamps, foreign language labels or duty-free labels. During these stops, researchers can record demographic information (e.g. age and gender of the smoker), smoking-related history (e.g. number of cigarettes smoked per day) and price information. This is helpful in understanding the profile of smokers who are able and willing to avoid cigarette taxes. Pack observations can be used in conjunction with population-based household surveys to obtain population-based estimates of the illicit tobacco trade (1,2). For example, as part of a regular national health survey, Kaplan et al. conducted a cross-sectional study of smokers in Turkey, using a face-to-face interviewer-administered survey and pack observation (3). They were able to collect sociodemographic, lifestyle and medical details along with pack observations as part of the study protocol.

Advantages and disadvantages of smoker intercept and pack observation surveys

A primary advantage of conducting pack observation is that it is direct and objective, and smokers are not subject to any value judgements (2). Paired with survey data, pack observation can appropriately account for respondents who are not residents of the area in which they are surveyed (4). Disadvantages include the difficulty of identifying areas that are representative of the tobacco use population and the difficulty of sampling important subpopulations such as elderly and immobile smokers. Also, surveys conducted in the daytime may discount the number of youthful smokers who are in school. Another disadvantage is that a sizeable number of smokers may refuse to show their last-purchased pack (2). Kaplan et al. found that 24% of smokers sampled in Turkey did not show their cigarette pack to the study interviewer (3). This issue may be mitigated by asking users to provide information on the brand purchased, whether any public health warnings were posted and the

price paid (5). Although the responses are based on recall, they may still yield useful information. For example, Joossens et al. allowed smokers who did not show their packs to provide self-reported information and found no statistical differences in illicit packs between these respondents and those who did show their packs (2). Another obstacle to accurate measurement based on smoker intercepts is the inability to determine the tax payment of smokers who purchase single cigarettes, since these smokers are generally not given packs. However, information can still be captured in self-report surveys by asking smokers to report the brand purchased and price paid.

Key study for readers to refer to for additional guidance:

Kaplan B, Navas-Acien A, Cohen JE. The prevalence of illicit cigarette consumption and related factors in Turkey. *Tob Control*. 2018;27(4):442–447.

A4.1.2 PACK RETURN AND SWAP SURVEYS

Pack return and pack swap surveys fall within the broader category of pack observation studies that use survey sampling techniques to examine smokers' pack characteristics and to determine whether they are tax compliant. For these surveys, the unit of analysis is the individual. The main differences between pack swap and pack return surveys is that swap surveys offer the smoker a replacement pack, whereas pack returns are built into mail surveys and allow respondents to mail in their unopened packs. Pack swap and pack return surveys use probability and nonprobability sampling procedures. Probability sampling allows researchers to generalize to the broader population.

Governments can use this method to rapidly assess the availability of illicit products in a given geographic area or to measure the share of the illicit marketplace. Rapid assessment may be performed in instances where there is an emerging tobacco product (e.g. a new cheap white brand) or suspected counterfeiting of tax stamp features. Rapid assessment using a convenience sampling strategy could place researchers near busy intersections where they could ask smokers for permission to look at their cigarette packs or to take photographs that could be analysed later. A population-based study requires a sample that closely mirrors the tobacco use population.

Advantages and disadvantages of pack return and pack swap surveys

Pack swap and pack return surveys may help to overcome the stigma associated with traditional smoking surveys. For example, when researchers ask smokers to see their cigarette packs (or when they take photographs), no value judgements are made. These surveys are good rapid-assessment tools that can be used to examine

the effectiveness of physical features of a pack designed to deter illicit trade (e.g. packs that have tracking and tracing technology or high-tech stamps). In addition, they can be supplemented with population-based tobacco use surveys. When coupled with such survey data, these methods allow researchers to obtain relevant information about the context of illicit purchases, including, for example, sources (e.g. street, peer networks, retail stores) and prices. Mail-in surveys are filled out in the comfort of the respondent's home without the presence of family members or passers-by, which may assure them that responses will be kept confidential. A potential disadvantage is that smokers who purchase both illicit cigarettes and tax-paid cigarettes may disproportionately mail back compliant packs. In addition, in LMICs, this mode of survey distribution may be unreliable because of issues associated with mail delivery systems.

Key study for readers to refer to for additional guidance:

Fix BV, Hyland A, O'Connor RJ, Cummings KM, Fong GT, Chaloupka FJ. A novel approach to estimating the prevalence of untaxed cigarettes in the US: findings from the 2009 and 2010 International Tobacco Control Surveys. *Tob Control*. 2014;23:i61-66.

A4.1.3 LITTERED-PACK SURVEYS

Littered-pack surveys, also known as empty discarded pack surveys, are used predominantly in high- and middle-income countries (e.g. the United States, France, Canada, New Zealand, Mexico and Poland). This unobtrusive method relies on the premise that smokers publicly discard packs (e.g. on streets, sidewalks and in public trash cans). The packs bear characteristics that illustrate whether they are tax compliant (e.g. tax stamps, health warnings). For example, an Albanian health warning label on a cigarette pack discarded in Greece provides evidence that the pack was destined for the Albanian market. The pack may have been smuggled into Greece by criminal entrepreneurs or it may have been brought by a visitor. Collecting discarded packs from a representative geographic sample and examining these characteristics can provide estimates of tax compliance. Operationally, this data collection method uses an ecological approach whereby geographies are the units of analysis. Geographical units are meant to represent the smokers in the city/country and can be administratively defined (e.g. by the country's census bureau or transit zones) or may reflect researcher-defined neighbourhoods (e.g. half-mile buffer zones near bus stops or activity spaces).

Researchers in Canada have expanded the littered-pack method to include collection and analysis of cigarette butts on 25 postsecondary campuses. The cigarette butts provide information on the brands sold (or lack thereof) and allow researchers to distinguish between legal and illegal products (6). A recent innovative expansion

of the littered-pack methodology is the collection of packs from cigarette retailers. John and Ross collected empty packs of tobacco products from a sample of registered and unregistered retailers in India (7). Collecting packs from retailers was relevant given that single cigarettes dominate the illicit market in India. Smokers who buy single cigarettes would be unable to provide a pack in a pack swap or street intercept survey, so collecting littered packs from the ground would undercount sales of single cigarettes. The feasibility of this method is dependent on the relationship between researchers and retailers (enhanced trust) and the efforts taken to ensure confidentiality. In some countries, retailer compliance with this research method might be strained because of concerns regarding confidentiality, since retailers may face criminal and civil penalties, depending on the research findings.

