illicit
CIGARETTE
TRADE IN THE DRC

December 2023

Quantitative
Research Results

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PREFACE

The Democratic Republic of Congo (DRC) ratified the World Health Organization's Framework Convention on Tobacco Control (FCTC) in 2005. This ratification is part of the government's commitment to promoting the health of its people and protecting children and young people from tobacco use.

Illicit trade in tobacco products is a major threat to the implementation of the FCTC. It undermines governments' efforts to reduce the demand for tobacco, particularly among young people. It also deprives governments of significant tax revenues, which could be used to finance public health programs (such as universal health coverage).

For these reasons, the Government of the Democratic Republic of Congo supported this study on illicit trade, carried out by Development Gateway and with support from the Bill & Melinda Gates Foundation.

The aim of the study was to assess the scale and characteristics of illicit trade in tobacco products in the DRC, and examine the origins of the illicit trade in cigarettes. It is an important step in the implementation of the Protocol for the Elimination of Illicit Trade in Tobacco Products, which the Government of the DRC intends to ratify shortly.

The results of this study show that illicit trade in tobacco products is a major problem in the country. Illicit tobacco products account for a significant share of the tobacco market in the DRC. They are often sold at lower prices than legal tobacco products, making them more attractive to consumers, particularly young people.

The study also identifies the factors that contribute to the illicit trade in tobacco products. These factors include the use of yellow stamps on tobacco products, whereas the law has introduced new gray, green and orange stamps, and the difficulty of tracing the origins of tobacco products. Some tobacco products do not respect the health messages required in the DRC, or display messages in languages that are not legally recognized in the country.

The results of this research will enable the Government of the DRC to take measures to combat the illicit trade in tobacco products. The Government of the DRC is determined to combat the illicit trade in tobacco products. This study is an important step in that fight.

Secretary General, Ministry of Public Health, Hygiene and Prevention, DRC
Dr Sylvain Yuma Ramazani
Kinshasa, November 15, 2023

FOREWORD

The *Programme National de Lutte Contre la Toxicomanie et Substances Toxiques* (PNLCT) is pleased to present the results of the study on illicit trade in the Democratic Republic of Congo (DRC), carried out in collaboration with Development Gateway and supported by the Bill & Melinda Gates Foundation. This study is of paramount importance in our fight against the illicit trade in tobacco and tobacco products.

As a signatory to the World Health Organization's Framework Convention on Tobacco Control since 2005, the DRC is committed to taking vigorous action to eradicate illicit trade. However, to achieve this, a thorough understanding of the illicit trade situation in our country is essential.

I would like to express my deep gratitude to Development Gateway for their technical support throughout this project. Their expertise and commitment have greatly contributed to our understanding of the determinants of illicit trade in the DRC. I would also like to thank the Bill & Melinda Gates Foundation for its generous support, without which this study would not have been possible.

The study on illicit trade in the DRC raises complex and sometimes troubling issues. It highlights the harmful consequences of this trade on public health and the economy.

The PNLCT is convinced that this study will be of great value for the advancement of tobacco control, and the recommendations presented will contribute to the implementation of the FCTC.

Together, we can build a world where illicit trade is controlled and reduced, protecting the health of our fellow citizens and ensuring health, social, environmental and economic prosperity for present and future generations.

I wish you an enriching and inspiring read of the results of the study on illicit trade.

C.T Patrice Milambo Kapia
Director of the PNLCT, Ministry of Public Health, Hygiene and Prevention, DRC

ACKNOWLEDGMENTS

EXECUTIVE SUMMARY

Illicit cigarette trade in the Democratic Republic of Congo (DRC) is widely recognized and constitutes a major concern. However, the phenomenon has so far remained insufficiently studied. This research implemented by Development Gateway, in partnership with the University of Cape Town with funding from the Bill & Melinda Gates Foundation, was carried out as part of the Tobacco Control Data Initiative (TCDI) to fill this gap.

The research was guided by two main questions:

⇨ What is the percentage of illicit cigarette trade in the DRC?

⇨ What are the origins and brands of illicit cigarettes sold in the DRC?

An approach combining qualitative and quantitative research was used to answer these questions. This report only presents quantitative research results, as another report is dedicated to qualitative research results.

1. RESEARCH METHODOLOGY

The methodology used consisted of collecting empty cigarette packets from trash cans and the streets, as well as from cigarette retailers, whether stationary or mobile. This data collection was carried out in 32 health areas, distributed in 16 health zones stratified in rural and urban areas. These health areas are located within eight provinces, six of which border each other and two which do not. These eight provinces were drawn randomly from the 26 provinces of the country distributed in four porosity strata related to how easily borders may be crossed: very high, high, moderate, and low. (The terms "porosity" and "porous" refer to the level of security at the borders between provinces.)

Each packet of cigarettes collected was examined in order to collect and encode the information present on the packaging, in particular: the brand name, the tax stamp, the health warning, the instruction prohibiting sale of cigarettes to minors and by minors, the nicotine and tar content of the cigarettes, as well as the country of origin and the name of the manufacturer. Data was collected using the SurveyCTO tool and then exported to STATA software for cleaning and analysis.

2. MAIN RESULTS

The study collected and analyzed 10,622 cigarette packets. It appears that 8.62% of the cigarette market in the DRC is illicit, following the basic hypothesis that illicit cigarettes are those whose packages do not display any tax stamp. When assuming that imported yellow stamp packages are illegal, this rate increases drastically and reaches 51.46%. This illegality is essentially due to the fact that packets of cigarettes do not comply with regulations, in particular with the absence of a tax stamp (and/or presence of a yellow stamp on imported packets), health messages, instructions for minors, or details on nicotine and tar content.

The results indicate that the more porous a province's borders are, the more favorable it is for the illicit cigarette trade. Furthermore, the weaker a province's institutional enforcement of anti-illicit trade measures, the more illicit cigarette trade prevails. Ituri province stands out with the highest rate of illicit trade, attributable to border factors, weak application of measures, and socio-political instability. In second position is the province of Sankuru with 25.90%, mainly due to the weakness of anti-illicit trade enforcement. Kinshasa, with the particularity of being the capital province of the country, has a rate of 5.40%.

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Concerning the origin of illicit cigarettes found in the DRC, Uganda and the United Arab Emirates (often via countries bordering the DRC, such as Angola) emerge as the main sources of illicit cigarettes, together supplying 84.03% of the illicit cigarette market in the DRC. As for cigarette brands, Supermatch and Oris dominate the illicit market with a 90.4% share. The phenomenon is widespread because other brands are also involved, although in small proportions.

3. OTHER RESULTS OF THIS SEARCH

Other results show that 71.71% of packages bear the old yellow stamp, linked to the brands Equateur, Monte Carlo, and Pall Mall. In addition, some brands carry ambiguous logos and other confusing information, which encourage cigarette consumption, thus highlighting the need for stricter regulation.

FIGURE 1: Illicit cigarette trade in the DRC

Quantitative Study Results

The presence of illicit cigarette trade in the DRC raises significant concern.

THE PERCENTAGE

8.62% of the cigarette market in the DRC is illicit. The more porous a province is, the more widespread illicit trade is there. The stronger the institutionsin a province are, the less prevalent the illicit cigarette trade is.

1

THE ORIGINS

Uganda and the United Arab Emirates are the main sources of illicit cigarettes sold in the DRC. These two countries represent **43.67%** and **42.47%** of the illicit market share, respectively.

2

THE BRANDS

The cigarette brands 'Supermatch' and 'Oris' represent **50.76%** and **41,48%** of the illicit cigarette market. This phenomenon is widespread, as other brands are also implicated, albeit at a lower frequency.

3

IMPLICATIONS

For policymakers: enforce existing laws, impose penalties on offenders, and enhance administrative insitutions and international cooperation. For research purposes: study the effectiveness of health warnings, the impact of tobacco on youth, and the fiscal loss for the Congolose government.

4

71.71% of the packs have old stamps (yellow). Illicit trade is estimated at 51.46%, in accordance with the DGDA's official letter prohibiting the importation of packs with old stamps 60 days after April 12, 2022.

PROJECT IMPLEMENTED BY DEVELOPMENT GATEWAY AS PART OF THE TOBACCO CONTROL DATA INITIATIVE (TCDI)

Source: Cabinets d'études RISD & SRD Lab

4. CONCLUSION AND RECOMMENDATIONS

This research deepened the understanding of the illicit cigarette trade in the DRC. The implications for decision makers are that strict actions are required, including effective enforcement of existing laws and regulations and sanctions against violators. Strengthening institutions, as well as border controls, and international cooperation are also recommended to combat this transnational problem. The findings of this study also suggest that the DRC ratifies the WHO Protocol to Eliminate Illicit Trade in Tobacco Products. Stricter regulations and continued monitoring are needed to protect the health of consumers, especially young people. Continuous monitoring and data collection mechanisms are also essential to track developments in illicit trade over time and better eradicate it. In terms of research implications, this study suggests that future studies evaluate the effectiveness of current health warnings, youth cigarette consumption, and the loss of tax revenue from the illicit cigarette trade. A comparative study with other African countries is also planned to identify good practices from neighboring countries that could be adapted to the Congolese context.

LIST OF ACRONYMS

AS   Health Area

BAT   British American Tobacco

CDF   Congolese francs

CTC   Congo Tobacco Company

DG   Development Gateway

DGDA   General Directorate of Customs and Excise

DRC   Democratic Republic of Congo

ILDI   Local Initiative for Development

PNLCT   Programme National de Lutte Contre la Toxicomanie et les Substance Toxiques

RISD   Research Initiative for Social Development

SICPA SA Industrial and Commercial Company of Food Products

SRD Lab   Laboratory for Survey & Research for Development

STDA   Excise Duties Traceability System

TCDI   Tobacco Control Data Initiative

WHO   World Health Organization

ZS   Health Zone

INTRODUCTION
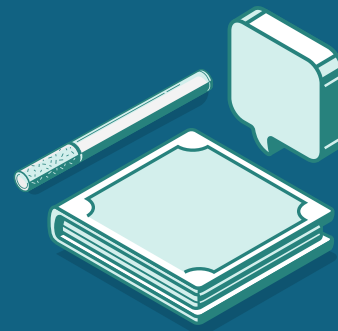
The Democratic Republic of Congo (DRC) is the second largest country on the African continent after Algeria, with an area of 2,345,000 km2. It shares its borders with nine countries, namely: the Republic of Congo to the west; Uganda, Burundi, Rwanda, and Tanzania to the east; the Central African Republic and Sudan to the north; and Zambia and Angola to the south. The DRC has experienced persistent social and political instability throughout its recent history, which has contributed to porous borders. One of the consequences of this situation is the intensification of illegal activities, such as the trade in illicit cigarettes, which endangers the health of consumers and leads to significant tax losses for the State.

The existence of the illicit cigarette trade in the DRC is recognized, but the phenomenon remains insufficiently quantified and its sources remain unclear. This study aims to fill this gap by assessing the percentage of illicit cigarette trade in the DRC as well as the origins of illicit cigarettes sold in the DRC based on an in-depth analysis of data collected in eight provinces of the country.

Context and objective of the research

According to the journal Financial Afrik[1] (March 2020 edition), the DRC loses 70% of revenues from the tobacco trade to smuggling. This information comes from the conclusions of the study conducted by the Local Initiative for Integrated Development (ILDI, 2019). It also emerges from this study that the DRC records significant tax losses resulting from the fact that several brands of cigarettes do not have official tax stickers.[2] Although this information exists on the internet, it has not been formally collected and analyzed until now.

Faced with these findings, it is essential to conduct in-depth research on the cigarette trade in the DRC to better understand the current situation and formulate effective policy recommendations. It is with this in mind that the Tobacco Control Data Initiative (TCDI) seeks to meet the needs of government actors, as well as civil society and academia. In the DRC, the TCDI initiative revealed a considerable lack of data on tobacco in general, and more specifically on the illicit tobacco trade. After observing this gap, preliminary qualitative research was conducted on secondary data, followed by the organization of a co-creation workshop bringing together various stakeholders engaged in the fight against tobacco in the DRC. This approach made it possible to identify the illicit tobacco trade as a priority problem requiring research based on the collection and analysis of primary data.

The TCDI initiative aims to aggregate and facilitate access to data necessary for the design and implementation of tobacco control policies carried out by governments in sub-Saharan Africa. One of the main expected results of this project is the design and development of national websites with data from different sources. This includes updated data on the prevalence of smoking and illicit marketing practices, as well as the health and economic effects of tobacco. By strengthening the capacities of decision makers and key stakeholders, this initiative aims to contribute to the implementation of more effective public health policies as well as the protection of the population against the harm of tobacco.

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[1] The DRC loses 70% of tobacco trade revenues to smuggling | Financial Afrik.
[2] DRC: the illicit tobacco trade at the root of the increase in the number of smokers (ILDI-ONGD workshop) | News.cd.

This research is guided by two questions:

1. What is the percentage of illicit cigarette trade in the DRC?

2. What are the origins and brands of illicit cigarettes sold in the DRC?

This report addresses the above questions through five chapters. Chapter I sets out the theoretical and conceptual framework of this study. Chapter II presents the research methodology and implementation. Chapter III highlights the processes used to obtain data, including data collection, data editing, and quality assurance. Chapter IV is dedicated to the presentation of the main results of the study. Finally, Chapter V discusses the results and presents conclusions and recommendations based on those results.
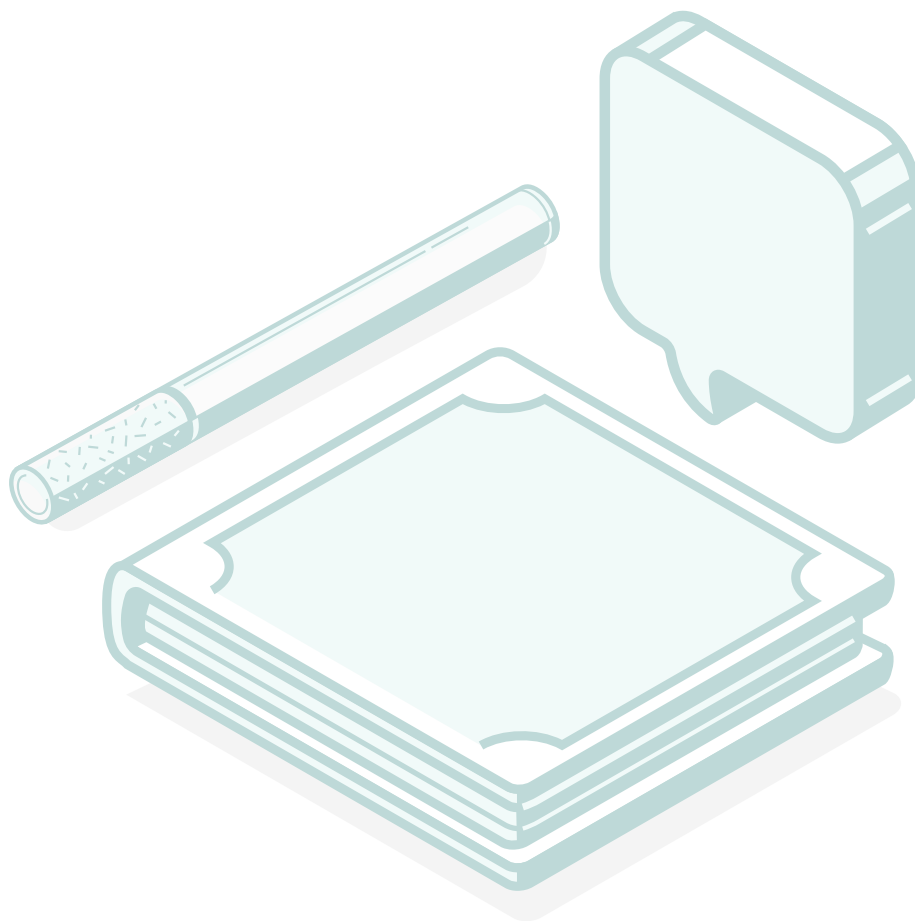
CHAPTER I. THEORETICAL FRAMEWORK

This chapter is structured into two sections. The first section sets out the regulations in force in the DRC regarding tobacco marketing and consumption, and the second section presents the definition of illicit cigarettes adopted as part of this study.

I.1. Marketing and consumption of tobacco in the DRC: Regulations

In the DRC, the marketing and consumption of tobacco are regulated by laws:

↳ Law No. 18/035 of December 13, 2018,[3] from the Ministry of Public Health, establishing the fundamental principles relating to the organization of public health in the DRC. Articles 110 to 117 of Chapter II of this law prescribe the information that must appear on cigarette packets. However, although this law has been promulgated, its implementation is not yet effective.

↳ Ministerial Order No. 1250/CAB/MIN/SP/010/AO/2007 of July 19, 2007,from the Ministry of Public Health, relating to measures applicable to the use and consumption of tobacco and its derivatives. This order is still in force.

↳ Order No. CAB/MIN/FINANCES/2020/009 of April 16, 2020, from the Ministry of Finance, relating to the Excise Code that sets out the implementing measures of Ordinance-Law No. 18/002 of March 13, 2018.

Based on this legislation in force in the DRC, we present below the articles of these ministerial decrees of 2007 and 2018, which are linked to the objectives of this research. The articles are coupled with illustrations of cigarette packets that are in compliance with the law.

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[3] Law No. 18/035 of December 13, 2018, establishing the fundamental principles relating to the organization of public health (leganet.cd).

I.1.1. The ban on the sale of tobacco to minors and by minors

TABLE 1: Instructions for minors

Article 2 of Ministry of Public Health Order No. 1250/CAB/MIN/SP/010/AO/2007 of 07/19/2007	Illustrations of instructions for sale by and to minors
Art 2. In whatever form proposed, the packet of cigarettes or cigars must bear the words "Prohibited for sale to minors and by minors." This notice must be printed in bold, indelible, and visible capital letters, with a height of at least two millimeters, on the top of the right side of the package.	

I.1.2. The presence of health warning text

TABLE 2: Health warnings

Article 7 and Article 8 of Ministry of Public Health Order No. 1250/CAB/MIN/SP/010/AO/2007 of 07/19/2007	Illustration of health warnings
Art 7. Any packet or carton of cigarettes or cigars must bear at least two of the four health notices below: • "Smoking is harmful to health" • "Tobacco seriously harms your health" • "Be careful, smoking kills" • "Smoking is highly addictive" **Art 8.** The health warnings listed in Article 7 must be printed in bold, black capital letters on a contrasting white background and must cover 30% of the two main presentation areas of the package. The background reserved for health warnings must be framed by a distinctive black outline printed in bold.	

Note: For the illustration, we did not find a packet of cigarettes with the words "Be careful, smoking kills."

