CONFRONTING ILICIT TOBACCO TRADE:

A GLOBAL REVIEW OF COUNTRY EXPERIENCES

ECUADOR: ADDRESSING ILICIT TOBACCO TRADE

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Chapter Summary

The chapter begins with a review of the smoking epidemic using global figures and data, followed by an examination of Ecuador’s domestic epidemic. The chapter describes the advances and challenges associated with specific laws and regulations designed to combat tobacco consumption in Ecuador, such as the Tobacco Control Law and the country’s signing and ratification of the Protocol to Eliminate Illicit Trade in Tobacco Products. The analysis highlights how Ecuador’s government has promoted cultural and social change smoking-related attitudes and practices by means of measures such as the National Plan for Well-Being. A brief look is taken at the application of MPOWER measures recommended by the World Health Organization (WHO) as the most effective means to combat the smoking epidemic. This is followed by analysis of tobacco tax issues.

The chapter provides an extensive analysis of Ecuador’s tax track-and-trace system (TTS) for domestically produced cigarettes, alcoholic beverages, and beer, known as the Identification, Marking, and Tracking System (Sistema de Identificación, Marcación y Rastreo, SIMAR). The system was implemented by Ecuador’s Internal Revenue Service (SRI) in 2017. Topics related

1 Servicio de Rentas Internas (SRI), Ecuador
to the technical and security characteristics of the physical features of the SIMAR system are discussed; these features are evidence of the robustness of the solution.

The implementation of the SIMAR system earned the SRI a 2017 award from WHO on World No Tobacco Day (which supported the theme “tobacco – a threat to development”). The first TTS to comply with the Protocol to Eliminate Illicit Trade in Tobacco Products, SIMAR has become a benchmark for other countries in the region as they begin to tackle these issues. The government of Ecuador has signed an international cooperation agreement with the Dominican Republic to establish a similar system, cooperated with various other countries in the region, and participated in a number of international forums to share its experiences: precisely the sort of international assistance called for under the Protocol.

The core of this study focuses on the illicit trade. Illicit trade in cigarettes has been widely discussed and is recognized as a policy issue of great importance. The collection of relevant data is especially critical in understanding the scope of the problem and whether illicit trade is expanding. Unfortunately, it is difficult to conduct a study of this type without adequate data on consumption within countries. This remains a challenge in Ecuador, which needs to periodically collect more reliable consumption statistics and compare them with data on sales and production to establish a robust assessment of the illicit trade. This would allow more effective targeting of public policy and facilitate intraregional comparisons and lessons.

The study presents additional evidence that may help in the further analysis of Ecuador’s illicit tobacco trade, such as the finding of a recent striking decline in the sales of the only authorized cigarette producer in the country. Seizures of illicit products are also discussed that highlight the effectiveness of Ecuador’s public policy and market surveillance. A key conclusion of the study is that, while the decline in legal cigarette sales has been associated with a fall in tobacco tax revenues, the current tobacco tax level in Ecuador is sustainable. The government appears to be adopting the appropriate response to the revenue reduction, which is strengthening tax administration.

The Smoking Epidemic: Background and Data

Tobacco consumption is the main factor in the death of 50 percent of smokers (WHO 2017). In Ecuador, an estimated 15.0 percent of women and 38.2 percent of men were current smokers in 2013 (PAHO 2016). The data indicate that 21 Ecuadorians die each day as a result of smoking, and approximately US$ 478.4 million are spent annually by the government to treat health issues and impacts related to tobacco consumption; this is the direct cost of smoking. This expenditure represented 0.47 percent of Ecuador’s gross domestic product (GDP) and 6.32 percent of total annual public spending on health in 2015. Moreover, 13.4 percent of all deaths among people over the age of 35 in Ecuador can be attributed to this pandemic, which means that controlling tobacco consumption might help avoid some 7,798 deaths annually (Bardach et al. 2016).
The Ecuadorian government has undertaken considerable effort in tobacco control over
the past decade. In March 2004, it signed the Framework Convention on Tobacco Control
(FCTC), and, in July 2006, it ratified the convention. The objective of the law is to promote
the right of the population to health and protect the population against the consequences
of the consumption of tobacco products and their harmful effects. In February 2012, the
regulations governing the implementation of the law were approved. These recognized the
Ecuador Inter-institutional Anti-Tobacco Committee as an entity within the Ministry of Public
Health charged with coordinating tobacco control nationwide.

Ecuador’s government signed the Protocol to Eliminate Illicit Trade in Tobacco Products
on September 25, 2013, and, in 2015, the National Assembly ratified the Protocol. Notably,
only six countries in the Latin America and Caribbean region—Brazil, Costa Rica, Ecuador,
Guatemala, Panama, and Uruguay—have ratified the Protocol. This demonstrates the
importance that the government of Ecuador has attached in recent years to combating the
smoking epidemic, the associated externalities, and the harmful direct and indirect effects.
The key to the progress achieved was the link established between the economic agenda
and the health agenda by means of a key message: tobacco taxes are not only an economic
measure; they are also a comprehensive public policy that is effective in reducing smoking
and preventing young people from taking up tobacco consumption (Pizarro et al. 2018).

Laws and Regulations
An examination of the national legislation on tobacco control, from the macro level down to
specifics, is revealing. Article 361 of the Constitution of Ecuador states that:

The State shall exercise leadership of the system through the national health
authorities, shall be responsible for national health policy making, and shall
set standards for, regulate, and monitor all health-related activities.