Advantages and disadvantages of littered-pack surveys

Littered-pack surveys are generally advantageous for governments because they facilitate comparison with industry estimates. This is one of the most-preferred methods because it yields estimates that are less likely to be biased due to issues of social desirability, recall error and confidentiality that plague survey research, and they are much less expensive than face-to-face interviews used in smoker intercept or household surveys. However, there are some issues regarding these surveys, especially in high-income countries, including the inability to differentiate between tax avoidance and tax evasion (8). For example, a pack in Berlin that bears a Vietnamese tax stamp may have been smuggled in mass quantity or brought in by a temporary visitor. Researchers have circumvented this issue and broadened the umbrella to measure cigarette tax noncompliance considering the potential biases introduced by tourism. Another disadvantage of littered-pack surveys is that larger budgets are needed to employ field researchers to collect, code and analyse the data. Not all countries employ tax stamps on their cigarette packaging, which may make it difficult to measure tax compliance. These surveys also can underestimate the markets in low-income countries such as India, where the main item of illegal trade is single cigarettes (7). The surveys may also overestimate illicit trade if littering behaviour is correlated with willingness to engage in illicit trade. Finally, littered-pack surveys and butt collections provide information on the proportion of butts and packs that are illegal, not the proportion of smokers that purchase illegal cigarettes (6).

Key studies for readers to refer to for additional guidance:

Barker DC, Wang S, Merriman D, Crosby A., Resnick EA, Chaloupka FJ. Estimating cigarette tax avoidance and evasion: evidence from a national sample of littered packs. *Tob Control*. 2016;25(Suppl 1):i38–i43.

Merriman D. The micro-geography of tax avoidance: evidence from littered cigarette

packs in Chicago. *Am Econ J Econ Policy*. 2010;2(2):61–84.

Stoklosa M., Paraje G., Blecher E., *A Toolkit on Measuring Illicit Trade in Tobacco Products. A Tobacconomics and American Cancer Society Toolkit*. Chicago, IL: Tobacconomics, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2020 (<https://tobacconomics.org/files/research/621/uic-illicit-trade-tool-kit-eng-v2.0-2.pdf>, accessed 18 February 2021).

A4.1.4 SELF-REPORT POPULATION SURVEYS

Self-report surveys, when distributed to a representative sample of the population, can provide meaningful data on the prevalence of tax noncompliance. The surveys can be distributed to individuals or households in various ways, including face-to-face, telephone, mail and internet. Questions that specifically address illicit purchases can be added as supplementary questions to existing health or tobacco surveys. Some countries include such questions in their adult and youth tobacco surveys to estimate tax evasion/avoidance. For example, Canada's annual Youth Smoking Survey asks smokers about the frequency of their purchases of First Nations/Native brand cigarettes (9–10). Davis et al. used data from the New York Adult Tobacco Survey to measure the source of purchase of the last cigarette pack purchased (i.e. Native American Reservations, lower-tax neighbouring states or countries, toll-free telephone numbers, the internet, duty-free shops) and the price paid (11). Twenty-eight nations currently use surveys to measure tax noncompliance as part of the ITC Project (12). Similar analyses can be conducted using questions from the Global Adult Tobacco Use Surveys. For example, Iglesias et al. used the Brazil Global Adult Tobacco Use Surveys to compare self-reported prices with a defined threshold retail price to estimate the proportion of illicit cigarette use among smokers in Brazil (13). Countries are encouraged to use existing global health surveys or to incorporate similar types of questions pertaining to illicit trade in their annual health surveys. Asking respondents about price paid per pack (including taxes), brand name and location where cigarettes were purchased (e.g. duty free shop, unlicensed vendor, internet) can contribute to a better understanding of the illicit tobacco trade.

Advantages and disadvantages of self-report surveys

Self-report surveys can be repeated over time to measure purchasing trends and progress associated with increases in cigarette taxation. Well-designed surveys can also provide generalizable estimates at the national level. Depending on the size of the sample, a self-report survey can provide comparable data across geographies that can help governments target resources. For example, findings that illicit cigarettes are more common in urban areas could lead to additional education campaigns and targeted enforcement.

Limitations of self-report surveys include the possibility of bias due to the social stigma associated with participating in the illicit trade, which could lead survey respondents to underreport participation. Additionally, surveys may be unable to gauge whether individuals are associated with tax avoidance versus tax evasion. Finally, there is evidence that self-report household surveys may underrepresent smokers.

Key studies for readers to refer to for additional guidance:

Callaghan RC, Veldhuizen S, Ip D. Contraband cigarette consumption among adolescent daily smokers in Ontario, Canada. *Tob Control*. 2011;20(2):173–174.

Davis K, Farrelly M, Li Q, Hyland A. Cigarette purchasing patterns among New York smokers: implications for health, price, and revenue. Albany (NY): New York State Department of Health, Tobacco Control Program; 2006.

A4.1.5 COVERT-PURCHASES SURVEYS

A number of studies in high-, middle- and low-income countries use covert purchases of packs and single cigarettes to gauge the availability of illicit cigarettes in public and semi-private spaces (14-17). This method is also used by the tobacco industry in the United States to identify retailers who sell counterfeit cigarettes (18).

Covert-purchases surveys do not provide estimates of the size of the illicit trade (i.e. market volume). Instead, they serve as a surveillance tool to identify where illicit cigarettes are sold and the extent to which they have infiltrated legal businesses. For example, a covert-purchases survey can examine whether illicit cigarettes are sold through legal retailers. It can also be used to measure compliance with emerging tobacco control policies that focus on, for example, product standardization or new regulations on flavours (e.g. plain packaging or bans on flavoured tobacco products).

Covert-purchases surveys use trained researchers to visit a selected sample of retailers and directly purchase or inquire about the availability of illicit tobacco products. Retailers are not informed about the goals of the studies. Methods for determining the availability of illicit product vary. For example, in some studies, covert buyers do not directly inquire about illicit products. Instead, they purchase packs of tobacco products, paying full price, to determine whether retailers are selling illicit products under the guise that they are licit (14). The research team then examines the packs to determine whether they are legal. In the United States, researchers have observed that some consumers are paying full price for illicit untaxed packs smuggled from lower-tax states (14). Other research protocols directly ask retailers for illicit products (14,16-17). In Guatemala, Arevalo et al. specifically asked retailers for “imported cigarettes” (17). The ways covert buyers ask for illicit products may also vary geographically. For example, in some countries covert buyers may ask for “cheaper” packs or for illicit whites such as Jin Ling.

Advantages and disadvantages of covert-purchases surveys

Covert purchasing allows researchers to directly identify sources of illicit cigarettes. It also allows them to measure and test the dynamics between buyer and seller. For example, researchers can experiment to see if repeated attempts to purchase products increase the likelihood of purchase (known as the familiarity protocol) (16). One methodological challenge associated with covert purchases is that it is difficult to create a sampling frame for illicit sources because some may be unknown (e.g. pubs or homes). The traditional approach is to make purchases in legal outlets, which may bias estimates. Another issue with this method is that it is difficult for buyers (also called raters) to purchase products if they are unfamiliar with the seller or do not fit the typical demographics of purchasers. Therefore, researchers using covert-purchases surveys must have detailed knowledge of the marketplace, including the ways individuals specifically ask for illicit tobacco products, and they must know whether they mirror the demographics of the neighbourhood. For example, in a study of South Bronx smokers, von Lampe et al. found that smokers looked for certain clues to assess whether they were being sold illicit cigarettes (19). Overall, this method can be quite costly because it requires training researchers, travelling to retailers and purchasing product. Covert-purchases surveys do not enable researchers to estimate the level of illicit trade, but they can provide information on availability of supply.