I.1.3. The presence of brand identifiers

Table 3: Brand identifiers

Article 10 of Ministry of Public Health Order No. 1250/CAB/MIN/SP/010/AO/2007 of 07/19/2007	Illustration of brand identifiers
Art 10. In addition to health warnings, any packet of cigarettes or cigars must bear the following information: • The name of the brand • The name of the manufacturer • The name of the country of origin • The batch number • Tar and nicotine content	

I.1.4. The presence of information on tar and nicotine content

Table 4: Composition of the tobacco product

Article 11 of Ministry of Public Health Order No. 1250/CAB/MIN/SP/010/AO/2007 of 07/19/2007	Illustration of brand identifiers
Art 11. The tar and nicotine content will appear on the right side of each packet and will cover at least 20% of said side. They will be printed as follows: • TAR .... mg • NICOTINE .... mg	

I.1.5. Prohibitions on wording, logos, and confusing images

Table 5: Phrases/logos prohibited on tobacco packets

Article 14 of the Ministry of Public Health Order No. 1250/CAB/MIN/SP/010/AO/2007 of 07/19/2007	Illustration of prohibited phrases/logos
Art 14. Also prohibited: • Wording like "light," "ultra light," "mild," "sweet," etc. • Names and logos likely to create confusion or give the impression that a particular brand can promote fitness and well-being in general • Sponsorship of sporting activities	 With its African roots, Equateur is made with carefully selected and blended Virginia tobacco.

I.1.6. Date the law went into effect

Table 6: Final provisions of the decree

Article 22 of the Ministry of Public Health Order No. 1250/CAB/MIN/SP/010/AO/2007 of 07/19/2007	Illustration of prohibited phrases/logos
Art 22. From the date of signing of this decree, manufacturers, importers, exporters, and distributors of cigarettes and cigars have six months to comply with its provisions.	

Note: The ministerial decree having been signed on July 19, 2007, Article 22 above therefore suggests that any package not respecting the instructions of the decree beginning January 19, 2008, is not in compliance with the regulations.

So far, the articles presented here are those of Ministry of Public Health Order No. 1250/CAB/MIN/SP/010/AO/2007 of July 19, 2007, , which relate to the measures applicable to the use and consumption of tobacco and its derivatives. The tax aspect is not addressed in this law. Rather, ministerial decree No. CAB/MIN.FINANCES/2020/009 of April 16, 2020, relating to the Excise Code gives requirements linked to the tax aspect, in particular to the presence of tax stamps on cigarette packets.

I.1.7. Annex 1 to Ministerial Order No./CAB/MIN. FINANCES/2020/009: Stamps

Table 7: Presence of the stamp on the cigarette packet

Annex 1 to Ministerial Order No. /CAB/MIN.FINANCES/2020/009	Illustration of the presence of the stamp on the package
The presence of tax stamps on cigarette packets is a provision in Annex 1 to Ministerial Order No./CAB/MIN.FINANCES/2020/009 of April 16, 2020, relating to implementing measures for the Ordinance-Law No. 18/002 of March 13, 2018, relating to the excise code as amended and on the day of signing of the aforementioned document. 1. Printing media: Paper without optical brightener (non-watermark), 100% cellulose, 7. 0 to 8. 0 gr/m2, featuring two-color fluorescent fibers and other multi-colored particles visible only under ultraviolet light 2. Format: 44 / 20 mm 3. Print quality: Background lined with security hologram visible to the naked eye and under ultraviolet light, with anti-copy properties; relief printing of the words "RD Congo"; micro-writing readable only with a magnifying glass, bearing the inscription "Democratic Republic of Congo"; logo of the General Directorate of Customs and Excise; tax identification number of the manufacturer or importer; serial number 4. Color: Orange, for locally manufactured cigarettes; gray, for imported cigarettes; green, for cigarettes intended for duty free shops	

Note: In Table 7, the illustration of a pack of cigarettes displaying a green stamp does not appear. Indeed, during the period of the study, the research team did not encounter cigarette packets with a green stamp, even in the duty-free shops located in the airports of Goma in North Kivu and N' djili in Kinshasa.

In the context of this study, we only use the presence/absence of a stamp and the color of the stamp to determine the legal status of a cigarette pack. The choice to retain the color of the stamp as a criterion for identifying the quality of the stamp can be explained by several reasons. First of all, the color is an essential and easily identifiable visual element, allowing a quick assessment of the authenticity and quality of the stamp. In addition, the color is an important indicator of the origin of the cigarette (local vs. imported), and it makes it easier to classify and categorize the stamps. In addition, to evaluate the quality of the stamp with criteria other than color (for example: the printing support, the format and the quality of the printing), one would have to be a specialist or have appropriate equipment and the collecting agents did not have the skills and tools for this purpose.

The illicit nature of cigarette packets that display a yellow stamp may be questionable due to the presence in the DRC of regulations that coexist and which contradict each other at a certain level.

I.1.8. Background on the stamp and chronology of facts

I.1.8.1. Chronology of facts

1. **Introduction of yellow tax stamps (2003):** In 2003, the government of the DRC introduced yellow tax stickers (stamps) by Ministry of Finance decree No. 084/CAB/MIN/FINANCES/2003 of October 22, 2003. These stickers were produced by the DRC Mint and affixed to cigarette packets, both imported and those produced locally. This measure aimed to regulate the tobacco trade, ensure the collection of taxes and excise duties, and fight the illicit cigarette trade.

2. **Regulatory changes and introduction of new tax stamps (2018):** In 2018, a new ministerial order was issued pursuant to Law No. 18-002 of March 13, 2018, on the Excise Code, repealing that of 2003. This new order has established a system of tax stickers in different green, gray, and orange colors intended respectively for cigarettes sold in duty-free shops, imported cigarettes, and those produced locally.

3. **Coexistence of old and new stamps (since 2018):** Despite the introduction of new stamps, it is noted that the old yellow ones continue to be present on cigarette packets in the DRC. This coexistence poses challenges in terms of regulation and traceability of tobacco products:

   ➪ **Potential tax fraud:** The persistence of old yellow stickers can facilitate fraudulent practices aimed at avoiding payment of appropriate taxes.

   ➪ **Ineffectiveness of the new system:** The coexistence of old and new stickers can complicate the implementation and effectiveness of the new traceability system.

4. **Reform and implementation of the Excise Duties Traceability System (STDA) in 2020:** The new tax stickers (stamps) are introduced by Ministry of Finance order No. CAB/MIN-FINANCES/2020/ of April 16, 2020 relating to implementing measures for Ordinance-Law No. 18/002 of March 13, 2018, relating to the excise code. These stamps are produced by the company SICPA SA and affixed to packages or sales units of excise products, depending on their type and place of sale. They are different colors: green for products sold in duty-free shops, gray for imported products, and orange for products manufactured locally in the DRC.

   On February 4, 2020, the General Directorate of Customs and Excise (DGDA) signed an agreement with SICPA SA, the company responsible for providing the necessary technical and operational solutions, including the production of stickers. This agreement[4] is called "Agreement for the provision of solutions and services relating to the secure tracking and traceability system for products and services subject to excise duties."[5] The system is called the Excise Duty Traceability System (STDA). The STDA is an IT system that makes it possible to follow the journey of excise products from their manufacture or importation to their final consumption. It aims to strengthen the control and verification of excise products, prevent and suppress fraud and smuggling, protect consumers, and mobilize public revenue.

5. **Press release from the DGDA, No. DGDA/DG/DGA-T/DAPA/DG/012/2022:** On April 12, 2022, the Directorate General of Customs and Excise (DGDA) issued an official press release under the number DGDA/DG/DGA-T/DAPA/DG/012/2022. This press release states that cigarettes imported into the Democratic Republic of Congo (DRC) with old stickers (stamps) after 60 days from April 15, 2022, will be considered fraudulent. Despite this press release, certain packages sold in the DRC continue to display them, thus showing difficulties in the transition to the new stickers. However, the press release does not give details on the fate of the yellow stamps affixed to packets of cigarettes not imported or manufactured locally in the DRC.

I.1.8.2. The implications of coexisting and conflicting laws and regulations

In the DRC, regulations relating to the use of tax stamps for the marketing of cigarettes coexist and conflict on certain points, particularly with regard to the use of old stamps. The problem posed by these old yellow stamps in the DRC is linked to the transition process between the old and new tax stamps.

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[4] This agreement provides for the design of an Android application for detecting illicit products called VeriDouanes. During the period during which the data collection was carried out, the application was not yet available on the Google Play store.

[5] https://douane.gouv.cd/dgda/outil-informatique/sicpa/

This transition poses several challenges, both legally and practically. On a legal level, there is a divergence between article 146 of the Excise Code and the official press release from the DGDA of April 12, 2022, on the duration and terms of the transitional period. Article 146 of the Excise Code provides that tax stamps currently in circulation continue to be used until stocks are exhausted, without setting a deadline. The official press release from the DGDA sets a transitional period of 60 days from April 15, 2022, to import cigarettes with the old stamps (vignettes) and considers cigarettes imported after this transitional period and bearing the old stickers as fraudulent. Furthermore, this press release does not explicitly comment on the case of the old (yellow) stamps affixed to packets of cigarettes manufactured in the DRC. This divergence can create confusion, legal uncertainty, and conflicts between economic operators and the tax administration.

In addition to this, the DGDA press release announced that the inventory of old tax stamps (vignettes) remaining with importers (stocks not yet used, quantities shipped to suppliers abroad) as well as the quantities of cigarettes were to be imported by brand and by customs office.

On a practical level, there is a risk that the old yellow stickers will be used to cover illicit products, i.e., products that do not meet quality, health, or safety standards, or that are introduced or sold without paying applicable duties and taxes. There is also a risk that the old yellow stickers will be falsified, counterfeited, or misused to escape the control and verification of excise products. These risks can harm public health, public finances and national security.

The solution to this problem could involve clarification and harmonization of regulatory texts on tax signs, as well as consultation between stakeholders (State, economic operators, civil society) to define the practical and technical modalities of the transition between old and new tax stamps. The capacities of DGDA agents and other control services should also be strengthened to ensure monitoring and verification of tobacco products on the market. Finally, public awareness should be raised on the health and economic risks linked to the illicit tobacco trade and on the advantages of the STDA and the new tax stamps for consumer protection and the mobilization of public revenue.

In view of this context, our analysis and conclusions on the illicit cigarette trade in the DRC require that hypotheses be formulated that take into account this transition between the old and new stamps.

As part of this study, two hypotheses are posed. Initially, based on the Ministry of Finance No. CAB / MIN-FINANCES/2020/ of April 16, 2020, implementing measures for Ordinance-Law No. 18/002 of March 13, 2018, on the Excise Code (JORDC., April 18, 2018, special no., p.5).[6]

☞ **Hypothesis 1:** All cigarette packets that display the yellow stamp are illicit.

☞ **Hypothesis 2:** Of all cigarette packets that display a yellow stamp, only those that were imported into the DRC 60 days after the date of April 15, 2022, are illicit. This takes into account the official press release from the DGDA[7] of January 13, 2022, on the duration and terms of the transitional period between the old stamps and the new stamps.

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[6] https://www.leganet.cd/Legislation/Dfiscal/Accisices/Loi%2013.03.2018.html
Art. 146. 1. Without prejudice to the provisions of article 52 of this Code, pending the establishment of official tax signs, the tax signs currently in circulation intended to be affixed to cigarette packets continue to be used until exhaustion of stocks. 2. The Director General of Customs and Excise is responsible for evaluating the stocks referred to in point 1 above.
[7] This official press release from the DGDA of January 13, 2022, on the duration and terms of the transitional period. This press release sets a transitional period of 60 days from April 15, 2022, to import cigarettes with the old stickers and considers cigarettes imported after this transitional period bearing the old stickers as fraudulent.

I.2. Definition of illicit cigarettes

With reference to the regulations in force in the DRC, this study considers that a pack of cigarettes is illegal if it presents at least one of the following characteristics:

Table 8: Definition of illicit cigarettes according to the assumptions made

Definition	Hypothesis 1	Hypothesis 2
No stamp on the package (indicating that the manufacturer has not paid various taxes)	☑	☑
Presence of a green stamp (the sale of cigarettes whose packet bears a green stamp outside duty-free areas denotes its illicit nature)	☑	☑
Presence of gray stamp on locally manufactured packets (the gray stamp is reserved for imported cigarette packets)	☑	☑
Presence of orange stamp on imported packets (the orange stamp is reserved for locally manufactured cigarette packets)	☑	☑
Presence of yellow stamp on imported packets (the yellow stamp on cigarette packets that were imported into the DRC 60 days after the date of April 15, 2022 are illegal)[8]	☒	☑
No written health warnings on the two main spaces of the package	☑	☑
Written health warning in a language other than French	☑	☑
No indication of tar and nicotine contents on the packet	☑	☑
Absence of the notice indicating the prohibition of sale by/to minors	☑	☑

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[8] This case is a special case that will allow the data to be analyzed under Hypothesis 2 as described in the previous section.

The National Tobacco Control Program regularly releases a list of cigarettes that are permitted and prohibited throughout the Democratic Republic of the Congo. Despite its potential usefulness, this list could not be directly incorporated into the development of the indicator for illicit cigarettes due to certain obstacles.

1. One main challenge is that the Programme National de Lutte Contre la Toxicomanie et les Substance Toxiques (PNLCT) list is subject to change every six months. Adding this factor to the indicator could increase its instability, particularly as the updated list we have is from December 2022, during the study's implementation.

2. Additionally, certain brands (such as Time Red) appear on both the authorized and unauthorized cigarette lists in the PNLCT, with the same manufacturer but a different distributor. The ambiguity cannot be incorporated into the indicator.

The illicit cigarette indicator cannot be constructed with the PNLCT list. Nonetheless, employing the indicator can aid in the evaluation of the PNLCT list and enhance comprehension of the market for informed decision-making purposes.

The quantitative survey made it possible to collect data on the presence/absence of all these characteristics. The results are presented in Chapter V, but first, we present the methodology for implementing the data collection below.

Table 9: Indicators of the illicit nature of cigarette packets in the DRC

Overall Indicator	Criteria for Identifying Illicit Cigarette Packets	Illicit Cigarette Packet Indicators
Percentage of illicit cigarette packs	• No stamp on the package • Presence of a green stamp • Presence of gray stamp on locally manufactured packages • Presence of orange stamp on imported packages • Presence of a yellow stamp imported after April 15, 2022 (only for Hypothesis 2)[9]	Non-compliance with tax stamp provisions
	• No written health warnings on the two main spaces of the package • Written health warning in a language other than French	Non-compliance with the provisions relating to the health message
	• No indication of tar and nicotine contents on the packet	Non-compliance with the provisions relating to sale to minors
	• Absence of the notice indicating the prohibition of sale by/to minors	Non-compliance with the provisions relating to tar and nicotine components

[9] For this aspect, see the box in the previous section, which presents the context on yellow stamps for further clarification. The analysis of the data from this study will be carried out according to the two hypotheses.

CHAPTER II. METHODOLOGY AND IMPLEMENTATION OF THE SURVEY

This chapter provides a clear and transparent vision of how we collected the data necessary to conduct this study. This allows us to understand the rigor and robustness of our methodological approach, thus guaranteeing the reliability and validity of the results obtained. We first present the target population, the observation unit, and the geographic coverage of the data collection. Next, we discuss the sampling method and the selected samples. And finally, we present the steps followed for the collection, processing and analysis of the data.

II.1. Target population, observation unit, and geographic coverage

The survey consisted of the collection of empty cigarette packets from three types of collection points: stationary retailers, itinerant retailers, and recycling centers/streets. The underlying hypothesis is that, by collecting from these three pack sources and using simple random sampling of cigarette pack collection areas, it is possible to collect a representative sample of packs that reflects the characteristics of cigarettes in a given area. The empty cigarette pack is the unit of observation for cigarette pack data collection. We also interviewed cigarette retailers from whom we collected empty cigarette packets. In this study, retailers refer to sellers of stick cigarettes. These include both stationary retailers and itinerant retailers. Stationary retailers are those who sell from shops, kiosks, and stalls, etc., while itinerant retailers are those who sell cigarettes on the move. The people interviewed are therefore itinerant and stationary cigarette retailers. The provinces in which data collection took place were chosen following the sampling method presented in the section below.

II.2. Sampling method, composition and sample size

II.2.1. Sampling method

The sampling frame is based on the structure of the DRC health pyramid. It was used to select collection sites using variables that include province, health zone (ZS) and health area (AS). Thus, the sample drawing took place according to three levels as presented in Figure 1. At the first level we drew the provinces, at the second level we selected the health zones and at the third level the health areas were sampled. Note that sampling was carried out using Stata software for all three draw levels.

II.2.2. Illustration of the Provinces

At the first level, we used the stratified sampling method to select the provinces. At this stage, the parent population, which includes the 26 provinces of the DRC, was divided into four homogeneous groups (strata) based on the porosity of the provinces. The term "porosity" refers to the level of security at the borders between provinces. The assumption is that these provinces are more vulnerable due to their border position and their prevailing security situation. Therefore, they could be subject to illicit trade. Thus, four strata were formed:

➥ **Stratum 1** is made up of provinces with very high porosity. These are border provinces and are subject to armed conflicts. These are the provinces of Ituri and North Kivu.

➥ **Stratum 2** of the high porosity provinces is made up of a single province: Kinshasa. This is a border province and has the distinction of being the capital of the DRC.

SAMPLING

Sampling is conducted in three stages (Level I, II, III). Sampling frame = health pyramid of the DRC

Health Zone

In each province, a simple random sampling of Health Zones (HZ) is conducted, with systematic selection of an HZ in the provincial capital.

Level II

Total number of empty packs in the DRC

Sample of collected empty packs

Level I

Province

In the DRC, simple random sampling of provinces is conducted based on the intensity of porosity, with systematic selection of the capital of the DRC (Kinshasa).

Level III

Health area

In each Health Zone, a simple random sampling of Health Areas (HA) is conducted, with systematic selection of an HA in the provincial capital.

↳ **Stratum 3** includes the provinces with medium porosity: these are border provinces and they are not subject to armed conflicts. The provinces of this stratum are Bas-Uele, Equateur, Haut-Katanga, Haut-Uele, Kasaï, Kasaï-Central, Kongo-Central, Kwango, Lualaba, Maï-Ndombe, Nord-Ubangi, Sud-Kivu, Sud-Ubangi, and Tanganyika.

↳ **Finally, stratum 4** consists of provinces with low porosity. These are non-border provinces with no particular security issues. The provinces that make up this stratum are Haut-Lomami, Kasaï-Orienta, Kwilu, Lomami, Maniema, Mongala, Sankuru, Tshopo, and Tshuapa.

We selected a subsample of provinces in each of the four strata to form the final sample. It should be noted that the size of the sample of provinces was predefined at a total of eight

provinces, taking into account the budget allocated to the project. Therefore, the number of provinces to be drawn from each stratum was established proportionally to the weight of the stratum (relative to the total number of provinces in the stratum). The stratified sampling of the provinces was carried out following a simple random drawing without replacement in each stratum.

