ILLICIT TRADE

Exploring the Interconnection of Illicit Trade in Firearms, Tobacco and Counterfeit Products

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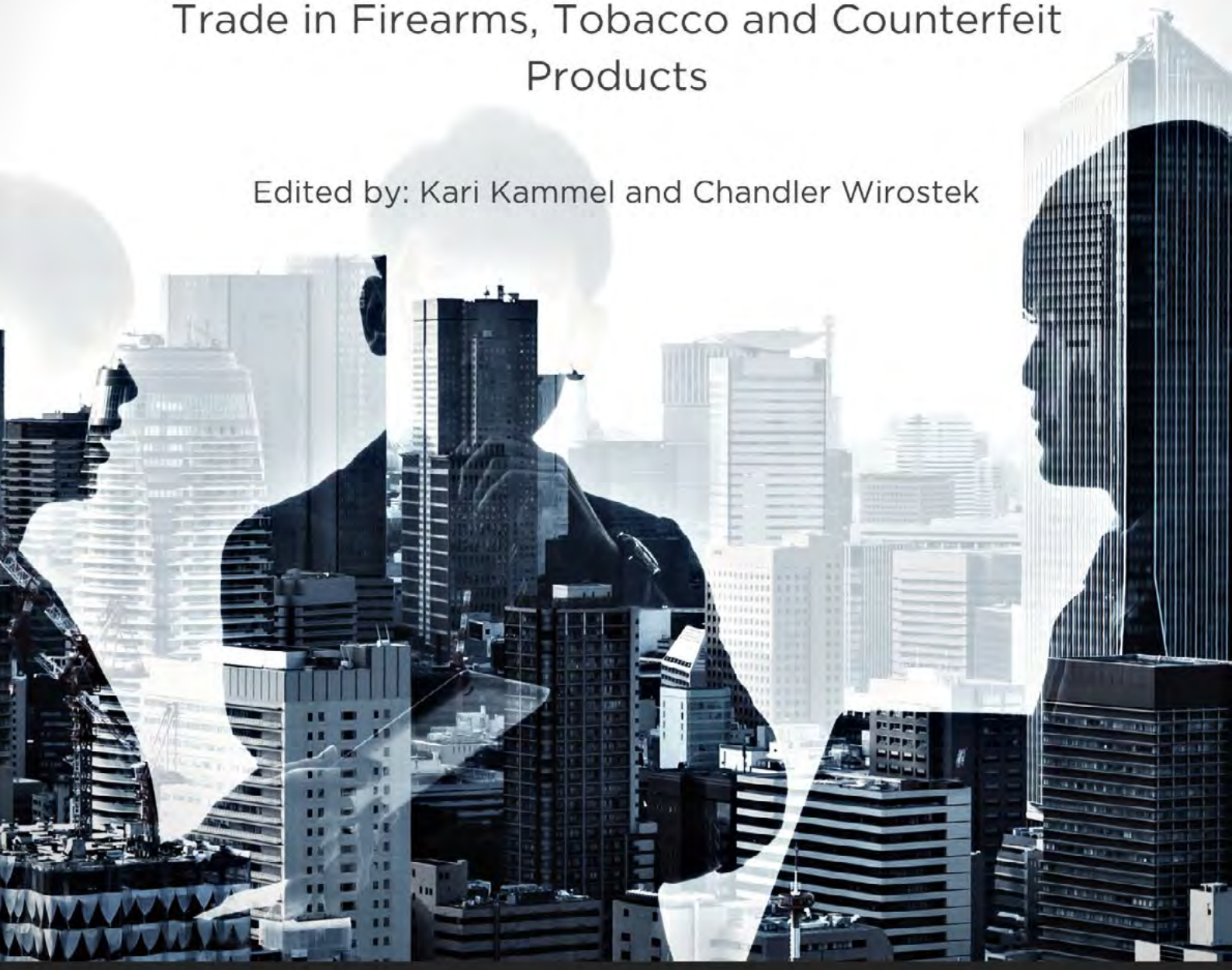

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Introduction

Kari Kammel

Introduction and Overview

Over the past few years, many segments of illicit trade have continued to flow and grow throughout the world as commerce of both licit and illicit varieties becomes increasingly global. Scholars from the A-CAPP Center and Transcrime, the Joint research centre on transnational crime of the Università Cattolica del Sacro Cuore, the Alma Mater Studiorum Università di Bologna and the Università degli Studi di Perugia, have laid out the three chapters contained in this e-book describing and analyzing the illicit market for 1) counterfeit products, 2) firearms trade, and 3) illicit tobacco. These independently complex illicit markets that fuel various activities ranging from funding other types of illicit trade to organized crime activities also contain overlap and lessons that can be shared from the study of each of these phenomena. We hope this report can help shed light on these crimes and ways that we all can curb their trade globally.

Comparing and Contrasting Illicit Markets

In this study, there are commonalities with the illicit markets, so-called "dual markets" because the same (or equivalent) products are sold in parallel both in legitimate and illicit channels. There are also some contrasts between these markets that the authors explore in depth. For example as described in Chapter 2, the illicit firearms market differs from counterfeit products, tobacco or other illicit markets because firearms are not consumable goods and last indefinitely, and can being reused and resold multiple times. (Arsovska, 2014; Marsh, 2016; UNODC, 2020c). The authors also explore how to estimate the size and scope of these illicit markets as collecting data with illicit

activities always remains a challenge; examining trade routes and countries involved as origin, transit or destinations countries; drivers and contextual factors that influence each of these markets; different activities, crime scripts and modi operandi used in all the phases of these illicit trades; actors and descriptions of consumers who are both innocent and complicit; as well as countermeasures and legal frameworks in place.

Estimating the Market Size

Estimating the market size for each of the illicit markets remains a challenge due to discrepancies in the data, collection methods and terminology, the illicit and hidden nature of all these activities, and in some cases lack of law enforcement wanting to report on their efforts. All three chapters look at some of the data produced by groups such as the OECD or government agencies.

Data collection across the board varies widely from jurisdiction to jurisdiction, as well as definitions describing the illicit activities. In some cases, because of the nature of the parallel trade, the illicit activities are interwoven with legitimate trade and commerce making it even more difficult to retrieve accurate data. Additionally, the tobacco market and the firearms market are highly regulated, something that we only see with certain types of counterfeit goods, such as pharmaceuticals. The authors describe the differing geographical scopes and methodologies that are used by these agencies and organizations, as well as the limiting nature of the studies.

Routes and Networks of Illicit Trade

All three chapters describe and analyze various patterns of routes and

networks, as well as countries of origin, transit and destination, or a country playing multiple roles. They also discuss organized crime and other criminal elements use of various routes, contacts and networks. All three chapters also discuss the importance of Free Trade Zones (FTZs) and their impact and role in illicit trade, particularly as a point of transit. In some cases, the routes used for these forms are illicit trade are already existing trafficking routes for other types of trade, such as drug trafficking, so organized crime has knowledge and control over the existing routes, reducing the risk of being caught. For example, for illicit tobacco, production takes place globally, compared to counterfeiting or cocaine where the production might be concentrated in one or a few locations. They also note the ever-changing nature of trafficking and smuggling routes, making enforcement challenging and evolving.

Drivers and Contextual Factors that Influence the Illicit Markets

This study describes in detail the factors and drivers the fuel these respective illicit markets, such as profit-making, consumer demand, and culture. In addition to supply and demand and the role of the consumer, the shift that has occurred because of access to the internet and e-commerce is explored, as well the increasing use of online sales in both legitimate and illicit trade. Competition amongst organized crime is also examined.

In respect to counterfeiting, the vast profit-making potential both in the legitimate and illicit market is analyzed, as well as the greater risk-reward tradeoff relative to other forms of illicit trade, given high profit margins and low or non-existent penalties. Specific to the illicit firearms trade, global gun culture and armed conflict are also examined as factors that have a major

impact on the phenomenon. The illicit tobacco market is examined within the context of taxation, affordability and prices, as well as geographical factors that impact it.

Illicit Trade Activities, Modi Operandi, and Crime Scripts

All three chapters explore crime scripts of these types of illicit trade and types of activities that are occurring. With all of them, attention is paid to activities that criminal elements in engage in to avoid detection, such as the shift in shipment to small parcels. E-commerce, the impact of COVID-19 and supply and product are examined. Additionally, social acceptance of illegal trade of these items is also examined in many communities and a common thread that they are often low-risk, high reward for organized crime.

Actors Engaged in Illicit Trade

When looking at these three types of illicit trade, although there are unique features of actors for each, there is also overlap when looking at the scope of the illicit supply chain from producers and manufacturers all the way through the chain to sellers. For example, in all three, there are very specific actors involved in illegal and illicit activity around the sale and movement of these goods; but there are also legitimate actors that both unknowingly and knowingly can take a part in the movement of these goods in the illicit supply chain, as well as the licit supply chain. For example, actors that have legitimate roles in the market, such as members of public or governmental agencies, legitimate arms dealers and registered firearms factories also have a role. Specifically, here when looking at the illicit trade in all areas, we do see organized crime and extremist groups playing a specific role in this trade.

Existing Regulatory Frameworks and Countermeasures

Finally, the report examines each of the forms of illicit trade in their existing regulatory and legal frameworks and available countermeasures, such as enforcement, that have been used worldwide to respond to them. In each of the chapters, the authors lay out national, regional, and international regulatory systems that provide the guiding framework from which any enforcement against these activities could occur. However, as before with statistics, the legal frameworks vary widely and are inconsistent both in their languages and definitions, as well as their use (or non-use) in enforcement.

These forms of illicit trade can and do have serious impact globally and will continue to with emerging trends and challenge. The importance for governments and other stakeholders to continue pursuing remedies to keep populations safer is even more apparent when seeing the impact across multiple areas of illicit trade. In each approach and each set of solutions or remedies, close consideration should be given to each market/jurisdiction and the region—whether it be their economy, the political situation, legal framework or history of illicit trade.

Therefore, the countermeasures should also be holistic and consist of multiple methods for approaching solutions due to the complexity of these types of trade. Governmental willingness to regulate varies widely between not only countries and regions, but also depending on the nature of the trade. For example, UN Conventions exist relating to the illicit trade in firearms, but not in counterfeit goods or in illicit tobacco.

Cooperation between the public and private sector is also paramount

in all three of these areas and the authors discuss how it can help stem the trade. In addition to groups and people, technology also can play a role in stemming these illicit trades—and are used by both the public and private sectors in various ways to curb the trade. Additionally, the move to the online space of the sale and advertising of these illicit products has happened gradually and now more quickly in the past few years. Criminals can rely on the fact that most legislation and law enforcement has not caught up to these technological changes

While all these countermeasures are discussed for these crimes, the struggle to successfully enforce and prevent these trades exists as the perception of both low risk of getting caught and low fines make the illicit market attractive for criminals. When these legal disparities are combined with ineffective border controls, the ability of criminals to trade these goods is amplified. Finally, although collaboration is an effective goal, often times poor communication and collaboration can contribute to a wider space for criminals to operate.

All of these impacts from the illicit trade networks continue to have a negative influence on economies and societies globally, taxing national budget by less public revenue, more law enforcement expenditures, damaging legitimate, licensed actors and companies. It also allows for criminal networks to continue to finance and bankroll their activities.

Conclusion

We hope that this report sheds some light on the complexities of global illicit trade in counterfeit goods, firearms and tobacco product; where there is overlap in a variety of factors between the three and where the problem

and the solution must remain sui generis to that particular, unique type of illicit movement of product. Again, it is important to study these phenomena individually, but even more urgent for us to examine them in this comparative light, as we can learn from each other and as we know criminal elements and bad actors are not limited by categories, definitions and legal structures. We hope that this can contribute to the literature on the subject and the fight against these dangerous forms of criminal activity on a global scale.

- Kari Kammel, East Lansing, Michigan USA

CHAPTER
TWO

Illicit Trade in **Counterfeit Products**

Jay Kennedy

1. Introduction

Everyday life is defined, in many ways, by the products or goods that surround us. From the clothes that we wear, the food that we eat and the utensils we use to cook, to the transportation that ferries us from one place to another. Our lives are built around goods. At their most basic level products/goods provide value to two distinct groups – the makers of goods and the consumers of goods – which exist in perpetual exchange relationships. The makers develop, produce and sell goods in exchange for money (or some similar medium), which is given over by consumers who then take possession of the good. While there is variety in the quality, form and uniqueness of any particular category of good, goods are essential to life and have become centerpieces of modern society.

The maker-consumer relationship is a relatively straightforward one and within a capitalistic system built upon competition and innovation; manufacturers compete with each other for consumers' favor, seeking to maximize value or the benefits that consumers receive from their goods. However, from the beginnings of labeled products and manufacturers' desire to distinguish their goods from those of others, usurpers have sought opportunities to defraud both producers and consumers. In today's world, the individuals and entities that violate a maker's trademark rights are called product counterfeiters and they pose serious challenges to rights holders of all kind.

Product counterfeiting is a significant global concern and its negative effects impact consumers across the globe, countries of all size and economic stature, and businesses of every size and industry. It is a crime that preys upon consumers' desire for legitimate brands, and at times is fueled by some

buyers' complete disregard for intellectual property rights. The goal of any product counterfeiting scheme is financial gain – counterfeiters are trying to defraud consumers by posing as legitimate businesses, thereby profiting from activities that would otherwise benefit legitimate businesses. Given the current global commercial environment, counterfeiting is just one form of networked criminal activity that spans the borders of multiple countries. Product counterfeiting networks stretch across oceans, deserts and forests, thriving off of the social, commercial and technical innovations that have produced untold benefits for our global society.

In fact, innovations that hold substantial promise for the betterment of society have in every case been attacked by product counterfeiters. This is true of technologies designed to bring us closer together and enable communication with our friends and families such as in the counterfeiting of cell phones and computers. It is also true with regard to the products that are meant to enrich our lives, simplify tasks and provide moments of joy and comfort, such as books, appliances, automotive equipment and athletic gear. Finally, counterfeiters have been quick to take advantage of society's need for life saving medicines and devices, regularly creating fake and at times harmful versions of vaccines, cancer treatments, cold medicines, durable medical equipment, and surgical equipment. Examined holistically, there is no end to the range of goods that have been counterfeited and there seems to be no moral compass steering counterfeiters and product counterfeiting networks away from goods that pose substantial harms to consumers.

The complete indifference to harm is one of the characteristics of product counterfeiting schemes that is the most difficult to reconcile. Even when seemingly harmless products such as clothing, purses or watches are concerned there exists a potential for harm. Given their use of toxic

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chemicals and lead-based paint, or poor quality production standards that are likely to lead to product failure it is easy to see how product counterfeiting schemes create great potential for harm. Accordingly, brand owners, law enforcement agencies, national governments and other stakeholders have taken a vested interest in stopping the growth of global product counterfeiting schemes.

While counterfeiting schemes can appear, on their face, to be relatively straightforward crimes defined by simple networks of actors connected through easily identified channels where profit is the sole outcome sought, the reality is much more complicated. Today, counterfeiting is a global enterprise that sees illicit activity intermingled with legitimate trade and commerce through willing and unwitting partners. In certain cases, the individuals and entities behind transnational counterfeiting schemes are seeking profit to support other criminal activities, such as terrorist or organized criminal acts. In other cases, the counterfeiters go to great lengths to hide their activities and identities through schemes that target the most vulnerable of populations; something that is clear in the counterfeiting rings that distribute fake medicines and those that have taken full advantage of the COVID-19 pandemic.

This chapter discusses the nature and structure of product counterfeiting schemes as viewed as a form of transnational illicit trade. Counterfeiting has always had global roots and the interconnected nature of scheme participants has made illicit networks a hallmark of this form of crime. However, as globalization has increased, access to the internet and internet-connected technologies has proliferated, and consumer decision making has had increasing impacts on the structure of commerce and trade, counterfeiting schemes have expanded their international reach.

The criminals and organizations behind product counterfeiting schemes are at the very least mercenary criminals who seek profits at the expense of consumers and brand owners, yet at the very worst these entities use counterfeiting to fund more nefarious crimes, including terrorism, human trafficking and organized criminal activities. Exploring product counterfeiting as a form of transnational illicit trade and comparing the elements of this crime to other types of illicit trade may lead to the development of more efficient crime prevention strategies.

2. Estimating the size of the global product counterfeiting market

While it is difficult to estimate the prevalence of any form of crime, let alone forms of illicit transnational trade schemes, product counterfeiting might be the most difficult to accurately assess. Other forms of illicit trade tend to stand out by their very nature as the items being moved are generally not supposed to be there. Aside for illicit tobacco smuggling and some forms of human trafficking, no other form of illicit trade is so easy to regularly hide in plain sight as is product counterfeiting. Because counterfeit products move throughout the legitimate marketplace through overt distribution methods, it is the product's origin that needs to be hidden rather than the product itself.

As a result, product counterfeiting operates as a form of parallel trade that takes place in line with legitimate trade and commercial activities, in many cases interweaving itself within legitimate trade and commerce. Unlike other forms of illicit trade such as arms trafficking, drug trafficking and human trafficking, the immediate identification of the item does not necessarily send out signals that an illicit activity is occurring. Furthermore, the similarity of many counterfeit goods to their legitimate counterparts can be quite

canny, making it difficult for customs agents, law enforcement, and even brand experts to determine legitimate from fake.

The contextual factors that surround the sale of many counterfeit goods is also a distinguishing feature of this form of illicit trade and something that makes it difficult to accurately determine estimates of the size of counterfeit goods trade. For example, the sale of counterfeit products online is something that is ubiquitous throughout the world. While the open advertisement of firearms or illegal drugs on an e-commerce platform sends very overt signals about illicit activity, the sale of counterfeit products is much more surreptitious.

The ability of counterfeiters to hide their goods "in plain sight" by making them appear to be legitimate elements of the e-commerce landscape not only protects the counterfeiters from being detected and stopped, but also creates substantial challenges to the accurate identification of the size of the market for counterfeits. Additionally, the buyers of counterfeit goods do not always have to visit hot spots of criminal activity to purchase these products. While such hot spots do exist – for instance, Chinatown market in New York City, Santee Alley in Los Angeles, and Ben Than Market in Ho Chi Minh City, Viet Nam – an increasing number of consumers are purchasing counterfeits from online sources. Some of these consumers are complicit in counterfeit trade, making the willful decision to purchase what they know to be infringing goods. Yet, others are normal consumers who are frequenting an e-commerce site to buy what they believe to be a legitimate product. The confounding of legitimate and illicit within the market further complicates efforts to arrive at accurate estimates of the size and scope of the global product counterfeiting market.

2.2 Existing Estimates

Arriving at accurate estimates of the counterfeiting problem is a key concern for all stakeholders involved in addressing the growth of product counterfeiting around the globe. Arriving at such an estimate can be useful for tracking trends overtime to assess the potential effectiveness of anti-counterfeiting activities, as well as the need to develop more appropriate or effective responses. Additionally, estimates of the size and scope of the product counterfeiting problem can be useful when such figures provide data on the specific types of goods being targeted, source/destination economies, or the ways in which counterfeits are trafficked around the globe. Existing estimates of the global counterfeiting problem have come from governments or global non-governmental organizations that have a vested interest in addressing this and other forms of illicit trade.