Key studies for readers to refer to for additional guidance:

Silver D, Giorgio MM, Bae JY, Jimenez G., Macinko J. Over-the-counter sales of out-of-state and counterfeit tax stamp cigarettes in New York City. *Tob Control*. 2016;25(5):584–586.
 Arevalo R, Corral JE, Monzon D, Yoon M, Barnoya J. Characteristics of illegal and legal cigarette packs sold in Guatemala. *Global Health*. 2016;12(1):78.

A4.1.6 SEIZURES OF GOODS

Seizures are the result of enforcement activity carried out by local, national and international organizations that confiscate tobacco products that are illegally manufactured, transported and sold. Seizures are meant to reduce the profits associated with illicit trade by confiscating proceeds (e.g. cash, cars or houses) and the tools of the trade (e.g. print and tobacco machinery). Seizures can occur at various points in the supply chain.

Seizure data are often tallied by the responsible agencies and used to measure program effectiveness or as justification for requesting additional resources (e.g. personnel). Some of the data may be supplied to international customs organizations, including the WCO (20). The quality of recordkeeping varies. For example, some agencies may maintain criminal files in databases that detail dates of seizure, brand names and laboratory testing.

Seizures provide preliminary data on the scope of criminal activity and can help identify key trends to guide law enforcement agencies' efforts. For example, seizures can identify trends on the modus operandi of smugglers, including transportation methods (e.g. sea cargo versus trucks), point of entry and brand preference. Seizure statistics can also be used as a preliminary test to measure the efficacy of interventions. For example, Stoklosa and Ross used seizure data from the Canadian province of Nova Scotia to test the impact of a 2015 menthol ban. He found no statistically significant change in the number of menthol cigarettes seized before and after the ban (1).

Advantages and disadvantages of seizures of goods

Generally, seizure statistics can be readily obtained from law enforcement agencies through formal requests to agency gatekeepers (e.g. public information officers). Seizure data, however, generally do not provide a representative picture of illicit activity. For example, certain geographies may yield higher seizures because that is where the bulk of operations are being conducted. Police agencies may focus on certain geographies (e.g. locations near borders) rather than randomly inspecting, and their findings may be limited to those specific regions. Seizure data may also be skewed by the type of investigation procedures utilized. Large seizures may be the result of long-term investigations (i.e. wiretaps or culling confidential informants), while smaller seizures may come from anti-smuggling cases that involve cross-border purchases of low quantities of cigarettes (less than 1 000) (2). Seizures can also be skewed by industry cooperation with law enforcement agencies. For example, the tobacco industry may be more likely to support law enforcement on counterfeit seizures rather than smuggling cases because counterfeiting impacts their brand integrity.

A4.2 RESIDUAL METHODS

Because the illicit tobacco trade is often decentralized, it can be difficult to observe directly. However, researchers are sometimes able to make inferences about its size without direct observation by comparing observed tobacco tax revenues with the amount of tax revenue that hypothetically would have been collected had all tobacco consumption been taxed. The difference between observed and hypothetical revenues is called the residual and can be used as an indicator of the magnitude of illicit trade. Even when the residual is only an approximate measure, changes in its size may be a reliable indicator of changes in the size of the trade. When actual tobacco tax revenues are reliably observed, the main challenge for residual methods is that of producing accurate estimates of the amount of tax revenue that hypothetically would have been collected had all tobacco consumption been taxed.

A4.2.1 GAP ANALYSIS

Gap analysis is the preferred residual methodology because it is intuitive, straightforward and relatively easy to explain to policy-makers and the general public, and it has been widely employed in government studies (4). Researchers using gap analysis compare survey-based self-reported consumption data with observed (usually administrative) data on tax-paid sales. The basic premise is that if both self-reports and observed data are accurate, any difference between reported consumption and tax-paid sales can be explained by legal imports of non-taxed cigarettes (such as duty-free sales), exports of taxed cigarettes, tax evasion or tax avoidance.

The greatest research challenge in implementing gap analysis – as with most residual methods – is obtaining reliable and accurate estimates of tobacco consumption. In its simplest implementation, gap analysis calculates the residual as the difference (which should be a minimum of zero) between the amount of tobacco consumption reported in surveys and tax-paid sales, which are generally available from administrative sources, minus exports. This simple calculation, however, is generally flawed, since surveys of reported tobacco consumption underestimate true consumption. Underreporting of tobacco consumption may result from survey respondents' reticence about disclosing behaviour that is viewed as unhealthy and potentially socially undesirable. Depending on the legal and cultural context, certain groups (e.g. women or youth) may be more likely than others to underreport consumption. Other groups (e.g. rebellious young men and women) may accurately report or even overestimate consumption. Reuter and Majmundar measured actual consumption by total national taxed sales in the United States, where both legal untaxed imports and exports of taxed tobacco are widely believed to be very small, and found that the ratio of self-reported consumption to actual consumption was only 65% (4). After incorporating this survey underreporting into their analyses and considering the evidence from their gap analysis and the literature, Reuter and Majmundar found that the illicit market in the United States, which largely consists of avoidance or evasion of subnational state taxes, is between 8.5% and 21% of consumption (4). The higher range of the estimate is consistent with prior estimates using population-based pack observation studies (21).

Researchers using gap analysis for countries or regions where legal imports of untaxed tobacco (such as duty-free products) or (legal or illegal) exports of taxed cigarettes are more significant should attempt to incorporate data about, or estimates of, these factors into their calculations. Legal untaxed imports of tobacco should be subtracted from reported consumption (after adjustment for underreporting), and exports of taxed tobacco should be subtracted from taxed sales. Obtaining data about legal untaxed imports and exports of taxed tobacco may be challenging, because these imports and exports may be the result of decentralized decisions of individual

travellers as they cross tax borders. Data on these activities will not necessarily be collected through normal administrative activities. Despite these challenges, gap analyses may still prove useful.

For example, if researchers have reason to believe that misreporting of tobacco consumption and the amounts of legal untaxed imports and taxed exports are relatively stable or follow known trends (e.g. are falling) over time, gap analyses can be used to provide estimates or lower (or upper) bounds on illicit trade when several years of data on taxed sales and reported consumption are available. Data sources may be country tax administrators who have access to sales data and health departments that have access to population-level studies of reported tobacco consumption. In this context, multiple years of data on reported consumption and tax-paid sales can allow researchers to estimate changes in the size of the illicit trade even when it is difficult to measure the absolute level. Paraje used the 2008 Global Adult Tobacco Survey and the 2013 National Health Survey to measure reported tobacco consumption in Brazil (22-23).

Advantages and disadvantages of gap analysis

A major advantage of gap analysis is that when quality data are available, it is simple, easily reproduced and explainable to policy-makers and the general public. However, high-quality data on reported consumption may not be available, especially in low-income countries. In many cases, gap analysis does not provide reliable information on the size of the illicit market but only on changes in the size over time (22). Additionally, some low-income countries may not have reliable estimates of tax-paid cigarette sales, and secondary data repositories of cigarette sales may not be transparent about their methodology (24).