Finally, as shown in Figure 3, the total sample is composed of one province in the stratum of provinces with very high porosity (Ituri), one province in the stratum of provinces with high porosity (Kinshasa), four provinces in the stratum of provinces with moderate porosity (Haut-Katanga, Kasaï-Central, Kwango, Nord-Ubangui) and two provinces in the stratum of low porosity provinces (Tshopo and Sankuru).
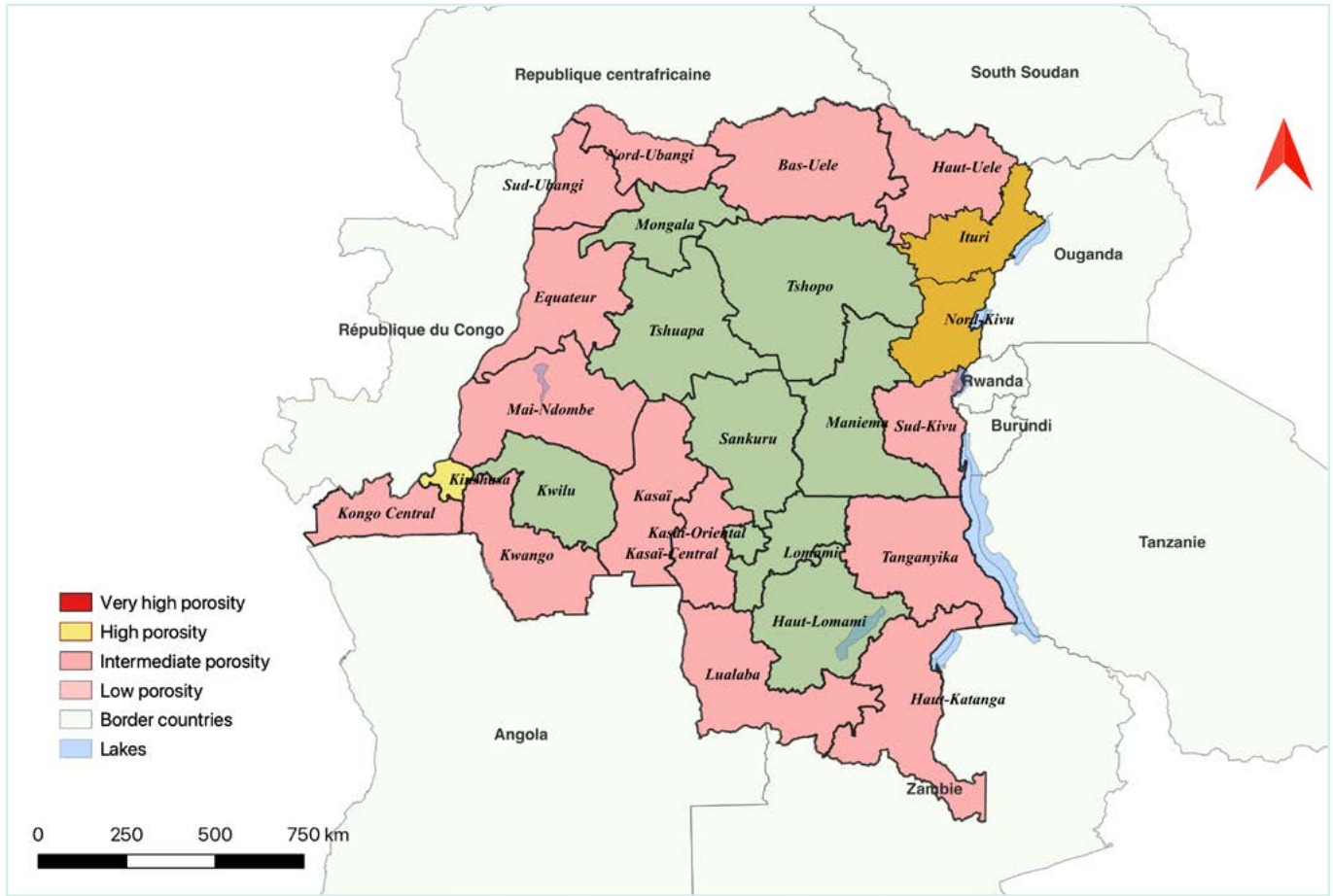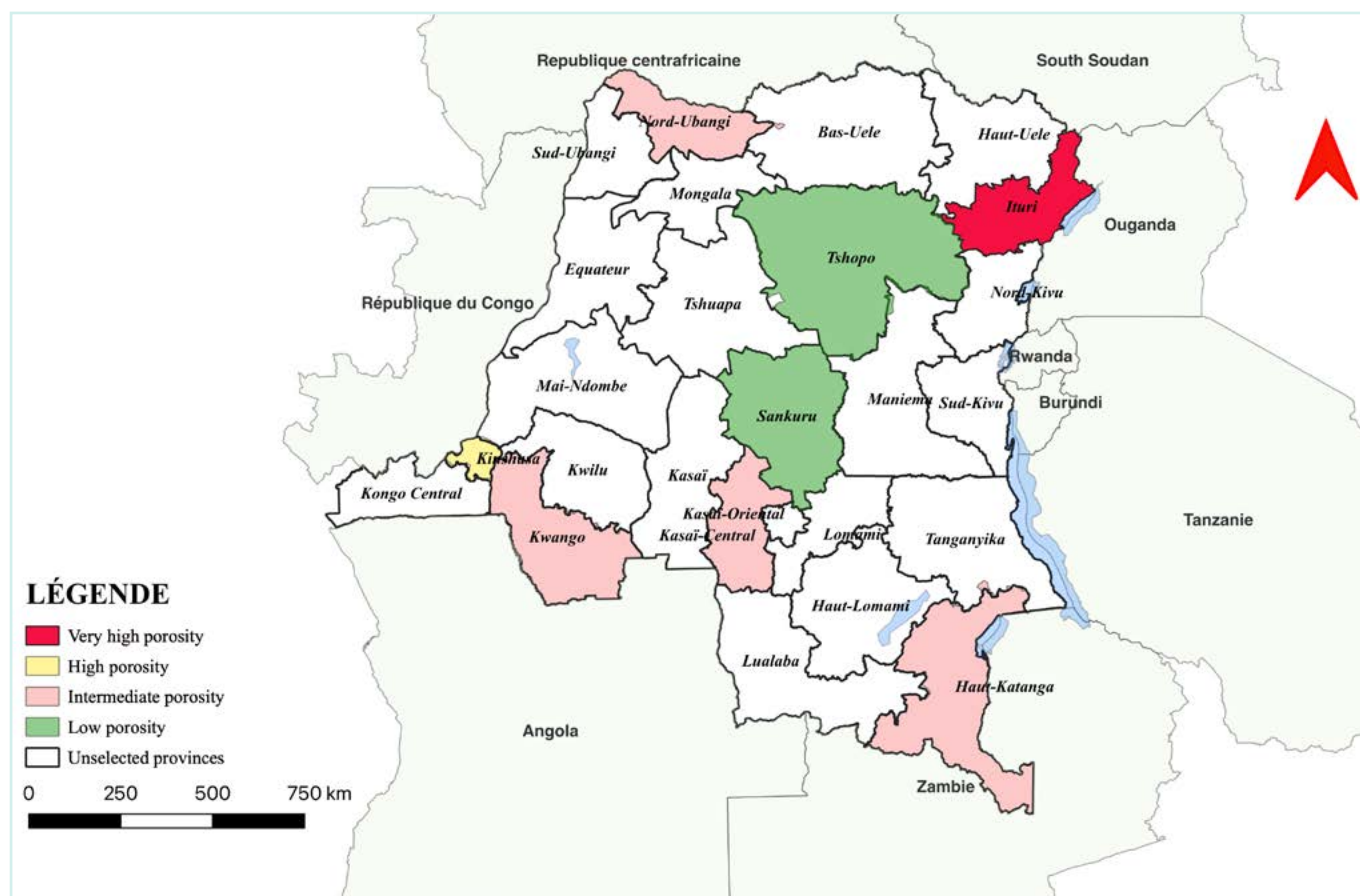
Source: humdata.org

Source: humdata.org

II.2.3. Illustration of health zones and health areas

After the selection of the provinces, we formed two other strata in each province: the "urban area" stratum and the "rural area" stratum. Then we drew a health zone from each new stratum using the simple random sampling method without replacement. Hence, each province ultimately had two health zones: a rural zone and an urban zone. A total of 16 health zones were selected in the eight provinces. At the third level of drawing, we selected the Health Areas. Thus, for each health zone, two health zones were selected using a simple random draw without replacement. This gives a total of 32 health areas (Figure 5). The selected health zones and health areas are recorded in Table 10.

II.2.4. The number of packets of cigarettes to collect

Regarding the quantity of cigarette packs, the objective was to collect at least 10,000 cigarette packs in the eight provinces sampled. This quantity was planned based on information from the literature on similar studies. As part of a study on illicit trade in India, Rijo and Ross (2017) collected 11,063 cigarette packs. Brown, *et al.* (2017) analyzed 3,240 cigarette packs as part of a study of the purchase price of legal and illicit cigarettes in urban retail outlets in 14 middle-income countries. Barker, *et al.* (2016) collected 2,116 packs of cigarettes to estimate cigarette tax evasion and fraud in the United States of America. The aim is to collect all empty cigarette packets from all willing retailers (stationary or mobile) that the investigators encounter along the routes identified for data collection as well as at recycling centers and along the streets. In this study, retailers refer to sellers of stick cigarettes. A distinction was made between stationary retailers (who sell in shops, kiosks and stalls, etc.) and itinerant retailers (who sell on the move).

FIGURE 5: Illustration of sampling by strata (provinces, health zones, and health areas)
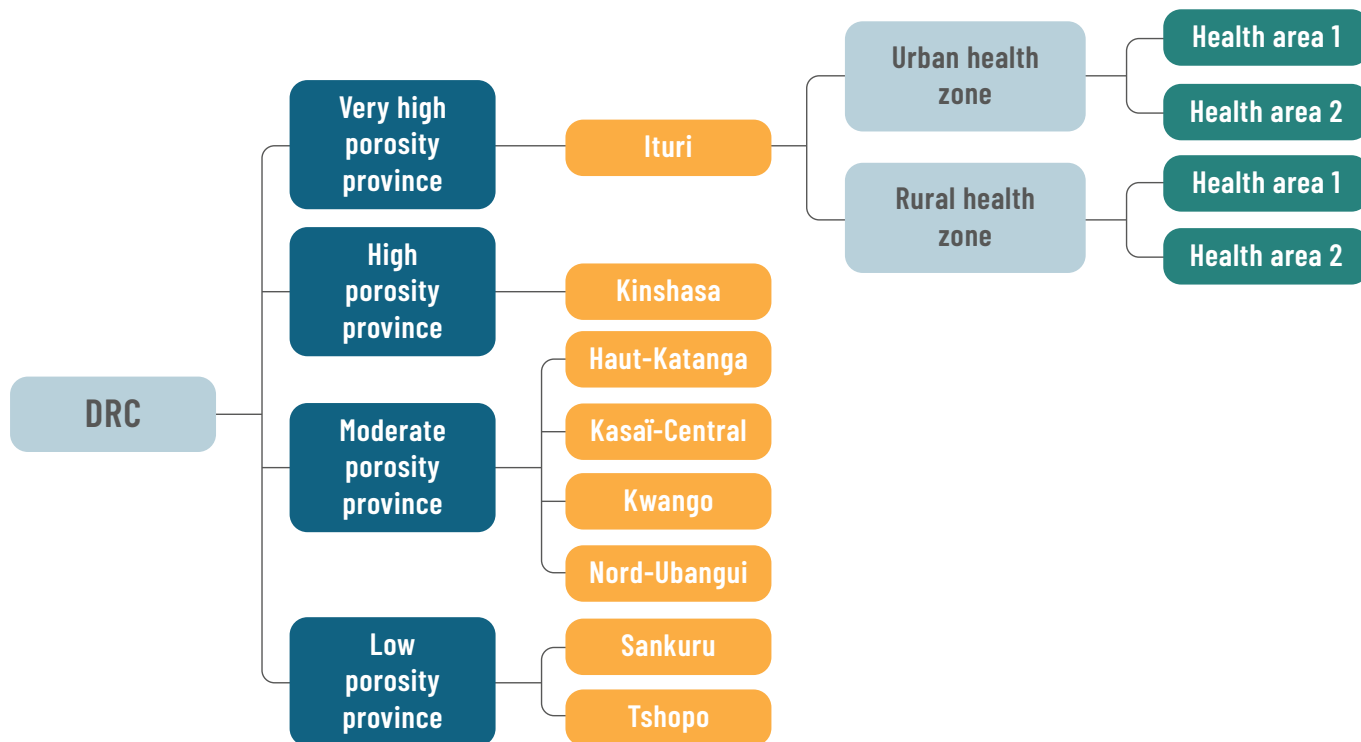
II.2.5. Implementation of the survey

The walking protocol for data collection differs depending on whether the collection takes place in an urban or rural environment.

II.2.5.1. Walking protocol for urban data collection

↳ Case of stationary cigarette retailers

We adopted an approach inspired by the work of Stoklosa, *et al.* (2020) for the collection of cigarette packets. This method consists of starting from a starting point and following the four cardinal directions (north, south, east, and west) in order to collect the data. In a given health area, the agent responsible for collection begins by identifying a center of economic activity that will serve as a starting point. Then the investigator proceeds with the collection by visiting all the retailers at the starting point and collecting the cigarette packets from the streets and recycling centers in that area. For example, if the starting point is circular, the investigator should first survey all retailers/recycling centers present in this circle before continuing on the north, south, east and west routes. Thus, after the starting point, the collector begins their walk starting with the routes in the north direction of the starting point. When they have investigated five retailers, they turn right at the next intersection. However, if cigarette retailers are very rare along this route, the investigator should extend their walk until they reach 100 meters before turning right. This procedure is repeated until the investigator has completed a square (dial) of 400 meters in perimeter north of the starting point. This pattern is then repeated following the other three cardinal directions. As shown in Figure 5, the final result is a grid composed of four squares of 400 meters each, for a total of 1,600 meters for a health area.

A zip bag was given to each stationary retailer surveyed along the routes. The collection agents asked them to put all the empty cigarette packets left after sales during the day.

Table 10: Health zone and health areas sampled by provinces

Province	Medium	Health Zone	Health Area
Upper Katanga	Rural	Kambove	Dikula
			Kiwewe
	Urban	Tshamilemba	Cimenkat
			Rail
Kinshasa	Rural	Binza Ozone	Munganga
			Mama Yemo
	Urban	Mount Ngafula 2	Kimbondo
			Antenne
Tshopo	Rural	Mangobo	Tp Maman Mwilu
			Tp Profession
	Urban	Banalia	Mosanda
			Babise
Sankuru	Rural	Minga	Engo Dihoka
			Ohale
	Urban	Lusambo	Lusambo West
			Lusambo East
Kwango	Rural	Zs Kenge	Kg Saint Esprit Health Area
			Kg Cbco Health Area
	Urban	Zs Kahemba	Kg Bumba Health Area
			Kg Tshifwameso Health Area
Kasaï-Central	Rural	Bobozo	Eastern District
			Kamayi
	Urban	Bilomba	Tshikupela
			Kabawu
Ituri	Rural	Bunia	It Mudzi Maria Health Area
			It Bunia Cité Aire De Santé
	Urban	Rethy *	It Gudjo Health Area
			It Mbr'bu Aire De Santé
North Ubangui	Rural	Gbadolite	Bolingo
			Gbadolite
	Urban	Bosobolo	Kwala
			Bok.Pombo

Note: The Mambasa health zone was excluded from the sample and replaced by the random drawing of the Rethy health zone because of the poor security situation in this health zone.

The collection protocol for mobile retailers, bins, and streets is almost identical to that described above for stationary retailers, with one difference. Instead of having one zip bag per street retailer or per bin/street, we use a single zip bag for all the street retailers in a dial (square) and a single zip bag for all the bins/streets in a dial. Thus, in a given urban health area, we used five zip bags for street retailers and five zip bags for trash cans/streets, i.e., one bag for the starting point and one bag for each of the four dials.

II.2.5.2. Walking protocol for rural data collection

Case of stationary retailers

In rural areas, the investigator begins by identifying a starting point that corresponds to a center of economic activity in the health area. The collection then begins at this starting point, collecting data over the entire surface, before following the routes in the four cardinal directions, but without forming dials as was done in an urban environment. For the rural area, the investigators were instructed to survey all retailers located at the starting point, then to survey 20 stationary retailers in each direction, including those present on the main street as well as those encountered in the secondary arteries. The snowball procedure is applied, which means that retailer X tells the investigator where to find retailer Y in the same cardinal direction. Once all 20 retailers are surveyed in a given direction, collection ends for that direction. However, if the surveyor does not encounter 20 cigarette retailers in a given direction, he walks so that, starting from the starting point, the total distance in that direction reaches 400 meters before ending the collection. The same pattern is repeated for the four cardinal directions (north, south, east, west). As shown in Figure 6, the end result is a grid of four directions of 400 meters each, for a total of 1,600 meters.

Cases of itinerant retailers and trash bins in rural areas

The collection protocol for mobile retailers, bins, and rural streets is almost identical to that described above for stationary rural retailers, with one difference. Instead of having one zip bag per street retailer or per bin/street, we use a single zip bag for all the street retailers in a direction and a single zip bag for all the bins/streets in a direction. Thus, in a given rural health area, we used five

FIGURE 6: Itinerary followed by empty cigarette pack collectors in urban areas
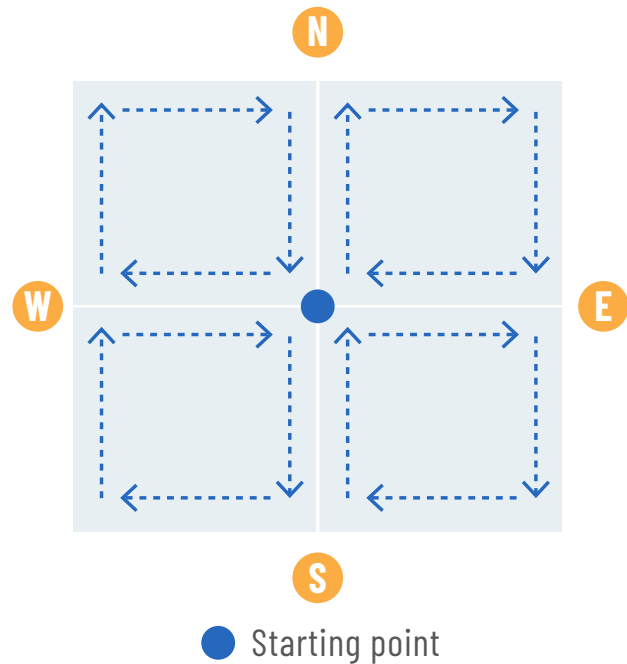
Starting point

Source: Stoklosa, *et al.*, 2020 (from the work of Pizarro, *et al.*)

FIGURE 7: IItinerary followed by empty cigarette pack collectors in rural areas
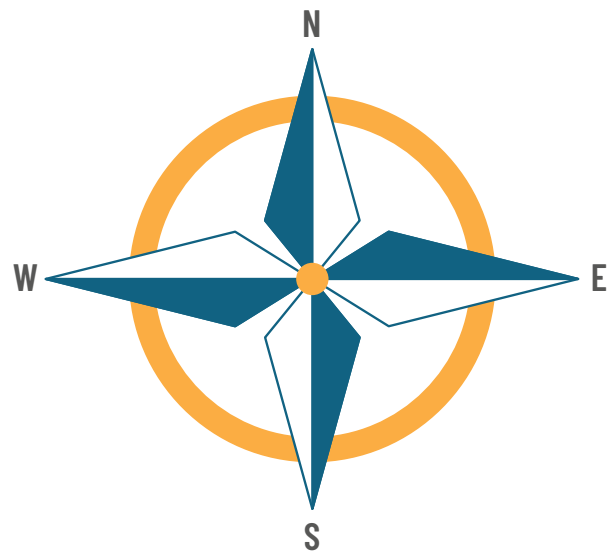
zip bags for street retailers and five zip bags for trash cans/streets, i.e., one bag for the starting point and one bag for each of the four directions.