The leadership of the health system is assigned to the Ministry of Public Health, and the
Constitution indicates that it is necessary to establish a policy at the national level. Article
364 affirms:

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2 Article 15 of the FCTC indicates that it is necessary to eliminate all forms of illicit trade in tobacco products
(smuggling, illicit manufacturing and counterfeiting), and Article 6 recognizes that price and tax measures are
effective and important in various sectors.
3 Published in Official Gazette 497 (July 22, 2011), the law sets out guidelines for tobacco control.
4 The committee was established by Plutarco Naranjo in 1988. It includes representatives of public and private
organizations and civil society actors.
5 Among the most important articles on illicit trade in the Protocol is Article 8, which provides that each party
shall establish a TTS controlled by the government for all tobacco products that are manufactured in or
imported into the national territory.

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Addictions are a public health problem. The State shall be responsible for developing coordinated programs for information about and the prevention and control of the use of alcohol, tobacco, and narcotic and psychotropic substances, as well as providing treatment and rehabilitation to occasional, habitual, and problematic users.

Thus, the Constitution establishes that tobacco consumption and the consumption of other narcotic substances are issues of national interest, requiring a comprehensive policy for prevention and for the treatment of users.

The government’s road map over the past few years was laid out in the National Plan for Good Living, 2013–2017. Objective 3 of the plan focused on improving the quality of life of the population and, more specifically, in Objective 3.2, on:

Expanding health prevention and promotion services to improve the living conditions and lifestyles of individuals… including by preventing and combating the consumption of tobacco, alcohol, and narcotic and psychotropic substances with emphasis on pregnant women, girls and boys, and adolescents.

This all demonstrates how the government views public policy as a whole and the topic of smoking as an issue that requires commitment at the highest level, particularly because 2016 data show that seven of the ten leading causes of death in Ecuador, accounting for 36.9 percent of total deaths, related to tobacco consumption. These included: ischemic heart disease, 9.65 percent; diabetes mellitus, 7.27 percent; cerebral vascular diseases, 6.35 percent; hypertensive diseases, 5.17 percent; diseases of the urinary system, 2.73 percent; chronic diseases affecting the lower respiratory tract, 2.69 percent; and malignancies of the stomach, 2.43 percent (INEC 2016).

The National Development Plan 2017–2021: Toda una Vida (“A Whole Lifetime”) entered into effect in 2017 (SENPLADES 2017). The plan is a continuation of earlier plans with adjustments and changes in structure, focus, and objectives. The anti-tobacco efforts are included in Focus 1: Lifelong Rights for All, and, within this focus, in Objective 1: Guarantee a life in dignity with equal opportunity for all. The policies established to achieve this objective include the following: guarantee the right to health care, education, and lifelong comprehensive care that is

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6 The plan represented a well-defined political stance and the government’s guide for the four years from 2013 to 2017. It comprises a set of objectives that indicate the intention to continue the historical transformation of Ecuador, as follows: Consolidate the democratic state and the construction of popular power. Promote equality, cohesion, inclusion, and social and territorial equity within diversity. Improve the quality of life of the people. Strengthen the capacity and potential of citizens. Construct common meeting places and strengthen the national identity, diverse identities, plurinationality and interculturalism. Consolidate the transformation of justice and strengthen overall security, while maintaining strict respect for human rights. Guarantee the rights of nature and promote territorial and global sustainability. Consolidate a sustainable, caring economic system with a social focus. Guarantee decent work in all its forms. Promote the transformation of the production matrix. Ensure the sovereignty and efficiency of strategic sectors for industrial and technological transformation. Guarantee sovereignty and peace, further strategic insertion in the world, and Latin American integration (SENPLADES 2013).
accessible, of good quality, and of local and cultural relevance (1.6); and confront the socioeco-
nomic phenomenon of drugs and alcohol through comprehensive prevention, control, and
supply reduction strategies (1.14). The plan proposes the following vision for Ecuador in 2030:

Ecuador will make progress in its guarantee of the right to health through the
promotion of healthy lifestyles that focus on the prevention of disease. It pro-
poses that Ecuador reduce sedentarism, improve people’s eating habits, and
increase physical activity among all groups, regardless of age. This will help
reduce stress levels and the number of deaths from cardiovascular diseases,
diabetes, excess weight, obesity, and so on. Emphasis will also be placed on
combating drug, alcohol and tobacco consumption (especially among ado-
lescents and young people). (SENPLADES 2017, 32)

Reducing tobacco consumption is a key in both national development plans. The plans are
spearheaded by the National Secretariat for Planning and Development, but their imple-
mentation is the responsibility of all government agencies according to the relevant areas
of expertise.

Combating Smoking

The government of Ecuador has aligned its efforts to combat smoking with the six most
effective measures stipulated by the WHO MPOWER policies contained in the FCTC: moni-
tor tobacco use and prevention policies; protect people from tobacco smoke; offer help in
quitting tobacco use; warn about the dangers of tobacco; enforce bans on tobacco adver-
tising, promotion, and sponsorship; and raise taxes on tobacco (WHO 2017). These efforts
have been led mainly by the Ministry of Public Health. With the publication of the Organic
Law on Tobacco Regulation and Control, attention was drawn more tightly around the pack-
age of MPOWER strategies, as follows:

Protect: 100 percent no-smoking areas were established in enclosed public spaces. This was
subsequently expanded to enclosed public and private spaces with public access and open
spaces in educational and health care institutions.