Another disadvantage of gap analysis is that it generally cannot be used to obtain separate estimates of tax avoidance and tax evasion. Biased estimates may also result if surveys of tobacco consumption are not representative of the population (25). Moreover, it is generally not possible to quantify the precision of the estimates or uncertainty associated with the estimates, because of both statistical uncertainty resulting from the use of samples to imperfectly represent populations (e.g. the share of the population that smokes) and uncertainty about key facts such as the degree to which survey respondents understate their tobacco consumption.

Key studies for readers to refer to for additional guidance:

Szklo A, Iglesias RM, Carvalho de Souza M, Szklo M, Maria de Almeida L. Trends in illicit cigarette use in Brazil estimated from legal sales, 2012–2016. *Am J Public Health*. 2018;108(2):265–269.
 Paraje G. Illicit cigarette trade in five South American countries: a gap analysis for Argentina, Brazil, Chile, Colombia and Peru. *Nicotine and Tob Res*. 2019;21(8):1079–86

A4.2.2 ECONOMETRIC MODELLING

There is a long tradition of using data to estimate parameters of demand functions that relate the quantity of goods consumed to the prices faced by consumers, their incomes and other variables. Because of the addictive nature of tobacco – and because of important public health and public policy concerns relating to tobacco use – economists have paid particular attention to the estimation of cigarette demand functions (26). As the literature on this topic developed, it became apparent that taxed tobacco sales would be a biased indicator of tobacco consumption if some consumers obtained their tobacco in illicit markets. Similarly, the price of cigarettes in the legal market might overestimate the price paid by consumers if some sales were not tax-paid.

While economists generally cannot observe sales in the illicit market, they have been able to develop models that predict conditions under which consumers avoid tobacco taxes. They reason that the relative size of illicit tobacco markets depends primarily on two variables: the relative price of taxed and untaxed consumption and the ease of obtaining lower-cost (untaxed) tobacco. Other variables, including the social stigma from evading tax laws and the perceived relative quality of illicit tobacco, could also influence the demand for it. While illicit trade cannot be directly observed, it can be estimated from the difference between tax-paid sales and predicted consumption. Tax-paid sales can be less than predicted consumption when retailers or consumers evade taxes. They can be greater if some tax-paid cigarettes are bought within the jurisdiction and then consumed in areas where after-tax prices are higher.

Econometric modelling estimates of illicit trade must be tailored to the situation in the country that is being studied, and therefore the data requirements may differ substantially from case to case. Researchers using this method should be familiar with the literature and should also understand the conditions in the areas they are researching. They must always include some measure of tobacco consumption or sales and some measure of the price of tobacco in the home country, as well as other variables (e.g. income) that are known to affect the demand for tobacco. It is also generally necessary to include variables that measure the availability and relative price of illicit tobacco, which can often be measured by comparing tobacco taxes in the home country with those in areas that are the source of illicit tobacco.

Advantages and disadvantages of econometric modelling

The major advantage of econometric modelling is that it is consistent with a long tradition of economic theory and practice, and the quality of the modelling techniques and empirical estimates can therefore be evaluated against widely accepted criteria. Empirical analyses provide estimates of price elasticities, income elasticities and price elasticities of tax avoidance. A substantial literature base makes it possible to

rigorously quantify uncertainty about the estimates and to test their robustness to various assumptions made in the modelling process. Estimates can be compared to other estimates available in the literature, and the results of these analyses can be used to simulate the impacts of policy changes (including tax and/or enforcement increases) on both consumption and tax avoidance. Because this methodology provides direct estimates of the uncertainty of the results, researchers can specify their level of confidence in the findings.

A shortcoming of econometric modelling is that it requires high-quality data on a variety of important variables over a period of time, as well as advanced econometric modelling expertise. Also, because results from the econometric models are based on statistical inference and economic theory rather than direct observation (e.g. the proportion of packs without tax stamps), it can be difficult to explain to policy-makers and the general public.

Key studies for readers to refer to for additional guidance:

Becker GS, Grossman M, Murphy KM, (1994). An empirical analysis of cigarette addiction. *Amer Econ Review*. 1994;84(3):396–418.

Schafferer C, Yeh CY, Chen SH, Lee JM, Hsieh CJ. A simulation impact evaluation of a cigarette excise tax increase on licit and illicit cigarette consumption and tax revenue in 36 European countries. *Public Health*. 2018;162:48–57.

A4.2.3 EXPERT OPINION (KEY-INFORMANT SURVEYS AND INTERVIEWS)

Insight on illicit trade dynamics can come from experts in the field, including researchers (e.g. in economics, criminal justice and public health), taxation departments, enforcement agencies, product manufacturers, wholesalers and retailers. Other key informants include journalists and academics who have secured confidential informants. Experts can provide novel information about emerging trends (e.g. new smuggling routes). In some cases, researchers can obtain interviews with incarcerated or active offenders (27–29). For example, researchers studying cigarette smuggling in eastern Africa conducted interviews with more than 150 Ugandan tobacco smugglers (29).

Experts can be queried through surveys or semi-structured interviews. When sampling frames are available (e.g. directories of tax department employees), surveys are more expedient than interviews. However, when experts are hard to find, non-random sampling strategies coupled with interviews are recommended. Identifying experts may require recruiting a gatekeeper who is tasked with helping researchers find additional experts; or purposive sampling, where individuals are identified based on set criteria (e.g. they are taxation experts employed by local governments) (30).

Advantages and disadvantages of key-informant surveys and interviews

Informant interviews can be a useful starting point for identifying trends in the marketplace (e.g. venues where illicit cigarettes are sold or modes of entry). One of the disadvantages of relying on informants is that the information solicited from them may not be generalizable. Expert knowledge may be outdated or limited by the informants' experience. Furthermore, the opinions of experts are subjective and may be biased by the experts' employment status and the sampling methods used. For example, persons working in law enforcement may overestimate the extent of bootlegging in order to secure additional funding for future operations. Similarly, manufacturers looking to defeat taxes may overestimate the illicit trade to illustrate the links between taxation and illicit behaviour. Alternatively, tobacco control advocates may underestimate illegal market measures in order to support the argument that taxes do not increase illicit trade.

Key studies for readers to refer to for additional guidance:

Joossens L, Raw M. Cigarette smuggling in Europe: who really benefits? *Tob Control*. 1998;7:66–71. doi:10.1136/tc.7.1.66 PMID: 9706757.

Titeca K, Joossens L, Raw M. Blood cigarettes: cigarette smuggling and war economies in central and eastern Africa. *Tob Control*. 2011;20(3):226–232.