It appears that the key organization involved in estimating the size of the global product counterfeiting market is the Organisation for Economic Cooperation and Development (OECD). For nearly 15 years, the OECD has been tracking the global counterfeit goods trade, providing estimates of the overall volume of counterfeit goods, as well as data on the most commonly trafficked goods, hotspots for production and distribution, and information about emerging global trends. A 2019 OECD report stated that "the volume of international trade in counterfeit and pirated products could amount to as much as USD 509 billion (OECD, 2019). This represents up to 3.3 % of world trade." In Europe alone, the OECD report found that "...in 2016, imports of counterfeit and pirated products into the EU amounted to as much as EUR 121 billion (USD 134 billion), which represents up to 6.8 % of EU imports..." Additional research focused on the U.S. market has found that "... counterfeiting and piracy costs U.S. businesses more than $200 billion a

year and leads to the loss of more than 750,000 jobs" (Blackstone, 2014). Research cited by the World Trademark Review (WTR) presents a much more bleak picture, suggesting that the value of counterfeit goods sold across the globe is greater than USD 1.2 trillion each year (Seufer, 2020). Such vast differences in estimates – between $509 billion and $1.2 trillion each year – highlight the challenges of identifying just how prevalent are counterfeit goods throughout the globe.

Looking at specific industries, the WTR cites information from the EU that suggests as the value of the market for counterfeit car batteries and tires is a much as €2 billion each year (Perez-y-Soto, 2021). The value of the counterfeit fashion market has been estimated to be as much as USD 450 billion each year (TFL, 2019). Counterfeit sneakers, just one section of the overall counterfeit footwear market, are estimated to be valued at USD 1.2 billion, with much of this market being based in physical retail sales as opposed to online transactions (Bmonitor, 2019). Another large sector of the counterfeit goods market is counterfeit watches, which have a strong following on social media channels such as Reddit (Kennedy, 2021). The global counterfeit watch market is estimated to be worth approximately USD 1 billion each year (INCOPRO).

As mentioned above, estimates of the size of the global counterfeiting market are based in part on officially reported data, specifically the types, amounts and value of goods seized by customs agencies or other law enforcement groups. Two customs agencies – U.S. Customs and Border Protection (CBP) and EU Customs – provide regular reports about the counterfeit goods seized, reports that help to paint a picture of existing trends in global counterfeiting schemes. The most recent U.S. CBP seizure report (for calendar year 2020) highlights the dramatic shifts in total seizure

amounts and value of seized goods over the past ten years, noting as shown in Figure 2.2a a recent decline in both seizure totals and MSRP in 2019 and 2020.

Over the past ten years (since 2011), U.S. CBP seizure reports suggest some stability, yet also quite a bit of change in the nature of transnational product counterfeiting schemes targeting American consumers. One of the most noticeable trends is that over the past ten years only three categories of goods (of the ten varying categories outlined in a report for a given year) have led yearly seizure totals: Handbags and Wallets (4 times), Watches and Jewelry (4 times), and Wearing Apparel and Accessories (2 times). Interesting, footwear seizures did not reach double digit numbers until 2017, which was the first year that the category Labels and Tags was not included in the listing. Outside of 2011, Labels and Tags seizures remained low (between 1% and 2% of total seizures) throughout 2016, which was the last year it was included as a stand-alone category.

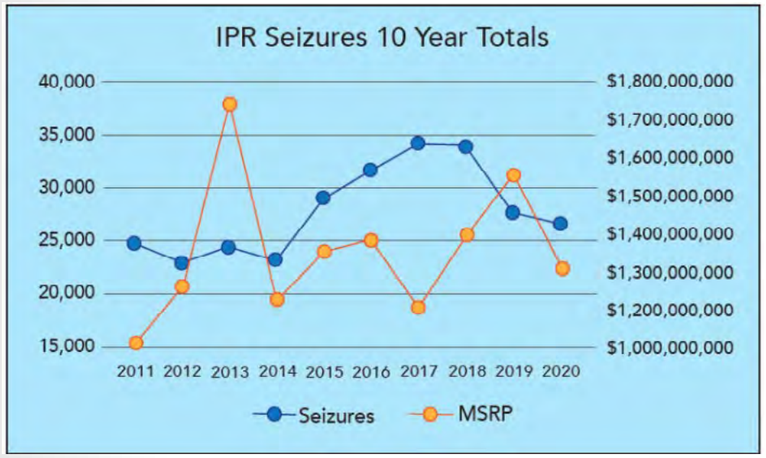

Figure 2.2a
Source: USCBP (cpb.gov)

Two other interesting patterns can be observed. First, Consumer Electronics seizure percentages have remained relatively stable, ranging between 8% and 13%. Second, between 2012 and 2019 seizures for Pharmaceuticals and Personal Care items fell between 5% and 7%; in 2020 this number dipped to 2%. Finally, as categories like Digital/Optical Media and Toys have waned, other Categories such as Consumer Products, Sporting Goods and Automotive Products have gained increased showings.

It must be stated that items may still be seized even though they do not show up as an item category that is specifically called out in an annual IPR seizure report. Counterfeit toys are still being seized, as are counterfeit labels and tags that are shipped unattached to a physical product. Yet, the volumes of these seizures are relatively low compared to other goods. Furthermore, it must be stated that the low number of seizures may not be reflective of the actual volume of counterfeit goods in the market. The efforts of CBP officers at ports of entry, global and regional anti-counterfeiting initiatives, and the efforts of brand owners working to advance their interests all have an impact on what is seized. Therefore, while official seizure statistics can provide insight to the types of goods seized and how these seizures can vary over time, they are a poor indication of the universe of counterfeit goods that are available to consumers during any given year.

EU Customs seizure statistics suffer from the same challenges as U.S. CBP reports, yet they can be useful in highlighting global variation in counterfeiting schemes. For example, the European Union Intellectual Property Office reported that in 2020 infringing goods seizures at internal markets declined by 13% from their 2019 levels. The most commonly seized items within the EU were clothing accessories, packaging materials, recorded CDs/ DVDs and labels, as well as tags and stickers (Taxation and Customs

Union, 2021). Seizures at the border in 2020 declined by 34% from 2019 (Arnold-Rees, 2021). When compared to U.S. CBP seizures, the high volume of packaging materials, tags and stickers seized from internal markets suggests that in-country counterfeiting operations may be much more developed within the EU compared to the U.S.U.S.. Similar to the U.S., EU Customs reports that the primary source economies for counterfeit goods are China and Hong Kong, and that express mail and air shipments are the most common shipping methods used by counterfeiters.

Before concluding this section, it must be noted that the estimates provided by the OECD and others incorporate trade in counterfeit and pirated goods. This means that the figures presented reflect estimates of the volume of trademark and copyright violations that occur across the globe, reflecting more of an intellectual property rights violation estimate than an estimate of counterfeit goods. While this caveat may be frustrating to some, it highlights the challenges that confront efforts to develop an accurate picture of this crime. Namely, it can be difficult to identify unique categories of intellectual property rights violations even when it is clear that something illicit is occurring.

2.3 Challenges to Estimation

Beyond the challenges posed by the conflating of copyright violations with trademark infringement, it is very difficult to arrive at an accurate estimation of the scope and scale of global product counterfeiting schemes. This is primarily due to the fact that there are two key challenges that restrict improving the accuracy of current estimations. The first challenge relates to the reliance upon official seizure statistics as the base metrics for estimates. As described above, official data are the most reliable when it comes to

quantifying the types and amounts of goods counterfeiters are attempting to move into a country. Yet, as was mentioned these figures give only a partial picture of the counterfeiting landscape. Seizure data can only reflect those items that are stopped in the distribution stream. While they are not allowed to reach consumers and impose a harm on them (aside from financial loss), they represent only a fraction of the total counterfeit products produced each year. Unfortunately, we do not know what fraction or percentage of the total is represented by the goods that are seized each year. The challenge of not knowing this unknown percentage is the second issue affecting the development of more accurate estimates of the scale of counterfeiting.

The unknowable figure that represents the totality of the counterfeit goods produced can be termed counterfeiting's "dark figure," a term that recognizes the inability to know exactly how many fakes counterfeiters are producing in a given year. The dark figure of product counterfeiting prevents the anti-counterfeiting community from having full confidence in any estimates that are produced. There simply is not enough information to state with any level of certainty that estimates given regarding the size of the global counterfeiting problem are accurate.

However, this fact does not mean that estimates are not useful or that we should not engage in the process of seeking more accurate estimates of the problem. Rather, the challenges that currently inhibit a more complete understanding of the scope and scale of counterfeiting should prompt efforts to gather the data and information necessary to gradually increase the reliability of future estimates. Importantly, using multiple sources of data from various stakeholders – including customs agencies, law enforcement, brand owners, brand protection service providers, e-commerce and physical retailers, and others – will likely allow for a triangulation of data whereby

more existing informational gaps can be addressed.

Finding an accurate estimate of the size of the global product counterfeiting market is a challenge that is not easily solved. Using official seizure data to frame the size of the problem and create a baseline is effective in highlighting trends in seized goods over time. Broader estimates, like those put forth by the OECD, help to raise awareness of the potential scope and scale of the transnational counterfeiting schemes. The truth likely lies between these upper and lower ranges, yet the lack of obscurity should not negatively affect anti-counterfeiting activities. Rather, it should spur researchers and other stakeholders to develop partnerships and practices that support the wide sharing of data and information such that more informed estimates can be derived.

2.4 Potential Alternatives/Triangulating Data Sources

The data and information used by the OECD and other groups to estimate the size of the global product counterfeiting market are not the only information available to gain an idea of the size of this problem, although other information is not as easily interpretable. While official seizure data come exclusively from customs and law enforcement agencies, some e-commerce platforms have provided data about the number of infringing listings they have proactively removed or prevented from being posted on their platforms. There is no way to verify the figures provided by e-commerce platforms regarding the takedown of illicit listings and so they must be taken with a grain of salt, yet over time if they are reported consistently these reports may give us an idea about important trends in online counterfeiting schemes. The most prominent example of such reporting comes from the e-commerce giant Amazon. In the company's first

Brand Protection Report, which was published in 2020, Amazon stated that it had proactively blocked 10 billion listings for illicit goods from its sites (a reported increase of 67% over the prior year), seized more than 2 million counterfeit products that would have transited through their fulfilment centers, and prevented 6 million attempts to set up fake seller accounts (Mehta, 2021).

Chinese e-commerce giant Alibaba reported in its 2020 IP Rights Protection Report that it had stopped 96% of suspected infringing product listings from being posted before they could reach consumers' screens (Little, 2021). The report also noted that consumers' reports of suspicious listings declined by one-third from the prior year, that 98% of infringement complaints were handled within 24 hours, and that the company assisted law enforcement with offline activities that led to nearly 3,000 arrests and the shuttering of nearly 1,500 manufacturing and distribution facilities.

Alibaba has also touted its work in collaborating with brand owners, reporting that the Alibaba Anti-Counterfeiting Alliance (AACA) works with more than 450 brands to collaboratively protect intellectual property rights on the platform (Chen, 2019).

Other e-commerce platforms, such as Amazon and Mercado Libre also have active brand owner collaborations that seek to become more effective in proactively preventing illicit listings from reaching consumers (Imach, 2021). These partnerships undoubtably produce seizure, takedown and proactive prevention statistics, as well as information about sellers' locations and other useful data, that can be useful in deriving more accurate estimates of the scale of transnational product counterfeiting schemes. Finally, brand owners themselves may be helpful in gathering useful data that can be

used to develop more comprehensive estimates of product counterfeiting. For example, Apple has reported that an internal team of brand protection specialists has been effective in removing 1 million counterfeit product listings from various websites (LPM, 2021), and Gilead recently announced its efforts to dismantle a USD 250 million pharmaceutical counterfeiting ring targeting one of its HIV medications (Basta, 2022). The data gathered from law enforcement seizures, brand owners' anti-counterfeiting efforts, and e-commerce platforms proactive brand protection efforts can likely be combined to form a more accurate measure that is reflective of the true scale of global product counterfeiting schemes.

3. Cross border trafficking routes

To move their goods around the globe, product counterfeiters will either intermingle their illicit products with legitimate goods within the legitimate supply chain or utilize legitimate transportation intermediaries to ferry goods to consumers. As a result, the trade routes used by counterfeiters look, in most respects, very much like the routes used in legitimate commercial activities. Counterfeiters utilize cargo shipping containers to move large amounts of goods in economical and efficient ways and express consignment services and postal systems to send goods directly to consumers' doors. There is no need to create a large-scale distribution system unique to a product counterfeiting scheme as counterfeiting networks can simply make use of the existing legitimate global transportation infrastructure. Using deception, fraud, corruption or the willing participation of intermediaries, product counterfeiters have been highly successful in moving their goods across the globe in ways that support their schemes and meet consumers' demands for rapid delivery times.

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The key maritime shipping routes for goods, both legitimate and counterfeit, leaving the primary source economies for counterfeit goods (e.g., China, Hong Kong) and headed for the U.S. and Europe are shown on the map displayed in Figure 3a (Notteboom, 2022). The chokepoints on this map, both primary and secondary, are places where goods must pass through some time of controlled environment, such as a free trade zone (FTZ), canal or lock system, or a narrow waterway or passage that restricts the volume of traffic that can traverse at any given period. Ideally, these chokepoints would also represent potential interdiction/inspection points wherein counterfeit goods that move through these controlled areas have a higher likelihood of being detected and seized.

Figure 3a
Source: USCBP (cpb.gov)

One of the reasons that the use of the legitimate global transportation system is such a vital component of product counterfeiting networks is the emphasis placed on hiding a product's origins. Because counterfeiters will often times replicate packaging and shipping cartons it is more important to hide the origins of a product rather than hiding the product itself as the goal is to have illicit goods exist within the distribution stream alongside legitimate goods. Therefore, the non-maritime cross-border trafficking routes central to transnational product counterfeiting schemes also tend to

mirror the routes used for legitimate products. Common air shipping routes that traverse the Arctic are favored by air freight companies – and are likely favored by some counterfeiting networks – because they connect to major passenger hubs (which can reduce costs), they minimize overall flight times, which also reduces shipping costs, they allow for a greater number of non-stop flights, and they connect important industrial/commercial hubs in Europe, Asia and the U.S.

The map displayed in Figure 3b shows the four most popular polar routes used in air cargo shipping, which minimize to a great extent shipping costs and delivery times related to the movement of goods from Asia to North America. It is certain, given the location origins and destinations for these flights, that counterfeiters are taking advantage of these air freight shipping lanes. Ground transportation routes within the U.S. have key origin and distribution points at New York, Chicago and Seattle, among other places. According to a recent report from a supply chain industry group one-third of all counterfeit goods seized by U.S. Customs agents were shipped via air express services; this figure increases to nearly half when postal shipments are included (Kulisch, 2019).

The speed at which goods can be shipped via air cargo and growth in the use of small parcels by counterfeiting networks are two of the primary reasons behind the dominance of air freight in global product counterfeiting schemes. Despite the higher costs of shipping by air, relative to shipping by ocean-going cargo container, the benefits of decreased delivery times, the ability to be more 'customer oriented' and responsive to consumer demands, and the perceived (in not actual) reduction in seizure risk make this method extremely attractive to counterfeiters.

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Inferring the locations that are likely to be some of the primary hubs for sending and receiving counterfeit goods can be done by cross-referencing key supply and destination locations with the world's busiest airports in terms of cargo volumes. Hong Kong and Shanghai are two of the top three – first and third, respectively – air cargo ports in the world, and both are key source destinations for counterfeits Transiting the globe. It is undoubtable that a large volume of counterfeit goods, either in finished or component form, begin their destinations to consumers from one of these airports. The second, fourth and sixth busiest airports are located in the U.S., yet large counterfeiting destinations such as New York, Los Angeles or Houston are represented on this list. The second busiest airport, in terms of air cargo, is Memphis, Tennessee, which is the home airport for FedEx. FedEx was recently recognized by Forbes magazine as the largest transportation company in the world and given the significant role that air express shipments play in counterfeiting schemes it is highly likely that a large volume of counterfeit goods transit through this airport daily. The other two U.S. airports, Louisville, Kentucky and Anchorage, Alaska do not neatly fit into known counterfeiting networks. However, the seventh most utilized airport is located in Dubai, the home of Jebel Ali, which is a sizeable (FTZ) long recognized as a hot spot for the manufacture, distribution and transshipment of counterfeit goods.

Figure3.1a
Source: Artic Portal (portlets.arcticportal.org)

3.1 North American Cross Border Routes

The U.S. is the biggest market targeted by counterfeiters and reports on the value of counterfeit goods seized from countries across the globe indicate that more counterfeit goods are seized in the U.S. than all of the EU (GIPC, 2016). While the relative ranking of economies by total seizure amounts is not, per se, indicative of the total amount of counterfeit goods sent to that country it is a good measure. It is possible that differences in enforcement activity and sophistication of anti-counterfeiting strategies create the distinctions in seizure amounts seen across global economies. Yet, it is easy to see how the U.S. and EU are the key markets sought by counterfeiters as these are the biggest consumer markets in the world. Consumers in these countries buy a lot of stuff, and counterfeits goods often make their way into their shopping carts.

Because the U.S. is a prime destination for counterfeit goods but one of the most effective countries at implementing anti-counterfeiting efforts, transnational counterfeiting schemes often times utilize the neighboring countries of Canada and Mexico to ship products over land into America. This is not to suggest that markets for counterfeit goods are non-existent within Canada and Mexico as the most recent Notorious Markets List , which is issued by the Office of the United States Trade Representative, includes physical marketplaces in both Canada (Pacific Mall located in Toronto, Ontario) and Mexico (La Pulga Rio located in Monterrey) as key locations selling goods that infringe upon U.S. firms' intellectual property rights (USTR, 2022). Counterfeiters' use of Canada and Mexico as transshipment points for goods moving into the U.S. highlights the fact that counterfeiting organizations will utilize adjacent destinations that appear to present lower barriers to entry for their illicit goods, which can be intermingled into the

larger North American distribution chain.

As shown in Figure 3.1a, there are major shipping corridors that connect important commercial hubs within the U.S. with key Canadian cities and southern U.S. border towns connected to major Mexican commercial hubs. If counterfeiters are successful in moving their goods to Canadian and Mexican hubs, they may increase the likelihood that these goods will make it across the border into the U.S., while at the same time supplying distributors and sellers throughout the rest of North America. After crossing the border, and once products reach key transshipment hubs withing the U.S., counterfeit goods can be easily and quickly ferried across the country to both urban and rural destinations. Many of the land-based ports of entry shown on the map in Figure 3.1a handle high volumes of trade each day, and in recent years these points of entry have seen increasing numbers of counterfeit goods seizures.