Warn: Tobacco packaging was required to bear graphic warnings covering 70 percent of the
package surface. The seventh series of health warnings on tobacco packages was launched
on July 15, 2018. This includes descriptions of real cases of individuals whose health has
been affected by tobacco consumption. Such packaging is required for all tobacco products
sold in Ecuador.

Enforce: Measures included a prohibition on all types of advertising, including the sponsor-
ship of sports, cultural, and arts activities, by the tobacco industry, as well as a prohibition
on any type of advertising, promotion, or sponsorship of tobacco products or the tobacco
industry in any mass media or through interpersonal means of communication. The sale,
including retail sales, to or by individuals under age 18 was prohibited, and regulations on the retail sale and use of vending machines for tobacco products were introduced.

**Monitor:** Ministry of Public Health data are essential in determining smoking prevalence. Breakdowns by gender and age-group are important in revealing the segments of the population in which smoking prevalence is greater. In 2012, the prevalence of tobacco consumption, defined as the number of persons declaring that they have smoked tobacco at least once in the previous month among those who declared that they had tried tobacco one or more times in their lives, is 28.4 percent among adolescents ages 10–19 and 31.5 percent among individuals ages 20–59. Among both adolescents and adults, prevalence is greater among men and the 15–19 and 20–29 age-groups. Among the 10–19 age-group, 48.7 percent of both sexes declared that they had begun to consume tobacco at 16 or older, compared with 73.5 percent among the population ages 20–59. Among adolescents, 34.1 percent say that it is easy to obtain cigarettes; 38.4 percent say that it is difficult; and 15.8 percent say that it is very difficult. However, 45.5 percent of individuals ages 20–59 who say they have smoked at some point in their lives no longer smoke currently (ex-smokers); the share is larger among men than among women (Freire et al. 2014).

**Raise Taxes:** In line with the most cost-effective tobacco control measures and the WHO (2010) recommendations, the government has undertaken wide-ranging steps to regulate and control tobacco products to reduce cigarette consumption, prevent young people from starting to consume tobacco products, restrict consumption by vulnerable groups, and encourage cessation of tobacco product use. The strategy has been led by the SRI, with the support of the Ministry of Public Health. The main method has involved raising taxes, leading to a rise in cigarette prices and thus to a decrease in demand. The following section describes the various tax issues in more detail.

**Tax Issues**

**The Excise Tax on Cigarettes**

The tax on cigarettes in Ecuador, the special consumption tax (impuesto a los consumos especiales, ICE), was created in 1989 through the enactment of the Law on the Internal Tax Regime. Its main purpose was to restrict the consumption of luxury goods and products harmful to health. WHO (2010, 2017) recommends that specific taxes on tobacco should represent at least 70 percent of the sales price to generate the desired impact on consumption. Other taxes, such as the value-added tax (VAT), are then added to the specific tax to reach the recommended minimum tax burden of 75 percent. Currently, the tax burden on the top-selling brand of cigarettes in Ecuador is 66.4 percent.
Trends in the tax burden are reflected in the commercial strategy of the only tobacco producer in Ecuador, which responds to every tobacco tax increase by immediately raising prices, often by more than the tax increase (Table 1). The firm can do this because it has a monopoly on the manufacture of cigarettes in the country, accounting for almost the entire formal cigarette market.

<table>
<thead>
<tr>
<th>Breakdown</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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</thead>
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<tr>
<td>ICE, per unit</td>
<td>US$0.13</td>
<td>US$0.16</td>
<td>US$0.16</td>
<td>US$0.16</td>
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<tr>
<td>ICE value, pack of 20</td>
<td>US$2.64</td>
<td>US$3.20</td>
<td>US$3.20</td>
<td>US$3.20</td>
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<tr>
<td>VAT, %</td>
<td>12</td>
<td>14^</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>VAT value</td>
<td>US$0.32</td>
<td>US$0.45</td>
<td>US$0.38</td>
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</tr>
<tr>
<td>Manufacturer's suggested retail price</td>
<td>US$4.25</td>
<td>US$5.20</td>
<td>US$5.40</td>
<td>US$5.40</td>
</tr>
<tr>
<td>Tax burden, %</td>
<td>69.5</td>
<td>70.2</td>
<td>66.4</td>
<td>66.4</td>
</tr>
</tbody>
</table>

Table 1. Tax Burden on the Top-Selling Cigarette Brand, Ecuador, 2015–18

Source: SRI database.

a. The tax rate, VAT share, and manufacturer’s suggested retail price correspond to the values at the close of the fiscal year, that is, in December.
b. In 2016, the VAT rate was increased from 12 percent to 14 percent for one year to raise funds for the reconstruction of areas affected by the April 16, 2016 earthquake.

Ecuador has one of the highest average prices per pack of cigarettes in the region. The retail sale price per pack of the top-selling brand of cigarettes in Ecuador is almost triple that in Colombia, where, in 2018, a pack of cigarettes cost approximately Col$ 5,000, or US$ 1.74. This is only 32.2 percent of the price in Ecuador.8 In Peru, the top-selling brand costs approximately S/. 11.50, equivalent to US$ 3.52, or 65.2 percent of the Ecuadorian price.9

ICE Collections

ICE collections on cigarettes rose steadily from 2000 through 2015 (Figure 1). Starting in 2016, there was a 12.7 percent decline in collections relative to the previous year, a trend that was maintained in 2017 with an even larger drop of 20.2 percent. With the launch in May 2017 of Ecuador’s tobacco-product tracking and tracing system (TTS), known as SIMAR, it is hoped that this decline will be much smaller for 2018, because the TTS also tackles issues of under-invoicing and makes it easier to differentiate between legal and illegal products (which allows for greater efficiency in the surveillance process).