II.2.5.3. Some exceptions to the implementation of the walking protocol for collection

Given that urbanization in the DRC is not done so that roads are drawn in strict squares, the following instructions were given to the data collectors:

↪ On an urban route, if you have not yet encountered all five retailers and have traveled 100 meters, continue walking until you reach the next road intersection that will allow you to turn. Once at this intersection, turn right. On a rural route, the same principle applies, considering 20 retailers and 400 meters of distance.

↪ On a route in an urban environment, if you have not yet encountered the five retailers and you arrive at an intersection before reaching 100 meters (for example at 98 meters): If you notice that the next intersection is much further away and out of sight (for example, beyond 120 meters), turn before you reach 100 meters. On a rural route, the same principle applies, considering 20 retailers and 400 meters.

↪ Whether in an urban or rural environment, if the starting point is not at an intersection of four directions, the instruction is to add the missing direction(s) to the existing direction(s). For example, suppose there are only three directions at the starting point, which means that one direction is missing (so we have a dead end). In this case, the collection agent adds the retailer quota of the missing direction to the retailer quota of the existing directions or it adds the distance of the missing direction to the distances of the three existing directions (i.e., it adds 1/3 of 20 retailers or 1/3 of 100 m/400 m to each of the existing departments).

The investigators had the **Distance Meter application**, allowing them to ensure that they covered the required distance: 100 meters in an urban environment (representing the side of a dial) and 400 meters in a rural environment in a given direction.

CHAPTER III. DATA COLLECTION, CLEANING AND QUALITY ASSURANCE

This chapter presents in its first section the composition of the team that carried out the data collection and the training it received. Section 2 is devoted to the data collection process, while section 3 presents the questionnaires. Section 4 discusses data cleaning, quality control, and validation. Section 5 presents an overview of the collected data.

III.1. The data collection team: formation and composition of the team

A staff of 48 people was mobilized to carry out the investigation, including eight supervisors and 40 collection agents. Collection team members were trained in a standardized manner on the data collection protocol, including respecting routes and identifying non-compliant cigarette characteristics according to current regulations. In addition, they were trained on the use of collection instruments, in particular, the forms programmed on SurveyCTO and the Distance Meter application for measuring the distance traveled. The training took place in two stages. First, the coordination team formed by experts from the Research Initiative for Social Development (RISD) and SRD Lab research firms trained the provincial supervisors in Kinshasa from April 3 to 6, 2023. The supervisors then trained the investigators in their respective provinces from April 10 to May 14, 2023. Pilot tests were carried out after the training to improve the data collection tools and allow collection agents to become familiar with real collection situations in order to succeed in the actual data collection.

III.2. Process of data collection

Data collection took place from May 15 to June 9 in the eight provinces sampled. Data collectors asked retailers to put empty cigarette packets from their day's sales into zip bags provided by the collector. These retailers were also interviewed using a form programmed on SurveyCTO. In the following paragraphs, we present the preparation of the zip bags as well as the progress of the data collection.

III.2.1. Package collection procedure

- **Preparation of zip bags:** Codes were generated well before data collection. They were affixed to the bags the day before contact was made with the retailers.

- **Collection from stationary retailers:** The zip bags were given to the stationary retailers during the first contact, i.e., on day 1. Then the bags were collected on day 2 following the interview with the retailers. If a stationary retailer was absent on day 2, the collection agent returned on day 3 to collect the bags and carry out the interview.

- **Collection from stationary retailers:** We took into account the fact that itinerant retailers are very mobile and therefore, empty cigarette packets were collected from itinerants on day 1 directly at the end of their interview (i.e., no delivery of bag for a later visit as was the case for stationary retailers).

- **Collection in the trash cans/streets:** The collection of empty cigarette packets in the recycling centers and along the streets was done on day 3. In fact, waste in the DRC is sometimes found on the ground, hence the collection in the streets.

➷ **Coding of the packets and data entry:** The zip bags were then brought back to a storage location and all the cigarette packets were coded and carefully examined. To avoid any confusion when coding the empty cigarette packets, only one zip bag was opened at a time and for each bag, the packets were numbered from 1, 2, 3... to n, using markers.

III.2.2. Course of the retailer interview

The interview of cigarette retailers took place at the same time as the collection of cigarette packets. Whether for stationary retailers or itinerant retailers, it was a question of interviewing only[10] consenting emancipated adults and adolescents who were owners of the cigarettes put on sale. When collection agents visited sales establishments (shops, kiosks, displays) and the stationary retailer was absent, an appointment was made for the next day to interview the owner in person. If, on the second day, the retailer was still absent, the bag containing the empty cigarette packets was collected from the person present during the visit (i.e., the owner's replacement), but this person was not interviewed. The requirement to interview the owner in person was intended to reduce reporting bias.

FIGURE 8: Data collection process

DAY 0

PRIOR TO THE FIELD VISIT
» The codes for the zip bags have been prepared and printed.
» The codes are affixed to the zip bags at the office.

DAY 1

INITIATING CONTACT AND STREET VENDOR DATA COLLECTION
» The interviewer establishes contact with the stationary retailer.
» They hand over the zip bags to the stationary retailers.
» They interview the street vendors and collect the packages.

DAY 2

EMPTY PACKAGE COLLECTION (1)
» The interviewer returns to the retailer's location and conducts the interview.
» They retrieve the Zip bag handed over the previous day.

DAY 3

EMPTY PACKAGE COLLECTION (2)
» Collection of packages from waste bins/streets.
» Interviews with retailers not present on Day 2.

DAY 4 a 7

DATA ENTRY
» Coding of empty cigarette packs.
» The interviewer enters data dor each cigarette pack.
» The entered data is reviewed for accuracy.
» The database for this health area is finalized and approved.
» End of data collection in this health area.

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[10] This measure was considered for ethical reasons.

Regarding street retailers, those encountered during the day were interviewed, but those encountered at night were not interviewed due to security concerns for collection agents. Itinerant retailers are generally few in number. They are rarer during the day than in the evening. After two days of data collection, the observation was that the number of street cigarette sellers during the day is low unlike their number at night. The data collection methodology was therefore modified. Initially, it was planned that the collection of packages and the carrying out of interviews would only be done during the day. Nighttime data collection was therefore added to increase the chances of encountering more street retailers. This adaptation allowed us to cover the target sample more effectively and collect more cigarette packs.

Concerning non-responses, some retailers (stationary and mobile) chose not to respond to interviews for fear that the interviewers were, in fact, tax collectors in disguise. Others feared that this could be a competitive strategy.

For consenting retailers, the interview was conducted face to face. Responses from cigarette retailers and data from the examination of pack characteristics were entered into a form programmed in SurveyCTO.

III.3. Presentation of data collection questionnaires

The survey was carried out using two questionnaires. The first questionnaire was used to collect information from retailers. The modules of this questionnaire are sources of supply, brands of cigarettes marketed by retailers, sale and purchase prices of cigarettes, as well as socio-demographic characteristics of retailers. The second questionnaire was a form used to collect observed data on the cigarette packets collected. This form included questions relating to the presence and information on the tax stamp, country of origin and manufacturer of cigarettes, health warning messages, quantity of tar and nicotine, and instructions prohibiting sale of cigarettes by minors and to minors.

To develop the retailer questionnaire and the data entry form observed on cigarette packs, an in-depth review of the literature was first carried out. Key documents consulted included the document developed by the Institute for Global Tobacco control (2020) on "Assessing Compliance with Tobacco Packaging and Labeling Regulations" and the document by Stoklosa, M., *et al.* (2020) titled "A toolkit on measuring illicit trade in tobacco products." This review of the literature coupled with

consideration of the objectives of the study made it possible to identify the key questions. Next, preliminary interviews were conducted with domain experts to gather their perspectives and complete the questions. Based on this, a set of questions was created, covering various aspects as defined above.

The questionnaire underwent a pre-test phase to assess its clarity and relevance, and adjustments were made based on feedback received. The questions were worded in a way that allowed for accurate responses while minimizing response bias. During the practical training of the investigators, the questionnaires were assessed again to reassure that the updated version would achieve the objectives of the study. This methodology created a robust questionnaire that served as a solid basis for data collection in this study. Throughout the phases that allowed the development of the questionnaires, Development Gateway researchers supported the research firm responsible for data collection by providing comments and suggestions to obtain the final versions of the questionnaires.

III.4. Data quality

↪ **Quality assurance and data validation:** We have implemented rigorous data verification and validation procedures (quality control [QC] and quality assurance [QA]).

↪ **Data quality control before data collection:** We programmed the forms on tablets by integrating filters on certain questions in order to eliminate certain entry errors. Timestamps were also programmed on the tablets in order to record the precise start and end time of completing the form and the different question modules, which enabled quality control by detecting incorrectly completed forms. In addition, to guarantee consistency in the data collection process, the collection agents followed standardized training described in a training guide. By following this approach, we ensured that data quality was maintained while avoiding inconsistencies and variations during data collection.

↪ **Quality control during data collection:** We also carried out regular supervision to ensure that the forms submitted to the SurveyCTO server were complete, consistent, and accurate, following the adopted methodology. Tablets with missing or inconsistent answers were completed/corrected by supervisors by re-checking the inspected packets. In the event of a discrepancy, a call to order was issued to the investigator in question and the other investigators were informed in order to dissuade

potential underperformers. The investigators gave their tablets to their respective supervisors so that they could verify the quality of the work carried out. The research team carefully monitored data collection with regular check-ins with supervisors to ensure that investigators were strictly following collection guidelines. Daily communication between the research team and supervisors made it possible to validate certain data collected.

↳ **Quality control after data collection:** After data collection was completed, it was cleaned. Thus, errors were identified through checks on the logical structure of the responses. Then we carried out the correction of aberrant data as well as outliers, and the correction of the data was carried out thanks to the clarifications received from the supervisors and investigators who sometimes went back into the bags to find the packages concerned and verify the information. Another level of quality assurance of the work was provided by the RISD and SRD Lab team who reviewed the databases before their transfers to Development Gateway.

↳ **Validity of data, ethical approval, and informed consent of participants:** The study received ethical approval from the national health ethics committee (CNES) of the DRC. This approval certifies that the study was conducted in accordance with the ethical principles and regulations in force in the DRC, thus guaranteeing legitimacy and respect for the ethical principles of research. Regarding informed consent from retailers, a rigorous approach was followed when soliciting retailers. Before their participation in the study, we provided a detailed explanation of the research objectives, the methods used, and the guarantees of confidentiality of the data collected. After our explanations, retailers were given the opportunity to ask questions before giving their formal consent to participate. The interviews allowed forms to be completed with their prior agreement. We have ensured the confidentiality and anonymity of the information shared by each retailer.

Data cleaning: The data was exported from SurveyCTO to STATA 17 software where it was cleaned and then analyzed. The cleaning consisted of cleaning the data by correcting inconsistent or incorrect data, by grouping the answers contained in the "other answers" questions so as to identify the new modalities of the main question, by cross-checking the information with the staff on the field in the event of missing data, and by validating the information from a sample of empty packaging collected in the field and reported to the research offices.

CHAPTER IV. PRINCIPLE RESULTS

This chapter presents the main results of this research, the objective of which was to answer the following questions: (i) What is the percentage of illicit cigarette trade in the DRC? and (ii) What are the origins and brands of illicit cigarettes sold in the DRC? This chapter is structured around five sections. The first section presents the overall statistics of the data collected. The second section presents the percentage of illicit trade in the DRC, while the third section highlights the origins of illicit cigarettes found in the DRC. The fourth section addresses the brands of illicit cigarettes found on the Congolese market. The last section provides additional information for a better understanding of certain aspects of the cigarette trade in the DRC.

IV.1. Overview of collected data

A total of 10,622 empty cigarette packs were collected, surpassing the 10,000 cigarette packs initially planned, which brought the data collection completion rate to 106.22%. Specifically, these cigarette packets were collected in each of the eight provinces sampled from three types of collection points: (i) willing stationary retailers, (ii) willing mobile retailers, and (iii) in trash cans and at even the ground of the streets.

Table 11 shows the distribution of packs by province and collection point.

Considering the collection points, Table 11 shows that the majority of empty cigarette packets were collected from stationary retailers, i.e., 66.99%, followed by 18.68% of packets

collected from bins/streets and finally 14, 33% from street retailers. Regarding the provinces, cigarette packets were collected the most in Kwango (17.07%), Kinshasa (16.38%), and Nord-Ubangui (14.95%).

Table 12 presents the distribution of the number of cigarette packets collected according to the area of residence, rural or urban.

Of the 10,622 cigarette packs, 2,704 were collected in rural areas, representing 25.46%, while 7,918 were collected in urban areas, representing 74.54%.

Table 13 highlights the distribution of cigarette packets collected according to whether the economic environment of the collection location is high-income or low-income.

Of the 10,622 packets collected, the majority were collected in low-income locations, i.e., 67.12%, while a minority were collected in high-income locations, i.e., 32.88%. This result may suggest that cigarette consumption is higher in places where the majority of the population is low-income.

Table 14 presents the distribution of cigarette packets collected by brand.

The statistics recorded in Table 14 indicate that the Equateur, Monte Carlo, Master, and Pall Mall brands are the brands that were collected the most with 19.86%, 18.02%, 17.03%, and 11.66%, respectively, of empty cigarette packets collected. In fact, these four brands account for 66.56% of the packages collected in the eight provinces. These results give an idea of the most consumed cigarettes.

Table 11: Distribution of packs collected by province and by collection point

Province	Collection Points			
	Stationary retailer	**Mobile retailer**	**Garbage can**	**Total**
Haut-Katanga	424 (3.99)	129 (1.21)	361 (3.40)	914 (8.60)
Ituri	1.333 (12.55)	29 (0.27)	117 (1.10)	1,479 (13.92)
Kasaï-Central	878 (8.27)	326 (3.07)	183 (1.72)	1,387 (13.06)
Kinshasa	918 (8.64)	524 (4.93)	298 (2.81)	1,740 (16.38)
Kwango	879 (8.28)	486 (4.58)	448 (4.22)	1,813 (17.07)
Nord-Ubangi	1,521 (14.32)	0 (0.00)	67 (0.63)	1,588 (14.95)
Sankuru	387 (3.64)	10 (0.09)	186 (1.75)	583 (5.49)
Tshopo	776 (7.31)	18 (0.17)	324 (3.05)	1.118 (10.53)
Total	7,116 (66.99)	1,522 (14.33)	1,984 (18.68)	10,622 (100)

Note: The numbers in parentheses represent relative values (in %) and rounded to the nearest unit.

Table 12: Distribution of packages collected by area of residence (rural vs urban)

	Effective	Frequency (in %)
Residence Environment		
Rural	2,704	25.46
Urban	7,918	74.54
Total	10,622	100

Table 13: Distribution of packets collected according to economic environment

Residence Environment	Effective	Frequency (in %)
High-income	3,492	32.88
Low-income	7,130	67.12
Total	10,622	100

Table 14: Distribution of cigarette packets collected by brand

Brands	Number	Frequencies (in %)	Cumulative Total	Cumulative frequency (in %)
Equateur	2.109	19.86	2,109	19.86
Monte Carlo	1,914	18.02	4,023	37.87
Master	1,809	17.03	5,832	54.90
Pall Mall	1,238	11.66	7,070	66.56
Supermatch	894	8.42	7,964	74.98
Stella	546	5.14	8,510	80.12
Oris	532	5.01	9,042	85.13
Elite	525	4.94	9,567	90.07
Portman	262	2.47	9,829	92.53
Ambassade	240	2.26	10,069	94.79
Business	147	1.38	10,216	96.18
Caesar	120	1.13	10,336	97.31
Other brands	286	2.69	10,622	100
Total	10,622	100	//	//

Note: The frequencies are the relative values in %, rounded to the nearest unit.

IV.2. Percentage of illicit cigarette trade in the DRC

In this study, the percentage of illicit cigarette trade represents cigarettes that do not comply with regulatory standards in the DRC. Given that the regulations are not unique with regard to the conformity of cigarette packs with the tax stamp, the data were analyzed according to the two hypotheses defined in Chapter I, which present the complex context of the regulations linked to the identification of cigarette tax stamps.

Hypothesis 1 is that all cigarette packs that display the yellow stamp are illicit. This hypothesis is formulated on the basis of the Ministry of Finance order No. CAB/MIN-FINANCES/2020/ of April 16, 2020, relating to implementing measures for Ordinance-Law No. 18/002 of March 13, 2018, bearing the excise code (JORDC., April 18, 2018, special No. p 5. Hypothesis 2 is that of all the packets of cigarettes that display a yellow stamp, only those that have been imported into the DRC 60 days after the date of April 15, 2022, are illicit. This hypothesis is based on the official press release from the DGDA of April 12, 2022, on the duration and terms of the transitional period between the old stamps and the new stamps.

ANALYSIS OF THE ILLICIT CIGARETTE TRADE IN THE DRC UNDER HYPOTHESIS 1:

ALL CIGARETTE PACKETS THAT DISPLAY THE YELLOW STAMP ARE ILLICIT.

IV.2.1. The overall percentage of illicit cigarette trade in the DRC

Table 15 shows the percentage of illicit cigarette packs.

The data collected reveals that the percentage of illicit cigarette trade in the DRC is 8.62% (Table 15). In other words, out of 100 packs of cigarettes in the DRC, there are nearly nine packs that do not have a tax stamp, and/or no health message, and/or no instructions for minors, and/or no text indicating the tar and nicotine contents.