Figure3.1a
Source: Transport Geography (transportgeography.org

For example, the Ambassador bridge – which connects the American city of Detroit, Michigan with the Canadian city of Windsor, Ontario – sees approximately USD 360 million in cargo shipped across the border each day, which is one-quarter of all U.S.-Canada trade (Lawder, 2022). In addition to legitimate items, U.S. CBP agents regularly seize large amounts of illegal drugs and counterfeit goods crossing the border from Canada into the U.S. at the Ambassador Bridge (Maxwell, 2022), as well as other Detroit-area border crossings, including the Detroit-Windsor tunnel and the Blue Water Bridge, which is located about an hour north of Detroit and connects Michigan with Sarnia, Ontario (Chen, 2020).

Goods have regularly been seized at the Blue Water Bridge that connects Michigan to Canada (WWJ, 2021), the International Falls / Fort Francis border crossing located near Duluth, Minnesota (Meyers, 2020), and from rail containers crossing the border at Portal, North Dakota (Gray, 2022). Shipments of counterfeit products sent via rail cars have also been seized crossing into the U.S. via Fort Francis, Ontario (Flanagan, 2019). Counterfeit goods are also sent from the U.S. in to Canada, as evidenced by U.S. Customs and Border Protection's seizure last year of counterfeit surgical masks headed from Cincinnati to Canada (Kirklen, 2021). Furthermore, there are well established drug shipment routes that have established the U.S. as a prime source economy or transshipment point for illicit drugs such as cocaine, MDMA, methamphetamine, and steroids (Russel, 2017). It is not out of the question to assume that counterfeiting organizations may be utilizing some of these same U.S.-to-Canada routes to traffic counterfeit goods north of the border.

Yet, the vast majority of counterfeit goods crossing the U.S. – Canada border are headed south into the United States. Several years ago, Canada was one

of the top five countries from which seized counterfeit goods entering the U.S. were shipped. The Canadian press even noted the outsized role that Canada plays as a transshipment point for Chinese counterfeits destined for the U.S. (Beeby, 2018). The Canadian government has implemented enhanced anti-counterfeiting efforts intended to protect Canadian rights holders and prevent counterfeiters from continuing to use the country as an entry point to the U.S. (Blackwell, 2018).

While a quarter of all trade between the U.S. and Canada occurs via one bridge crossing in Michigan, the U.S. and Canada maintain the longest international border in the world, measuring over 5500 miles. There are more than 100 border checkpoints spanning ten U.S. states and eight Canadian provinces along the border, with many of these points accommodating personal and recreational, rather than commercial, travel. The trade agreements that have made U.S. – Canadian trade relations so strong have made it attractive to ship goods into one country for movement to the other. However, Canada is hoping that its strengthened IP rights protection activities will serve as an active deterrent to the abuse of what might otherwise be seen as a porous border system. Despite U.S. – Canada joint operations and strong IP rights environments in both countries, counterfeiters can reap substantial profits if they are able to effectively get their goods into these countries. There are numerous methods that can be used to ship counterfeits between the two countries – ferries that cross the great lakes; trains; commercial trucks; air freight; the postal system; personal vehicles – which presents a daunting task for customs and law enforcement agents and provides a wide range of options to counterfeiting networks.

Counterfeit goods also cross the border between the U.S. and Mexico, yet unlike the U.S.-Canada situation, the cross-border product counterfeiting

traffic appears to primarily flow north into the U.S. While other illicit items do transit from the U.S. into Mexico, such as fake COVID treatments , money related to illegal drug networks , and firearms , counterfeit goods do not appear to head south across the U.S. border with Mexico (PinalCentral, 2021; GAO, 2021). On America's southern border there are numerous cities where commercial traffic can be used to facilitate trade in counterfeit goods, as well as other illicit products. The large consumer market for all sorts of goods, licit and illicit, make America a key destination for illegal products coming out of Mexico.

One of the most prominent entry points along the southern border is a bridge that connect the U.S. city of Laredo, Texas with Nuevo Laredo, Tamaulipas, Mexico. Of the four bridges that span the Rio Grande river and connect the U.S. to Mexico at these cities, the World Trade Bridge is the most vital to cross border trade as it handles between 16,000 and 18,000 commercial vehicles each day (Sanchez, 2021). Yet, the dollar volume of trade at Laredo pales in comparison with that of the Ambassador bridge, as the World Trade Bridge sees cargo crossing valued at USD 230 annually, which is USD 130 million less than the daily totals seen in Detroit. Despite this fact, U.S. Customs and Border Protection agents have made substantial seizures of products crossing the Laredo border into the U.S., with one instance netting products valued at more than USD 43 million.

In addition to the Laredo border crossings, the cities of Nogales, Arizona, San Diego, California and El Paso, Texas are home to some of the most active border crossings in the country. Recently, U.S. Customs and Border Patrol investigators uncovered more than 100,000 counterfeit N95 masks that had crossed the border with Mexico and were destined for a hospital on the east coast of the U.S. (Coote, 2020). Other items seized by U.S.

law enforcement agents at the port of El Paso include counterfeit soccer jerseys (Martinez, 2018), and in the past two years counterfeit COVID testing kits (KTSM, 2020). Once counterfeit goods enter the country through the southern border, they typically make their way north, west or east along interstate highways, ending up in large urban areas where goods are either resold and shipped to other parts of the country, or distributed for local sale. It appears that southern and southwestern states are the key destinations for counterfeit products entering the country through Mexico.

U.S. and Mexican authorities do collaborate on issues of intellectual property rights violations, in addition to combatting other forms of illicit transnational trade. One of the more effective U.S. Customs and Border Protection collaborations involved several federal agencies and the government of Mexico and led to the seizure of more than USD 80 million in counterfeit goods. Recently, federal agents in the U.S. dismantled a cross border counterfeit goods network that saw goods originating in China being shipped from locations in Chihuahua, Mexico to the metropolitan Atlanta area where some goods were distributed to local retailers, others shipped to the northeast U.S., and still others were sold in online marketplaces (Dugan, 2022).

3.2 The Importance of Free Trade Zones (FTZs)

While free trade zones (FTZs) are not a new phenomenon within the global logistics system in recent years, they have become increasingly important hot spots for product counterfeiting, as well as other forms of illicit trade. FTZs are physical locations wherein manufacturing, packaging and re-packaging, and transshipment of goods occurs. The goods that enter these facilities are typically considered "international commerce" and therefore

may have lowered import and duty fees, and typically can be processed outside of customs enforcement (NAFTZ). Some goods can transit into and through FTZs with no customs inspections at all, and the final destination of the products that pass through the FTZ determine whether and how much duties are paid on those goods. In some cases, should the goods be destined for a country other than the one hosting the FTZ, no customs fees are assessed. Importantly, activities that change the classification type of a product, such as manufacturing or assembly operations, are allowed within FTZs, yet retail trade is not allowed.

FTZs are attractive to counterfeiting networks for a number of reasons, not least of which are the lowered costs of operating within an environment where customs oversight is minimized. The desire to increase trade and commerce between countries and to support increases in export activity within a country have led to the very favorable conditions that are take advantage of by counterfeiters and other illicit actors. More importantly, FTZs allow product counterfeiters the opportunity to establish manufacturing, assembly or distribution operations that can hide not only the nature of the goods produced, but also their source origin. For example, shipping unbranded items into a FTZ and manufacturing counterfeit labels and trademarks that are then applied to the unbranded items is one way that FTZs have been used in illicit trade schemes. The use of FTZs for relabeling, rebranding, and repackaging tobacco products, as well as the use of these facilities for grey market diversion and smuggling operations has been well noted (Cichero, 2017).

One of the greatest advantages of existing FTZs for product counterfeiting networks is the ability to hide the origins of the goods being shipped into other countries (BTG, 2018). Cargo containers and large volume express

shipments entering countries that have strong customs enforcement activity are more likely to be flagged for inspection if they meet certain patterns related to the origin of the goods and the shipment. Goods labeled as “handbags” or “shoes” originating from the Guangdong region of China for instance, a province that is well known as a hub for counterfeit production, are more likely to be seized than are goods coming out of a European free zone in Greece or Malta. Once a good is modified or repackaged within a FTZ the source origin changes and the provenance of the goods can be masked.

Product counterfeiting networks that can effectively establish operations within FTZs, or otherwise develop partnerships with legitimate entities operating within an FTZ, have a distinct advantage over their competitors. While goods are still subject to full customs inspections and scrutiny when they enter their destination country, coming from a FTZ rather than the country of origin means that the goods may be less likely to be singled out for examination. As such, it can be expected that sophisticated product counterfeiting networks are utilizing FTZs across the globe to manufacture, repackage and relabel, and transship counterfeit goods across the globe. Importantly, the development of FTZ networks within key emerging markets around the globe may be the infrastructure developments that are key to the growth of stable transnational counterfeiting operations.

An area that should be of particular interest is Africa. The African African Continental Free Trade Area (AfCFTA) agreement, which launched in 2021, created the largest free trade area in the world as it brings together 55 countries in an effort to create new opportunities for international and intracontinent commerce and trade (Maliszewska, 2020). One of the key goals of AfCFTA is to shift African economies from raw materials suppliers

and hosts for low-wage, low-skill manufacturing operations into a key contributor to the growing global economy. A recent report from the United Nations argues that there exists about USD 21.9 billion in “untapped export potential” across Africa, and the report states that the AfCFTA can be useful for eliminating trade barriers and infrastructure gaps, as well as key to raising overall quality of life on the continent (UNCTAD, 2021).

While the AfCFTA offers great promise for increasing the global influence of African trade and commerce, the impacts of the COVID-19 pandemic and other disruptions in the global supply chain have limited the zone’s impact (Schwikowski, 2021). However, the AfCFTA has been highlighted as a key step towards reducing the illicit trade risks that currently plague FTZs generally as it is designed to create transparency in all aspects of its operations (Kende-Robb, 2021). At the same time, it cannot be denied that the large scale of investments in the AfCFTA by African nations and private entities must be putting pressure on its operators to produce tangible results in the near future. If product counterfeiting networks seek a new route to move goods across the globe their actions may be surreptitiously assisting the AfCFTA in meeting its stated objectives. Additionally, should the African free trade zone be successful in addressing low-wages and poverty across the continent it could be the case that counterfeiting organizations will begin to use the AfCFTA as a series of intracontinental distribution hubs that would support the sale of counterfeit goods to a growing middle class in across African nations.

4. Drivers and contextual factors

Transnational product counterfeiting schemes are driven by a number of factors that point to the vast profit-making potential found in all forms of

illicit trade. However, product counterfeiting schemes provide a greater risk-reward tradeoff for criminals relative to other forms of illicit trade. This is because profit margins can be quite high and very sustainable, while penalties are often inconsistently applied and relatively light. When considering the range of product counterfeiting schemes occurring around the globe it is easy to see who these schemes can be highly dynamic, shifting and adapting as a response to brand owner activities, marketplace demands and consumer trends, as well as anti-counterfeiting and anti-illicit trade activities. The primary drivers of transnational product counterfeiting schemes are consumer demand for legitimate goods and demand for counterfeit items (also referred to as consumer complicity). To a lesser, yet still highly important extent, product counterfeiting is also driven by increasing access to the internet and related technologies, as well as the globalization of legitimate commerce and trade.

4.1 Legitimate demand for goods and illicit profit

There is no denying the fact that counterfeiting networks use legitimate organizations to further their criminal schemes, including taking advantage of transportation intermediaries and legitimate physical and virtual marketplaces, as well as fraudulent documents to get their illicit goods into countries around the globe. Yet, a unique feature of this form of illicit trade is that the market for their illegitimate goods is driven by market demand for genuine goods, which counterfeiters use as a guidepost for their illicit activities. The statement is often made, in various forms, that the only way to ensure that a counterfeit of a product does not exist is to make a product that no one wants. If there is no demand for a legitimate product, there will likely be no demand for a counterfeit of that product.

While demand for legitimate products is used by counterfeiters to guide their actions, this demand does not in and of itself push counterfeiters to engage in their schemes. Rather, it is the financial rewards related to product counterfeiting that drive this crime. Accordingly, counterfeiting can be considered to be the ultimate form of a mercenary crime, one wherein the goal is always profit (MacDougall, 1933). While counterfeiting may be an activity that is taken up by transnational criminal organizations, including terrorist groups, it is not done to promote ideology or some other organizational goal. Product counterfeiting schemes are used to generate revenue that is fed back to the counterfeiters (be they individuals or organizations) and used to support other activities, both legitimate and illegal. These profits are siphoned out of the legitimate market in two ways: (1) consumers seeking legitimate goods being duped into purchasing counterfeits; and (2) complicit consumers going in search of counterfeit goods, willingly giving their money to counterfeiters.

As regards the impact of demand for legitimate goods and counterfeiters' efforts to deceive consumers, data on global consumer trends suggests that the number of potential victims had been steadily increasing up until the start of the pandemic when demand began to slip. According to data from the World Bank, global consumer spending had been steadily increasing since 2015 through 2020, wherein decreased consumer spending was attributed to the impacts of the COVID-19 pandemic (World Bank, 2021). In fact, some observers have stated that the net loss to the consumer economy due to COVID-19 is around USD 5.3 trillion, a figure that reflects the lost momentum that characterized the global economy prior to the pandemic (around USD 2 trillion in growth each year), as well as actual yearly declines of USD 3.3 trillion (World Data).

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Despite the 2020 downturn, the global economy still generates more than USD 60 trillion each year, with e-commerce generating nearly USD 5 trillion in 2020 and it is estimated that by 2025 e-commerce sales will exceed USD 7 trillion (Chevalier, 2022). It has been suggested by some observers that the easing of COVID restrictions and the "end" of the pandemic will lead to a rebound in consumer spending as more people return to in-person and out-of-home shopping and younger consumers reestablish their spending habits (Charm, 2021; Repko, 2021). Irrespective of when consumer spending returns to its pre-pandemic levels, the COVID-19 crisis has forever changed the ways in which consumers purchase products, which has led to changes in the ways in which counterfeiters engage with consumers.

One of the biggest changes to the ways in which consumers go about searching for legitimate goods that has also increased their chances of interacting with counterfeiters centers on e-commerce shopping habits. The COVID-19 pandemic accelerated online spending in ways that were difficult to imagine prior to the pandemic. This led e-commerce platforms, social media platforms, manufacturers, distributors, intermediaries and counterfeiters to upgrade their online systems and networks, devote increasing resources to internet marketing and advertising, and enhance their logistics capabilities, specifically focusing on upstream supply chain concerns and the rapid delivery of a wide range of consumer goods (Pannuti, 2020).

For consumers, the pandemic led to behaviors that likely increased their risks of being deceived by counterfeiters as a report by McKinsey and Co. found that three out of four consumers changed their shopping behaviors as a way to find value and convenient options, while 39% of consumers, mostly younger consumers, "deserted trusted brands for new ones" (Robinson,

2021). A willingness to shop around for value and convenience, decreased brand loyalty, and a younger generation that is both comfortable with emerging e-commerce trends and poised to be the most influential category of consumers in the market combine to create an ideal environment for counterfeiters.

4.2 Consumer demand for illicit goods

While the primary driver of product counterfeiting schemes is demand for legitimate goods, the problem of consumer complicity represents another direct source of support for counterfeiters and their global networks. Consumer complicity is a form of consumer behavior that involves the willing purchase of known counterfeit goods by consumers. These consumers seek out counterfeit products in both physical and virtual environments, knowingly avoiding legitimate goods in favor of illegitimate items. By doing this complicitly, consumers create direct demand for counterfeit goods, provide stable incentives for counterfeiters to continue their activities, and the consumers develop a wide variety of rationales to support or explain away their complicit behavior.

Several recent reports, including one compiled by the American Apparel and Footwear Association and another produced by the A-CAPP Center , have highlighted the role that social media channels and social media influencers are having on consumer complicity (AAFA, 2021; Kennedy, 2021). Each of these reports calls out the role of social media influencers as intermediaries that promote counterfeit goods and provide a tangible connection between consumers and counterfeiters. In this role, social media influencers have freed counterfeiters from the need to market and sell directly to consumers, something that could expose them to detection and liability.

Working through intermediaries, counterfeiters are able to obscure their engagement in this crime and widen their criminal networks in ways the increase the superficial appearances of legitimacy that are so important to the success of their schemes. Importantly, when combined with government stimulus packages in the U.S. and other countries, during the pandemic there were substantial increases in consumer spending by individuals in the lower economic strata (Tartar, 2021). Given that prior counterfeiting research has identified relationships among socio-economic status and complicit consumption, it is likely the case that consumer complicity during the pandemic rose substantially more than it would have under normal circumstances.

Taken to a global level, the prevalence of social media influencers in counterfeiting schemes allows criminal networks to further hide their locations, while are the same time engaging partners across the globe. For instance, a counterfeiting scheme that is operated by an individual in eastern Europe may engage product suppliers from Viet Nam and social media influencers based in the U.S. who advertise to North American consumers via social media channels, which direct consumers to Chinese-based e-commerce sites. In this scheme, the advertising, sale and distribution of an infringing good creates a unique global path, one that is not mirrored by the path these goods take as they travel to the end consumer. Considering the flow of funds related to this example scheme – funds that are spent by counterfeiters to acquire goods and pay influencers, and those sent from the consumer to the counterfeit via an e-commerce website – creates a third global network of legitimate and illicit actors that have key roles in the counterfeiting scheme.

The ultimate ‘influence’ that social media influencers are able to have relates

to the spurring of demand for counterfeit goods. In many cases, these influencers openly discuss the products they promote as being "dupes" or "reps" of legitimate products, clearly signaling their illicit nature. Yet, consumers still purchase these items, and there are various reasons for why they choose to become complicit in product counterfeiting schemes. One of the most well-established reasons behind the willing purchase of counterfeit goods is a consumer's desire to display status or wealth, or to obtain a product that they could not otherwise afford. These bargain shoppers help to drive product counterfeiting schemes because they see counterfeits as a way to maximize the value of their consumption by balancing price against quality and legitimacy.

However, not every complicit consumer willfully engages in a product counterfeiting scheme as a way to cheaply obtain a luxury look-alike. Some people knowingly purchase counterfeit goods because they are self-professed 'fans' of a particular brand or a certain type of good. These individuals may even become collectors or hoarders of counterfeits, referring to their illicit goods as "replicas" as a way to create a qualitative distinction between the level of goods they have acquired and cheaper, less desirable "counterfeit" goods. These consumers tend to be proud of their acquisitions and will display them to others, often times finding support and praise for their collections.

In some instances, the consumers of high-end counterfeit goods may even become experts in their own right, offering advice to novice consumers about where and how to buy counterfeit goods, as well as how to discern high from low quality fakes, and how to identify the differences between legitimate and illegitimate goods. Yet, in developing their skills at picking out the differences that exist between authentic and counterfeit goods, these

individuals seek to support the production of higher quality counterfeit goods. They gain reputation and status for sharing their knowledge in ways that can be used by counterfeiters and consumers to develop more sophisticated and authentic-looking counterfeit products.