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8 The official exchange rate in June 2018 was Col$2,777.75 per U.S. dollar.
9 The official exchange rate on June 29, 2018, was S/. 3.27 per U.S. dollar.
Thus, the collection of the ICE on cigarettes rose from 2000 through 2015, but has trended downward since then. This analysis must be supplemented with historical data on the volume of sales (closely related to production output) to obtain an accurate analysis of the cigarette market. This analysis is provided below, in the discussion of illicit trade.

Ecuador’s Tax Identification, Marking, Authentication, and Track-And-Trace System

SIMAR, Ecuador’s TTS, is primarily designed to minimize tax evasion associated with domestic products. The goal is to increase tax collections by identifying and tracking legal products and to provide citizens and watchdog organizations with the means to detect products of doubtful origin that can negatively impact the health of Ecuadorians.

The design and implementation of SIMAR for domestically produced cigarettes, beer, and alcoholic beverages began with the launch of an international public tender on April 7, 2016. Following a detailed process, SRI awarded the contract for the SIMAR Project to the SICPA EcuaTrace Consortium. The selection criteria were detailed in the terms of reference for the tender (bids had to meet certain minimum criteria for consideration: minimum technical personnel, minimum general and specific experience, minimum experience of the technical personnel, technical specifications or terms of reference, capital, percentage of the minimum Ecuadorian value added, etc.). After these requirements were met, the factors to be scored were established: general experience, specific experience, experience of the technical personnel, other parameters met by the contracting entity (related to additional levels of security), plus financial indicators and the financial bid (Table 2). These criteria were scored...
in accordance with the guidelines set out in Ecuadorian public procurement regulations. It is important to note that only for the item “other” was there freedom for the contracting authority to establish any criterion that it wishes to evaluate, but the scoring of that parameter was just five points.

After completion of the legal process set out in the public procurement regulations, the contract for the implementation of the system was signed in July 2016. The bidding process from the announcement of the specifications through to the awarding of the contract took two months. The cost of the project, as stipulated in the terms of reference, is US$ 81.5 million for the five-year contract or the marking of 6,678,901,820 units, whichever comes first. The project is financed through the general government budget.

Owing to various contractual, technical, and political factors, implementation took place on different dates for different products. SIMAR went into operation in alcoholic beverages, artisanal beer, and one of the industrial beer producers on February 23, 2017. It was implemented for cigarettes on May 20, 2017. Nonetheless, almost the entire system had been installed on production lines by February 2017, which made it possible to count all of the cigarettes manufactured in the production plant even if they had not yet been marked.

In the case of cigarettes, the SRI defined an indirect type of marking, that is, the application of visible physical security features to the product or the packaging containing the product on the production line.

**Physical Security Features**

The elements that comprise the physical security features (PSFs) applicable to this type of marking were outlined in the terms of reference of the bidding process. The terms of

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**Table 2. Terms of Reference, Bid Scoring, SIMAR, 2016**

<table>
<thead>
<tr>
<th>EVALUATION PARAMETERS</th>
<th>IDEAL SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>General experience</td>
<td>11</td>
</tr>
<tr>
<td>Specific experience</td>
<td>14</td>
</tr>
<tr>
<td>Experience of technical personnel</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
<tr>
<td>Financial bid</td>
<td>55</td>
</tr>
<tr>
<td>Subtotal</td>
<td>90</td>
</tr>
<tr>
<td>Ecuadorian value added</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Terms of reference for the SIMAR tender.

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10 This is an estimate based on the actual units marked in 2017 and projections for 2018–22.
reference made it clear that, in addition to the required coding that would facilitate the tracing of the product, there should be at least two components for each of the PSF categories, as follows:

» Overt, visible security features: security features that can be verified with the naked eye, such as change of color, change of ink, holograms, latent images, watermarks, and security threads

» Semi-covert security features: security features that can be verified using a simple tool, such as ultraviolet filters, polarized filters, or magnifiers

» Covert, invisible security features: security features that require the use of specialized robust electronic devices for the verification of authenticity

» Forensic security features: security features that include forensic markers that can only be identified through a laboratory analysis and that are capable of providing irrefutable proof that may be presented as evidence in a court of law

PSFs also have to include tamper-evident features to prevent the manipulation, transfer, or reuse of security devices. Moreover, PSFs are required to meet general security criteria, as follows:

» Security based on type of material used: integrate robust high-security features to prevent copying and safeguard against the reuse of the features on illicit products or their reproduction through commercially available means

» Information-based security: security based on algorithms with unique encryption keys for Ecuador

» Compatibility with high-speed devices, without affecting the speed and volume of production, within a margin of error of 2 percent

» Readability by equipment designed for use in the field by SRI users and other inspection and control entities, as well as through a mobile application, enabling oversight by the public

PSFs are stacked in bundles of 500 units and are delivered on the basis of minimum orders of 124,000 units (SRI 2017). They are affixed automatically by marking equipment installed as part of the SIMAR solution on all production lines of the country’s cigarette manufacturer. They are placed on the product by a labeling arm during the final stage of the production process, at a point when the cigarettes packs are not subject to any other processing. This means new products may enter the production line once the paper filters have been attached.