The fact that the percentage of illicit cigarette trade is equal to the percentage of cigarette packs without tax stamps suggests a correlation between the four illicit cigarette sub-indicators. The absence of a tax stamp seems to be enough to characterize cigarettes as illicit. This result can be verified by the information in Table 16, which represents the correlation matrix between the four sub-indicators of illicit cigarettes. Each value in the matrix represents the degree of correlation between two non-compliance criteria. A value of 1 on the diagonal means that each criterion is perfectly correlated with itself, which is what is expected.

Table 15: Percentage of illicit cigarette packets in the DRC (Hypothesis 1)

Overall Indicator	Criteria for Identifying Illicit Cigarette Packets	Illicit Cigarette Packet Indicators
Percentage of illicit cigarette packs **(8.62 %)**	• No stamp on the package. • Presence of a green stamp. • Presence of gray stamp on locally manufactured packages. • Presence of orange stamp on imported packages. • Presence of a yellow stamp (Hypothesis 1).	• Non-compliance with tax stamp provisions • **(8.62%)**
	• No written health warnings on the two main spaces of the package. • Written health warning written in a language other than French.	• Non-compliance with the provisions relating to the health message • **(7.98%)**
	• Absence of the notice indicating the prohibition of sale by/to minors.	• Non-compliance with the provisions relating to sale to minors • **(5.63%)**
	• No indication of tar and nicotine contents on the packet.	• Non-compliance with the provisions relating to tar and nicotine components • **(4.54%)**

The results in Table 16 show that all correlation coefficients are positive and significant at the 5% level. This means that the four illicit cigarette sub-indicators are all associated and vary in the same direction (i.e., when one of the criteria is absent on a pack of cigarettes, the probability that another criterion is also missing is high). Non-compliance with the tax stamp is strongly and positively correlated with non-compliance with the health message (0.956), just as non-compliance with the health message is positively correlated with non-compliance with the instructions to minors (0.825), just as non-compliance with instructions for minors is positively correlated with non-compliance with the tar and nicotine components (0.871). Therefore, it is possible to conclude by transitivity that if a pack of cigarettes does not have a tax stamp, the probability that it is non-compliant according to the other three criteria is very high.

The results reveal that in rural areas, there were 219 illicit packages out of all 2,704 packages collected in this area of residence, which represents 8.10%. On the other hand, in urban areas, there were 697 illicit packs, or 8.80% of all cigarette packs collected in urban areas. This indicates that the prevalence of illicit cigarette trade would be slightly higher in urban areas compared to rural areas.

IV.2.3. The percentage of illicit cigarette trade by economic environment

Table 18 presents the percentage of illicit cigarette trade by economic environment.

The results reveal that in the low-income area, 10.22% of the cigarette market is illicit, compared to 7.84% in the high-

Table 16: Relationships between indicators of non-compliance of cigarettes with regulations

	Non-compliance with the stamp	Non-compliance with the health message	Non-compliance with instructions for minors	Non-compliance with tar and nicotine components
Non-compliance with the stamp	1			
Non-compliance with the health message	0.956*	1		
Non-compliance with instructions for minors	0.795*	0.825*	1	
Non-compliance with tar and nicotine components	0.710*	0.737*	0.871*	1

Note: * significance at the 5% level

The percentage of illicit cigarette trade in the DRC, which amounts to 8.62%, is an overall statistic that masks disparities at several levels. It appears interesting to explore the differences in the percentage of illicit cigarettes at the level of the area of residence (urban area vs. rural area), at the level of types of economic environment, at the level of provinces, at the level of strata (porosity), and at the level of level of collection point types.

IV.2.2. The percentage of illicit cigarette trade by area of residence

Table 17 presents the percentage of illicit cigarette trade taking into account the area of residence.

income area. This indicates that the prevalence of illicit cigarette trade would be greater in places with low-income levels compared to the prevalence in high-income settings.

The results highlight that the prevalence of illicit trade is potentially much greater in low-income environments, compared to the prevalence in high-income environments. Indeed, there were 357 illicit packages collected in low-income settings, which represents 38.97% compared to 559 illicit packages collected in high-income settings, or 61.03%.

Table 17: Illicit cigarette trade by area of residence

Residence Environment	Percentage of Illicit Cigarette Packs			
	Total cigarette packs collected	Packs of illicit cigarettes	As a proportion of the total number of illicit packs collected	As a proportion of the total packs collected by area of residence
Rural	2.704	219	23.91	8.10
Urban	7,918	697	76.09	8.80
Total	10,622	916	100	8.62

Table 18: Illicit cigarette trade according to economic environment

	Percentage of Illicit Cigarette Packs			
	Total cigarette packs collected	Packs of illicit cigarettes	As a proportion of the total number of illicit packs collected	As a proportion of the total packs collected by area of residence
Economic environment				
Low-income	3,492	357	38.97	10.22
High-income	7,130	559	61.03	7.84
Total	10,622	916	100	8.62

IV.2.4. The percentage of illicit cigarette trade by province

Table 19 presents the percentage of illicit cigarette packs by province and by type of collection point.

The results recorded in Table 19 highlight that the provinces of Ituri and Sankuru have the highest percentages of illicit cigarette trade, 31.64% and 25.9% respectively. Conversely, the provinces of Tshopo, Haut-Katanga, and Kasaï-Central have the lowest percentages, respectively 0.72%, 0.98%, and 1.30%. The three other provinces have a percentage approximately equal to 5%: Nord-Ubangui (4.16%), Kinshasa (5.23%), Kwango (5.79%). Easy visualization of this result is possible thanks to Figure 8, which shows that the more prominently the name of a province is in the word cloud, the higher the proportion of illicit cigarette packets.

Table 19: Illicit cigarette trade by province and type of collection point

| | Collection Points | | | | | | | | |
| | Stationary retailer | | Mobile retailer | | Garbage can | | Total | |
	Illicit	Total	Illicit	Total	Illicit	Total	Illicit	Total
Haut-Katanga	3 (0.71)	424 (100)	0 (0.00)	129 (100)	6 (1.66)	361 (100)	9 (0.98)	914 (100)
Ituri	428 (32.11)	1.333 (100)	0 (0.00)	29 (100)	40 (34.19)	117 (100)	468 (31.64)	1,479 (100)
Kasaï-Central	12 (1.37)	878 (100)	3 (0.92)	326 (100)	3 (1.64)	183 (100)	18 (1.30)	1,387 (100)
Kinshasa	49 (5.34)	918 (100)	10 (1.91)	524 (100)	32 (10.74)	298 (100)	91 (5.23)	1,740 (100)
Kwango	49 (5.57)	879 (100)	18 (3.70)	486 (100)	38 (8.48)	448 (100)	105 (5.79)	1,813 (100)
Nord-Ubangi	63 (4.14)	1,521 (100)	0 (//)	0 (//)	3 (4.48)	67 (100)	66 (4.16)	1,588 (100)
Sankuru	90 (23.26)	387 (100)	3 (30)	10 (100)	58 (31.18)	186 (100)	151 (25.90)	583 (100)
Tshopo	3 (0.39)	776 (100)	0 (0.00)	18 (100)	5 (1.54)	324 (100)	8 (0.72)	1.118 (100)
Total	**697 (9.79)**	**7.116 (100)**	**34 (2.23)**	**1,522 (100)**	**185 (9.32)**	**1,984 (100)**	**916 (8.62)**	**10,622 (100)**

Note: Total = total packs of legal + illicit cigarettes. The figures in parentheses represent relative values (in %) and are related to the total number of packs collected in each province and per collection point. In this table, (//) means that there is no percentage to calculate. Having not collected any packets of cigarettes of this characteristic, the denominator is 0 and therefore a percentage calculation is not possible.

IV.2.5. The percentage of illicit cigarette trade by stratum (porosity)

Table 20 below presents the percentage of illicit cigarette trade by porosity stratum.the provinces of Tshopo, Haut-Katanga, and Kasaï-Central have the lowest percentages, respectively 0.72%, 0.98%, and 1.30%. The three other provinces have a percentage approximately equal to 5%: Nord-Ubangui (4.16%), Kinshasa (5.23%), Kwango (5.79%). Easy visualization of this result is possible thanks to Figure 8, which shows that the more prominently the name of a province is in the word cloud, the higher the proportion of illicit cigarette packets.

The results recorded in Table 20 reveal that the stratum comprising the province with very high porosity records the highest percentage of illicit cigarettes, i.e., 31.64%. In second place comes the stratum of provinces with high porosity (5.23%), then in third place the stratum of provinces with low porosity (9.35%), and finally the stratum of provinces with moderate porosity (3.47%). The fact that the stratum of provinces with low porosity ranks before the stratum of provinces with moderate porosity suggests that in addition to the degree of porosity of the province, another factor should be taken into account to explain the intensity of illicit trade in cigarettes. The result found above which revealed that Sankuru is the second province behind Ituri to have a high percentage of illicit trade makes us think that the other explanatory factor of illicit cigarette trade would be the quantity and quality of institutions. We explore this idea in the section that follows.

IV. 2.6. The percentage of illicit cigarette trade according to the quantity and quality of political-administrative institutions

The previous section reveals that the degree of porosity explains the intensity of the illicit cigarette trade. However, the analysis of the results highlights the fact that the degree of porosity of the province seems not to be the only factor that justifies the degree of illicit trade in a province. The quantity and quality of political-administrative institutions also seem to play a determining role. This observation was made on the basis of a particular result that this study revealed. Indeed, the province of Sankuru, which is a non-border province and therefore has low porosity, appeared as the second province

Table 20: Illicit cigarette trade in the DRC by stratum (porosity)

		Workforce by province		Total workforce per Stratum		Percentage by stratum*
		Illicit	Total	Illicit	Total	Illicit
Very high-porosity province	Ituri	468	1,479	468	1,479	31.64
High-porosity province	Kinshasa	91	1,740	91	1,740	5.23
Moderate-porosity province	Haut-Katanga	9	914	198	5.702	3.47
	Kasaï-Central	18	1,387			
	Kwango	105	1,813			
	Nord-Ubangi	66	1,588			
Low-porosity province	Sankuru	151	583	159	1,701	9.35
	Tshopo	8	1.118			
Total		916	10,622	916	10,622	//

Note: Total = total packs of cigarettes (legal + illicit). * averages are rounded to the nearest unit.

with a high percentage of illicit trade behind Ituri, which is a border province with very high porosity.

This can be explained by the fact that the political-administrative institutions in Sankuru are weak (limited human and material resources, lack of control structures, difficulties in implementing national policies, etc.). Indeed, Sankuru is a new province created in 2015 following the breakup of the historic province of Kasaï-Oriental. Furthermore, beyond being a new province, Sankuru has not kept the capital of the old province from which it came,[11] which explains the institutions there are few in number and of low quality.

This result therefore implies that a stratification criterion for future research would be the distinction between new provinces having kept the capital of the old province before the dissolution and the new provinces not having kept the capital of the old province before the dissolution. This stratification would make complete sense because most of the new provinces resulting from the dissolution of the old provinces have not yet completed the installation of all the institutions and administrations, some of which still depend on the old capital.

Taking into account this new stratification criterion, we see that the percentages of illicit cigarette trade in the provinces are established as follows: First the stratum of provinces that have not kept the capital of the old province from which they come (Ituri (31.64%), Sankuru (25.9%), Kwango (5.79%), Nord-Ubangi (4.16%)) and at the bottom of the scale, the stratum of provinces that have kept the capital of the former province from which they come (Haut-Katanga (0.98%), Thsopo (0.72%), Kasaï-Central (1.30%)). The results reveal that Kinshasa (5.23%) does not follow this pattern, and this observation confirms the distinction of Kinshasa as the capital of the DRC (the most populous city-province in the country and seat of institutions). In conclusion, putting aside the country's capital, the illicit cigarette trade is a function of the strength of institutions.

IV.2.7. The percentage of illicit cigarette trade by type of collection point

The analysis of the illicit cigarette trade according to the different types of collection points reveals that the majority of illicit cigarette packets were collected from stationary

FIGURE 9: Illicit cigarette trade per province

retailers, i.e. 9.79 %. Garbage bins and streets occupy second place with approximately 8.62% of illicit packets collected, while street retailers represent only 2.23% of illicit packets collected, according to Table 19.

The percentage of illicit cigarette trade in the DRC analyzed above is an indicator taking into account the absence of tax stamps, health messages, instructions for minors, as well as the absence of precision on the contents in tar and nicotine on the cigarette packet. In the following, each of these four criteria is addressed individually.

IV.2.8. Compliance with regulatory standards related to tax stamps

Figure 9 shows that of the 10,622 packets of cigarettes collected, 8.62% do not have a tax stamp and 19.54% comply with the regulations relating to the tax stamp. These are gray or orange stamps. It should be noted that during data collection, no packet of cigarettes with a green stamp (i.e., stamp for cigarettes sold duty-free) was found. Furthermore, 71.83% of cigarette packets display a yellow stamp. The yellow stamp is a special case, and the following paragraph is dedicated to providing more clarification regarding yellow stamps. Figure 10 features an illustration of a cigarette pack without a tax stamp while Figure 11 is an illustration of a cigarette pack that bears a yellow stamp.

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[11] The province of Sankuru has Lusambo as its capital and is a new province resulting from the dissolution of the historic province of Kasaï-Oriental, whose capital was Mbuji Mayi. It is the new province of Kasaï-Oriental which kept the old capital of the dissolved province (so the new province of Kasaï-Oriental kept Mbuji Mayi as provincial capital).

IV.2.9. Compliance with regulations requiring the presence of health warnings

The regulations provide that cigarette manufacturers should display health messages on cigarette packets on both main sides of the packet. Table 21 shows the percentage of cigarette packages without a health message by province and by collection point.

The results in Table 21 indicate that the percentage of cigarette packets on which health messages do not appear is 7.98%. The analysis of the results according to the provinces highlights that Ituri and Sankuru have the highest percentages of cigarette packets without health messages, respectively 32.11% and 20.16%. Then come the provinces of Kwango (4.21%), Kinshasa (4.48%) and Nord-Ubangui (3.68%). The Kasaï-Central province records a percentage of 1.08%, while the other provinces have a percentage of packages without health messages lower than 1.03%.

On the other hand, examination of the results, depending on the type of collection point (see Table 21), highlights that it was from stationary retailers that the percentage of cigarette packets without message was collected sanitary measures the highest, i.e., 9.25%, followed by trash cans at 8.27% and finally 1.91% for cigarette packets without health messages.

After examining the percentage of cigarette packets without health messages, the following paragraph looks at cigarette packets displaying health messages. The results highlight that cigarette manufacturers in the DRC have a revealed preference for certain health warning messages over others.

☞ **Manufacturers prefer certain health warnings over others.**

The regulations provide that cigarette packets sold in the DRC must carry at least two of the following four health messages: "Smoking is harmful to health"; "Tobacco seriously harms your health"; "Be careful, smoking kills"; or "Smoking is highly addictive." Table 22 shows the frequencies of health messages printed on cigarette packets by manufacturers.

The results indicate that out of all the 9,774 cigarette packets containing a health message, the message "Smoking is harmful to health" is largely favored by the manufacturers, i.e., 73.07% of the packets. In second place, we find the message "Tobacco seriously harms your health" present on 31.73% of packages, followed by the message "Smoking is highly addictive" at 0.34%.

FIGURE 11: Cigarette packs collected according to tax stamp compliance

Table 21: Compliance with regulations requiring health messages, by province and type of collection point

| | Collection Points | | | | | | | |
| | Stationary retailer | | Mobile retailer | | Garbage can | | Total | |
	No	Total	No	Total	No	Total	No	Total
Haut-Katanga	1	424	0	129	3	361	4	914
	(0, 24)*	(100)	(0.00)	(100)	(0.83)	(100)	(0.44)	(100)
Ituri	428	1.333	0	29	40	117	468	1,479
	(32.11)	(100)	(0.00)	(100)	(34.19)	(100)	(31.64)	(100)
Kasaï-Central	9	878	3	326	3	183	15	1,387
	(1.03)	(100)	(0.92)	(100)	(1.64)	(100)	(1.08)	(100)
Kinshasa	45	918	6	524	26	298	77	1,740
	(4.90)	(100)	(1.15)	(100)	(8.72)	(100)	(4.43)	(100)
Kwango	37	879	17	486	34	448	88	1,813
	(4.21)	(100)	(3.50)	(100)	(7.59)	(100)	(4.85)	(100)
Nord-Ubangi	56	1,521	0	0	3	67	59	1,588
	(3.68)	(100)	(//)	(//)	(4.48)	(100)	(3.72)	(100)
Sankuru	78	387	3	10	50	186	131	583
	(20.16)	(100)	(30)	(100)	(26.88)	(100)	(22.47)	(100)
Tshopo	2	776	0	18	4	324	6	1.118
	(0.26)	(100)	(0.00)	(100)	(1.23)	(100)	(0.54)	(100)
Total	**656**	**7.116**	**29**	**1,522**	**163**	**1,984**	**848**	**10,622**
	(9.22)	**(100)**	**(1.91)**	**(100)**	**(8.22)**	**(100)**	**(7.98)**	**(100)**

Note: No = Packs of cigarettes without instructions for minors. Total = total packs of cigarettes with health warnings + without health warnings. * The figures in parentheses represent relative values (in %) and are related to the total number of packs collected in each province and by collection point, and rounded to the nearest unit.

It should be noted that no packet of cigarettes collected presented the message "Be careful, smoking kills."

After examining the illicit cigarette trade in relation to health messages, we present below the percentage of cigarette packages that do not display the words: "prohibition of sale to minors and by minors."

Table 22: Most common health messages on cigarette packets

Health Warning	No	Frequency (in %)	Total
"Smoking is harmful to health"	33	0.34	9,774
"Tobacco seriously harms your health"	3,101	31.73	9,774
"Smoking is highly addictive"	7,142	73.07	9,774

Note: The total number is 9,774, which is less than 10,622 because 848 packets of cigarettes collected do not have a health message. Furthermore, no packet of cigarettes presented the message "Be careful, smoking kills."

IV.2.10. Absence of a message prohibiting sale to minors and by minors

DRC regulations prohibit the sale of tobacco products to minors and by minors. Table 23 describes the percentage of packets without instructions for minors.

The results recorded in Table 23 show that out of all 10,622 cigarette packs collected, 5.63% of cigarette packs do not contain the message prohibiting the sale of cigarettes to minors and by minors.

Analysis of data by province reveals higher rates of cigarette packets without a message intended for minors in the regions of Ituri and Sankuru, with respective percentages of 31.51% and 16.12%. In contrast, the province of Kasaï-Central has a rate of only 1.01%. The other provinces have rates well below 1%.