The growth of the internet and social media networks that allow complicit consumers to spread the benefits of purchasing counterfeiting and provide an avenue for consumers to engage with influencers who promote and support the sale of counterfeits, will likely serve to decrease consumers' aversions to counterfeits. This may also mean an increase in online counterfeiting and a growth in the sophistication of counterfeiting networks. As counterfeiters are effective in engaging partners around the globe in ways that allow them to effectively hide from detection, it will become much more difficult to identify, disrupt and dismantle these operations. Importantly, as new technologies develop counterfeiters will likely continue to look for ways to usurp those technologies for their illicit ends.

4.3 The growth of, and proliferating access to, technology

When looking across the entire history of product counterfeiting, as far back as the first recorded use of trademarks in ancient China and Greece , we see only recently the influence of computing technology that connects various aspects of counterfeiting networks to each other (Chaudhry, 2009). Product counterfeiting developed as a person-to-person, offline crime wherein the manufacturers of counterfeit goods had to develop direct relationships with distributors or sellers much like a legitimate businessperson, and consumers had to physically travel to the places where counterfeit goods were sold. While this dynamic still defines some aspects of modern product counterfeiting schemes, it is being overshadowed – both practically as well as regards the areas of focus that now form the core of anti-counterfeiting

discussion and strategy – by technological advancements. Specifically, the rise in computing technology, consumers' increasing access to and use of the internet, and the commercialization of internet spaces have streamlined some areas of product counterfeiting networks and made certain networks operate more efficiently. As seen in Figure 4.3a, there remain only a few places in the world where access to the internet, as well as use of the internet, is not commonplace.

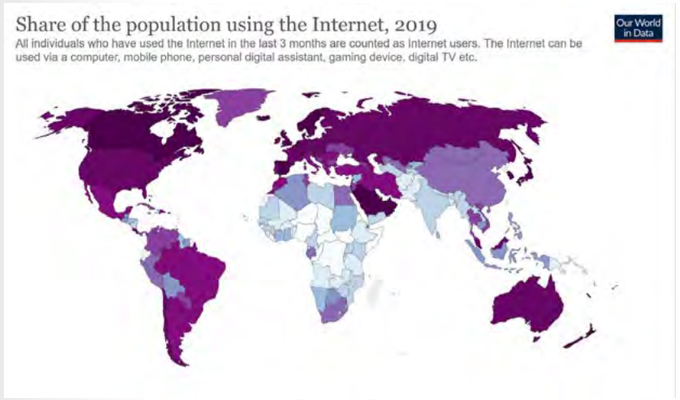

Figure 4.3a
Source: (Roser, 2015)

The COVID-19 pandemic exacerbated global trends around consumers' use of the internet to browse and purchase goods. Prior to the pandemic nearly every generation of consumer in every part of the world was engaged in online commerce, to varying extents, and this engagement had seen gradual year-over-year increases. The pandemic forced many consumers who were previously reluctant to shop online into the e-commerce revolution, and for many of these consumers the positive experiences they had have forever shifted their online shopping behavior (Mathradas, 2020).

Prior to the pandemic older generations tended to be much more reluctant to adopt online shopping, relative to younger generations such as Gen Z and Millennials (Dhanapal, 2015). While older generations have been increasingly

migrating to online shopping, most still tend to prefer traditional physical retailers, preferring to go to a store to make a purchase rather than to shop online (Salesfloor). However, during the COVID-19 pandemic many older Americans traded in-person shopping experiences for the convenience and safety of online shopping. This trend was particularly noticeable in the area of prescription pharmaceuticals, a trend that is particularly troubling.

The Alliance for Safe Online Pharmacies (ASOP) conducted a study of internet pharmacy usage during the pandemic and found that over 70% of respondents were unaware of the potential risks of buying medications online, that 31% of people who bought medicines from an online pharmacy did so for the first time during the pandemic, and that 72% of online pharmacy users stated they will continue to buy online after the pandemic is over (ASOP). But for the ubiquity of online pharmacies – the vast majority of which are illicit – and consumers' increased access to internet technology many consumers may have never been exposed to counterfeit, substandard or illicit goods during the pandemic.

In recent years growth in consumers' access to the internet has come not from increased use of computers (laptops or desktops), but rather from mobile computing devices, such as smart phones. As the graph in Figure 4.3b shows, worldwide smartphone subscriptions increased by just over 70% between 2016 and 2021, and in the next five years (through 2026) smartphone adoption is expected to jump by another 20%. This means that more and more people have, right at their fingertips, ever expanding opportunities to connect to internet commerce and trade, something that product counterfeiters are keen to exploit.

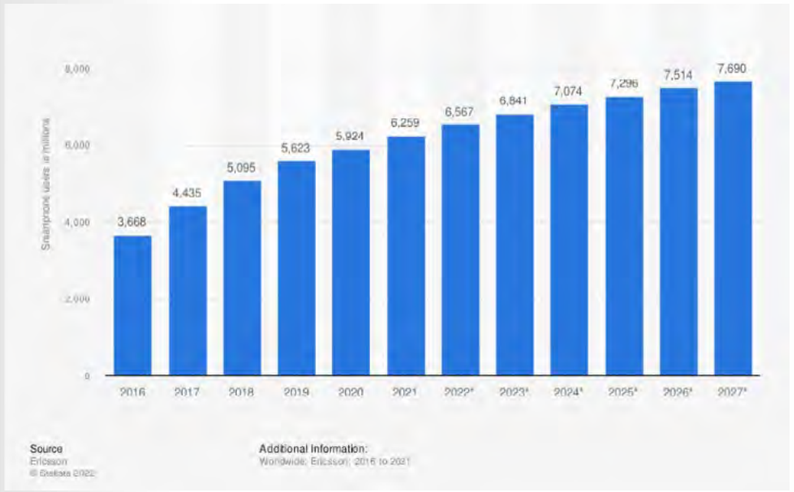

Figure 4.3b
Source: (Statista, 2022)

The rise of mobile computing and the ubiquity of cell phones has allowed many more consumers to access the internet in recent years. In fact, globally over half of internet users access the web via a mobile device, with users in Africa, China and South America leading this trend (Clement, 2022). As the chart in Figure 4.3c shows, cell phone use is common all across the globe and in many places, it is more common to use one's cell phone to access the internet than to use a traditional computer.

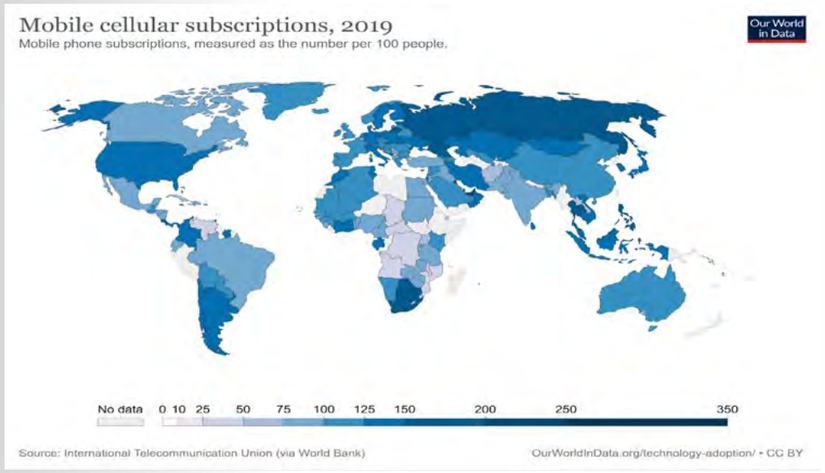

Figure 4.3c
Source: (Roser, 2015)

With the rise of social commerce and the integration of third-party seller-supported applications such as Shopify with popular social media platforms like Facebook and TikTok, it would be unsurprising to see trends in the coming years that point to significant growth in mobile-phone initiated e-commerce transactions. The problems of counterfeit goods on platforms such as Shopify , Amazon, eBay, Instagram and Etsy , as well as those found on sites like TikTok are well known to the brand protection community (BBC, 2020; Case, 2021; Khan, 2019; Lince, 2019). Yet, the virtual nature of these counterfeiting schemes can obscure the vast physical networks that are involved in the promotion, sale and distribution of infringing goods that is made possible through applications that are accessed through mobile devices. The many positive benefits that come from an interconnected world, due in large part to the proliferation of internet-connect technologies, are undermined when counterfeiters use these technologies to veil their activities. To consumers, the purchase of a product from a third-party seller operating on an e-commerce platform or through a social media network is an exercise in convenience. For counterfeiters, it is a way to expand their schemes by layering legitimate technological advancements on top of existing physical infrastructures and supply chains that support their illicit global schemes.

4.4 The globalization of trade and commerce

It is not hyperbole to state that globalization has continued to transform the commercial marketplace by opening up new avenues for production, distribution and sales for many firms. Fueled by consumers' increasing levels of access to internet technologies and the growth of e-commerce and social commerce channels, many firms that were once constrained to regional operations now have the ability to engage customers around the

globe. Nowhere else is the appeal of a global commercial environment more ardently felt than among small and medium-sized enterprises/businesses (SMEs). The ability to leverage foreign manufacturing capabilities to lower production costs, employ a sophisticated global shipping network, and sell through third-party friendly e-commerce platforms has meant that geographical boundaries that once restricted trade opportunities now represent opportunities for growth.

The globalization of trade and commerce has also meant that consumers have come to perceive significantly enhanced shopping opportunities and exposure to products and brands from across the globe. Within this environment the internet has helped to support the notion that anything can be found with a brief online search. Once a product has been identified customers tend to think little about from where their goods are coming, at times being completely oblivious to the interconnect global systems that move goods efficiently and expeditiously from manufacturer to consumer. Of course, the wide range of products available to consumers in virtual and physical markets has also increased opportunities for intellectual property rights violations, primarily product counterfeiting.

Much attention is focused on the illicit goods sold by third party sellers operating on e-commerce platforms. Counterfeiters in nearly any country can reach consumers around the globe through direct means (e.g., setting up a seller account on an e-commerce platform) or indirectly through the use of intermediaries (e.g., working through a social media influencer who directs consumers to a product listing). Product counterfeiters have become well versed in the ideal ways to capture consumers' engagement in the global consumer marketplace and are quick to provide product options to those who are willing to search the internet for desired goods. While brand owners,

law enforcement and other stakeholders attempt to caution consumers against falling for schemes that offer low prices or access to scarce products, the opportunity to maximize value and obtain a desired product can be too strong for many people.

However, it must also be remembered that the internet affords great opportunities for those seeking to sell or distribute goods to consumers, and counterfeiters have taken full advantage of this situation as well. The profit-making potential of counterfeit goods is not constrained solely to the producers of these goods, as volume discounts make distribution a financially attractive option for many. For example, a brief search of the Aliexpress.com website for toy building block sets turned up an advertisement for products that, although not labeled as a name band product, appear very similar in design and nature to LEGO® products. The item – displayed in Figure 4.4a – is advertised for USD 50.41 with free shipping, and nearly 95 units are available for sale. This product is part of a host of product advertisements offered by a seller operating and e-commerce storefront on Aliexpress.com titled "Building Blocks Discount Factory Store." While the item listing did not use the name brand "LEGO" nor any LEGO® trademarks, the fact that it is a "Star Wars" vehicle labelled "Galaxy of Heroes." The goods are likely counterfeit.

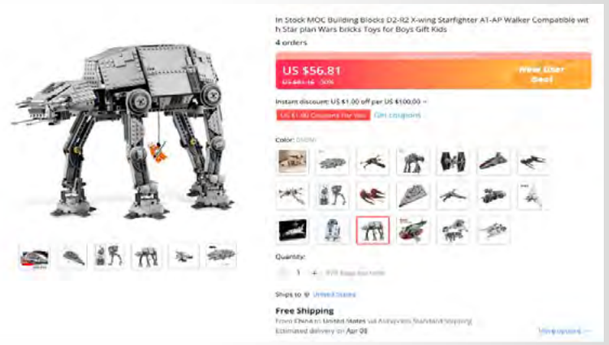

Figure 4.4a
Source: (A;liExpress, 2022)

A consumer searching Aliexpress.com seeking items to purchase for resale may come across this listing and find the item to be a very good deal indeed. This is because the genuine version of this product is listed an e-commerce website operated by The LEGO Group retailing for USD 159.99. The potentially illicit version is less than 1/3 the cost of the genuine. Even given a hefty markup of 100%, the cost of the illicit version would still be more than 30% cheaper than the genuine product. The pricing disparities that exist between legitimate and counterfeit items makes the sale of counterfeits quite an attractive proposition to those willing to get involved in this activity. Prior to e-commerce and a convenient and efficient global shipping environment such distribution/reselling opportunities were likely limited to those individuals with personal connections to manufacturers, distributors or their representatives. In many ways, the globalization of trade and commerce has led to a more egalitarian product counterfeiting environment, one in which sellers and counterfeiting networks must compete with each other almost as fiercely as they must compete with brand owners.

5. Crime scripts and modus operandi

Crime scripts are a type of structured thinking tool that can be useful for investigating and understanding the processes involved in a particular type of crime (Cornish, 1994). They are developed by outlining the essential actions that happen before, during, and after the commission of a crime, identifying the key people or entities involved in those actions, and describing the places wherein these actions occur, as well as tools needed to complete the action (Tompson, 2011). The value of developing a crime script is the identification of possible scheme weaknesses that can be exploited to mitigate or close off opportunities for the crime to occur. The crime scripting process has been successfully used to describe pharmaceutical

counterfeiting generally, as well as the specifics of occupational pharmaceutical counterfeiting (Lavorgna, 2015; Kennedy, 2018). The crime scripts discussed in this chapter can be described as performed metascripts, or descriptions of general types of crime that have already occurred (Borrion, 2013).

5.1 Modeling Product Counterfeiting Networks

One way to comprehensively identify the important elements found within transnational product counterfeiting schemes is to develop generalized models of counterfeiting networks that include each of the elements that are essential to scheme completion. While these models may not accurately capture a specific product counterfeiting network, they show the overall patterns that can be observed across different types of networks. The three figures below, and the related discussions, describe the general elements of the following three different types of product counterfeiting networks: networks involved in the manufacturing and sale of goods in physical locations; networks involved in the manufacturing and sale of goods through e-commerce; and, networks involved in the manufacture and sale of specialty goods to certain types of complicit consumers.

Crime Script for Physical Locations

The model shown in Figure 5.1a describes a generic illicit supply chain for counterfeit goods that are sold in physical marketplaces. This is the most traditional form of a product counterfeiting network as it predates the e-commerce environment and can be applied to transnational and domestic counterfeiting schemes across history. This model also included several important elements that may be found in the other models displayed below, yet for the sake of parsimony they are included once here. As can be seen, the primary elements of this model are: a manufacturer, warehousing of

finished goods, distribution partners/channels, sellers and buyers.

For the purposes of this exercise, the manufacturing node includes the selection of the product to be counterfeited, the sourcing of raw materials and components that make up the counterfeit item, and the sourcing of needed equipment and production tolls including labor. Warehousing is placed after manufacturing for simplicity and because in large volume product counterfeiting schemes the need to warehouse products prior to shipment is greatest immediately following the production process. Yet, this process can occur throughout downstream distribution all the way until the point at which the final transaction takes place. Distribution is also simplified in this model; its occurrence in the scheme depends upon the number of times products are moved between actors. Sellers can be either wholesalers or the individuals/entities that conduct transactions with consumers. These processes can take place within a relatively small geographical location, or they can be spread across the globe, involving partners in multiple countries. Counterfeiting networks begin with a manufacturer who determines the

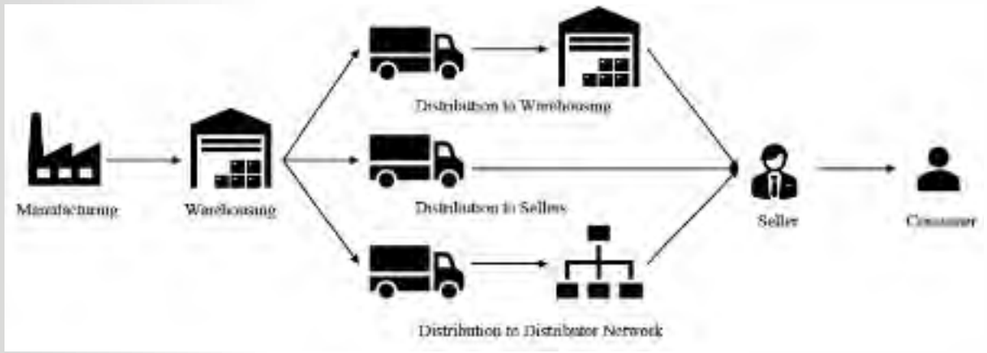

Figure 5.1a
Source: (A-CAPP, 2022)

products they will make, sources raw materials and component goods, and produces an infringing good. However, in some schemes the manufacturer

will source or produce the base product without a brand owners mark then ship the goods to some other destination (typically the source country) where the brand owner's mark is applied. It is at that point that a good becomes counterfeit, yet the distribution chain that supports these types of schemes are essential targets for dismantling as well. Once manufactured, goods typically move to a storage facility until they can be distributed further downstream to other warehouses, directly to sellers, or into a distribution network in another location. Ultimately, these goods arrive in the hands of sellers who sell the goods to consumers in flea markets, retail stores, on street corners, fairs or other locations.

The scenes or locations in which these acts take place can vary, particularly with regard to warehousing and distribution facilities. The logistics infrastructure used to move goods throughout this network can include illicit actors, but in most cases relies upon legitimate transportation intermediaries who are either willingly involved in the network, disinterested in identifying red flags of illegal activity, or unwitting accomplices to the counterfeiters. The actors involved also include a mix of individuals who are cognizant of the illegal nature of the scheme and those who are not.

Crime Script for E-Commerce Sales

The model for virtual marketplaces, shown in Figure 5.1b, shares a number of elements with the model from Figure 5.1a. Yet, the e-commerce environment allows counterfeiting networks the option to avoid having to send large quantities of goods to distributors and sellers located around the globe. Rather, they can warehouse goods close to the point of manufacture and ship direct to consumers when orders are placed. While this may at times mean higher shipping costs relative to shipping in large loads of product, sending goods direct to consumers can reduce the risk that goods will be

seized by authorities or otherwise detected throughout the distribution stream. It is also worth noting that counterfeiting networks will use multiple distribution points in countries with a lower perceived risk of counterfeit goods as a way to disguise the origin of their goods.