Each taxpayer, the cigarette manufacturer in this case, is obliged to submit an application by e-mail to the account designated by SRI to request the quantity of PSFs needed for manufacturing. The request should take account of historical production amounts and comply with the format and instructions indicated on the website and outlined in Resolution

11 See the terms of reference for the SIMAR recruitment process on the SIMAR website, at http://www.sri.gob.ec/web/guest/simar.
NAC-DGERCGC16-00000455, published in the Supplement to Official Gazette 878 of November 10, 2016. In cigarette production lines, PSFs are applied in an L shape on the right side of each pack (SRI 2017).

Some of the physical and security characteristics of PSFs placed on cigarette packs are as follows:

- The rectangular PSF measures 44 x 20 millimeters.
- The PSF is printed on dry paper with a weight of 80 grams per square meter.
- Green security ink on the edge of the PSF shows a high sheen under sunlight and shifts to blue if the PSF is viewed from another angle.
- The data matrix is visible.
- The Quick Response Code, a barcode, can be scanned using the SRI SIMAR application.12
- A printed alphanumeric code can be scanned and verified using the SRI SIMAR application.
- The SRI logo shifts between pink and red if it is viewed from different angles.
- Modulation lines have been added.
- “Republic of Ecuador, Internal Revenue Service, and SRI SIMAR” is printed in micro-text on the pack (SRI 2017).

PSFs also possess other security features that cannot be revealed. This precaution is necessary to ensure that security solutions are robust and to prevent counterfeiting.

**Characteristics of the SIMAR Solution**

The SIMAR solution comprises a number of technological components that provide marking and online data storage across various stages, starting with the production plants owned by taxpayers and their interface with registry services and extending to web-based authorizations and the verification of information generated throughout the cycle. The technological platform is based on the installation of information technology equipment in each production plant. Central storage facilities are supplied by the provider. The service relies on various technical channels to process the information, which is the property of SRI, and to ensure adequate control over taxpayers. The technological solution provides a service that allows for adequate control over the technological components, such as web systems, links (SRI–taxpayers–providers), SRI integration, databases, and data visualization.

The SIMAR solution includes two important components of a business intelligence platform (inteligencia empresarial), which contains data facilitating decision making. One is a system

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12 The Quick Response Code holds information about the taxable entity, the reference number on the Single Taxpayer Registry (Registro Único de Contribuyente), the location of the production facility (province, city, canton, address), the date of production, the production line, the time of production, the lot number, the product type, and the ICE code of the product (brand, presentation, packaging, and so on) as stipulated in the terms of reference and control requirements of the tax administration.
Illicit Trade

Preliminary Considerations

The illicit trade in cigarettes is an international phenomenon. However, the countries of the Americas, including Ecuador, have had difficulties implementing the methodologies that WHO, the Pan American Health Organization, the Inter-American Center of Tax Administrations, and the World Bank recommend for measuring the real scale of the problem.\(^\text{13}\) The difficulty extends to characterizing the types of illegal markets and understanding how such markets have developed. Some of the challenges are the absence of time series data, inconsistencies in the data, and the lack of ready comparability of the data because of changes in the methodologies used for collection and analysis.

However, in 2014, SRI, applying a method commonly known as gap analysis, undertook the development of an internal system to measure the scope of the illegal trade in cigarettes and other harmful products, such as alcoholic beverages (Jorratt 2012). The system draws on data from the National Health and Nutrition Survey, which discusses risk factors, including risks associated with alcohol and tobacco consumption (Freire et al. 2014). SRI created estimates of total consumption based on information organized by age-group and prevalence. These consumption data were compared with data in the SRI database on the collection of the ICE to determine whether there were any significant discrepancies or variations that would indicate a high incidence of illicit trade. This method of measurement makes government verification of the consistency of the various data easy, given that the tax data are linked to a specific ICE per cigarette. The SRI estimates have served as inputs for the implementation of the TTS in Ecuador. However, because it contains sensitive information on taxpayers, the study is intended for the sole use of the tax administration.

\(^\text{13}\) See Ross’s (2015) summary of these methods.
If one were to analyze data from the ICE declarations of the only legal, formal producer of cigarettes in Ecuador, one would be struck by the fact that sales volumes fell drastically between 2014 and 2016. At the same time, because of frequent tax rate increases, tax collections had been on a rising trend up to 2015. The collections did not decline until 2016, when there was a drop of 12.7 percent relative to 2015. This was followed by a reduction in real tax collections of 20.2 percent in 2017 relative to 2016. However, a comparison of collection rates that have been converted into volumes reveals that, between 2014 and 2017, there was a large drop in cigarette production. A cursory analysis might lead one to conclude that the ICE and the public policies being applied in the fight against the tobacco epidemic were having the desired effect.