Stationary retailers stand out by displaying the highest percentage of cigarette packs without messages about sale to minors, with a rate of 7.1%. Trash bins rank next with a rate of 4.39%, while street retailers have the lowest rate, with only 0.39% of cigarette packs collected without these warning messages.

IV.2.11. Absence of message specifying the tar and nicotine contents

The regulations in force in the DRC on the trade in tobacco products instruct manufacturers to indicate the tar and nicotine content on cigarette packets. Table 24 shows the percentage of packages that do not display the tar and nicotine composition by province and by type of collection point.

The results contained in Table 21 indicate that of all 10,622 cigarette packets collected, 4.54% did not have details on the nicotine and tar constituents.

The analysis of data according to the provinces highlights a particularly high percentage of cigarette packets sold without mentioning the tar and nicotine content in the province of Ituri, i.e. 31.51%. In contrast, the provinces of Kasaï-Central, Kinshasa, Kwango, Nord-Ubangi, and Sankuru have even lower percentages, less than 1%. The provinces of Haut-Katanga and Tshopo show a rate of 0%.

In addition, the analysis of the results according to the collection points reveals that stationary retailers seem to be the main players in the distribution of cigarette packets without details on the content of the ingredients, with a rate of 6.11%. Trash cans are also a source, representing 2.37% of samples collected. On the other hand, only all the cigarette packets collected from itinerant retailers displayed details on the nicotine and tar constituents.

Table 23: Absence of the message "prohibition of sale to minors and by minors", by province and by type of collection point

	Collection Points								
	Stationary retailer		**Mobile retailer**		**Garbage can**		**Total**	
	No	**Total**	**No**	**Total**	**No**	**Total**	**No**	**Total**
Haut-Katanga	0	424	0	129	1	361	1	914
	(0.00)	(100)	(0.00)	(100)	(0.28)	(100)	(0.11)	(100)
Ituri	426	1.333	0	29	40	117	466	1,479
	(31.96)	(100)	(0.00)	(100)	(34.19)	(100)	(31.51)	(100)
Kasaï-Central	9	878	3	326	2	183	14	1,387
	(1.03)	(100)	(0.92)	(100)	(1.09)	(100)	(1.01)	(100)
Kinshasa	3	918	0	524	5	298	8	1,740
	(0.33)	(100)	(0.00)	(100)	(1.68)	(100)	(0.46)	(100)
Kwango	5	879	0	486	2	448	7	1,813
	(0.57)	(100)	(0.00)	(100)	(0.45)	(100)	(0.39)	(100)
Nord-Ubangi	2	1,521	0	0	0	67	2	1,588
	(0.13)	(100)	(//)	(//)	(0.00)	(100)	(0.13)	(100)
Sankuru	58	387	3	10	33	186	94	583
	(14.99)	(100)	(30)	(100)	(17.74)	(100)	(16.12)	(100)
Tshopo	2	776	0	18	4	324	6	1.118
	(0.26)	(100)	(0.00)	(100)	(1.23)	(100)	(0.54)	(100)
Total	**505**	**7,116**	**6**	**1,522**	**87**	**1,984**	**598**	**10,622**
	(7.10)	**(100)**	**(0.39)**	**(100)**	**(4.39)**	**(100)**	**(5.63)**	**(100)**

Note: No = Packs of cigarettes without instructions for minors and Total = total packs of cigarettes with instructions for minors + without instructions for minors. *The figures in parentheses represent relative values (in %), are related to the total number of packs collected in each province and by collection point and rounded to the nearest unit.

Table 24: Absence of message specifying tar and nicotine contents

| | Collection Points | | | | | | | | |
| | Stationary retailer | | Mobile retailer | | Garbage can | | Total | | |
	No	Total	No	Total	No	Total	No	Total
Haut-Katanga	0	424	0	129	0	361	0	914
	(0.00)	(100)	(0.00)	(100)	(0.00)	(100)	(0.00)	(100)
Ituri	426	1.333	0	29	40	117	466	1,479
	(31.96)	(100)	(0.00)	(100)	(34.19)	(100)	(31.51)	(100)
Kasaï-Central	1	878	0	326	0	183	1	1,387
	(0.11)	(100)	(0.00)	(100)	(0.00)	(100)	(0.07)	(100)
Kinshasa	4	918	0	524	2	298	6	1,740
	(0.44)	(100)	(0.00)	(100)	(0.67)	(100)	(0.34)	(100)
Kwango	1	879	0	486	2	448	3	1,813
	(0.11)	(100)	(0.00)	(100)	(0.45)	(100)	(0.17)	(100)
Nord-Ubangi	2	1,521	0	0	0	67	2	1,588
	(0.13)	(100)	(//)	(//)	(0.00)	(100)	(0.13)	(100)
Sankuru	1	387	0	10	3	186	4	583
	(0.26)	(100)	(0.00)	(100)	(1.61)	(100)	(0.69)	(100)
Tshopo	0	776	0	18	0	324	0	1.118
	(0.00)	(100)	(0.00)	(100)	(0.00)	(100)	(0.00)	(100)
Total	435	7,116	0	1,522	47	1,984	482	10,622
	(6.11)	(100)	(//)	(100)	(2.37)	(100)	(4.54)	(100)

Note: No = Packs of cigarettes without details on tar and nicotine content and Total = total packs of cigarettes with details on the tar and nicotine content + without details on the tar and nicotine content. The figures in parentheses represent relative values (in %), are related to the total number of packs collected in each province and by collection point and rounded to the nearest unit. (//) means that the denominator is zero and therefore the percentage calculation does not make sense.

IV.3. Origins of illicit cigarettes sold in the DRC

This section addresses the illicit trade in cigarettes in the DRC from the perspective of their origin. Understanding where illicit cigarettes come from is essential to developing effective strategies to combat this problem. Based on the data collected as part of this study, Table 25 below presents the origins of illicit cigarettes sold in the DRC.

The analysis of illicit cigarette trade by country of origin presented in column [4] of Table 25 indicates that all cigarettes originating from South Sudan are illicit. This percentage is also very high for Uganda and the United Arab Emirates, which record 99.26% and 52.36% of illicit cigarettes respectively. For other countries, the percentages are very low, below 3%. Another result is that out of all the cigarette packets collected, all the packets manufactured in the DRC and Zimbabwe are not illicit, i.e. 4,906 packets.

The results presented in Table 25 reveal that Uganda and the United Arab Emirates are the main sources of illicit cigarettes found in the DRC, representing 43.67% and 42.47% of the total illicit packs respectively. In addition, other cigarette packs come from countries such as South Sudan and India for 6.99% and 2.84% respectively. This result indicates a complexity in the cigarette distribution and supply networks present on the DRC market. This suggests the existence of well-established channels for the transport of these illicit cigarettes to the DRC.

Table 25: Countries of origin of illicit cigarettes sold/consumed in the DRC

Native country	Percentage of Illicit Cigarette Packs			
	Total cigarette packs collected	Pack of illicit cigarettes	As a proportion of the total number of illicit packs collected	As a proportion of the total number of packs collected per country
Uganda	403	400	43.67	99.26
United Arab Emirates	743	389	42.47	52.36
South Sudan	64	64	6.99	100
Kenya	2.108	26	2.84	1.23
India	16	16	1.75	100
Tanzania	2.178	14	1.53	0.64
South Africa	162	2	0.22	1.23
Angola	36	1	0.11	2.78
Other country	6	4	0.44	66.67
Total	5,716	916	100	16.02

Note: Of all the cigarette packets collected, all the packets manufactured in the DRC and Zimbabwe are not illegal, i.e., 4,906 packets. The total number of cigarette packs in this table in column [1] is 5,716, which is less than 10,622 due to these 4906 compliant cigarette packs.

IV. 4. Illicit cigarette brands collected

This section focuses on the analysis of the cigarette brands most involved in illicit trade. Table 26 presents the data.

The results highlight the fact that a given brand can consist of a part that is legal and another part which is not. Column [4] of Table 26 shows that 71.43% of packets of cigarettes of the Oris brand are illicit, 52.01% of packets of cigarettes of the Supermatch brand are illicit, and 5.44% of cigarettes of the Business brand are also illegal. Other brands of illicit cigarettes have a very low share of illicit cigarettes, which is below 2%.

Analysis of the distribution of illicit cigarette packets by brand reveals that the Supermatch and Oris brands particularly stand out, representing respectively 40.76% and 41.48% of the total illicit packets. These two brands together constitute the brands that overwhelmingly dominate the illicit cigarette market in the DRC because cumulatively, they occupy 92.25% of this market. In addition, the presence of other brands in the list of illicit cigarette brands, although in small quantities, reflects the generalization of the contraband phenomenon.

Equateur, Master, and Portman brand packets are compliant, and therefore, these brands do not have any illicit packets, i.e., 4,705 packs of cigarettes.

☞ **Illicit cigarette manufacturers**

Table 27 presents the distribution of illicit cigarette packets according to their manufacturer.

Table 26: The brands most involved in the illicit cigarette trade in the DRC

Brands	Total cigarette packs collected	Packs of illicit cigarettes	Percentage of Packs	
			Illicit Cigarettes	
			As a proportion of the total number of illicit packs collected	As a proportion of the total number of packs collected by brand (in %)
Supermatch	894	465	50.76	52.01
Oris	532	380	41.48	71.43
Pall Mall	1,238	16	1.75	1.29
Monte Carlo	1,914	14	1.53	0.73
Stella	546	8	0.87	1.47
Business	147	8	0.87	5.44
Caesar	120	1	0.11	0.83
Ambassade	240	1	0.11	0.42
Other brands	286	23	2.51	8.04
Total	5,917*	916	100	15.4

Note: In this table, the total number of packets of cigarettes collected is 5,917, which is less than 10,622 because the packets collected of the Elite, Equateur, Master, and Portman brands are compliant (i.e., 4,705 packages). The frequencies are the relative values in %, rounded to the nearest unit.

The results highlight the fact that some cigarette manufacturers produce some cigarettes that are legal and some that are not. Column [4] of Table 27 shows that 71.43% of cigarette packs produced by the manufacturer Oriental General Trading INC (producer of the Oris brand of cigarettes) are illicit. Additionally, 5.44% of illicit cigarettes are produced by the manufacturer Independent Tobacco FZE which is actually the producer of the Business brand. Cigarette packets on which the manufacturer's name does not appear, 99.36% of cigarettes are illicit. This percentage is strongly influenced by 52.01% of Supermatch brand cigarette packs that do not have a manufacturer name on the pack.

The results also reveal that illicit cigarette packs come from a variety of manufacturers. Among the manufacturers identified, Oriental General Trading INC. represents the largest proportion, contributing 41.48% of all illicit packets. Other manufacturers include British American Tobacco Kenya (BAT) with 2.87% and Bharath Beedi Works Private Limited with 1.75%. Several manufacturers have a less marked presence, with percentages less than 1%. Some cigarette packets (464) do not bear the name of a manufacturer, representing 50.66%. of the total. The packages in this group are Supermatch brand packages collected in the province of Ituri and coming from Uganda and South Sudan.

Table 27: Manufacturers of illicit cigarettes

Maker	Percentage of Illicit Cigarette Packs			
	Total cigarette packs collected	Pack of illicit cigarettes	As a proportion of the total number of illicit packs collected	As a proportion of the total number of packs collected by manufacturer
Oriental General Trading INC.	532	380	41.48	71.43
British American Tobacco Kenya (BAT)	2,108	26	2.84	1.23
Bharath Beedi Works Private Limited	16	16	1.75	100
Tanzania Cigarette Public Limited Company (TCC PLC)	2,178	14	1.53	0.64
Independent Tobacco FZE	147	8	0.87	5.44
Best Tobacco Company (PYT) LTD	162	2	0.22	1.23
Barco Trading Company LTD	36	1	0.11	2.78
British American Tobacco Norway	1	1	0.11	100
JSS Tobacco	1	1	0.11	100
Pakistan Tobacco Company	1	1	0.11	100
Philip Morris Brand SARL	1	1	0.11	100
Shanghai Tobacco Group	1	1	0.11	100
No manufacturer for this package	467	464	50.66	99.36
Total	5,651	916	100	16.21

Note: In this table, the total number of cigarette packets collected is 5,651, which is less than 10,622 because the packets collected that come from the manufacturers Congo Tobacco Company Sarl (CTC), Intercontinental Tobacco Company FZE Ajman, International Tabac Congo SarL (ITC), KT&G, Olomide Trading (PVT) Limited, and Vision Tobacco FZC are compliant (i.e., 4,971 packs).

ANALYSIS OF THE ILLICIT CIGARETTE TRADE IN THE DRC UNDER HYPOTHESIS 2:

CIGARETTES WHOSE PACKAGES DISPLAY A YELLOW STAMP AND WHICH WERE IMPORTED INTO THE DRC 60 DAYS AFTER THE DATE OF APRIL 15, 2022, ARE CONSIDERED ILLICIT.

IV.5. Analysis of the illicit trade in cigarettes under the hypothesis that certain packs displaying the yellow stamp are illicit

IV.5.1. Overall statistics on cigarette packs that bear a yellow stamp

The data collected reveals that out of all 10,622 cigarette packets collected, 7,630 packets display a yellow stamp, which represents 71.83%. Table 28 presents the distribution of cigarette packets displaying the yellow stamp by province and by type of collection point.

The analysis by province highlights that the provinces of Kwango and Kinshasa are the provinces in which the most pacs with a yellow stamp were collected, respectively 22.23% and 21.17%. Then come the provinces of Kasaï-Central (14.29%), Haut-Katanga (11.69%), and Tshopo (11.47%). The other provinces have a percentage of less than 10% of yellow stamp cigarette packs: Ituri (9.33%), Sankuru, (5.54%) and Nord-Ubangui (4.27%). The results also show that it was from stationary retailers that the most packs of cigarettes with the yellow stamp were collected, i.e., 60.58%, followed by trash bins at 21.31%, and street retailers at 18.12%.

The results recorded in Table 29 show that 42.84% of cigarette packets collected are imported and bear a yellow stamp. It is in the provinces of Kinshasa and Kwango that there are more cases of imported yellow stamp cigarette packets, respectively 67.01% and 60.12%, followed by the provinces of Haut-Katanga and Ituri, respectively 57.88% and 48.14%.

IV.5.2. Brands with a yellow stamp

Table 30 presents the distribution of cigarette brands depending on whether the packets have a yellow stamp.

Equateur brand cigarette packets collected (2,109 packets) have a yellow stamp. With this number, Equateur accounts for the highest percentage of packages collected with the yellow stamp, i.e. 27.63%. The Monte Carlo and Pall Mall brands come in second and third position with 24.89% and 15.36% respectively. These three brands alone account for approximately 67.9% of packages with a yellow stamp. For other brands, the percentage is less than 7%.

IV.5.3. Illicit trade in cigarettes under the assumption that imported cigarette packs with yellow stamps are illicit

Table 31 presents the percentage of illicit cigarette packs under the assumption that imported yellow stamp cigarette packs are illicit.

Data analysis under Hypothesis 2 reveals that the percentage of illicit cigarette trade in the DRC is 51.46%, which represents 42.84% more illicit cigarettes than the result obtained under Hypothesis 1.

Table 32 presents the percentage of illicit cigarette trade by area of residence.

The results reveal that according to Hypothesis 2, in rural areas there were 1,296 illicit packs out of all 2,704 packs collected, which represents 47.93% of all cigarette packs collected in rural areas. On the other hand, in urban areas, there were 4,170 illicit packs, or 52.66% of all cigarette packs collected in urban areas. This indicates that the prevalence of illicit cigarette trade would be slightly higher in urban areas compared to rural areas. This conclusion is similar to what was found when analyzing data under Hypothesis 1.

Table 33 presents the percentage of illicit cigarette trade by economic environment.

The results reveal that under Hypothesis 2, in the low-income environment, 58.76% of the cigarette market is illicit compared to 47.88% in the high-income environment. This indicates that the prevalence of illicit cigarette trade would be greater in places where the income level is high compared to the prevalence in low-income settings. This conclusion is contrary to what was found during the analysis under Hypothesis 1.

Table 28: Distribution of collected packs with a yellow stamp by province and by collection point

	Collection Points			
	Stationary retailer	**Mobile retailer**	**Garbage can**	**Total**
Haut-Katanga	414 (5.43)	125 (1.64)	353 (4.63)	892 (11.69)
Ituri	629 (8.24)	21 (0.28)	62 (0.81)	712 (9.33)
Kasaï-Central	685 (8.98)	256 (3.36)	149 (1.95)	1,090 (14.29)
Kinshasa	846 (11.09)	511 (6.70)	259 (3.39)	1,616 (21.18)
Kwango	827 (10.84)	460 (6.03)	409 (5.36)	1,696 (22.23)
Nord-Ubangi	311 (4.08)	00 (//)	15 (0.20)	326 (4.27)
Sankuru	290 (3.80)	7 (0.09)	126 (1.65)	423 (5.54)
Tshopo	620 (8.13)	2 (0.03)	253 (3.32)	875 (11.47)
Total	**4,622 (60.58)**	**1,382 (18.12)**	**1,626 (21.31)**	**7,630* (100)**

Note: The numbers in parentheses represent relative values (in %) and are related to the total number of packs collected with a yellow stamp. *The yellow stamp total is 7,630. This figure is less than 10,622 because the analysis focuses only on yellow stamps.

Table 29: Analysis of data following cigarette packs with the yellow stamp

Provinces	Total cigarette packs collected	Packs with yellow stamp	Packs imported with yellow stamp	Percentage of Packs with Yellow Stamp		Percentage of Packs Imported with Yellow Stamp	
				As a proportion of the total number of yellow stamp packets collected	As a proportion of the total number of packs collected per province	As a proportion of the total number of imported yellow stamp packs collected	As a proportion of the total number of packs collected per province
Haut-Katanga	914	892	529	11.69	97.59	11.63	57.88
Ituri	1,479	712	712	9.33	48.14	15.65	48.14
Kasaï-Central	1,387	1,090	571	14.29	78.59	12.55	41.17
Kinshasa	1,740	1,616	1.166	21.18	92.87	25.63	67.01
Kwango	1,813	1,696	1,090	22.23	93.55	23.96	60.12
Nord-Ubangi	1,588	326	324	4.27	20.53	7.12	20.40
Sankuru	583	423	69	5.54	72.56	1.52	11.84
Tshopo	1.118	875	89	11.47	78.26	1.96	7.96
Total	10,622	7,630	4,550	100	71.83	100	42.84

Note: Total number of packets of cigarettes collected is 4,550, which is less than 7,630 because 3,080 packets collected with yellow stamps come from the DRC.