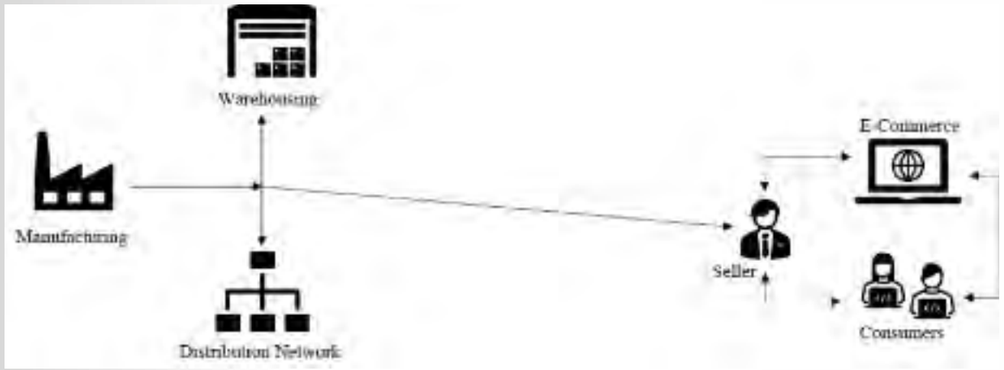

Figure 5.1b
Source: (A-CAPP, 2022)

In the network shown in Figure 5.1b, connecting lines represent both the flow of information between actors and nodes, as well as the movement of counterfeit goods. As with Figure 5.1a, the network originates with the manufacturing process and continues with the shipment of goods from the manufacturer to a warehouse, distribution network or seller. The key component of this model is the seller. If the seller is not the manufacturer, they are less likely to actually hold physical inventory that is shipped to the consumer. Rather, they serve as an informational conduit that shuttles orders between consumers and the order fillers (i.e., manufacturers, warehousers or distributors). E-commerce also plays a role in shuttling information, as well as warehousing data. However, as Amazon's logistics network and civil lawsuits have shown at times e-commerce can play that part of warehousing and distribution network (AEON, 2020).

Within this network, information and goods flows among online sellers,

consumers and e-commerce platforms/social media networks. It is important to note the bi-directional flow of goods among these online nodes as the return of counterfeit goods has been identified as a weak point at which infringing goods and enter the legitimate supply stream. Consumers who receive a counterfeit product and are dissatisfied with it may return it to online vendors (even if these vendors have brick-and-mortar operations) seeking a refund or a replacement good. Alternatively, complicit consumers may knowingly purchase counterfeit goods as a part of retail fraud scheme where counterfeit goods are returned to legitimate sellers/retailers in the guise of legitimate product returns.

The inclusion of third-party sellers, e-commerce platforms, social media networks and standalone websites – all of which are represented by the "E-Commerce" node – simplifies what can be a very nuanced virtual network of actors and entities involved in the facilitation of transnational product counterfeiting schemes. Omitted here are payment processors, which collect and hold a substantial amount of data bout schemes, actors and nodes. Counterfeiting networks readily utilize the anonymity afforded by internet intermediaries to hide their identities when necessary, yet this is not always a necessity. The more intermediaries that can be placed between the counterfeiter and the consumer the more difficult it is to identify the roles of illicit actors without deep exploration into a particular scheme. Even when product counterfeiting networks are identified and exposed, it can be difficult to completely dismantle their virtual networks because of the ease at which components can be replaced (e.g., counterfeiters can quickly create large numbers of websites or product listings using automated 'bots'), reluctance on the part of e-commerce platforms or social media networks to act, or a lack of legal jurisdiction to engage enforcement activities.

Crime Script for Specialized Counterfeits

While a general model of consumer complicity mirrors that shown in Figure 5.1b – complicit consumers shop for counterfeit goods in the same ways, and via similar channels, as do legitimate consumers – certain complicit consumers operate via a different method. There is a small cadre of complicit consumers who are much more discerning about the types of products they desire. Recent research by the A-CAPP Center has identified the important trust-building role of certain complicit consumers who assist other consumers with obtaining high-quality, and at times customized, high-end counterfeit products (Kennedy, 2021). Certain complicit consumers are focused on obtaining specialty goods and utilize the internet and social media networks to locate counterfeiters and specify their desires. It must be noted that this is simply the online version of what has been happening offline for decades – consumers have for a long time been able to visit certain warehouse districts in high-production countries and specify the type of counterfeits they want made. However, the internet has allowed many more consumers access to the specialized services of high-end product counterfeiting networks, a practice that is challenging consumers' desire to customize their products and brands' desire to ensure their intellectual property rights are not being violated (TFL, 2021). Examples of consumers search for specialized counterfeits are show in Figures 5.1c and d, which were extracted directly from social media platforms and highlight the types of discussions that go on within this niche market for counterfeits.

Chapter 2: Illicit Trade in Counterfeit Products

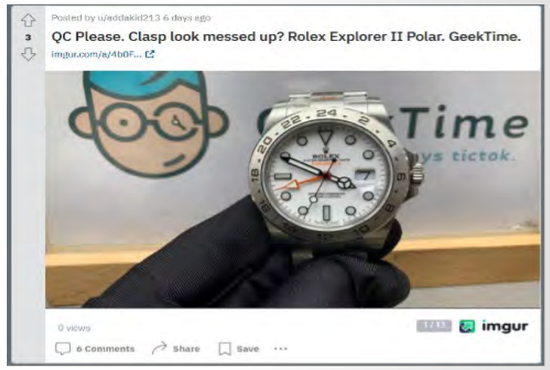

Figure 5.1c
Source: (Reddit, 2022)

In Figure 5.1c above a consumer is reaching out to an online community seeking feedback about the counterfeit watch they ordered from a counterfeiter. The phrase "QC please" means that the consumer is asking the discussion board to verify the quality of the counterfeit item. The image shared with the community is not the product the customer received, but rather is an image sent by the manufacturer prior to product shipment. This is something unique to the specialized counterfeit market – the sharing of product images and specifications as a way to verify that a consumer is satisfied with the product before it is shipped, which prevents items from being returned if the consumer is unsatisfied. The specialized community also shares information that allows other consumers to make more informed counterfeit purchase decisions, including reviews of products (as shown in Figure 5.1d), verified seller names and contact information, information about shipping costs and lead times, and descriptions of issues or challenges faced in dealing with sellers or their representatives.

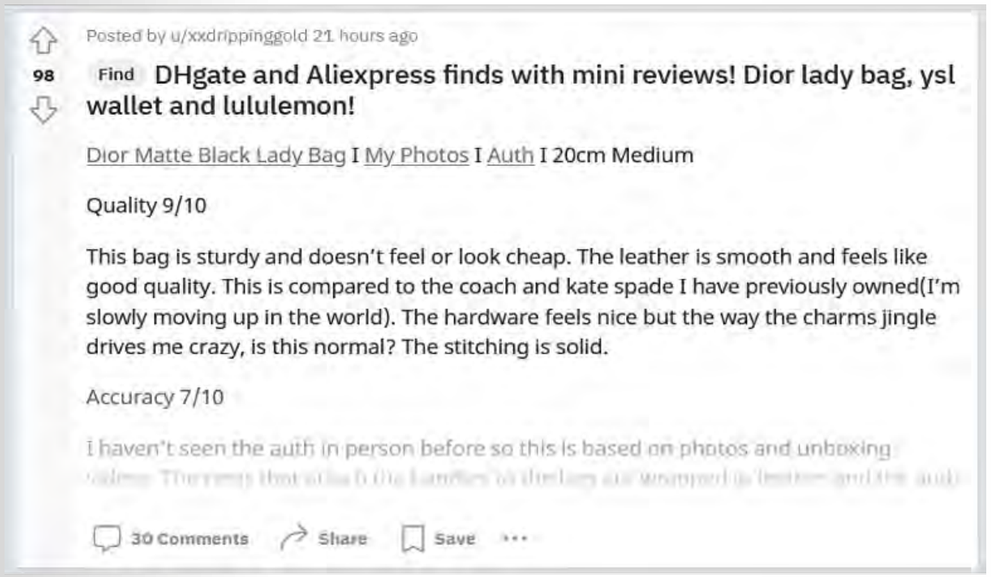

Figure 5.1d
Source: (Reddit, 2022)

A key feature of the specialized counterfeiting market, and the production networks that support this market, is the role that networks play in the verification of sellers and determination of product quality. The consumers who patronize these forums and search for specialized counterfeits are intentionally seeking out a higher quality good that generally comes direct from the producer. These producers establish their 'legitimacy' in the same ways that genuine manufacturers establish their brand value, through high-quality advertisements, branding and logos, direct marketing services, and customer loyalty programs. The manufacturers involved in these networks have a vested interest in meeting their clients' needs and they charge a premium for their products. In some cases, counterfeits of luxury watches and handbags can sell for several thousand dollars, a price point that puts them out of reach for many complicit consumers, yet one that is still well below the actual retail price of the genuine good. The model displayed in Figure 5.1e highlights the importance of information exchange and the verification of minute details prior to the customer receiving a counterfeit

from the manufacturer. What is not easy to show in this model is the important role of information feedback, both to the manufacturer and to the complicit community, and product expertise to one's standing within the community.

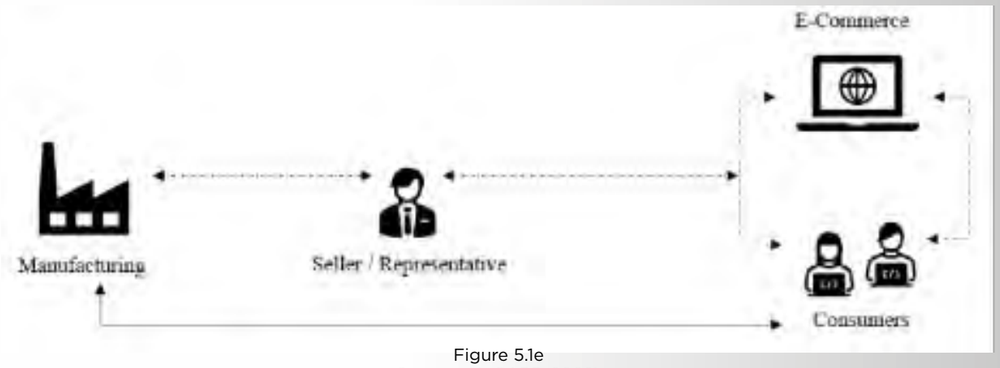

Figure 5.1e
Source: (A-CAPP, 2022)

The dotted lines shown in Figure 5.1e represent the flow of information between nodes within this general network, while the solid line represents the flow of goods. It is possible that goods will also pass through a distribution intermediary, such as the manufacturer's representative – this may be particularly true when goods are returned by an unsatisfied consumer. Information about the types of counterfeit goods the manufacturer is able to produce flow from the manufacturer to the seller, or manufacturer's representative. The seller/representative is active on social media platforms and discussion forums when discerning consumers actively look for counterfeit goods. These sellers have ongoing conversations with consumers, advertising products and soliciting feedback about the types of goods that can be produced, product features and at times customization options that may be available. Consumers will have discussions, sometimes open and at times behind closed doors, regarding the types of goods available, product quality, reputable sellers, and issues experienced in the past. Within these consumer groups certain individuals, due to their level of

knowledge and prior experiences, become trusted experts to whom group members will turn when they need in-depth knowledge or advice. It seems as though for certain complicit consumers the experience of purchasing counterfeit goods and engaging in forums around these products affords them not only the luxury goods they desire, but also a level of social standing and respectability. As such, anti-counterfeiting messaging and consumer awareness campaigns that focus upon the negative aspects of counterfeit goods may fail to reach/influence these consumers as their complicity is reinforced through the positive feedback they receive from within their networks.

5.2 A Shift to Small Parcels

Over the past five years the rapidly growing trend of counterfeiters using small parcel shipments to move their goods to consumers has made it increasingly difficult to seize counterfeit products being shipped around the globe. As seen in Figure 5.2a, the number of illicit goods seized through the mail system spiked substantially in 2017 and while these seizures have declined since that time, they remain higher than the total seizures in 2016. When it comes to attempts to seize counterfeit drugs being shipped into the United States through the postal system, the FDA's efforts at international mail facilities (IMFs) highlights the vast resource challenges faced by law enforcement and customs agencies. In 2019, the FDA stated in a report that it hopes to be able to screen up to 100,000 packages per year of the nearly 300 million items shipped through IMFs in the U.S. (FDA, 2020). While not all of all of the items moving through IMFs contain FDA regulated goods, the agency estimates that up to 9%, or nearly 25 million packages, contain drugs of some type. Additionally, the U.S. Chamber of Commerce recently reported that small parcel shipments handled by the U.S. Postal Service increased

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232% between 2013 and 2017, and that of the 500 million packages handled in 2017 safety information was only available on 36% of items (Brill, 2018). The U.S. Chamber of Commerce has called on the federal government to require more detailed shipping data for packages coming into the U.S. via the postal system, and for an increase in the resources given to the postal service and U.S. CBP to combat the rise of counterfeit shipments through the mail. U.S. CBP seizure numbers for 2021, as reported on the U.S. CBP dashboard , indicate a preponderance of seized goods have been shipped through express consignment, and nearly half of the more than 20,000 seizures in 2021 originated from China. (CBP, 2022)

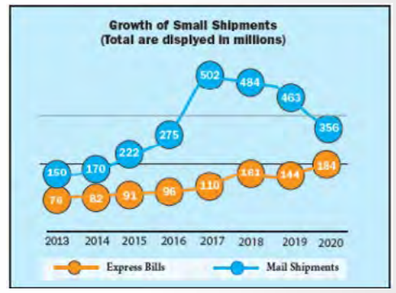

Figure 5.2A
Source: (cpb.gov, 2022)

In Europe, an OECD and European Observatory on Infringers of Intellectual Property Rights report found that more than three-quarters of the counterfeit goods seized within the EU were small parcels, many of which were sent through the postal system (EUIPO, 2018). It has also been noted that as the number of seizures of small parcel shipments of counterfeit goods has been increasing, the value of the goods seized has decreased. Relative to other shipping methods, seizures of small parcels lead to less overall value being extracted from the counterfeit goods market. While this volume to dollar value tradeoff appears on its face to make sense, it begs the question of how many small parcels are not being seized. If counterfeiters

are shifting more of their efforts towards express consignments and postal mailings that take products directly from their warehouses and production facilities to customers' doors, there may need to be an exponential increase in the volume of seizures before dollar values reach levels similar to seizures made through cargo shipments and air freight prior to the proliferation of small parcels.

One of the reasons that small parcels are such an attractive avenue for counterfeiters, besides the easy ability to hide items as innocuous products that look just like millions of other parcels, is favorable shipping rates. Manufacturers, distributors and entities shipping products out of China, the largest source economy for counterfeit goods, into other countries had long enjoyed substantially reduced global postage rates. This is because they were considered a developing country and therefore given lower postage rates, and in many cases it was cheaper for a Chinese manufacturer to ship a product from China to a U.S. consumer than it was for that same U.S. consumer to ship an item to a neighboring state (McAllister, 2021). Yet, recent changes in postal rates, including the removal of developing nation status for China and a desire by the U.S. Postal Service to stem financial losses has led to recent changes that, according to some, will likely make bulk shipping a more attractive offer. It has been noted that drop shippers will no longer enjoy the very favorable shipping rates they once did and that they may benefit from utilizing bulk shipments when possible (Wu).

Despite the rate changes that are coming to the international postal arena is it unlikely that the trend toward direct-to-consumer small parcel shipping for counterfeit goods will abate. This is because the growth of e-commerce and social commerce align with a model that is built upon leveraging the speed and efficiency of shipping unique mixes of products directly to

consumers in the most expeditious and cost-effective manner possible. For counterfeiters seeking to service the largest markets for counterfeit goods (i.e., the United States, Europe and the Middle East) the option to relocate manufacturing, warehousing and distribution to these regions does not exist. Product counterfeiting will continue to be a global crime that makes use of the legitimate small parcels systems that exist whether the counterfeit goods are coming from China, Hong Kong, Taiwan, or somewhere else in the world. In fact, should the prime source locations for counterfeit goods shift to other developing nations, such as those in Africa or South America, the costs for shipping products through the postal system may once again be incredibly favorable for counterfeiters. Should international postal costs continue to increase for all shippers, counterfeiters may either absorb these costs or pass some, or all, of them along to consumers.

What this means for counterfeiting networks and anti-counterfeiting efforts is that IMFs will become ever more important nodes in the transnational networks that link counterfeiters to consumers. Additionally, express consignment facilities and services that offer door-to-door service must be included as potentially more important nodes within counterfeiters' networks and efforts must be taken to build collaborative approaches to identifying and seizing illicit goods moving through these facilities, as well as closing off opportunities for express shippers to be used by counterfeiters as part of their criminal schemes.

6. Actors

Research into product counterfeiting schemes has not identified the regular or distinguishable presence of transnational organized crime groups or criminal syndicates. Therefore, unlike illicit trade schemes such

as drug trafficking, arms trafficking or organized crime groups, product counterfeiting does not have a list or even a category of known bad actor groups to be identified. Accordingly, there are no territorial boundaries or "turf" that can be sued to demarcate the areas of counterfeit trade that are controlled by one group or another. Of all forms of illicit trade it seems as if product counterfeiting is the most entrepreneurial, as well as the most agnostic as individuals and organizations – both legitimate and criminal – have the opportunities to initiate and profit from counterfeiting schemes.

As with any global illicit trade scheme there are a number of essential actors involved in product counterfeiting networks, each of whom plays a key role in ensuring products flow from the point of manufacture to the point of sale, and in many cases on to consumers. Examining the extant data on identified and dismantled product counterfeiting schemes, several important categories of actors emerge. While not every scheme will involve an actor from every category, most schemes require the presence of the following individuals or entities: a counterfeit producer, a distributor or middleman, transportation intermediaries, the advertisers and promoters of counterfeit goods, sellers and consumers. As discussed below, some of these actors are unwitting accomplices who are taken advantage of by counterfeiters as part of larger criminal schemes. Accordingly, it is essential to note the instances where actors are complicit in illicit activities and when they are victimized by counterfeiters. It is also important to note that it may be relatively easy for certain complicit actors to feign ignorance and act as a victim, when the reality of their involvement in a counterfeiting scheme indicates otherwise.

6.1 Producers/Manufacturers

Product counterfeiting schemes originate with the production of infringing

goods. These goods are then sent throughout global networks of distributors, warehousing and sellers, with varying having differing levels of sophistication. The ultimate end of these networks is the delivery of a product to a consumer who has knowingly or unwittingly purchased the counterfeit product. Product counterfeiting would not be the threat to global health and safety that it is without the wide range of producers of counterfeit goods that operate on a daily basis across the world. The individuals and organizations that manufacture counterfeit products and those that produce materials or parts designed specifically to be used in the manufacture of counterfeit products, typically seek to maximize their financial returns by using substandard and at times potentially hazardous components.