A4.3 MIXED AND MULTIMETHOD STUDIES

Given the shortcomings of the aforementioned methods for assessing the nature and size of the illicit tobacco trade, governments may want to validate their findings by using mixed or multiple methodologies. Mixed methods use two methodological paradigms, qualitative and quantitative, as tools for exploration and explanation. For example, mixed method studies can use littered-pack surveys to measure the size of the market along with self-report surveys of smokers to understand patterns of purchasing, including sources, frequency and social norms. For example, Stoklosa and Ross estimated the share of the illicit market in Poland using a population-based self-report survey and a littered-pack survey (1). Using both types of survey simultaneously enables governments to assess their validity in estimating the size of the illicit market. Alternatively, governments can employ multimethod research, i.e. the use of multiple methods that are similar in tradition (e.g. focus groups and semi-structured interviews) (31). Saenz de Miera et al. used face-to-face interviews (households), litter collection and observation of single-stick sellers, which enabled them not only to cross-validate the two major methodologies, but also to see if the brand of the single stick was a good measure of licit versus illicit trade (33).

Advantages and disadvantages of mixed and multimethod studies

Mixed and multimethods studies enable researchers to check the validity of their findings. Multiple methods are preferred in contexts where illicit trade estimates are politicized. For example, low estimates may be challenged by the tobacco industry, while high estimates may be challenged by tobacco control researchers and/or proponents. Mixed and multiple methods (e.g. littered-pack surveys and informant interviews) can enable governments to understand the situational context in which the illicit trade operates, including the actors involved and venues of sale. One disadvantage of using mixed and multiple methods is cost. Governments that are constrained by tight budgets may choose to use a single method that provides the most accurate information. However, given the issues faced by each method, this may not be feasible – each method has limitations. Instead, governments can pair a high-cost method with a lower-cost method (e.g. pairing interviews with empty pack surveys, or law enforcement seizure data with face-to-face consumer surveys).

Key study for readers to refer to for additional guidance:

Zaloshnja E, Ross H, Levy DT. The impact of tobacco control policies in Albania. *Tob Control*. 2010;19:463–468.

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ANNEX 4.2 HOW ARE THE TOBACCO TAX REVENUES EARMARKED?

The introduction of earmarking of tobacco tax revenue is almost always combined with an increase in excise taxes (or a new surcharge) rather than reallocation of existing revenues (1). Table A4.1 provides examples of the different approaches used by several countries to earmark tobacco tax revenues.

Table A4.1 Approaches used to earmark tobacco tax revenues

FUNDING SOURCES/ TYPE OF TAX		EXAMPLES OF TAX BASE AND RATES		
As part of the excise system (tobacco, alcohol)	Specific	Republic of Korea: 841 won (US\$ 0.75) per pack or 29% of the specific excise rate	Costa Rica: 467.8 colones (US\$ 0.83) per pack or 100% of the specific excise rate	Congo: 20 CFA francs (US\$ 0.036) per pack or 50% of the specific excise rate
	Ad valorem	Colombia: 10% of retail price (equivalent to 100% of the ad valorem rate)		
New levy (surcharge on the existing excise or completely new levy)	Specific	Egypt: additional 0.75 Egyptian pounds (US\$ 0.042) per pack		
	Ad valorem	Thailand: surcharge of 2% over the excise tax base	Botswana: new tobacco levy of 30% of the cost of production or CIF	
Percentage of excise revenue		Cook Islands: 50% of revenues from the excise tax on tobacco	Guatemala: 100% of revenues from the excise tax on tobacco	

Note: Conversions of amounts from the local currency were made using the official exchange rates from the IMF as of 31 July 2018 (date of the data collection).

Source: (2).

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CHAPTER 5.

Best practices in tobacco tax policy and administration

TAX POLICY

Use excise tax increases to achieve the public health goal of reducing the death and diseases caused by tobacco use

Extensive research has clearly demonstrated the effectiveness of higher tobacco product taxes and prices in reducing tobacco use and its harmful consequences, particularly among the poor and the young. In fact, tobacco excise tax increases are the single most effective and cost-effective policy for reducing tobacco use. Excise taxes are the most significant taxes applied on tobacco products because of their ability to raise both absolute and relative prices. Tobacco excise tax increases also generate sizeable new revenues that will be sustained in the short to medium term. In the long term, continued increases in tobacco taxes – coupled with implementation of other evidence-based tobacco control policies and programmes – will lead to even larger reductions in tobacco use and its consequences.

Include significant tobacco excise tax increases as part of a comprehensive strategy to reduce tobacco use

Governments should adopt a comprehensive tobacco control strategy that includes objectives for reducing adult tobacco use and preventing youth tobacco use. Raising excise taxes significantly is the most effective, as well as the most cost-effective, measure for reducing consumption. When combined with other demand reduction interventions, the impact of tax increases on tobacco use is even stronger. Such interventions include comprehensive smoke-free policies in all public spaces, total bans on tobacco advertising, promotion and sponsorship by tobacco companies, large graphic health warnings about the consequences of tobacco use, plain packaging, broad efforts to help current users quit and mass media public education campaigns. Implementation of a comprehensive strategy to reduce tobacco use leads to greater reductions in the harmful consequences of tobacco use, builds public and political support for higher taxes and maximizes the effectiveness of tax increases in achieving public health objectives.

Involve the competent authority from the start when considering the revision of a tax policy

Competent authorities such as tax administrations and customs authorities are key partners in the effective implementation of a tax policy. Policy-makers need to ensure that those competent authorities are consulted and involved in the tax policy revision process so that their concerns about the impacts of policy change on enforcement can be taken into account from the beginning. This can also help identify and address possible loopholes early on in the enforcement process. Coordination among relevant bodies, including close cooperation and sharing of information, will optimize enforcement of tax policy and tax collection. To streamline the process of cooperation and exchanges of information, a basis in law needs to be established. Additionally, the involvement of tax administration authorities in the entirety of the tax revision policy process is important to ensure effective implementation of the policy.

Promote greater policy coherence across sectors such as agriculture, industry, trade, finance and labour

Greater multisectoral integration and policy coherence is needed at the country level to achieve effective health improvements. In particular, it is important to ensure that public policies and interventions in non-health sectors (e.g. agriculture, industry, trade, finance and labour) do not act against the intended public health impact of tobacco control and taxation (such interventions include providing subsidies to tobacco growing or manufacturing).

TAX DESIGN

Tax structure matters and simpler is better

Complex tax structures are difficult to administer, create opportunities for tax avoidance and evasion and are less effective than simpler structures in achieving public health and revenue goals. Simplifying the structure of tobacco excise taxes will facilitate tax administration, reduce tax avoidance and evasion, enhance revenues and have a greater impact on tobacco use by reducing incentives to substitute among tobacco products or brands in response to tax increases. Countries with multiple tiers of tobacco tax rates based on product characteristics (e.g. price level, length, weight, type of tobacco) should reduce and eventually eliminate these differential tax rates. An appropriate transition strategy is to reduce the variations in tax rates over time with the aim of implementing a uniform tax (i.e. a single rate applies whether excise is ad valorem or specific) on a given tobacco product. Applying a uniform tax to all brands of a given tobacco product also sends a clear message that they are equally harmful.