Table 30: Distribution of collected packs with a yellow stamp by brand

Brands	Total cigarette packs collected	Number of packs of illicit cigarettes	Percentage of Illicit Cigarette Packs	
			As a proportion of the total number of packs collected with yellow stamp	As a proportion of the total number of packs collected with yellow stamp by brand
Equateur	2.109	2.109	27.64	100.00
Monte Carlo	1,914	1,899	24.89	99.22
Pall Mall	1,238	1,172	15.36	94.67
Stella	546	533	6.99	97.62
Supermatch	894	426	5.58	47.65
Master	1,809	424	5.56	23.44
Portman	262	257	3.37	98.09
Ambassade	240	239	3.13	99.58
Elite	525	160	2.10	30.48
Business	147	139	1.82	94.56
Oris	532	59	0.77	11.09
Caesar	120	3	0.04	2.50
Other brands	286	210	2.75	73.43
Total	10,622	7,630	(100)	71.83

Table 31: Percentage of illicit cigarette packets in the DRC (Hypothesis 2)

Overall Indicator	Criteria for Identifying Illicit Cigarette Packets	Illicit Cigarette Packet Indicators
Percentage of illicit cigarette packs **(51.46 %)**	• No stamp on the package • Presence of a green stamp • Presence of gray stamp on locally manufactured packages • Presence of orange stamp on imported packages • Presence of a yellow stamp imported 60 days after April 15, 2023 (Hypothesis 2)	• Non-compliance with tax stamp provisions • **(51.46%)**
	• No written health warnings on the two main spaces of the package • Written health warning written in a language other than French	• Non-compliance with the provisions relating to the health message • **(7.98%)**
	• Absence of the notice indicating the prohibition of sale by/to minors	• Non-compliance with the provisions relating to sale to minors • **(5.63%)**
	• No indication of tar and nicotine contents on the packet	• Non-compliance with the provisions relating to tar and nicotine components • **(4.54%)**

Table 32: Illicit cigarette trade by area of residence (Hypothesis 2)

Residence Environment	Percentage of Illicit Cigarette Packs			
	Total cigarette packs collected	Packs of illicit cigarettes	As a proportion of the total number of illicit packs collected	As a proportion of the total packs collected by area of residence
Rural	2.704	1,296	37.54	47.93
Urban	7,918	4170	62.46	52.66
Total	10,622	5,466	100	51.46

Table 33: Illicit cigarette trade according to economic environment (Hypothesis 2)

Economic environment	Percentage of Illicit Cigarette Packs			
	Total cigarette packs collected	Packs of illicit cigarettes	As a proportion of the total number of illicit packs collected	As a proportion of the total packs collected by area of residence
High-income	3,492	2.052	37.54	58.76
Low-income	7.130	3,414	62.46	47.88
Total	10,622	5,466	100	51.46

Table 34: Illicit cigarette trade by province and type of collection point (1 of 2)

	Collection Points							
	Stationary retailer		Mobile retailer		Garbage can		Total	
	No	Total	No	Total	No	Total	No	Total
Haut-Katanga	278 (65.5)	424 (100)	43 (33.33)	129 (100)	217 (60.11)	361 (100)	538 (58.86)	914 (100)
Ituri	1,057 (79.29))	1.333 (100)	21 (72.41)	29 (100)	102 (87.18)	117 (100)	1,180 (79.78)	1,479 (100)
Kasaï-Central	380 (43.28)	878 (100)	133 (40.80)	326 (100)	76 (41.53)	183 (100)	589 (42.47)	1,387 (100)
Kinshasa	656 (71.46)	918 (100)	383 (73.09)	524 (100)	218 (73.15)	298 (100)	1,257 (72.24)	1,740 (100)
Kwango	582 (66.21)	879 (100)	238 (48.97)	486 (100)	375 (83.71)	448 (100)	1,195 (65.91)	1,813 (100)
Nord-Ubangi	372 (24.46)	1,521 (100)	0 (//)	0 (//)	18 (26.87)	67 (100)	390 (24.56)	1,588 (100)

	Collection Points											
	Stationary retailer			Mobile retailer			Garbage can			Total		
	No		Total	No		Total	No		Total	No		Total
Sankuru	145		387	5		10	70		186	220		583
	(37.47)		(100)	(50)		(100)	(37.63)		(100)	(37.74)		(100)
Tshopo	72		776	0		18	25		324	97		1.118
	(9.28)		(100)	(0.00)		(100)	(7.72)		(100)	(8.68)		(100)
Total	3,542		7.116	823		1,522	1.101		1,984	5,466		10,622
	(49.78)		(100)	(54.07)		(100)	(55.49)		(100)	(51.46)		(100)

Note: The 5,466 total packs of cigarettes is less than 10,622 because these are packs without a stamp plus packs with a yellow stamp and which are imported. This total does not equal 7,630 because it is not all cigarette packs bearing a yellow stamp.

The results recorded in Table 34 highlight that, under Hypothesis 2, the provinces of Ituri, Kinshasa, Kwango, and Haut-Katanga display the highest percentages of illicit cigarette trade, respectively 79.78%, 72.24%, 65.91% and 58.86%. The other four provinces have a percentage less than 50% respectively: Kasaï-Central (42.47%), Sankuru (37.74%), Nord-Ubangi (24.56%), and Tshopo (8.68%).

IV.5.4. Countries of origin of illicit cigarettes sold/consumed in the DRC (Hypothesis 2)

Table 35 presents the origins of illicit cigarettes sold in the DRC under Hypothesis 2.

The results presented in Table 35 reveal that, under Hypothesis 2, 100% of cigarettes sold in the DRC and coming from five countries are illicit: Uganda, Zimbabwe, South Sudan, Angola, and India. Tanzania, Kenya and the United Arab Emirates also have very high rates: 99.77%, 97.34%, and 86.27%. South Africa appears to be the country from which there is a very low rate of illicit cigarettes imported into the DRC, i.e., 3.09%.

The analysis of the illicit cigarette trade by country of origin presented in column [4] of Table 35 indicates that cigarettes originating from Tanzania and Kenya include a significant proportion of illicit cigarettes, respectively 39.75% and 37.54%, followed by Angola (11.73%), Zimbabwe (1.32%), and Uganda (1.17%). The other countries of origin have percentages of illicit cigarette trade of less than 1%. This percentage is high for Tanzania and Kenya, reflecting the large number of cigarette packets that display a yellow stamp. Another result is that out of all the cigarette packets collected, not all the packets made in the DRC are illegal, i.e. 4,834 packets.

Table 36 presents the analysis of the cigarette brands most involved in illicit trade.

Column [4] of Table 36 shows that the Business and Ambassade brands record 100% illicit cigarettes. The Monte Carlo, Stella Postman, and Pall Mall brands have a percentage greater than 99%, followed by the brands Oris at 82.52% and Supermatch at 56.38%. Caesar is the cigarette brand with the lowest illegality rate, at 3.33%. Taking into account the presence of a yellow stamp on imported cigarette packets disrupts the results obtained under Hypothesis 1.

Table 35: Countries of origin of illicit cigarettes sold/consumed in the DRC (Hypothesis 2)

Native country	Percentage of Illicit Cigarette Packs			
	Total cigarette packs collected	Pack of illicit cigarettes	As a proportion of the total number of illicit packs collected	As a proportion of the total number of packs collected per country
Tanzania	2,178	2,173	39.75	99.77
Kenya	2,108	2,052	37.54	97.34
United Arab Emirates	743	641	11.73	86.27
Uganda	403	403	7.37	100
Zimbabwe	72	72	1.32	100
South Sudan	64	64	1.17	100
Angola	36	36	0.66	100
India	16	16	0.29	100
South Africa	162	5	0.09	3.09
Other country	6	4	0.07	66.67
Total	5,788	5,466	100	94.44

Note: Total number collected is 5,788, which is less than 10,622 because the packs collected manufactured in the DRC are compliant (i.e., 4,834 packets). The total number of packets of cigarettes in column [2] is 5,466, which is less than 10,622 due to 5,156 packets of cigarettes conforming under Hypothesis 2 (this is the total number of packets of cigarettes collected from which imported yellow packets and packets without stamps are subtracted).

Table 36: The brands most involved in the illicit cigarette trade in the DRC

Brands	Total cigarette packs collected	Packs of illicit cigarettes	Illicit Cigarettes (Percentage of Packs)	
			As a proportion of the total number of illicit packs collected	As a proportion of the total number of packs collected by brand (in %)
Monte Carlo	1,914	1,913	35	99.95
Pall Mall	1,238	1,188	21.73	95.96
Stella	546	541	9.9	99.08
Supermatch	894	504	9.22	56.38
Oris	532	439	8.03	82.52
Portman	262	257	4.7	98.09
Ambassade	240	240	4.39	100
Business	147	147	2.69	100
Caesar	120	4	0.07	3.33
Other brands	286	233	4.26	81.47
Total	**6,179**	**5,466**	**100**	**88.46**

Note: Total number of cigarette packets collected is 6,179, which is less than 10,622 because the Elite, Equateur, and Master brand packets collected are compliant (i.e., 4,443 packets).

Analysis of the segmentation of the illicit cigarette market highlights the brands most involved (column [3] of Table 36). The results reveal that the Monte Carlo and Pall Mall brands particularly stand out by having the highest illicit market shares, representing respectively 35% and 21.73 % of the total illicit packages. Furthermore, the Stella, Supermatch, and Oris brands have a market share of between 5% and 10%. Other cigarette brands have low market shares.

Another result is that, under Hypothesis 2, the collected packets branded Elite, Equateur, and Master are all compliant, i.e., 4,443 packets. This is the reason why these brands do not appear in the table above.

IV.5.5. Illicit cigarette manufacturers under Hypothesis 2

Table 37 presents the distribution of illicit cigarette packs according to manufacturer.

Taking into account Hypothesis 2, column [4] of Table 37 shows that many have a rate of 100% but a quantity of 1, so the rate of 100% should be viewed with that in mind. However, we note that the rates of Tanzania Cigarette Public Limited Company (TCC PLC), British American Tobacco Kenya (BAT), Intercontinental Tobacco Company FZE Ajman, and Oriental General Trading INC are 99.7%, 99.34%, 87.10%, and 82.52%

Table 37: Manufacturers of illicit cigarettes (Hypothesis 2)

Maker	Total cigarette packs collected	Pack of illicit cigarettes	Percentage of Illicit Cigarette Packs	
			As a proportion of the total number of illicit packs collected	As a proportion of the total number of packs collected by manufacturer
Tanzania Cigarette Public Limited Company (TCC PLC)	2,178	2,173	39.75	99.77
British American Tobacco Kenya (BAT)	2,108	2,052	37.54	97.34
Oriental General Trading INC.	532	439	8.03	82.52
Independent Tobacco FZE	147	147	2.69	100
Olomide Trading (PVT) Limited	72	72	1.32	100
Intercontinental Tobacco Company FZE Ajman	62	54	0.99	87.10
Barco Trading Company LTD	36	36	0.66	100
Bharath Beedi Works Private Limited	16	16	0.29	100
Best Tobacco Company (PYT) LTD	162	5	0.09	3.09
British American Tobacco Norway	1	1	0.02	100
JSS Tobacco	1	1	0.02	100
Pakistan Tobacco Company	1	1	0.02	100
Philip Morris Brand SARL	1	1	0.02	100
Shanghai Tobacco Group	1	1	0.02	100
No manufacturer for this package	467	467	8.54	100
Total	5,785	5,466	100	94.49

Note: Total number of cigarette packets collected is 5,785, which is less than 10,622 because the packets collected from the manufacturers Congo Tobacco Company Sarl (CTC), Intercontinental Tobacco Company FZE Ajman, KT&G, and Vision Tobacco FZC are compliant (i.e., 4,837 packages).

respectively. The cigarette manufacturers most involved in the illicit cigarette trade change depending on whether we consider Hypothesis 1 or Hypothesis 2.

The results also reveal that, under Hypothesis 2, the illicit cigarette market in the DRC is essentially dominated by two manufacturers, notably Tanzania Cigarette Public Limited Company (TCC PLC), British American Tobacco Kenya (BAT), respectively 39.75% and 37.54%.

IV.6. Other Results

IV.6.1. Comparison between brands authorized and prohibited by the PNLCT with the results of the study

↳ **Certain brands authorized by the PNLCT are both legal and illegal:** In this table, column [2] provides information on the cigarette brands that have been identified as being

legal (or illicit) on the basis of this research. Note that for certain brands of cigarettes, one part may be legal while another part is not. These brands have been identified in the table above as being "partially" compliant: Master 20, Oris Slims King Size Red, Oris Slims Red, Oris Slims Green Supermatch.

↳ **Certain brands not authorized by the PNLCT are identified as being legal:** These are the brands Oris King Size Green, Oris Slims, Peterman, Time Red. The cigarette packets of these brands bear a tax stamp.

Table 38: Comparison of marks authorized and not authorized by the PNLCT[12] and marks found in the field (1 of 3)

Brand Of Cigarette Packet Collected	Pack of illicit cigarettes	Authorized by the Pnlct	Observation
Ambassade	Yes	Yes	
Bharath Special Beedies (Shikata)	No	//	Not on the PNLCT list
Business Royals	Yes	Yes	
Business Royals Green	No	Yes	
Caesar	Yes	Yes	
Caesar Blue	Yes	Yes	
Caseer Menthol	Yes	Yes	
Cruiyan	No	//	Only 1 package collected, possible it was a tourist
Dunhill	Yes	Yes	
Dunhill Blue	Yes	Yes	
Elite	Yes	Yes	
Equator Red Tropic	Yes	Yes	
Gold Leaf	No	//	Only 1 package collected, possible it was a tourist
Manchester Red	Yes	Yes	
Marlboro	No	No	
Master 20	Partially	Yes	
Monte Carlo	Partially	No	

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[12] Source: Directive No. 7 updated 19 of December 28, 2022: Official list of cigarette brands authorized/not authorized for marketing and consumption in the DRC.

Brand Of Cigarette Packet Collected	Pack of illicit cigarettes	Authorized by the Pnlct	Observation
Monte Carlo Filters	Yes	Yes	
Norging	No	//	Only 1 package collected, possible it was a tourist
Oris Ice Plus	No	//	
Oris King Size Green	Partially	No	
Oris Slim Strawberry	No	//	
Oris Slims	Partially	No	The vast majority are non-compliant
Oris Slims Double Apple	No	//	
Oris Slims Green	Partially	Yes	The vast majority are non-compliant
Oris Slims King Size Red	Partially	Yes	
Oris Slims Menthol	Yes	Yes	
Oris Slims Red	Partially	Yes	
Oris Super Slims Pulse	No	Yes	There are 3 packages collected. Is this a stamp detachment?
Pall Mall Green	Yes	Yes	
Pall Mall Red	Yes	Yes	
Pall Mall Rubi	Yes	Yes	
Peterman	Yes	No	
Portsman Star	Yes	Yes	
Rally Kings	Yes	Yes	
Ruby Red Filter Kings	Yes	Yes	
Smart Slims Double Apple	Yes	Yes	
Smart Slims Strawberry	Yes	Yes	
Stella Filter King Size	Yes	Yes	
Stella Rumba	Yes	Yes	
Sunny	Yes	Yes	
Supermatch	Partially	Yes	

Brand Of Cigarette Packet Collected	Pack of illicit cigarettes	Authorized by the Pnlct	Observation
Ticket King Sise Virginia	Yes	Yes	
Time	Yes	Yes	
Time Change	Yes	Yes	
Time Red	Yes	Yes No	
Tumbaco Filter	Yes	Yes	
Winston	Yes	//	
Yes International	Yes	Yes	

↪ **Certain brands authorized by the PNLCT are illegal.** These are all brands that have a legal portion and an illegal portion. The PNLCT should be careful about this fact, as it seems that some manufacturers operate both correctly and fraudulently.

↪ **Certain packages collected but not known to the PNLCT because they appear neither on the list of authorized brands nor on those of unauthorized brands:** These are Bharath Special Beedies (Chikata) (16 packages, but knowing that the packaging melts quickly, this figure is underestimated compared to what is actually observed in the field), Cruiyan (1 packet), Gold Leaf (1 packet), Norging (1 packet), Oris Slims Double Apple (4 packets), Winston (2 packets). The brands that have a number of 1 are possibly cigarettes that tourists or travelers would have consumed during their visit to the DRC. But for those whose number is >1, the attention of the PNLCT would be important at this level.

↪ **Special case, a brand which appears on both PNLCT lists and which is legal:** The Time Red brand appears on both PNLCT lists, both the authorized and unauthorized ones and requires particular attention from the PNLCT for this. This brand has been identified as legal.

IV.6.2. Prohibited images/phrases on cigarette packets

Some cigarette packets display logos that may create confusion or give the impression that a particular brand may promote fitness and well-being. The results recorded in Table 39 present the results of cigarette packets with phrases and/or logos likely to create confusion.

The results indicate that on certain cigarette packets phrases and/or logos likely to create confusion have been noted; for example, the phrase "With African roots, equator is made with carefully selected and blended Virginia tobacco" appears on approximately 120 packs of cigarettes (or 16.9%). It should be noted that on certain cigarette packets, there are phrases referring to aromas or fruits such as strawberry, menthol, apple.

In table 40, the image (1), the illustration of the pregnant woman does not include a prohibition mark, and the message is written in English. Given that most of the Congolese population is not primarily English speaking, this message is confusing. Indeed, this message could be misinterpreted by suggesting that this cigarette is less harmful for a pregnant woman. In image (2), the footballer suggests that this cigarette is suitable for athletes, as does image (3) which shows a horse's head. In image (4), the presence of a strawberry suggests to consumers and potential consumers that this cigarette has a particular aroma or contains a fruit-based ingredient. Such messages could encourage consumption.

Table 39: Packages with phrases and/or logos likely to create confusion

Confounding Elements

→ Image of an athlete

→ Image of a horse's head

→ Text: With African roots, Equateur is made with carefully selected Virginia tobacco and a blend

→ Image of a pregnant woman and light packaging

→ Image of two lions

→ Text: Refreshes the taste

→ Image of two horses

→ Compass logo

Note: In this table, the figures are not shown because the data entry agents were not asked to record such elements. The question was open. Some agents entered information completely or partially depending on what they saw. It is therefore not wise to provide statistics on this question. But knowledge of the existence of this information is already possible thanks to these results.

Table 40: Packs with confusing information that can lead to confusion

FIGURE 12: Cigarette pack with a confusing device shaped like a tax stamp

Presence of a confusing image on certain packets of cigarettes that resembles a tax stamp: On packets of Supermatch brand cigarettes, there is an image similar to a tax stamp. However, upon careful observation, it appears that this device is part of the Supermatch brand logo. This can lead to erroneous interpretations, as the consumer may believe that the packet of cigarettes bears a stamp, and therefore has been approved by the state authorities responsible for tobacco control.

IV.6.3. Selling prices of cigarettes in the DRC

The results recorded in Table 41 highlight a strong disparity between brands in terms of the average selling price of a full pack of cigarettes. This price varies between 3185 Congolese francs for the Oris brand to 1156 Congolese francs for the Elite brand. The Oris brand identified as illicit has a high average price, and Supermatch does not have the lowest price. Price does not seem to be a determining factor in the illicit nature of cigarettes in the DRC.