While the producers of counterfeit products are located all across the globe and anyone who has the ability to create illicit versions of a trademark can be a producer of counterfeit goods, most counterfeits that reach the U.S. and EU come from a small handful of countries. Records on customs seizures has shown that for decades the largest source economy for counterfeit goods has been China, with Hong Kong recently showing an increased role, yet it could be argued that the goods 'originating' in Hong Kong have actually come from Chinese production facilities. While the proportion of seized counterfeit goods coming out of China has been decreasing in recent years, the majority of counterfeits that come into the U.S. and Europe still originate from this country. When seizures from Hong Kong are combined with those coming from China, they account for more than three out of every four counterfeits shipped into the U.S.

China, in particular, and southeast Asia in general, have been hot spots for the manufacture of counterfeit goods because of a large national push for

manufacturing growth, a relatively weak stance on the enforcement of IP rights, substantial investments by western corporations that have brought technology and intellectual property into the country for the sole purpose of producing products for export around the globe, and a large low-wage labor force. These features are not unique to China, and the coming decades will see them coalesce in other countries around the globe. As such, it is important to explore the producers of counterfeit goods from an objective perspective that seeks to understand the factors the facilitate their role in product counterfeiting schemes, rather than generalizing their activities to country-specific factors or processes. While prior work looking to identify the various roles and types of counterfeiters strayed far from established legal boundaries by considering acts that did not violate trademark rights to be counterfeiting , we only consider those entities that are involved with actual trademark rights infringements (Spink, 2013).

Irrespective of where they are located, the producers of counterfeit goods need access to the physical infrastructures necessary to support their activities, labor to work in the factories and produce goods, capital to finance activities, and a legitimate front or local support to assist with moving goods into the other elements of the network. Because the production of counterfeit goods looks highly similar to any other form of legitimate manufacturing, some product counterfeiting networks operate in plain sight and employ people who genuinely believe they are working for a legitimate organization. The production of counterfeits requires a mix of deception and guile and connections to legitimate entities in order to be successful. The degree to which schemes utilize deception, corruption, bribes, or coercive means will vary, yet unlike other forms of illicit trade more aggressive and violent approaches are not usually seen in product counterfeiting schemes.

There is also wide variation in the sophistication of counterfeit manufacturing and production operations, as well as counterfeiters' abilities to reproduce accurate versions of genuine goods. Some products do not require sophisticated production equipment and multiple production lines. Ironically, some of the most intricate and controlled manufacturing processes used to produce legitimate products can be reduced to crude, ad hoc systems when producing counterfeits. Figures 6.1a and 6.1b show examples of this in the form of photographic evidence of production facilities used to produce counterfeit pharmaceuticals and counterfeit cigarettes. While not every counterfeiting operation uses such crude setups, many do. This is contrasted by the situation found with certain product counterfeiting schemes centering on footwear and automotive supplies. Some of these schemes employ the actual production facilities, materials and workers used to make the legitimate products, while others will utilize obsolete equipment and makeshift production lines as the illegitimate products require multiple production steps.

Figure 6.1a
Source: (pbs.org, 2013)

Figure 6.1b
Source: (TellerReport.com, 2020)

Connections to legitimate intermediaries is crucial for the producers of counterfeit products because counterfeiting networks do not operate illicit global distribution systems – that is to say, such systems have not yet been identified. Many of the producers of counterfeit products rely upon legitimate transportation intermediaries, as well as networks of distributors, logistics partners and wholesalers to move their goods around the world. Using falsified documents and hiding the true nature of their goods, the product counterfeiters attempt to intermingle their illicit goods within the legitimate supply stream in ways that mask the illegal nature of their goods. Beyond transportation intermediaries, the producers of counterfeit products will often partner with social media influencers, affiliate marketers, drop shippers, advertisers and sellers who serve as their connection to consumers.

6.2 Distributors/Wholesalers

Sitting between the manufacturers of counterfeit goods and the consumers

who receive these goods are two groups of actors: distributors and transportation intermediaries, the latter being discussed in the following sub-section. The distributors or wholesalers of counterfeit goods operate like any legitimate distributor or wholesaler, taking large volumes of product in and distributing it out in smaller quantities to a large number of sellers. These individuals are not the face of a counterfeiting operation nor are the typically found on e-commerce websites or in physical retail space selling counterfeit goods. Rather, they serve a crucial function of providing illicit goods to retailers who might otherwise be at a buying disadvantage with the manufacturers of counterfeit goods. Accordingly, they have a vital role within the counterfeit goods marketplace, enabling many independent counterfeit goods retailers to operate.

Distributors/wholesalers tend to be generalists, providing a wide range of products to sellers and varying their inventories as demands dictate. Distributors operate in various locations, sometimes stationing themselves within the countries wherein they distribute their goods, and at other times remaining in foreign countries, shipping goods to sellers via international shippers. Finding these distributors is in some cases quite difficult, yet in other instances these individuals operate openly in the market. For example, developing personal relationships with a distributor/wholesaler operating out of a physical marketplace may require the seller to make multiple purchases and establish themselves as a trusted partner. Alternatively, someone looking to sell counterfeit goods through either a physical or virtual storefront can visit a website, such as DHGate.com and search for any number of counterfeit goods that can be shipped in bulk to the seller. As show in Figure 6.2a, a seller looking to obtain large quantities of a counterfeit purse can quickly connect to a distribution partner through the use of the DHGate.com website. This particular seller is offering up to 1187 items at a substantially

discounted price, and the product listing offers multiple versions of other handbags that can be purchased as well. As seen in Figure 6.2a, there have been 101 transactions recorded for this particular product.

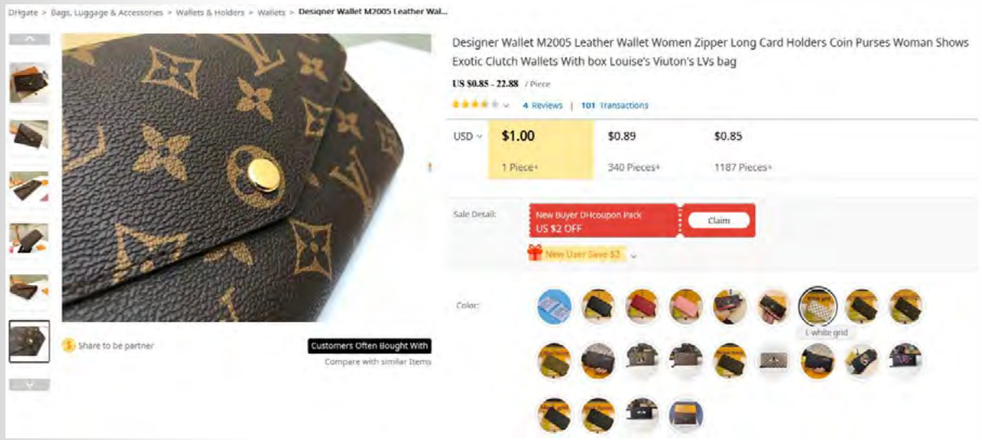

Figure 6.2a
Source: (DHGate, 2022)

Distributors like the one highlighted in Figure 6.2a advertise their products online and in person in ways that appeal to sellers. For instance, some sellers will discuss how their products come with accurate packaging and labels, or product serialization numbers and certificates of authenticity. Others will offer repeat customer discounts seeking to build customer loyalty and establish a solid base of sellers. The photos shown on these sites are intended to showcase the product's quality and give purchasers an idea of what they can expect to receive when they get the product. Many of the distributors who operate online do so from the countries wherein the counterfeit goods offered for sale are being produced, and in some cases the distributors are the manufacturers themselves. Within counterfeiting networks, distributors form a connection point that links producers to the sellers that interact most directly with consumers. However, sometimes distributors also take advantage of the opportunity to sell directly to

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consumers, thereby increasing their role and engagement in product counterfeiting schemes.

Anti-counterfeiting activities targeting the distributors of counterfeit products are an efficient way to have a broad impact on transnational product counterfeiting schemes. Showcasing the size and scale of many large counterfeit goods distribution schemes, a 2018 Department of Homeland Security operation in New York City led to the dismantling of a large wholesale/distribution operation that seized goods valued at more than USD 450 million (Santia, 2018). A total of 33 people were arrested as part of this operation, all of whom were involved in some aspect of the network that connected retailer sellers and distributors in New York and California to manufacturers in China. The network at the center of this scheme was responsible for sourcing counterfeit goods, importing them into the U.S., building networks of distributors and sellers, and shipping goods from warehouses in New York to cities across the country. Other times, foreign counterfeiters will use individuals in other countries as contracted distributors to package and ship the products customers have ordered from a website in an attempt to mask the origin of the illicit goods. For example, in 2012 a Puerto Rican national was convicted in U.S. Federal court for his role in a global pharmaceutical counterfeiting scheme (ICE, 2012). This individual was contracted by the manufacturer of counterfeit pharmaceuticals, a Chinese national operating out of New Zealand, to repackage and ship counterfeit pills to American consumers that had purchased the illicit drugs from an internet website. According to the U.S. government, the Puerto Rican man was just one of many contracted distributors located around the globe working specifically within this particular product counterfeiting network.

6.3 Transportation intermediaries

One of the most important groups of actors involved in product counterfeiting schemes are transportation intermediaries – individuals and organizations/corporations involved in facilitating the shipment of goods from one source to another. In the vast majority of cases these intermediaries operate within the law and are unwitting partners for counterfeiters. However, in other instances transportation intermediaries have turned a blind eye to suspicious or identifiably illicit activity or have become complicit in transnational counterfeiting schemes. As with legitimate products, intermediaries provide the means to move goods from their source of origin into the hands of consumers; so irrespective of their own motivations, intermediaries will always be a key component of product counterfeiting schemes.

While brand owners and other parties have attempted to bring legal actions against intermediaries that have played a key role in counterfeiting schemes and have even acted as willful, if not knowing, agents of counterfeiters, these actions have generally failed (Taylor, 2019; Levy, 2019). The ability of transportation intermediaries to escape liability due to the fact that they act only as "middlemen" has tested the legal theory of contributory trademark infringement (Bikoff, 2016). Accused intermediaries point the finger at shippers and the receivers of counterfeit goods, arguing that they cannot be expected to know which products are genuine and which are illicit. Even freight forwarders have been able to claim ignorance of the illicit activities they support, which has allowed them to escape civil and criminal liability (Securing Industry, 2022).

Given the breadth and variety of transnational product counterfeiting

schemes and the networks that support these schemes it is unsurprising to note that seizures of counterfeit goods occurs in nearly every category of product shipper. U.S. CBP annual IPR seizure reports highlight trends in the use of various shipping methods, with seized goods coming into the U.S. via ocean going cargo shipping containers, air freight, via overland boarders through commercial trucks, and via international post. The prevalence of one means of transportation over another reflects occasional shifts in the methods counterfeiting networks use to move their goods across the globe. External (non-intellectual property rights protection) factors and anti-counterfeiting efforts both affect how counterfeiting networks will make use of certain intermediaries. For example, counterfeiters seeking to move a large volume of finished goods from a source economy to a distribution destination would generally favor ocean going cargo containers. Yet, the long shipping times and frequency of customs inspections (due to the fact that authorities tend to know that illicit trade networks of all ilk utilize this shipping method) might be enough to offset the relatively low costs associated with shipping via cargo ships. Alternatively, the rapid shipping times offered by air freight tend to be offset by high costs and lower shipping volumes. While direct to consumer postal shipments are low cost and relatively speedy, sending products one at a time is a labor intensive and highly inefficient process for many sophisticated networks.

As the global economy continues to grow and the impacts of COVID-19 linger within the supply chain, it is likely the case that temporary low-cost shipping alternatives have sprung up, providing at least a short-term opportunity for counterfeiters to effectively bring their goods to consumers. Creating a regulatory environment that sees transportation intermediaries adopt a collaborative regulatory structure – in partnership with law enforcement, customs agencies, etc. – is an important step toward setting

and enforcing clear goals for these actors (Kennedy, 2017). Embracing Know Your Customer (KYC) processes will lead to more meaningful anti-counterfeiting engagements on the part of transportation intermediaries , as well as provide essential data and information to anti-counterfeiting partners and law enforcement bodies (Kennedy, 2015).

6.4 Advertisers and promoters

The rise of social commerce and the growing influence of social media has created new opportunities for the growth of product counterfeiting networks. Just as social media influencers have become fixtures of social media networks, so to have they become important actors within product counterfeiting networks. Social media platforms have been growing in popularity over the past decade and many people now rely upon social media to maintain connections and relationships with family and friends, to get news about the world around them, and importantly to shop for products. Figure 6.4a gives a picture of the use of social media platforms by people all around the globe. Each of these has counterfeit products being sold on the platform, yet the nature of the schemes going on within each of these platforms varies.

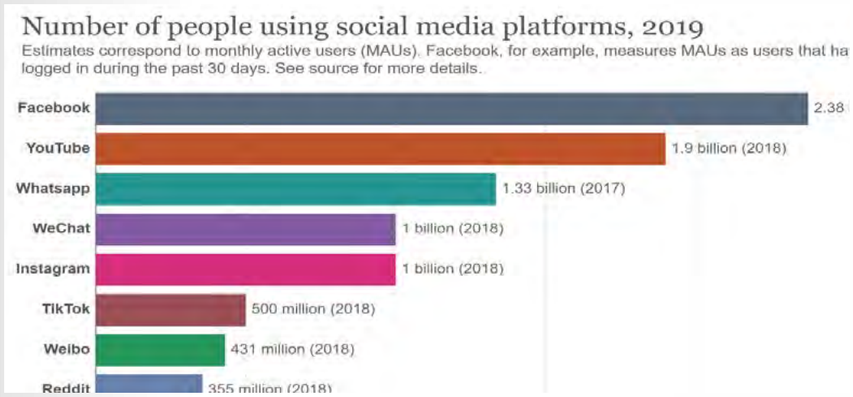

Figure 6.4a
Source: (ourworldindata.org, 2020)

The largest social media platform, Facebook, has a much different problem from platforms like YouTube, Instagram, TikTok and Reddit. Because Facebook operates a third-party marketplace (Facebook Marketplace) there is less of a role for influencers or promoters as compared to YouTube and other platforms that are built around allowing users to share personal content directly with others on the platform, be they a part of the individual's network or not. The Instagram influencers who have been the key to cultural trends, challenges and hashtags have also provided a new way for counterfeiters to engage with consumers. Some influencers have become the promoters and advertisers, in some cases even the evaluators and critics, of counterfeit goods, and many are working at the behest of product counterfeiters.

While the advertisers and promoters of counterfeit goods are essential components of global counterfeiting networks, it remains to be seen what actual liability they have for the promotion of these illicit goods. Because they may not actually be selling or manufacturing counterfeit products, in many instances these individuals are able to escape legal liability. However, in recent years several e-commerce platforms have been effective in brining lawsuits against these individuals. Despite the lack of clarity regarding their criminal culpability, the advertisers and promotors of counterfeit goods are essential to the growth of product counterfeiting networks. These individuals have the important role of changing consumers' perceptions of counterfeit goods and providing the information necessary to connect consumers to sellers and rationalize their behavior.

6.5 Sellers

As with all other forms of illicit trade, product counterfeiting schemes

would not succeed but for the work of sellers, the individuals and entities that facilitate the transactions that occur between consumers and the manufacturers or distributors of counterfeits. In some cases, the sellers of counterfeit items are legitimate entities that are unaware of the nature of the goods they are selling. However, in most cases the sellers of counterfeit goods are well aware of the illicit nature of the products they offer to consumers. Sellers are a highly visible target that is a key target of anti-counterfeiting activities, surpassed in their culpability only by the manufacturers of these illicit goods. At times the sellers of counterfeit products are the manufacturers of these items, other times they are entrepreneurial retailers who buy counterfeits in wholesale amounts and then resell the items to consumers.

The sellers of counterfeit goods are an essential component of transnational counterfeiting networks, even if the seller themselves does not view their activities as a central to global criminal activities. The individuals who buy large quantities of counterfeit items from online vendors selling on e-commerce platforms are the connecting link to manufacturers and distributors located throughout the globe. As the global shipping environment has changed and e-commerce has proliferated, many sellers have shed the need to warehouse large quantities of products. The ability to take advantage of drop shipping or to serve as an intermediary acting as a sort of affiliate marketer for counterfeiters has freed many sellers from having to touch any counterfeit goods. Financial transactions are conducted online, and products are sent from the manufacturers or some other distribution party directly to consumers. Sellers simply advertise products and facilitate the transaction, in addition to handling customer issues and in some cases promoting products to consumers. The internet has also freed sellers from the need to be physically present within the jurisdictions where

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they sell their goods and has allowed many sellers to efficiently hide their identities.

Both brand owners and e-commerce platforms have recently taken civil action against individuals and organizations selling counterfeit products online (Long, 2021). In fact, over the past five years e-commerce platforms have been actively engaged in bring lawsuits against individuals that have used their platforms to sell infringing goods (Rao, 2016). The sellers targeted by these lawsuits have been located all across the globe and the internet has allowed them to reach a global consumer base. Obviously, this presents legal issues and constrains the options available to brand owners, platforms and law enforcement when it comes down to enforcing a civil or criminal judgement. The physical borders that create jurisdictional asymmetries are not present in the virtual world where many counterfeit goods are bought and sold.

Yet, while much of the brand protection world is focused on the growing threat posed by e-commerce there are many counterfeit sellers operating in physical places who serve a persistent reminder of the thriving trade of person-to-person counterfeit sales. For example, in early December of 2021 federal law enforcement authorities seized more than 13,000 counterfeit items estimated to be valued at more than USD 30 million from shipments coming in to California seaports (Powell, 2021). This seizure follows on six months prior that netted counterfeits valued at more than USD 12 million at the port of Long Beach, California and included fake handbags, apparel, shoes, and prescription medication (Pinho, 2021). The sellers of counterfeit goods have been arrested while operating retail stores within legitimate shopping centers as well as for operating both online and offline sales operations as a way to diversify their illicit profit making schemes (Dartman,

2020; CNN, 2022).

6.6 Consumers

Product counterfeiting schemes would not exist without consumers. The products manufactured by producers, shipped by distributors and advertised by promoters and influencers are ultimately destined for consumers around the globe. It is consumer demand for legitimate (as well as illegitimate) goods that creates the financial incentives that motivate product counterfeiters. Most consumers who purchase a counterfeit do so because they have been deceived into buying an illicit product. Some other consumers, while not intentionally seeking a fake product, ignore clear warning signs that the goods they are buying are illicit. Yet other consumers are well aware of their activities as they are actively seeking out counterfeit goods. This latter group of consumers are labeled 'complicit consumers'. Consumer complicity is a growing issue, particularly as social commerce has proliferated in recent years.

While most consumers do not go out actively searching for counterfeit goods, consumers are included here as a group specifically because of their prime importance to counterfeiting schemes. Product counterfeiters do not engage in their schemes with the goal of targeting a company to impose financial harm or impact their market share. Brands are simply a tool used by counterfeiters to entice consumers to purchase a product. Accordingly, any plan to dismantle a product counterfeiting scheme has the option to include a focus on consumers. In fact, there are a number of consumer-focused messaging campaigns aimed at consumers of all ages that attempt to alert potential victims to the many ills of product counterfeiting.