Rely more on specific tobacco excises to drive price increases

Greater reliance on specific excise taxes maximizes the impact of tobacco taxes on public health by reducing the gap in prices between premium and low-priced alternatives and limiting opportunities for users to switch down in response to tax increases. For countries that currently rely on an ad valorem tax, an appropriate first step would be to shift to a mixed system by adding a sizeable specific component or introducing a high minimum specific excise tax (an excise tax floor). For countries that rely on a mix of ad valorem and specific taxes, the specific tax component should be increased regularly so that it accounts for a greater share of the total excise tax.

Increase tobacco taxes significantly to reduce the affordability of tobacco products

To maximize the public health impact of higher tobacco taxes while at the same time generating higher revenues, governments should significantly raise taxes to increase prices and reduce the affordability of tobacco products. In many LMICs, tobacco use increases with incomes, and since incomes rise faster than tobacco product prices, these products are becoming more affordable. To reduce affordability, tax increases need to result in real price increases that are higher than the increases in real incomes.

Where revenue increases are a goal, rely on regular excise tax increases

If governments want to increase tobacco revenues, they must increase excise taxes regularly. From the tax revenue perspective, the important determinant is the tax base elasticity, which has three key components: the price elasticity of demand of tobacco, the share of the tax in the retail price and the degree of pass-through of the excise tax rate increase on to retail price. Tax increases will increase revenues at least in the short to medium term, because demand is price inelastic, tax levels are generally low as a proportion of retail prices and the pass-through of tax increases on to retail prices is unlikely to be higher than the tax increase itself (i.e. there is no overshifting). In addition, increasing tax rates is the only policy measure that can reverse reduced revenues in a declining market that has strong tobacco control policies.

Automatically adjust specific tobacco taxes for inflation and income growth

Unless specific tobacco taxes are regularly adjusted, their real value will fall over time as general price levels increase. When this happens, their effectiveness in reducing tobacco use will be diminished. Governments should establish a mechanism for automatically adjusting specific taxes to keep pace with inflation. Recently, some governments have begun to extend this indexation to include income growth as well, further ensuring that tobacco does not become more affordable over time.

Pricing regulations cannot be considered an alternative to excise tax. However, in some specific contexts, pricing regulations could be used in conjunction with excise taxes to help ensure the effective implementation of tax increases

In certain contexts where increasing taxes is challenging or the tax structure is weak, non-tax policies such as pricing regulation (specifically, minimum mark-ups and price floors/minimum prices) may be seen as a second-best alternative to ensure a high price level and dissuade consumption of tobacco products. These policies, however, do not necessarily lead to the desired price level, nor do they protect consumers and government from industry manipulation. However, in the context of powerful multinationals that sell brands across all market segments and could easily undershift a tax increase to cheaper brands – or where price promotions cannot be banned – minimum price policies may help increase the effectiveness of tax increases, especially if the minimum prices are increased regularly.

Implement nontax policies affecting price levels, such as banning promotional discounts for tobacco products and the sale of single sticks of cigarettes

The banning of promotional discounts is usually dealt with in tobacco control laws under the Tobacco Advertising, Promotion and Sponsorship provision.

Do not allow concerns about the inflationary impact of higher tobacco taxes to deter tax increases

Given that wages or some government spending may be tied to a price index, governments can reduce concerns about the inflationary impact of a tobacco tax increase by using a price index that excludes tobacco products.

TAX PARITY

Tax all tobacco products in a comparable way

Increasing excise taxes on some tobacco products but not on others results in changes in the relative prices of these other products. This induces substitution towards relatively less-expensive products – for example, from expensive manufactured cigarettes to other, cheaper tobacco products such as RYO tobacco, bidis, cheroots or chewing tobacco. As a result, the overall reduction in tobacco use is smaller than it would have been had all taxes increased by comparable amounts. Comparable increases in the taxes on all tobacco products maximize the public health impact of tobacco tax increases by minimizing opportunities for substitution. Moreover, increases in taxes on all tobacco products will generate larger increases in revenues.

Strictly regulate new and emerging tobacco and nicotine products where they are not banned and impose an excise tax

In recent years, the world has been experiencing the rise of new and emerging tobacco and nicotine products including ENDS, ENNDS and HTPs. The tobacco industry claims these new products are safer than traditional tobacco products, but the evidence so far suggests that they could pose a threat to public health, especially if they attract new or young users or prevent current smokers from quitting.

The market and demand dynamics of newer products – as well as initiation, smoking cessation and switching behaviour among different socioeconomic groups – are not yet clear. Best practices for taxing new and emerging tobacco and nicotine products, based on current knowledge, are that:

1. HTPs should be taxed at the same level as cigarettes and, in terms of structure, through a specific excise per unit regardless of tobacco content. HTPs contain tobacco and should be treated as a tobacco product.
2. ENDS/ENNDS products should be taxed in a manner that discourages uptake by youth and non-users. Nicotine- and non-nicotine-delivery systems containing e-liquids should be taxed equally.
3. Countries can also consider taxing the devices used for ENDS/ENNDS and HTP consumption, but they need to adequately assess their administrative capacity to do so.

While these newer products create additional challenges for tobacco control, it is important to remember that cigarettes remain by far the predominant tobacco product and that raising taxes and prices on cigarettes – and thereby reducing their use – should remain the top priority.

MONITORING AND EVALUATION

Know your market

Know your market well. The type of tax structure you choose and the impacts it will have on consumption and tax revenue are shaped by the particular dynamics of your market. Understanding the nature and degree of competition in your market is vital to selecting the appropriate type of tax structure and policies to achieve your public health and revenue objectives. This knowledge will also facilitate more accurate estimates of the impacts of a tax increase, as well as better anticipation of industry responses.

Assess the impact of your policies to design and implement the most effective tobacco excise tax policies

Monitoring and evaluation are essential for effective tobacco taxation, and they

should be built into the initial design – or redesign – of tobacco tax policies. A number of tools exist to help policy-makers pre-emptively assess the effects of a proposed tobacco control policy on consumption, smoking prevalence and lives saved. The WHO TaXSiM uses target simulations to assist governments in predicting how specific tax changes will impact consumer prices, consumption and tax revenue in their market.

Adopt indicators that help you measure improvements in tax policy and its impact

Building and monitoring indicators of tax and tobacco control policies helps policy-makers assess the improvement of their policies and determine if those policies have an impact on tobacco use over time. The tax share of the retail price for a particular tobacco product is a key indicator that should be used in conjunction with an affordability indicator. A recommended target for countries to aspire to is to have an excise tax that represents at least 70% of the retail price of tobacco products. Another useful indicator to assess the performance of the tax policy overall is the use of a tax scorecard, which synthesizes best practices in tobacco taxation by combining the four key components of tax policy (price level, change in affordability over time, total and excise tax share in the retail price and tobacco tax structure).

TAX ADMINISTRATION

Implement best practice approaches in general tax administration to make tobacco tax administration more effective and efficient

Best practice approaches include (1) defining clearly the roles and responsibilities of competent authorities, (2) ensuring effective coordination among relevant bodies at the national and international levels and (3) undertaking evaluation of performance and accountability against pre-agreed indicators to identify points for improvement.