Table 41: Average selling price of a pack of cigarettes by brand

Brands	Average selling price of the package
Oris	3185
Ambassade	2216
Stella	2183
Business	1946
Caesar	1891
Pall Mall	1819
Portman	1688
Monte Carlo	1676
Supermatch	1632
Master	1596
Equateur	1554
Elite	1156
Other brands	1309
Total	1765

Note: Values are rounded to the nearest unit.

CHAPTER V: CONCLUSION AND RECOMMENDATIONS

This quantitative research on the illicit cigarette trade in the DRC made it possible to highlight the percentage of this trade, the countries of origin of illicit cigarettes, as well as the brands most involved in this illegal activity. It also revealed other information that shed light on certain aspects of the cigarette trade in the DRC. Unexpected information revealed by this study includes the coexistence of old yellow stamps alongside new orange, gray, and green stamps. This coexistence led to carrying out the analysis based on a basic hypothesis where the absence of a stamp is indicative of illicit cigarettes and a second hypothesis where packets of cigarettes displaying the yellow stamp imported 60 days after April 15, 2022, are illicit in the same way as packages without a stamp.

Therefore, the results of this research indicate that the percentage of illicit trade in the DRC amounts to approximately 8.62% under Hypothesis 1 and 51.46 % under Hypothesis 2. This percentage results from the fact that certain packages of cigarettes present at least one characteristic of non-compliance with the regulations in force in the DRC, in particular: the absence of a health message, the absence of instructions for minors, the absence of precision on the tar and nicotine contents, and the absence of a tax stamp on the packaging (where imported cigarettes packs have a yellow stamp [Hypothesis 1] or do not [Hypothesis 2]). In both cases, compliance linked to the stamp appears to be the statistic that alone can account for the overall percentage of illicit trade, because the three other sub-indicators of non-compliance are positively and very strongly correlated with it. The results also show that illicit cigarettes are more frequently distributed by stationary retailers than by itinerant retailers. The prevalence of illicit cigarette trade appears slightly higher in rural areas than in rural areas in both hypotheses.

On the other hand, the analysis following the economic environment of the collection location reveals that under Hypothesis 1, there is a higher prevalence of illicit cigarette trade in low-income economic environments than in high-income economic environments, whereas under Hypothesis 2, it is the opposite. In the same vein, the analysis of the prevalence of illicit trade according to the provinces reveals that, under Hypothesis 1, the provinces of Ituri and Sankuru are more affected by this phenomenon, with respective rates of 31.64% and 25.90% illicit cigarette trade. The provinces of Kwango, Kinshasa, and Nord-Ubangui follow closely, with rates of 5.79%, 5.23%, and 4.16% respectively; the other provinces have very low rates. Under Hypothesis 2, the provinces most concerned are Ituri, Kinshasa, Kwango, and Haut-Katanga, which display the highest percentages of illicit cigarette trade, respectively 79.78% and 72.24%, 65 .91% and 58.86%.

Concerning the origin of illicit cigarettes, the results revealed that, under Hypothesis 1, this percentage is also very high for Uganda and the United Arab Emirates, which respectively record 99.26% and 52.36% of illicit cigarettes. illicit cigarettes. Another result is that out of all the cigarette packets collected, none of the 4,906 packets manufactured in the DRC or Zimbabwe were illicit. Uganda and the United Arab Emirates are the main sources of illicit cigarettes found in the DRC, representing 43.67% and 42.47% of the total illicit packs respectively.

Under Hypothesis 2, 100% of cigarettes sold in the DRC and coming from the following five countries are illicit: Uganda, Zimbabwe, South Sudan, Angola, and India. Tanzania, Kenya, and the United Arab Emirates also display very high rates, close to 100%, and South Africa appears to be the country from which there is a very low rate of illicit cigarettes imported into the DRC, i.e. 3.09%. The illicit market is mainly occupied by Tanzania and Kenya. Another result is that out of all the cigarette packets collected, all the packets manufactured in the DRC are illicit, i.e. 4,834 packets, under Hypothesis 2.

Regarding the brands involved, under Hypothesis 1, the observation is that the brands Supermatch and Oris largely dominate the illicit cigarette market in the DRC, together occupying 92.24% of this market. The results highlight the fact that a

given brand can consist of a part that is legal and another part that is not. The results show that 71.43% of packets of Oris brand cigarettes are illicit, and 52.01% of packets of Supermatch brand cigarettes are illicit. Under Hypothesis 2, 100% of the Business and Ambassade brand cigarettes are illicit. The Monte Carlos, Stella Postman, and Pall Mall brands have a percentage greater than 99%. Next are the brands Oris (82.52%) and Supermatch (56.38%). Caesar is the cigarette brand with the lowest illegality rate, at 3.33%.

Taking into account the presence of a yellow stamp on imported cigarette packets disrupts the results obtained under Hypothesis 1. The analysis of the segmentation of the illicit cigarette market highlights that the brands most in question are Monte Carlo and Pall Mall, which particularly stand out by having the highest illicit market shares, representing respectively 35% and 21.73% of the total illicit packages. Another result is that, under this Hypothesis 2, the collected packages of the Elite, Equateur, and Master brands are all compliant, i.e., 4,443 packages.

In addition to answering the main research questions of this study, this report addressed other aspects that emerged from the data collected. It appears that 71.83% of cigarette packets display a yellow stamp. The brands most affected by these stamps are Equateur, Monte Carlo, and Pall Mall. The sources of cigarettes with a yellow stamp are mainly Kenya and Tanzania. Another finding noted by this study is the presence of logos and messages on cigarette packages that can create confusion or give the impression that a particular brand can promote fitness and well-being. This is manifested, among other things, by the presence of images of football players and fruits reflecting the aroma of cigarettes on the packages. In short, the observation of the absence of essential signs on cigarette packets such as the tax stamp, health warnings, warnings prohibiting the sale or consumption of tobacco products by minors, and details on tar and nicotine contents reinforces concerns related to the illicit cigarette trade in the DRC. These gaps raise questions about compliance with current regulations in the DRC and highlight inadequacies in tax policy and public health policy regarding tobacco use in the DRC. It should also be noted that the legal arsenal governing the consumption and marketing of tobacco in the Democratic Republic of Congo contains gaps. Indeed, certain legal texts are promulgated without being implemented (for example law No. 18/035 of December 13, 2018), and this creates legal uncertainty conducive to smuggling and illegality. This situation is reinforced by the circulation of old yellow stamps, which does not facilitate control, especially since certain packages covered by yellow stamps are manufactured in the DRC and other packages are imported. Yet, the new excise code differentiates tax stamps depending on whether the cigarettes are manufactured in the DRC (orange color), imported (gray color), or intended to be duty-free.

Results interpretation

Non-compliance with tax stamp provisions suggests a lack of regulatory oversight and potentially weak customs oversight, thereby facilitating the entry of contraband or counterfeit products into the DRC market. These illicit cigarettes escape taxes and excise duties, thus causing significant revenue losses for the State and creating unfair competition for legal players in the tobacco industry. On the other hand, the presence of a very large quantity of cigarette packets displaying a yellow stamp, even though it is an old stamp, shows that there is a slowness in the application of the regulations in force. Because in fact, although the yellow stamp is not illegal, it is one of the old stamps that are legal tender in the DRC, and the law authorizes manufacturers to use them until stocks last. Furthermore, the absence of health warnings and the absence of tar and nicotine content on illicit cigarette packets limits the accessibility of vital information on the health risks associated with smoking to the population. Also, the absence of warnings prohibiting the sale or consumption of cigarettes by/to minors leaves young people vulnerable to accessibility and early initiation of smoking, which can lead to harmful consequences to their long-term health.

The results of this research suggest that the hypothesis put forward at the beginning of the study—according to which the more porous a province is, the more it is conducive to the illicit trade of cigarettes—should be supplemented by taking into account the quality and quantity of institutions in the province. Indeed, the results show that in the descending order of the percentage of illicit cigarette trade, the stratum of the provinces with very high porosity comes in first position, followed by the stratum of the provinces with high porosity, then the stratum of the provinces with low porosity, and finally the stratum of provinces with moderate porosity. Therefore, the fact that the stratum of provinces with low porosity precedes the stratum of provinces with moderate porosity suggests that the degree of porosity of the province seems not to be the only factor that explains the importance of illicit trade in a province. The quantity and quality of political-administrative institutions also seem to play a determining role.

This observation was made on the basis of a particular result that this study revealed: the province of Sankuru, which is a non-border province and therefore has low porosity, appeared as the second province with a high percentage of illicit trade behind Ituri, which is a border province and with very high porosity.

The fact that the United Arab Emirates is one of the main sources of illicit cigarettes found in the DRC indicates a complexity in the cigarette distribution and supply networks present in the DRC market. This suggests the existence of well-established channels for the transport of these illicit cigarettes to the DRC. Certain cigarettes intended, for example, for the market in neighboring countries end up in the DRC because of the porosity of the borders.

The data analysis also highlighted the presence of several brands of illicit cigarettes. This multiplicity of brands indicates a diversity of supply on the illicit cigarette market in the DRC. This means that the supply networks of the illicit cigarette market are varied. By comparing the cigarette brands resulting from the data collection with the list authorized by the National Program for the Fight against Tobacco and Toxic Products[13] it turns out that certain authorized brands are present in the field both in legal forms and illicit. This is the case for products like Oris and Supermatch, which are not only authorized by the PNLCT, but are found on the market illegally. This situation is explained by the fact that illicit cigarettes are mainly produced by countries bordering the DRC. For example, the Supermatch brand intended for the South Sudanese, Angolan, or Ugandan market is also found on the Congolese market by arriving there illicitly.

Strengths and limitations of this research

This quantitative study helped to deepen our understanding of the illicit cigarette trade in the DRC. Its main strength is the rigorous methodology that was adopted, in particular the drawing of a representative sample of the data collection localities and the implementation of a collection procedure appropriate to the context of the DRC. In other words, the methodological approach adopted made it possible to guarantee the reliability of the data and the relevance of the results obtained. It is also important to emphasize that this quantitative study is an interesting complement to the qualitative study that was carried out in parallel for a fairly complete understanding of the phenomenon. Thus, the integration of these quantitative results into the overall analysis enriches the conclusions and facilitates the development of targeted recommendations for a more effective fight against the illicit cigarette trade in the DRC.

Despite the significant contributions of this quantitative study on the illicit cigarette trade in the DRC, it has some limitations, notably the fact that it is a cross-sectional study and therefore a snapshot of the period during which the data collection took place. Because the data was collected at a specific time, it does not reflect the changing dynamics or seasonal fluctuations of the illicit cigarette trade. Periodic reports are more suitable for reporting on dynamics and changes in the phenomenon. On the other hand, the results obtained from this research suggested that this study would have had greater precision if the methodology for drawing the sample of provinces to be investigated had taken into account a stratification made up of new provinces having kept the capital of the old province before dissolution and the new provinces not having kept the capital of the old province before dissolution. This limit does not, however, remove the relevance of the results of this study insofar as our sample includes the provinces that kept the capital of the old province and those that did not keep it.

This study offers results from which recommendations to combat the illicit cigarette trade in the DRC can be proposed.

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[13] Annex to Directive No. 7 updated 19.

Implications of this research

In more detail, here are policy recommendations and future research to stem this phenomenon in the DRC:

⇪ For politicians

The results of this study highlight the existence of legislation on the tobacco trade in the DRC, but it is not applied. We recommend that politicians and competent authorities in the DRC enforce existing laws and adopt more strict and coercive measures. This involves the establishment of mechanisms for the effective and rigorous application of the laws in force, in particular (i) Law No. 18/035 of December 13, 2018, of the Ministry of Public Health establishing the fundamental principles relating to the organization of public health in the DRC, (ii) the order of the Ministry of Finance No. CAB/MIN/FI-NANCES/2020/009 of April 16, 2020, on the Excise Code, which sets out the measures for implementing the Ordinance-Law No. 18/002 of March 13, 2018, and (iii) Ministry of Public Health Order No. 1250/CAB/MIN/SP/010/AO/2007 of July 19, 2007, relating to measures applicable to use and consumption of tobacco and its derivatives.[14]

The State should also severely sanction those involved in the illicit cigarette trade in order to discourage traffickers of illicit cigarettes; in particular with significant financial fines, prison sentences, and withdrawal of rights to operate in commerce, which are also provided for in the excise code mentioned above. In addition, it is recommended that the authorities authorized to repress the illicit tobacco trade verify, during controls and inspections in shops, kiosks, and stores, that safety and quality standards are respected such as the presence of tax stamps, health messages, the mention of the tar and nicotine content, but also that minors are neither sellers nor consumers of cigarettes and that this is mentioned on each cigarette packet.

Stricter regulations and their rigorous enforcement are also necessary to ensure that consumers are correctly informed of the risks to their health through health warnings. When it comes to preserving the health of populations through health warnings, decision makers could favor pictorial illustrations instead of sentences whose meaning is not accessible to a large majority of Congolese. Such awareness-raising among populations with illustrated health warnings would make it possible to reach a large majority of the population, including populations limited in terms of reading and understanding the French language.

On the other hand, in light of the observation that the illicit cigarette trade is thriving in some provinces due to institutional weaknesses, it is imperative that policy makers undertake to strengthen institutions in the provinces, especially those that were created in following decentralization in 2015 and who, moreover, did not keep the capital of the former province. This strengthening of institutions involves investments in infrastructure in these provinces, the deployment of administrative staff competent on issues of trade and tobacco consumption, and capacity building of staff already in service.

Furthermore, as the results of this study revealed that the illicit cigarette trade is a transnational problem due to the porosity of certain borders, we also suggest that decision makers in the DRC strengthen border controls and intensify cooperation internationally with the countries of the region in order to stem this phenomenon. Indeed, international collaboration can offer resources and expertise. From a more global point of view, we also recommend that the DRC actively participate in regional and international initiatives to combat the illicit trade in cigarettes, for example, by ratifying the WHO Protocol to Eliminate Illicit Trade in Tobacco Products, which is the first Protocol associated with the WHO Framework Convention on Tobacco Control, adopted on November 12, 2012.

The implications of this study for practice start from the observation that the present data collection on illicit trade was made at a specific moment while the phenomenon itself is dynamic; it is essential to put in place monitoring mechanisms and continuous data collection to monitor developments in illicit trade over time. This can be achieved by using regular monitoring and analysis tools like the TCDI initiative or by establishing partnerships with relevant authorities involving relevant stakeholders such as regulatory bodies, security forces, law enforcement, and civil society organizations. This requires capacity building for various stakeholders.

The implications of this study for research activities are based on the observation that the quality and quantity of political-administrative institutions influence the scale of illicit trade. This being said, it is recommended that the sampling methodology adopted for future research be based on a stratification of provinces that also reflects the strength of institutions.

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[14] Normally it is law No. 18/035 of December 13, 2018, which should have an implementing decree to replace the ministerial decree of 2007, but this decree has not yet been issued.

On the other hand, this study highlighted interesting results that suggest the need for further research. For example, a study could examine whether the health warnings appearing on cigarette packets are likely to reach their target, which is the Congolese population. The aim is to study whether the adoption of photographic health messages or neutral and standardized cigarette packaging between manufacturers would allow greater receptivity of health warnings by the Congolese. In addition, the observation of the absence of instructions for minors on certain cigarette packets suggests that it would be interesting to conduct a study on the consumption and marketing of cigarettes to people under 18 years of age. Another study could therefore focus on smoking among young people in the DRC. Another interesting research topic would be the evaluation of the loss of tax revenue that the State suffers due to the illicit cigarette market in the DRC because, in fact, this study highlighted the absence of tax stamps on many packs of cigarettes.

Finally, given that the study on illicit tobacco was conducted in other African countries, another research project could involve carrying out a comparative analysis of the illicit cigarette trade in the DRC with other countries in the region, like Zambia. This could offer interesting insights into similarities and differences between national contexts. Such a study would also make it possible to learn lessons from the experiences of neighboring countries and identify good practices that could be adapted to the Congolese situation and to the prospects for concerted control at the regional level.

BIBLIOGRAPHY

1. Barker D.C., Wang S., Merriman D., Crosby A., Resnick E.A., & Chaloupka F.J. (2016). Estimating cigarette tax avoidance and evasion: evidence from a national sample of littered packs. *Tobacco Control*, 25 (Suppl 1), i38-i43.

2. Brown J., Welding K., Cohen JE, Cherukupalli R., Washington C., Ferguson J., & Clegg Smith K. (2017). An analysis of purchase price of legal and illicit cigarettes in urban retail environments in 14 low- and middle-income countries. *Addiction*, *112* (10), 1854-1860.

3. Institute for Global Tobacco Control (2020). Assessment of compliance with tobacco packaging and labeling regulations. Campaign for Tobacco Free Kids.

4. John, R.M., & Ross, H. (2018). Illicit cigarette sales in Indian cities: findings from a retail survey. *Tobacco Control*, 27 (6), 684-688.

5. Ministry of Public Health of the DRC (2007). Ministerial Order No. 1250/CAB/MIN/SP/010/AO/2007 of 07/19/2007 relating to measures applicable to the use and consumption of tobacco and its derivatives.

6. Mbuyu Muteba Rigobert (2015). National strategic plan for tobacco control in the DRC, PSN 2016 2020.

7. Ministry of Public Health of the DRC (2008). Circular note No. 1251/SG/1181/2008 of 05/16/2008 relating to the terms of application of ministerial decree No. 1250/CAB/MIN/SP/010/AQ/2007 of July 19, 2007, as amended and supplemented by Order No. 1250/CAB/MIN/SP/020/JT/2007 of December 28, 2007, on measures applicable to the use and consumption of tobacco, tobacco products, and its derivatives.

8. World Health Organization, WHO (2013) Protocol to Eliminate Illicit Trade in Tobacco Products. WHO Framework Convention on Tobacco Control.

9. Oxford Economics, OE (2017). The Asia Illicit Tobacco Indicator 2017 (the "Report") on the illicit tobacco trade in selected Asian markets (including Australia and New Zealand).

10. Ross H (2015). Understanding and measuring tax avoidance and evasion: A methodological guide.

11. Stoklosa M., Paraje G., Blecher E. (2020). 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.

12. The Financial Action Task Force, FATF (2012). Illicit tobacco trade. FATF Report, June 2012.

WEBOGRAPHY

1. Law No. 18/035 of December 13, 2018, establishing the fundamental principles relating to the organization of public health (leganet.cd).

2. DRC: The DGDA reminds cigarette importers to register with the Technical Secretariat of the Excise Duty Traceability System and the Directorate of Other Excise Products | News.cd.

3. https://douane.gouv.cd/dgda/outil-informatique/sicpa/

4. https://www.leganet.cd/Legislation/Dfiscal/Accisices/Loi%2013.03.2018.html