There is no shortage of consumer-focused campaigns designed to both raise awareness of counterfeit goods and to attack counterfeiting networks by removing the consumer (and their money) from the counterfeiting network. Campaigns like Underwriters Laboratories Be Safe Buy Real initiative, the U.S. Patent and Trademark Office's Go for Real campaign, and the U.S. government's StopFakes.gov website are all current consumer-focused efforts (Underwriters Laboratories; USPTO; StopFakes). Each of these initiatives inform consumers about how to protect themselves from becoming victims of counterfeiting schemes, and address how to report suspicious products to the proper authorities. These campaigns also try to inform consumers about the dangers of counterfeit goods and provide information that is meant to combat some of the messaging consumers may be hearing from the promoters of counterfeit goods.

6.7 Brand owners

Brand owners are discussed as actors in product counterfeiting schemes due to the role they play in trying to prevent the spread of this crime and mitigate their exposure to counterfeiters. While some brand owners have been found to have violated other brand's intellectual property rights, this chapter focuses upon the anti-counterfeiting efforts of brand owners. These efforts are addressed because they help to shape the product counterfeiting landscape by forcing counterfeiters to change and adapt their strategies and practices. Brand owners can have a substantial influence on the function and form of global product counterfeiting schemes through their own independent efforts, or in collaboration with other stakeholders, yet in all cases they are important antagonists to the counterfeiters.

Intellectual property rights laws give brand owners the ability to seek civil

and criminal remedies against individuals and entities that violate their trademark rights. This can be done on their own, yet some of the most effective efforts have involved collaboration with other brand owners, law enforcement, third-party service providers, and lately with e-commerce and social media platforms. There are a number of active associations that support brand owner-led anti-counterfeiting efforts, including the International Anti-Counterfeiting Coalition (IACC), the International Trademark Association (INTA), the Anti-Counterfeiting Group (ACG), and the Pharmaceutical Security Institute (PSI) to name a few.

Because counterfeiters tend to be generalists and unconcerned with targeting a specific brand, collaborative efforts can be quite effective in reducing a specific brand's anti-counterfeiting costs. Additionally, collaborative engagements offer the opportunity to share data and information about counterfeiting activity in ways that support action and targeted efforts to disrupt product counterfeiting schemes. Many brands realize that while their main goal is to shift the counterfeiters focus away from them (through either stopping the illegal activity or dissuading the counterfeiters from focusing upon their particular brand), everyone benefits when counterfeiting networks are dismantled.

7. Countermeasures

Product counterfeiting networks span the globe and take on various forms. Some may be localized to particular areas, focusing upon a particular type of good and a specific brand that is favored by consumers in the area. Others may be tied to transnational organized crime groups and involve network actors located across the globe, leveraging global shipping intermediaries and e-commerce platforms to push their illicit goods to consumers. Many

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other fall somewhere in between these two extremes. Irrespective of what a product counterfeiting network looks like or what specific components go into that network, the goal of law enforcement and brand owners it the dismantling of the network and the disruption of the infringing activity.

The driving force behind why brand owners select the specific strategies they employ or how they choose to engage in anti-counterfeiting activities varies by the brand's perspective on why anti-counterfeiting activities are important. For brands in the pharmaceutical and health and beauty industries the motivation to stop counterfeiters is tied to the desire to prevent any form of patient harm. Counterfeits deceive consumers and other intermediaries, and the substandard and unregulated nature of counterfeit goods creates an automatic harm for people and may further complicate their compromised state. For luxury brands an anti-counterfeiting strategy may represent an investment in image maintenance and the protection of the value of the brand as counterfeits diminish the reputation of the firm and can dissuade people from purchasing authentic products, thereby negatively affecting the bottom line. For other brands, the goal is to protect consumers' trust in the marketplace and their products, and to ensure that their brand name is not used to support an activity that may be part of a larger criminal enterprise. No matter what the goal of an anti-counterfeiting strategy brands, law enforcement agencies, customs agencies and other stakeholders can categorize their activities as either proactive or responsive.

7.1 Proactive enforcement

Proactive enforcement refers to anti-counterfeiting activities that are designed to prevent the development or maturation of product counterfeiting schemes. This type of approach is forward thinking,

representing a search for factors or conditions that can be identified as the foundations of a product counterfeiting network or scheme. Once identified, proactive efforts attempt to mitigate or eliminate the conditions that support the growth/development of the scheme. One of the more basic, yet incredibly essential, proactive strategies is trademark registration.

Another strategy that spans both proactive and response approaches to enforcement is collaboration with online marketplaces and social media platforms (ACAPP). There are an increasing number of engagement avenues that facilitate brand protection partnerships between rights holders and e-commerce platforms. Many e-commerce platforms are realizing, or being forced to acknowledge, the value of creating opportunities to proactively remove or block listings of infringing goods, as well as to work with brands to quickly address identified counterfeits on their platforms. While some e-commerce platforms are more advanced and forthcoming than others, the general sentiment within the brand protection community is that all platforms can be doing more to protect consumers and brands.
Other strategies that span the proactive and responsive categories involve the close interaction of brand protection service providers, which are companies that provide specialized products such as web scrapping, test purchases, product authentication, track and trace solutions, and other anti-counterfeiting activities to brands. This group of actors was not mentioned in section 6, yet they are an important support of rights holders' efforts to combat product counterfeiters. Many times the technological advancements that signal innovate anti-counterfeiting undertakings come from service providers, which have a financial interest in developing more robust, effective and efficient anti-counterfeiting solutions for their clients.

One of the challenges of proactive anti-counterfeiting efforts is that the

metrics used to evaluate their success may be challenging to identify. Traditionally, success in anti-counterfeiting activities has been measured through a quantification of the periodic number of seizures, value of seized goods, counterfeiters arrested or convicted, lawsuits initiated and won, the size of financial judgements granted by the courts, or the number of operations that have been dismantled or shut down. In short, anti-counterfeiting success tends to be measured using metrics that align well with responsive activities – those that occur once a counterfeiting problem has been detected.

Shifting to proactive approaches, should they be successful, will also shift the way in which existing metrics are evaluated. For example, major global customs organizations tend to evaluate their year-over-year effectiveness through tracking seizure numbers. As the number of seizures increases these agencies can claim that they have been more effective in stopping counterfeit products from reaching consumers. Relatedly, when special operations or joint task forces are created to address specific counterfeiting issues, the success of these operations is generally judged by the amount of seizures or the value of the seizures related to the operation. Traditional perspectives on effective anti-counterfeiting activities follow a sort of stock market perspective regarding outcome metrics: they should continually 'walk up'. However, when proactive approaches become truly effective the metrics will, and should be expected to, walk down.

Effectively implementing proactive anti-counterfeiting strategies means that there will be fewer counterfeit products in the marketplace to detect and seize. If transportation networks are disrupted and goods are not able to reach consumers, physical markets or e-commerce marketplaces then there will be substantial declines in the number of seizures made by customs

organizations. There will be many fewer reports of counterfeit goods on social media platforms and fewer consumers will report being harmed by counterfeit goods. Unless there is a shift in the assessment of success that aligns with a shift in nature of anti-counterfeiting strategies undertaken brand owners, law enforcement agencies and other stakeholders may miss the value of being proactive. Yet, the reality of brand protection is that dismantling transnational product counterfeiting networks requires a mix of both proactive and responsive approaches, something that may make it even more difficult to identify when success has been achieved.

7.2 Responsive solutions

Responsive solutions to product counterfeiting threats are also referred to as reactive or reactionary approaches because they begin after a counterfeiting problem has been detected. However, this does not mean that brand owners, law enforcement or other actors take a 'wait-and-see' approach to anti-counterfeiting interventions. Rather, it reflects the fact that in certain cases the information needed to take action against product counterfeiters is not available until the scheme has already developed and products are in the marketplace. Product counterfeiters can be quite nimble and innovative, adapting and adjusting elements of their schemes in ways that are intended to keep them ahead of existing anti-counterfeiting initiatives. This means that it can sometimes be very difficult to detect schemes at a point where proactive interventions would be most effective.

Responsive strategies are more recognizable 'solutions' to counterfeiting problems as they directly address existing threats by attempting to solve a problem that exists. The goals of this approach vary by scheme and situation, yet they tend to focus on removing products from the marketplace,

disrupting on-going schemes, preventing products that have already been purchased from reaching consumers, and stopping counterfeiters from receiving funds from their illicit activities. As mentioned above, these activities provide clear markers of their outcomes, which can be tracked over time to determine when and under what conditions interventions have been successful.

With responsive anti-counterfeiting strategies, it is relatively simple to tie effort to outcome in ways that show tangible results for brand owners and other stakeholders, this is why so many brand, customs agencies, e-commerce partners and service providers use such metrics as measures of success. Scholars exploring anti-counterfeiting program metrics have argued that seizure statistics should form the core of many businesses anti-counterfeiting strategy as they effectively focus the company on taking potentially dangerous products out of the market (Rullani, 2021). Focusing upon dangerous product removal is likely to be of greater importance for those products that pose a clear risk to consumer health and safety. Such a focus leads to tangible data that can be used to evaluate the efficiency and effectiveness of an intervention and may also be useful in prompting increased actions that lead to additional seizures.

While it is true that responsive approaches tend to focus on addressing identified counterfeiting problems, should they be effective and should the right outcome metrics be selected, these strategies may spur proactive work that further mitigates counterfeiting threats. For example, a strategy that focuses upon identifying and seizing products being sold in physical markets may uncover evidence of the nature and structure of the production and distribution networks that support identified product sellers. By focusing on working upstream from sellers, anti-counterfeiting activities may be effective

in seizing additional goods from warehouses or production facilities. These later seizures will not only remove products from the distribution stream before they can reach customers and potentially disrupt emerging schemes that have yet to be identified (thereby encompassing a proactive approach), they will also generate outcomes that can be adequately measured using existing metrics.

7.3 Anti-counterfeiting operations

The structured nature of global product counterfeiting schemes means that there exist commonalities in transshipment points, production processes, marketing strategies, and seller techniques. Some of these commonalities have become the focus of global anti-counterfeiting operations that seek to disrupt counterfeiting networks and take counterfeit goods out of the marketplace. One of the most impactful global efforts to date is Operation Pangea, which was launched in 2008 with the goal of stopping dangerous health care products and counterfeit pharmaceuticals from reaching consumers. The operation is led by INTERPOL and involves more than 150 countries around the globe. Since 2008 law enforcement partners have been successful in seizing more than 105 million units of counterfeit pharmaceuticals, shutting down more than 82,000 websites selling fake medicines, and arresting more than 3,000 people involved in counterfeit pharmaceutical networks (Interpol, 2019). Operation Pangea led to some of the initial discoveries of counterfeiters' movement to small parcels shipments and it has been active in fighting the proliferation of counterfeit medicines in developing world countries. Through its efforts it has identified the presence of transnational criminal organizations and helped to identify important supply chain linkages that facilitate and support global product counterfeiting networks.

Importantly, Operation Pangea highlights the importance and effectiveness of global anti-counterfeiting partnerships. Another effort that seeks to leverage the benefits of partnerships, albeit in terms of public-private partnerships is the National Intellectual Property Rights Center (IPR Center) led e-commerce working group. Established in 2017, this working group brings together representatives from online marketplaces, payment processors, shipping companies and transportation intermediaries, and federal law enforcement agencies. The goal of the working group is to develop the processes necessary to share data and information about known counterfeiting schemes and actors so that broad action can be taken against infringers. The working group also has a goal to establish industry best practices that will help to increase oversight within e-commerce and disseminate effective anti-counterfeiting solutions.

The IPR Center's desire to bring together essential e-commerce actors likely derived from its experiences with Operation In Our Sites, which began in 2010. This Department of Homeland Security Investigations-led initiative seeks to identify criminal operations that sell counterfeit and other illicit goods online. The focus of this operation is the disruption of the flow of illicit gains generated by targeted online schemes as a way to impact both domestic and international criminal organizations. The Department of Homeland Security Investigations now partners with state and local agencies within the U.S., as well as law enforcement agencies from several European countries through the efforts of Europol. In 2018 alone, Operation In Our Sites led to the seizure of over 1.2 million domain name registrations, the seizure of more than 2.2 million unique URL links to e-commerce and social media platform advertisements, and the redirection of more than 177 million views to informational banners designed to tell consumers about the risks of certain online behavior. In the coming years the operation will be expanding

to include greater numbers of law enforcement partners, as well as private industry, associations and other relevant stakeholders.

7.4 Legislation and a global regulatory environment

The area of anti-counterfeiting activity that has been receiving the greatest amount of attention as of late is the promulgation of legislative and regulatory frameworks that seek to expand liability for product counterfeiting schemes and increase transparency within e-commerce transactions. As of the time of this publication, many countries are proposing new national legislation that seeks to regulate the sale of goods, especially counterfeit goods in the e-commerce and online environment.

CHAPTER
THREE

Illicit Firearms Trade

Marina Mancuso, Marco Dugato, Flaminia De Biase

Introduction

Firearms are dangerous goods that can be used in violent crime or exacerbate on-going national or international conflicts by facilitating the escalation from political disputes to actual violence. Given the deadly impact of firearms, the illicit trafficking of firearms (ITF) poses a severe threat to the security of individuals and communities. For this reason, combating ITF has been on the international agenda from many years (UN 2001; European Parliament 2008; Mancuso and Manzi 2021; Savona and Mancuso 2017). ITF is defined in Article 3, paragraph 3 of the Protocol against Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components and Ammunition supplementing the United Nations Convention against Transnational Organized Crime (UN Firearms Protocol) as the unauthorized "import, export, acquisition, sale, delivery, movement or transfer of firearms, their parts and components and ammunition" (UN 2001; Article 3, paragraph e). The illicit trafficking also refers to "weapons produced, transferred, held or used in violation of national or international law" (Ponti 2018, 14). Another definition of the ITF can be found in the EU Firearms Directive 2017/853/EC, which establishes standard basic regulations for the control of weapon purchase, ownership, and transfer in the European Union (EU) Member States. In Article 1, paragraph 1, illicit trafficking is defined as "the acquisition, sale, delivery, movement or transfer of firearms, their essential components or ammunition from or through the territory of one Member State to that of another Member State if any one of the Member States concerned does not authorize it in accordance with this Directive or if the firearms, essential components or ammunition are not marked [...]" (European Parliament 2008).

The firearm market is defined as a dual market, which is a market that has

both a licit and an illicit side (Savona, Calderoni, and Kleiman 2017). On one hand, the licit side is made of firearms legally manufactured by authorized producers and legally sold to different customers, such as civilians, military forces, and law enforcement agencies. The firearms sold and brought in this market can be part of the international trade or they can be part of a single country market. Some countries have industries that primarily produce for domestic clients without being engaged in exporting, while others produce for both domestic and foreign clients (UNODC 2020c). On the other hand, the illicit market is mostly made of firearms legally produced but diverted into the illicit market through, for example, firearms conversion, thefts from individuals, or loss of control on the stockpiles. Firearms produced or assembled in violation of national laws and international conventions are only a minor share (Europol 2021b; UNODC 2015; 2020c).

The illicit market can be further divided in two categories: black and grey market. The difference between these two markets lies in the nature of the transactions. In the black market, all the aspects of the transaction and the positions of both the buyers and sellers are illegal. These transactions happen outside the state control and are usually managed by criminal organizations (Transcrime 2013; UNODC 2015). The grey market only involves transactions in which one or more parties are not authorized; for example, they occur when a firearm is legally bought and later illicitly trafficked through falsification of documents or bribery of officials (UNODC 2015; Ponti 2018; Transcrime 2013; Arsovska 2014; Mavrellis 2017).

The ITF includes different products. Besides firearms, there are other goods that can be trafficked such as parts or components, ammunitions, and accessories (UNODC 2020b). Firearms are defined in the UN Firearms Protocol as "any portable barreled weapon that expels, is designed to expel,

or may be readily converted to expel a shot, bullet or projectile by the action of an explosive, excluding antique firearms or their replicas. Antique firearms and their replicas shall be defined in accordance with domestic law. In no case, however, antique firearms include firearms manufactured after 1899" (UN 2001; Article 3, paragraph a). Among firearms, there is a further distinction between small arms and light weapons. Small arms are considered as "weapons designed for individual use" and include revolvers and self-loading pistols, rifles and carbines, assault rifles, sub-machine guns, and light machine guns (UN 2005). Light weapons are "weapons designed for use by two or three persons" and include hand-held, under-barrel, and automatic grenade launchers; heavy machine guns; portable anti-tank and anti-aircraft missile systems; anti-materiel rifles, recoilless rifles, and guns (UN 2005; Mavrellis 2017; Savona and Mancuso 2017). Parts and components comprise "any element or replacement element specifically designed for a firearm and essential to its operation, including a barrel, frame or receiver, slide or cylinder, bolts or breech block, and any device designed or adapted to diminish the sound caused by firing a firearm" (UN 2001; Article 3, paragraph b). Ammunitions mean "the complete round and its components, including cartridge cases, primers, propellant powder, bullets, or projectiles, that are used in a firearm" (UN 2001; Article 3, paragraph c). Accessories are objects that physically connect to the weapon and improve its efficacy or utility, but they are not required for the weapon's intended use. They include for example night vision devices, fire control systems, and aiming lasers (Mavrellis 2017). Moreover, the UNODC also provides a definition for pneumatic, blank-firing and gas weapons. These weapons do not strictly qualify as firearms as specified by the UN Firearms Protocol, but they can be easily transformed into firearms and for this reason they should be taken into account when referring to the ITF (UNODC 2020c). This variety of products fills a multi-faceted demand. `Criminals are able to satisfy this demand by

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supplying complete firearms, parts and components, ammunitions and also specific accessories that are not available through legal channels. For example, by acquiring parts and components people can manufacture their own firearms that can be used in their criminal activities or resold on the illicit market (UNODC 2020c).

The illicit firearms market is global and often transnational due to the significant regulatory asymmetries across countries. Indeed, criminals exploit differences in national regulations by trafficking firearms from countries that have less strict firearms regulations to those that have stricter regulations. The attractiveness and the diffusion of this market is explained by several factors. First, the ITF is boosted by the high demand for firearms coming from different typologies of actors that are not lawfully eligible for accessing a firearm, are planning an illicit activity, or would like to own a firearm that is not accessible on the legal market. Firearms are also valuable goods because they may be sold with high profits in illegal marketplaces, where they often have a higher price than in legal ones (Duquet 2018; Savona and Mancuso 2017; UNODC 2020c). Further, the firearms market is different from other illicit markets such as narcotics, drugs, or tobacco because of the durability of the products. Firearms are not consumable goods; they last indefinitely and so they can be easily reused and resold many times (Arsovska 2014; Marsh 2016; UNODC 2020c).