Ensure compliance and accuracy of information on the tax compliance cycle

To achieve this, implement the following actions:

- Require licences for manufacturing, importing, exporting, retailing, growing, transporting, wholesaling, brokering, warehousing and distributing tobacco products. This will help secure the supply chain while obtaining valuable information, e.g. through access to companies' accounting and inventory systems.
- Make sure all persons and entities engaged in the supply chain of tobacco, tobacco products and manufacturing equipment keep complete and accurate records of all relevant transactions and details of materials used in the production of tobacco products.

- Ensure that tax declarations collect as much information as possible on the taxpayer.
- Collect taxes close to the point of production and import to limit the number of taxpayers a competent authority needs to manage.
- Maintain a system of authorization for warehousing to carry out controls in production and storage facilities to ensure that taxes are paid.
- Use electronic methods, through the best available IT, for declarations and collection of taxes. This allows for cross-check of information provided in declarations with information from other government agencies and third parties.

Ensure control and enforcement on the supply chain

To achieve this, implement the following actions:

- Include control and enforcement as a fundamental pillar in the strategic plan of the tax administration overall.
- Use a risk-based approach by choosing defined targets for enforcement and control, such as those who have a higher probability of noncompliance.
- In the licensing process, ensure that purchases from unlicensed suppliers or sales to unlicensed purchasers are not allowed. Ensure also that the validity of licences is limited in time and require renewals or reapplication to maintain a high level of control.
- Use tax stamps with strong security features to reduce the risk of stamp counterfeiting. These markings facilitate the collection of excise taxes, audits and enforcement actions.
- Implement a tracking and tracing system for tobacco products. A tracking and tracing system assists authorities in determining the origin of tobacco products and the point of diversion, if applicable, and monitoring and controlling the movement of tobacco products and their legal status.
- Implement anti-forestalling measures so that forestalling does not delay a tax increase and its intended effect on revenues and consumer behaviour.
- Control import and export of tobacco products and manufacturing equipment by allowing only duly licensed natural persons or legal entities to conduct such activities.
- Strengthen border control, e.g. by utilizing non-invasive tools such as X-ray scanners and dogs to detect tobacco products.
- Limit or tightly control and, ideally, ban activities related to production and trade of tobacco products in tax-free zones to avoid opportunities for tax evasion.
- Prohibit intermingling of tobacco products with non-tobacco products in a single container or any other similar transportation unit when removed from tax-free zones.

- Prohibit the sale to or import by international travellers of tax-free or duty-free tobacco products. These sales erode the effects of tax and price measures aimed at reducing the demand for tobacco products and adversely affect government revenues by creating a loophole in the tax structure.

Clearly define procedures to follow after detecting illicit trade of tobacco

- Take immediate action to seize and destroy smuggled and/or illicit tobacco and collect due taxes.
- Ensure certain, swift and severe sanctions for those caught engaging in illicit trade in tobacco products, such as penalties, fines and withdrawal of licences. It can also be effective to consider illicit trade in tobacco products by law as a source of money-laundering.

Become a Party to and/or implement the WHO FCTC Protocol to Eliminate Illicit Trade in Tobacco Products

The WHO FCTC Protocol provides a blueprint of best practices and policies for dealing with illicit trade and should be part of any strategy to fight it.

Implement, to the extent possible, the same rules and regulations for tax administration and enforcement for all tobacco products, as well as new and emerging nicotine and tobacco products

Implement broad policies for ensuring a good tax system that will trickle down to good tax administration of tobacco products by:

- ensuring proper resourcing of competent authorities;
- having strict rules and regulations to detect corruption and to punish both personnel and taxpayers who are engaged in corrupt practices; and
- ensuring a strong judicial system that is independent in fact and in perception, where disputes are solved quickly. The appeal process should have limits so that appeals cannot continue for years. The use of criminal rather than civil charges should also be considered, especially for illicit trade.

POLITICAL ECONOMY

Beyond the technical soundness of best practices in tax policy and administration, a critical factor in advancing tobacco taxes is the ability to get the political buy-in of the highest instances in the government. One key strategy is to address concerns around the political economy of tobacco taxation, which are often exploited by the tobacco industry to block major reforms.

SCARE tactics

The tobacco industry uses SCARE tactics to dissuade governments from implementing tobacco tax increases. These include smuggling and illicit trade (S), court and legal challenges (C), anti-poor rhetoric (A), revenue reduction (R) and employment impact (E). Best practices for countering these tactics are described below.

S: Smuggling and illicit trade

Do not allow concerns over the impact of increasing excise taxes on illicit trade in tobacco affect your decision to increase them. Rely on your own estimates of the level and nature of illicit trade and not on the industry's estimates.

Illicit trade in tobacco products continues to be a major concern for tax administrators because of the difficulties associated with accurate and independent measurement of it, as well as with its elimination. Industry figures provide a distorted understanding of the extent of the problem, along with a monocausal explanation of the link between illicit trade and tobacco taxation. It is therefore recommended that governments (1) assess independently and with the best statistical practices the size of the illicit trade to assess the scope of the problem; (2) address directly the country-specific institutional and/or governance challenges, including multilateral coordination, and improve tax and customs administrations practices; and (3) implement best practices to fight illicit trade, contained in the WHO FCTC Protocol to Eliminate Illicit Trade in Tobacco Products. Ideally, accede to the Protocol if not yet a Party.

C: Court and legal challenges

Do not let tobacco industry threats of court and legal challenges to tax increases or reforms prevent you from improving your tax policy. Closely follow legal requirements for design, procedure and consultation to strengthen your legal position and minimize the possibility that any challenge will be raised.

Health-protective and non-discriminatory tobacco excise taxes are legally defensible, and industry threats will usually be baseless. Your legal position can be strengthened, however, by exercising care with a tax measure's procedure, design and consultation: (1) determine the standard of consultation required under domestic law and any applicable international obligations; (2) distance the tobacco industry from the policy-making process to the extent that this is permissible; (3) avoid unnecessary and unjustified discrimination towards foreign tobacco products or investors in the design, implementation or enforcement of a tax measure; and (4) do not offer investment incentives in the form of inducements or contractual undertakings, as these may be binding in and of themselves or grounds for a challenge under an international investment agreement.

A: Anti-poor rhetoric**Do not allow concerns about the regressivity of higher tobacco taxes prevent tobacco tax increases.**

In recent years, there has been an overwhelming increase in the evidence concerning the positive distributional impact of tobacco taxes and tax increases. Indeed, tobacco taxation and tax increases are actually a progressive or pro-poor policy once these wider considerations are properly accounted for. In its effort to lobby against tax increases, the tobacco industry often claims that tobacco taxation will hurt the poor. This argument is based on the concept of regressivity in relation to taxation. Conceptually, a tax is regressive if it means lower-income people must pay a relatively greater proportion of their household income to meet the tax liability than wealthy people. However, there are two limitations to the industry's argument. First, the concept of regressivity based solely on tax burden does not consider the wider health and economic harms caused by tobacco use that are disproportionately experienced by lower socioeconomic groups. Second, higher tobacco taxes and prices can induce behavioural change in the population, as reflected in the price elasticity of demand, which means that lower-income smokers will curtail their smoking the most and thus will benefit disproportionately in terms of health gains from reduced tobacco consumption and use. In fact, these broader considerations make tobacco taxation a progressive, rather than regressive, public health intervention.