According to WHO, a good public policy consisting of a 10 percent rise in the tax on a pack of cigarettes in middle-income countries should lead to a 4 percent–8 percent decline in consumption as the economics of the tax tends to make the population more sensitive to price (Jha and Chaloupka 2000). Taking as a reference the 2016 price elasticity study

<table>
<thead>
<tr>
<th>MONTH</th>
<th>2012</th>
<th>2013</th>
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<th>2017</th>
<th>2018</th>
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<td>180,857,860</td>
<td>163,164,400</td>
<td>126,530,000</td>
<td>67,170,000</td>
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<td>159,870,000</td>
<td>227,507,700</td>
<td>125,201,900</td>
<td>66,300,000</td>
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<td>202,930,000</td>
<td>192,330,000</td>
<td>126,994,200</td>
<td>127,045,500</td>
<td>76,900,000</td>
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<td>185,100,000</td>
<td>193,533,420</td>
<td>172,853,500</td>
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<td>71,596,300</td>
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<td>153,223,690</td>
<td>203,078,530</td>
<td>241,175,300</td>
<td>182,330,000</td>
<td>93,516,100</td>
<td>59,710,000</td>
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<td>Subtotal</td>
<td>2,204,588,412.53</td>
<td>2,162,642,880</td>
<td>2,035,754,280</td>
<td>1,491,424,200</td>
<td>985,284,500</td>
<td>755,772,920</td>
<td>302,745,500</td>
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<td>Variation</td>
<td>−1.90%</td>
<td>−5.87%</td>
<td>−26.74%</td>
<td>−33.94%</td>
<td>−23.29%</td>
<td>−1.93%b</td>
<td></td>
</tr>
</tbody>
</table>

Source: SRI database on the basis of taxpayer declarations on cigarettes on which the ICE has been levied.

a. No tax collection data exist for January and February 2012. The figures for these two months were extrapolated from the average of the 10 remaining months of 2012.

b. The variations between 2017 and 2018 were only considered for the first five months of the year (that is, January to May), which is the cutoff point of the available data.
on Ecuador, whereby price elasticity was calculated at a value of 0.87, a 10 percent price increase could lead to an 8.7 percent decline in consumption (Chávez 2016).

In light of these considerations, the data are significant and may be indicative of an illicit cigarette market affecting Ecuador (Table 3). The situation is exacerbated by the negative externalities associated with neighboring countries with much lower cigarette prices.

On the basis of tax collection data from 2012 onwards and the same calculation method for the ICE on cigarettes at a specific rate, it is possible to arrive at the volume of cigarette production in Ecuador. It emerges that, since 2012, sales have fallen each year, which, to a certain extent, reflects the volume of production. Sales fell by 1.9 percent between 2012 and 2013 and by 5.9 percent between 2013 and 2014. In both cases, the reduction in sales can be explained by the price elasticity in those years. In 2014–15, the specific ICE rate rose by 41.6 percent, and sales fell by 26.7 percent. The specific ICE rate was raised again, by 14.8 percent, in 2015–16 to reach US$0.16 per unit, the current rate. This rate rise resulted in a 33.9 percent drop in the volume of cigarette sales. The specific ICE tariff of US$ 0.16 was maintained from 2016 to 2017, and sales plummeted once again, by 23.3 percent.

It is not likely that the reduction in sales between 2015 and 2017 was caused solely by the effectiveness of public health policies. Such an outcome would also have to be attributed in part to the growth of the illegal market. The government should carry out its own study of the illicit cigarette trade to discover the cause of the drop. Another key factor to consider in discussing the illicit trade is the volume of seizures and confiscations. This, too, must be approached with caution and should be used only as a point of reference, because a greater number of seizures tends to reflect greater government attention to the illicit trade as well as improved inspection and control, particularly through the application of new technologies.

The National Customs Service of Ecuador (SENAE) has recorded a high volume of seizures since 2017, following the adoption of the anti-smuggling plan as a tool to strengthen policies to address the illicit market (SENAE 2017). Spearheaded by SENA, the plan brings together the efforts and resources of 20 institutions, including SRI, the Ministry of Agriculture and Livestock, the State General Prosecutor, and the Ministry of the Interior. Among the achievements under the plan is the confiscation of over US$ 36 million in contraband merchandise between May and December 2017, including a large number of cigarettes. As a result of these actions, almost 3,600 jobs have been protected in Ecuador (SENAE 2017).

Many countries have focused on conducting their own analyses of the illicit trade and have sought to do so without interference from the tobacco industry. Colombia, for example, conducted two surveys of smokers (in 2016 and 2017) to estimate both consumption patterns and the scale of illicit trade.14 Similarly, Euromonitor provides data on the illegal cigarette market, but, because of the methodology and other issues, sole reliance on this data source can be problematic. This underscores the need for governments, academic

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14 The studies were conducted by Anaas (a Colombian civil society organization).
institutions, and civil society organizations to pursue the preparation of their own studies that are not linked in any way to the industry.

Furthermore, considering that a TTS is already in place in Ecuador to provide reliable data on the production and sale of cigarettes from the only tobacco production company in the country, new studies should be implemented to facilitate data comparison with other time periods and to clarify trends. While the illicit trade is difficult to measure because of the nature of the problem, robust methodological approaches have already been developed. This is why every effort must be made to prepare the most rigorous and realistic study possible, with the understanding that, while it may over- or underestimate the extent of the trade, the estimates may be verified after the TTS has enhanced the transparency of the cigarette market and segments of the illegal market have been formalized and regulated.