R: Revenue reduction**Do not let fears of potential revenue reductions prevent you from increasing excise taxes on tobacco products.**

Tax increases, even in countries with already high taxes, bring in additional revenue. Arguments by tobacco control opponents that tax increases will not result in increases in revenue are unfounded. The relatively price inelastic nature of cigarette demand, combined with the low tax share and no overshifting of the tax, means that for most, if not all, countries, increases in revenues will accompany increases in taxes. If tax increases are carefully designed and tax administration is functional, it is extremely unlikely that tax increases will lead to revenue decreases.

E: Employment impact**Do not allow concerns about employment impact to prevent tobacco tax increases.**

The tobacco industry often seeks to frame tobacco taxes as an economic issue rather than a public health issue. Particular emphasis is placed on the alleged threat tax increases pose to employment in tobacco farming and manufacturing, as well as related industries. This so-called choice between health and jobs, however, is largely based on exaggeration. The tobacco industry exaggerates the importance of tobacco

employment relative to total national employment and overstates the impact that domestic demand reduction from local taxes will have on tobacco farmers serving a global market. The argument used by the industry also ignores the fact that expenditures on tobacco do not disappear but rather are redistributed to other consumption that can produce a similar or higher number of jobs. Case studies demonstrate the possibility and methods for governments to support farmers in transitioning to other crops that provide similar and often better returns with greater sustainability.

Earmarking

Consider earmarking tobacco tax revenues for health-focused programmes, especially if it helps advance tobacco control efforts and, more specifically, efforts to implement large tobacco tax increases and tax reforms. This could have the additional benefit of funding health programmes where they are poorly funded or not prioritized.

From a tobacco control perspective, tobacco tax earmarking is best understood as a way of selling significant tobacco tax increases to the public, politicians and officials. Earmarking is a tool to improve the political economy of tobacco taxation; it is only a secondary issue, after the primary goal of reducing demand for tobacco. Evidence shows that public support for higher tobacco taxes is greater when at least some of the increased revenues are explicitly used to support health-focused programmes. Current evidence shows that the amounts effectively earmarked for health have been relatively small and therefore unlikely to introduce rigidity in government budgets. At the same time, in some countries, those funds have helped to implement much needed underresourced health programmes. The payoffs will be seen in the future as fewer people fall ill and need less medical care for tobacco-related illnesses. Earmarking tobacco tax revenues to fund high-burden/low-priority health programmes could pave the way for raising awareness about the importance of such programmes and their effectiveness, thereby convincing governments to redefine their priorities and commit to including the programmes in their regular budget.

TOBACCO TAX REFORM CHECKLIST

(FOR TAX POLICY-MAKERS)

STEP 1



● Focus on tobacco taxation's purposes

Tobacco tax policy should aim not only to increase revenues but also to decrease consumption and improve health. To both raise revenue and reduce consumption, you need to (1) simplify tobacco tax structures, (2) significantly increase rates to impact price levels, and (3) regularly adjust rates to at least account for inflation and income growth.

STEP 2



● Analyse your tax structure and identify its weaknesses

You need to analyse and identify the problems of your current tax structure to know which steps to consider next. Which tax structure do you have: specific, ad valorem, mixed, or no excise?

STEP 3



● Identify the improvements to be made to the existing tax policy/structure

Your present tax structure and tax situation will provide you with the steps you would ideally take next to achieve the aims in Step 1.

Specific:

1. Ensure that the tax automatically adjusts for inflation and income growth effects.
2. Ensure that all price promotions are banned.

Ad Valorem:

1. Ensure that the tax base of the ad valorem is retail price.
2. Introduce a high specific excise component (and a minimum specific excise).
3. Ensure that the specific excise and/or the minimum specific excise automatically adjusts for inflation and income growth effects.
4. Ensure that all price promotions are banned.

Mixed:

1. Ensure that the tax base of the ad valorem component is retail price.
2. Ensure that you are using a high specific excise component and a minimum specific excise.
3. Ensure that the specific excise and/or the minimum specific excise automatically adjusts for inflation and income growth effects.
4. Ensure that all price promotions are banned.

No Excise:

1. Introduce a high specific excise.
2. Ensure that the rate automatically adjusts for inflation and income growth effects.
3. Ensure that all price promotions are banned.

STEP 4



● Assess tobacco taxation's political economy

Reform must begin with an assessment of tobacco taxation's political economy: (1) learn from past successes and failures – what went wrong, what went right, what you can do differently this time; (2) assess the reform's strengths and weaknesses, likely opportunities and risks; (3) determine who the main supporters and opponents of reform inside and outside of government have been and may be, based on past reforms and current situation; and (4) anticipate arguments that will be used against the reform (refer to SCARE tactics).

STEP 5



● Prepare a plan for realizing the reform

Focusing on the overall aims identified in Step 1, the steps for achieving them identified in Steps 2 and 3 and the political economy around this reform as identified in Step 4, prepare your plan:

1. Be clear on the non-negotiable objectives for the reform and the trade-offs you are prepared to make to realize them.
2. Develop a plan to approach potential allies and win them over to the reform efforts.
3. Develop the counterarguments that will be needed in response to the SCARE arguments identified earlier.
4. Prepare the evidence you will need ahead of time. To do this, get support from academics and relevant intergovernmental agencies.

STEP 6



● Mobilize a coalition for reform

1. Formulate a strategic communications plan: aim for political support both at the highest levels and among the public (framing tobacco taxation as a health issue has helped win political support in many countries).
2. Identify champions in government: ensure that finance and health officials are on the same page; involve implementing departments, such as enforcement agencies, from the start.
3. Mobilize allies from academia, civil society and the private sector to counter the anticipated pushback from the tobacco industry, its proxies and its allies.

STEP 7



● Monitor and evaluate

To make the most well-informed policy decisions, a reform effort should be monitored to assess its overall impact and its effect on key indicators; this will help identify issues to be fixed while also creating a strong evidence base for further reform efforts.

Get and analyse the relevant data to better understand the market situation and its dynamics:

1. Monitor the market and its evolution (e.g. retail prices, duty-paid sales, market shares).
2. Get regular estimates of price elasticity (including cross-price elasticity), income elasticity and tax base elasticity to evaluate any changes in tobacco demand.

Use relevant tools to assess the impact of the tax policy on consumption and revenue:

1. Use specific tools on the impact of excise on price, consumption and revenue (e.g. the WHO TaxSiM).
2. Use global tools to assess the tax increase's impact on prevalence (e.g. the WHO ISPT).

Monitor key indicators closely to assess improvements over time:

1. Tax as a percentage of retail price.
2. Change in affordability of tobacco products over time.
3. Change in the tobacco tax scorecard, which combines a mix of best practices in tax policy.
4. Change in sales, prevalence and illicit trade in tobacco products.
5. Improvements in MPOWER package achievement.

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