The data that the SIMAR system can generate will give the SRI ongoing access to real online data on the production of the formal industry and will, in time, allow for estimates of market behavior and sales forecasts. Nonetheless, a study on illicit trade can only be prepared if there are other studies or data on consumption patterns, the preparation of which falls outside the scope of the tax administration. While the SRI conducted a study in 2014 on the basis of existing data, they have not been able, because of the lack of regular surveys on consumption or of time series data, to prepare a new study to confirm the robustness of the first or to analyze trends and behavior patterns. The failure to prepare a new study has also been caused by the fact that the surveys on consumption were conducted using different approaches, assumptions, and methodologies, making comparisons difficult. Furthermore, the data of the national statistical entity for this type of product have usually involved substantial underestimates, owing to the fact that they were gathered on the basis of household surveys that make it notoriously difficult for respondents to reveal the real quantity of cigarettes they consume. It is therefore essential for the government to collect consistent cigarette consumption statistics on an ongoing basis to improve our understanding of the illicit trade and the overall pattern of consumption, which is essential for monitoring the effectiveness of tobacco control.

Data on Cigarette Seizures by Inspection and Control Agencies

According to SENAE data, approximately 2,053,418 cigarettes were confiscated in 2013 and 4,458,950 in 2014. In 2015, 16,839,285 units were seized, and 17,024,324 units in 2016. These data point to the efficiency of the SENAE inspection process and to the existence of an extensive illicit trade that needs to be quantified. Aside from these two issues and over and above questions about the accuracy of the data on seizures, it is evident that the number of cigarettes confiscated after 2015 increased by over 200 percent (SENAE 2017). The bulk of the goods seized were from China (brands such as Elephant and Modern), Colombia, and India, or brands such as Lucky Strike.
Against this background, SRI began, in 2014, to step up efforts to identify a mechanism or strategy to control the illicit trade. A tax monitoring and tracking system was identified as offering a number of potential benefits. On September 2, 2014, the SIMAR Project was adopted in recognition of the need to strengthen and improve oversight of ICE by more carefully monitoring products prone to tax evasion, such as spirits and cigarettes.

SIMAR regulations provide for the confiscation of goods subject to the ICE (beer, cigarettes, and alcoholic beverages) that do not have the required PSFs. SRI started to undertake field inspections and apply confiscation measures after the corresponding regulations were published, which meant that, for a time, products manufactured before the enactment of SIMAR and which did not carry PSFs actually coexisted on the market with SIMAR-compliant products. Between October and December 2017, 55,370 cigarettes were seized through 79 operations carried out in Ambato, Cuenca, Guayaquil, Ibarra, Loja, Machala, Manta, Portoviejo, Quero, Quito, Santo Domingo, and Tisaleo. Between February and April 2018, 4,310 packs were seized in 49 operations carried out in various cities.

Between 2017 and 2018, SENAE carried out a series of large-scale operations that resulted in the seizure of sizable quantities of cigarettes that were being imported into the country as contraband through criminal schemes such as the cambiazo (switching scam). Cigarettes were identified, together with textiles, fruits, and other foodstuffs, among the products most likely to be trafficked as contraband. According to official SENAE data, the most extensive operations aimed at confiscating cigarettes included the seizure of 1.5 million cigarettes in January 2018 and the raid in the week of December 5–11, 2017, of a clandestine warehouse in the city of Ibarra that had 945,500 units of various brands in storage that were valued at US$ 235,643. In March 2018, SENAE seized 3 million cigarettes contained in a shipment from Florida. In November 2017, SENAE, through the Unidad de Vigilancia Aduanera (Customs Monitoring Unit), incinerated 10 million cigarettes that would have represented a government revenue loss of more than US$ 6 million. However, seizures usually represent a small share of total sales. In particular, the largest seizures of 2017 are less than 0.5 percent of the total sales registered that year (756 million; see Table 10.5).

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15 Article 28 of SRI Resolution NAC-DGERCGC16-00000455, published in the Supplement to Official Gazette 878 on November 10, 2016, states expressly as follows:

With effect from February 23, 2017, goods subject to SIMAR control that exit manufacturing premises without the required physical security features will be subject to seizure, and auctioned, destroyed, or donated in accordance with the law... Similarly, with effect from July 11, 2017, products subject to SIMAR control that are on the market without the required physical security features (PSF) will be subject to seizure, and auctioned, destroyed, or donated in accordance with the law. Products subject to SIMAR control that have the required PSF, but are not backed by sales receipts or import documents will be confiscated provisionally, in accordance with the legal provisions in force.

16 The scheme involves the reentry of containers to the customs control area with items other than those initially declared.
Recommendations

The government has made great progress in a number of the MPOWER measures recommended by WHO and the Pan American Health Organization. Furthermore, the government has worked hard to achieve 100 percent smoke-free areas, and these are growing in number and scope. It has adopted a coordinated approach to reducing prevalence and to multiplying and improving the provision of health care and supporting people wishing to quit using tobacco. It has carried out three tax reforms in under eight years, increasing the ICE on cigarettes. The challenge now is to establish generic packs and adopt other measures, such as prohibiting the sale of packs of fewer than 20 cigarettes. These actions will be addressed through the adoption of a new tobacco control law in Ecuador.

To prepare a complete illicit tobacco trade study, the availability of comprehensive data must be assured. Ideally, the data would be in time series to facilitate a comparative analysis. Time series data are not normally available to governments or do not usually cover all years, and, even in cases in which time series data are available across at least two years, the data often originate from different sources and have been obtained based on different methodologies, thus making comparisons impossible. It is vital for governments to have their own data, limit the use of industry data, and possess protocols based on good methodological practices in data production. In Ecuador, the challenge is to have ongoing access to cigarette consumption statistics to facilitate the preparation of studies on the illicit trade and ensure a greater understanding of the issue. Such data are also essential to monitoring the effectiveness of tobacco taxation in the country.

While it will always be important to have access to information on the confiscation of illicitly traded goods, such as contraband, illicit whites, or other illicit products, this information should be managed with great care and be treated only as supplementary data to be used on a case-by-case basis. Alternatively, statistics in this area can be used to determine specific aspects of the type of illicit trade affecting a country or region. But such data should not be used as a direct indicator of illegal market growth because increases in the number of seizures are more indicative of the efficiency of governments and of the new initiatives that these adopt in the fight against this global scourge.

Since 2017, SRI has been implementing SIMAR for domestically produced cigarettes and other products, such as spirits and beers. This project will, in the short run, be extremely useful in providing the tax administration with real, first-hand data on the production of the national tobacco industry, without the need for the taxable entity to make any declarations whatsoever. At the same time, once information for some time periods has been collected, it will then be possible to make projections of market behavior and trends that will be instrumental in generating a better understanding of the situation. Once the Protocol to Eliminate Illicit Trade in Tobacco Products enters into force, the government can begin implementing the SIMAR for other tobacco products, and, once guidelines are established for an international center for information exchange, an institution described in the Protocol, then the
next step will be to begin sharing the data efficiently on an ongoing basis. SIMAR will be the first TTS in line with the provisions of the Protocol. As early as September 2018, it will be adopted as a binding legal instrument.

The government has also been collaborating with other countries, particularly within the Americas. It has signed international cooperation agreements, such as with the Dominican Republic, and is active in forums organized by WHO and nongovernmental organizations, such as the RENATA National Anti-Tobacco Network of Costa Rica. These organizations have also provided a platform for the government to share its successful experiences in the implementation of the SIMAR TTS and in resolving concerns about the process, addressing industry interference issues, and providing support for other countries to begin work on similar projects to combat the illicit trade and promote tobacco control. The challenge will be to continue its pioneering work and offer support to other countries in the operation of TTSs.

While the fight against the tobacco epidemic is, to a certain extent, the responsibility of the Ministry of Public Health, it is also everyone’s responsibility. Thus, other public entities and civil society representatives must play a collaborative and supportive role. If countries are to meet the health goals recommended by WHO and the Pan American Health Organization and successfully reduce illicit trade, lower access and the prevalence of tobacco use, and meet the tobacco challenge head on, then they must approach the issue and work together on various fronts. This highlights the importance of a collaborative effort between health care agencies, budget ministries, tax administrations, and customs authorities. The potential for results is demonstrated in the tremendous progress that Ecuador has achieved over the past few years.

Ecuador’s tax burden on cigarettes is one of the heaviest in the region. This achievement, together with the importance assigned by the government to eliminating illicit trade, and the fact that the government has ratified the Protocol and implemented the SIMAR TTS and the anti-smuggling plan, shows the great strides that have been made. Moreover, while the recent decline in legal cigarette sales has been associated with a fall in tobacco tax revenues, a key conclusion of this study is that the current tobacco tax level in Ecuador is sustainable. The government appears to be adopting the appropriate response to the revenue reduction, which is strengthening tax administration.

However, these efforts will not be sufficient without international cooperation and support. The problem of the illicit trade is not confined to Ecuador, nor even to the region of the Americas. It is a global problem that must be tackled through global strategies and international cooperation. Because it is committed to the fight against the tobacco epidemic, the Government of Ecuador will continue its collaborative efforts to increase the effectiveness of each type of action and to support the continuing development of harmonized and coordinated public policies as it pursues the objective of reducing tobacco access, prevalence, and illicit trade.
References


Confronting Illicit Tobacco Trade: A Global Review of Country Experiences


COVER QUOTE SOURCES


“To tackle illicit trade is to tackle accessibility and affordability of tobacco products, to be more effective on the control of the packaging and to reduce funding of transnational criminal activities whilst protecting the governmental revenues from tobacco taxation.”

– Dr. Vera Luiza da Costa e Silva
   Head of the Secretariat of the WHO Framework Convention on Tobacco Control

“Governments around the world must waste no time in incorporating all the provisions of the WHO Framework Convention on Tobacco Control into their national tobacco control programmes and policies. They must also clamp down on the illicit tobacco trade, which is exacerbating the global tobacco epidemic and its related health and socio-economic consequences.”

– Dr. Tedros Adhanom Ghebreyesus, Director-General
   World Health Organization

“Tobacco still remains the biggest avoidable cause of premature death in the EU, and the illicit trade in tobacco facilitates access to cigarettes and other tobacco products, including for children and young adults. In addition, millions of euros in tax revenues are lost every year as a result of the illicit trade.”

– Commissioner Vytenis Andriukaitis
   Health and Food Safety / European Commission

“Given their light weight, small size, and high value, tobacco products are susceptible to fraud through illegal trade, production, and cultivation... Illegal trade is a context-specific activity that has various modus operandi and therefore requires multi-dimensional context-specific solutions.”

– Patrick Petit (Senior Economist) & Janos Nagy (Senior Economist)
   Fiscal Affairs Department / International Monetary Fund

“Effective tobacco tax regimens that make tobacco products unaffordable represent a 21st century intervention to tackle the growing burden of noncommunicable diseases. We are convinced that, working together with WHO and other partners in support of countries, we will be able to prevent the human tragedy of tobacco-related illness and death, and save countless lives each year.”

–Dr. Tim Evans (Senior Director) & Patricio V Márquez (Lead Public Health Specialist)
   Health, Nutrition and Population Global Practice / World Bank Group