Given the seriousness and gravity of this illicit market, it has received a great deal of attention at the international level. The UN Firearms Protocol provides strategies to regulate the firearms flows, to contrast illicit trade, to prevent diversion of legally produced firearms and to persecute related offences (UN 2001). Besides the UN Protocol, the UN International Small Arms Control Standards (ISACS) define voluntary international standards

for effective controls of firearms entering the illicit market (UN 2013). Also, at a regional level, there are many initiatives to reduce and prevent ITF. The EU, for example, has reinforced the firearms legislation and Europol has consistently named the fight against firearms trafficking as one of the key priorities in its multiannual EU Policy Cycles for Organized and Serious International Crime (now called EMPACT – European Multidisciplinary Platform Against Criminal Threats), included the last one (2022–2025) (European Commission 2020; Europol 2021b). The Western Balkans have defined seven goals to reduce the illegal possession, misuse and trafficking of small arms and light weapons (SALW) to be reached within 2024 (SEESAC 2018). In Central Africa, regional instruments comprehend the 2017 Central African Convention for the Control of SALW, their ammunition and all parts and components, that has the objective to reduce the proliferation of SALW (UNODA / UNREC 2017).

Despite all these efforts, the illicit firearms market continuously challenges law enforcement agencies because criminals are very flexible and able to change strategies and traffic patterns according to the countermeasures put in place by the countries (European Commission 2020; Duquet 2018; Savona and Mancuso 2017). Difficulties also arise since the national legal frameworks and definitions are still different across countries, data on firearms are not comprehensive and comparable, the sharing of information is not systematic and there is a lack of communication and coordination between different authorities at the national and international level (UNODC 2020c; 2020d; Mancuso and Manzi 2021). Further, new trends are emerging, such as the technological improvements in 3D printing, the use of post parcel and postal services to traffic firearms parts and components, and the diffusion of more sophisticated conversion techniques incrementing the potential threats and the complexity in tackling this illicit market (European Commission 2020).

Chapter 3: Illicit Firearms Trade

This chapter aims at providing a global picture of ITF and delineating its main characteristics. The chapter is organized as follows: Section 1 discusses the size of the illicit firearms market worldwide; Section 2 describes the different international routes used to traffic firearms across multiple countries, including the identification of the main countries of origin and destination; Chapter 3 briefly summarizes the different drivers and contextual factors that influence this market; Section 4 depicts the different activities and modi operandi used in all the phases of the trade; Section 5 illustrates the actors taking part in the illicit trade; and, finally, Section 6 reports the main existing countermeasures to combat the ITF. A glossary with the definition of the main types of firearms is available at the end of the report.

1. Size of the market

The World Customs Organization (WCO) reported that 45 countries experienced 8,100 cases of firearms and ammunitions trafficking in 2019.[1] These cases accounted for 10,460 seizures with the recovery of 716,217 pieces of ammunition and 264,332 pieces of weapons or weapons components (WCO 2020). The UNODC estimated that the number of firearms seized amounted to 550,000 in 81 countries in the world during each of 2016 and 2017. Numbers varied significantly across countries and regions and the variability is very high considering the population of each country. Indeed, the total number of arms seized typically ranged between 0.5 and 69 arms per 100,000 inhabitants (Figure 1) (UNODC 2020c). These figures clearly demonstrate how the ITF has a global dimension impacting many countries worldwide. After a short discussion on the challenges related to estimating the dimension of the ITF market, this chapter provides an

1 The WCO in its annual reports on illicit trades gathers data on the cases of firearms and ammunitions trafficking from customs agencies of different countries. For some countries data can be missing or underestimated if customs agencies decide to not disclose them due to ongoing investigations that require to keep them confidential (WCO 2020).

overview of the existing estimates of this illicit market worldwide.

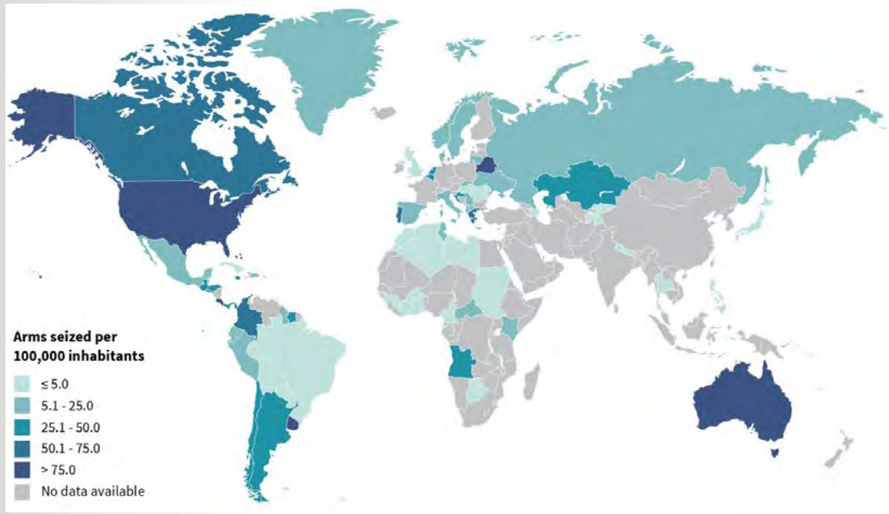

Figure 1 Total number of arms seized per 100,000 inhabitants by country, 2017
Source: Authors' elaboration of UNODC data (2020c)

1.1 How to estimate the ITF market size

Estimating the size of the illicit firearms market is complex. First, it is difficult to have access to reliable, systematized, and updated data. Law enforcement agencies adopt different data collection procedures and collect different types of details and information about the ITF and related activities. This generates a wide heterogeneity in terms of data collected and data formats, which are largely unstandardized and not comparable among them. Second, legal definitions vary from one country to another, increasing the incompatibility of the existing information. Third, there are also differences in the quantity and quality of the data: some states gather very detailed data on firearms, while others collect only general statistics or do not store any information at all, mainly due to lack of resources or skilled personnel (UNODC 2020c; Mancuso and Manzi 2021). Moreover, ITF involves many different actors, products, modi operandi and countries making the

possibility of reaching a comprehensive picture of the whole market very challenging (UNODC 2020c; European Commission 2020).

Some studies have tried to measure the extent of the illicit firearms market, but many of them do not explain the details of the methodology used (Calderoni et al. 2014). In general, there are two major approaches used to measure the ITF. The first methodology starts from the statistics on firearms lost or stolen from their legal owners, state authorities, or government departments and personnel. These statistics are combined with data on crimes committed with firearms, firearms registries, and legal production and trade. This methodology presents a few limitations. When using data on stolen and lost arms, cross border smuggling is usually not taken into account and the low level of reporting makes it difficult to have a comprehensive picture of the illicit market (Hennop 2000; Eurostat 2018a). Moreover, data on stolen firearms are usually collected at the national level and adopting different methods, which hinders to perform comparisons across countries or regions (de Labbey, Duquet, and Smets 2021).

The second and most common methodology used to measure the extent of the illicit market relies on data on firearms seized. Besides providing an estimation of the trafficked volumes, this methodology also allows to spot the origin of the illicit firearms (e.g., whether the firearm has been registered and where) and their trafficking routes (UNODC 2020c). When this information is combined with complementary details, such as the criminal context, it can provide a realistic picture of the characteristics of the illicit trade (Eurostat 2018a). However, data on seizures must be handled carefully because law enforcement agencies may use different ways of reporting at national level. For example, some countries record together both administrative and criminal seizures, while others report them separately

(UNODC 2020c). Also, some countries collect data only regarding firearms seized in specific settings (e.g. illicit stockpiles) or about a few types of specific weapons (Schroeder and King 2012). In addition, this type of data is affected by law enforcement agencies priorities, resources, time, and efforts, which may vary across countries (Marsh 2016; UNODC 2020c). All these factors have an impact on the quantity of firearms seized at country level by making a comparison across countries quite challenging.

Despite these limitations, data on seizures are considered one of the best sources to assess the magnitude of the ITF. For example, the UNODC in its global reports on firearms trafficking provides a global picture of this illicit market starting from data on seizures shared by the countries (both in aggregated form and on a case-by-case basis) (UNODC 2020c). These data are collected though the Illicit Arms Flow Questionnaire (IAFQ) developed by the UNODC, together with international experts, relevant international and regional organizations, non-governmental organizations and research entities. Besides gathering data on seizures, the questionnaire includes sections on firearms trafficking routes, criminal context, tracing, and the criminal justice system (UNODC 2020c).

In conclusion, estimating the size of the illicit firearms market is challenging as for many other illicit markets. Therefore, the existing estimates presented in the next paragraphs should be considered cautiously and only indicative of the actual size of the ITF market.

1.2 Africa and Middle East

Africa and the Middle East are key regions in both the licit and illicit firearms markets for two main reasons: the extensive occurrence of armed conflicts

and the presence of armed non-state groups and extremist organizations (Alaraby and Muller 2020; Alusala 2018). In particular, a recent study directly connects the escalation of violent conflicts in several African countries to the proliferation of small arms among both state and non-state actors (Tar and Onwurah 2021). Nevertheless, determining the size of the ITF market in these regions remains very difficult due to the paucity of data (Alaraby and Muller 2020; Alusala 2018; Floriquin, Lipott, and Wairagu 2019).

Focusing on the illicit firearms market in Africa, different studies provided estimates on the ITF in the continent or at the country level. In 2019, the Small Arms Survey estimated that 80% of all small arms in the continent (around 40 million) are owned by private individuals, including civilians, security agencies and non-state armed organizations. Among them, 16,043,800 firearms appear to not be registered. Around 11 million licit small arms are held by law enforcements and armed forces (Floriquin, Lipott, and Wairagu 2019). According to the UNODC, the African countries with the largest quantities of firearms seized between 2016 and 2017 were Angola, Kenya, Algeria, and Sudan (between 6,000 and 11,000 overall). On the contrary, the countries with the lowest quantity of firearms seized in the same time span included Togo, Botswana, and Cape Verde (UNODC 2020c). In Somalia, both state and non-state actors acquired firearms given the high intensity of internal conflicts. In particular, about 50,000 SALW were seized between 2004 and 2011, of which 72% were small arms and 28% light weapons (Schroeder and King 2012). In Niger, which is located along a major transit route for firearms trafficking, data provided by the Nationale Pour La Collecte et Le Controle Des Armes Illicites (CNCCAI) indicate that in the years 2011-2014 the total number of firearms seized or handed over amounted to 1,806 (de Tessières 2017). In Nigeria, according to the Chairman of the National Peace Committee and ex-Head of State Abdulsalami

Abubaka, it was estimated that in 2011 there were 6 million weapons in circulations. The United Nations Regional Center for Peace and Disarmament in Africa estimated that in 2016 70% of the 500 million illicit SALW in West Africa were located in Nigeria (Percy 2021).

Not all the illicit firearms seized in Africa are imported from other countries. The Conflict Armament Research developed the iTrace system, founded by the EU and German Government, to discover the point of weapons diversion and to help national control agencies to identify diversion risks (iTrace 2021b). This system is helpful to identify illicit firearms that are manufactured locally. According to its findings, the total amount of SALW illicitly manufactured between 2000 and 2016 in Burkina Faso, Central African Republic, Libya (Box 1), Mali, Niger, Nigeria, Somalia, Democratic Republic of Congo, and South Sudan between 2014 and 2017 amounted to 1,925 (CAR 2017; Floriquin, Lipott, and Wairagu 2019).

Box 1: The impact of the Libya's civil war on ITF

Before the civil war in 2011, Libya was already involved in the ITF. The country was a source of firearms for many neighboring countries. The ITF was controlled and approved by Ghaddafi's regime (Alaraby and Muller 2020). In February 2011, when the civil war began, the United Arab Emirates and Qatar provided firearms to rebels fighting against Ghaddafi. These operations happened under NATO's control, but without following the end-users' protocols (Alaraby and Muller 2020). This armed conflict, not only increased illicit arms trafficking, but also led to the formation of a regional illicit market in Libya, reaching diverse extremist groups, such as Ansar Al-Shari. Firearms mostly came from stockpiles of the Ghaddafi regime and were transferred not only to terrorists groups, but also to rebels and city-militias across the country (Duquet 2018; Alaraby and Muller 2020).

Regarding the type of firearms trafficked in Africa, the UNODC 2020 Report provides detailed information. The predominance in seized firearms between 2016 and 2017 was made by shotguns, but significant differences existed between countries. For example, in Ghana the majority of seized arms were pistols, in Kenya rifles and in Burundi submachine guns (Figure 2) (UNODC 2020c).

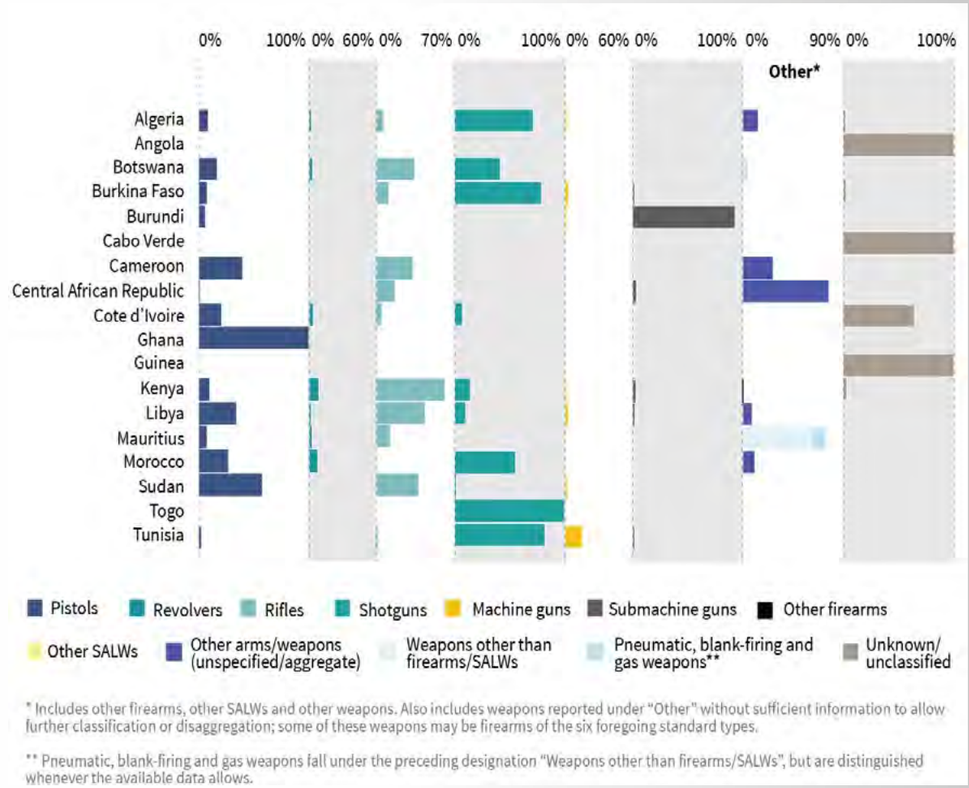

Figure 2. Seized arms by type in selected African countries, 2016-2017
Source: Authors' elaboration of UNODC data (2020c)

Regarding Middle East, a Small Arms Survey report pointed out that Iraq became a huge hub for ITF in the region during the last Gulf War. However, the lack of a known pre-war registration system together with the destruction of previous military records make it almost impossible to estimate the exact number of small arms circulating in this country (Karp

2004). Estimates indicate that in Iraq, after the defeat of Saddam Hussein in 2003, military stockpiles amounted to around 7 or 8 million of firearms (Karp 2004). A more recent study reported seizures in 1,100 caches in the country between 2008 and 2009. In total, 30,000 SALW were seized together with 500,000 small-caliber ammunitions (Schroeder and King 2012).

The WCO reports provide some data on the ITF in Saudi Arabia and the United Arab Emirates from 2015 to 2019. The Customs of Saudi Arabia registered a decreasing trend in the number of ITF cases from 2015 to 2018 (from more than 1,000 in 2015 to less than 500 in 2018). In 2019, the number of cases increased (1,000). In the United Arab Emirates, the trend of ITF cases was unstable. It increased from 2016 to 2017 (from less than 100 in 2016 to 500 ITF cases registered by the Customs in 2017), then it decreased in 2018 (little more than 300 cases) to increase again in 2019 (almost 400 cases) (WCO 2020; 2019; 2018; 2017).

1.3 Americas

Available studies on the ITF in the Americas focused mainly on the trafficking from the U.S. to Canada and Mexico, and the trafficking within South America. Regarding the U.S., data show that it is a central player in both licit and illicit firearms trade. Indeed, the U.S. registers the highest number of privately held firearms in the world, on average 9 guns for every 10 Americans, due to the Second Amendment to the U.S. Constitution that gives Americans the right to carry arms (Cook, Cukier, and Krause 2009). In 2021, there were more than 350 million firearms circulating in the nation. In the same year the states with the highest rate of gun ownership were Montana (66.3%), Wyoming (66.2%) and Alaska (64.3%) (World Population Review 2021). Focusing on the illicit trade, the WCO reports a decreasing

trend in the number of ITF cases registered by customs authorities from 2015 to 2018. In 2019, this number increased going from less than 2,000 to more than 6,000 (WCO 2020; 2019; 2018; 2017).

The U.S. is the major producer and exporter of both licit and illicit weapons (UNODC 2010). In 2020, the U.S. exported more weapons than any other county (37% of the global share) and their arms exports increased by 15% from 2011 (Wezeman and Wezeman 2021). From 2010 to 2015, illicit firearms, ammunition and parts originating from the U.S. were distributed to 46 countries worldwide (Matt Schroeder 2016). Despite this global distribution, evidence suggests that illicit exports mostly end up in Canada and Mexico, which are neighboring countries with very strict regulations regarding gun ownership (Cook, Cukier, and Krause 2009; Arsovska 2014). In Canada, there are few available data on the illicit firearms market and the research addressing the problem is quite outdated (Ferguson and Koziarski 2019). In 2007, the Firearms Tracing and Enforcement Program (FATE) traced 705 guns of which 90% where prohibited or restricted (Heemskerk et al. 2008). In the same year, an estimate reported 5,616 firearms seized in the country (Cook, Cukier, and Krause 2009).

In Mexico, it was estimated that around 4.5 million registered and 10 million unregistered firearms was circulating in 2007 (Cook, Cukier, and Krause 2009). A substantial part of the illicitly owned firearms available in Mexico originate in the U.S., including a rising number of increasingly deadly weaponry (Ford 2009; Matt Schroeder 2013). Indeed, approximately 70% of weapons seized by Mexican authorities between 2004 and 2008 were manufactured in the U.S., and in particular in Texas (39%), California (20%), and Arizona (10%) (UNODC 2010). In 2019, these three states were still the major sources of illicit weapons for Mexico (41% of the firearms seized

originated in Texas, 18% in California and 14% in Arizona) (Agrawal 2019). The latest UNODC report reveals that in 2017 firearms were mainly seized in four Mexican states, in Tamaulipas, Sinaloa, Michoacán and Guerrero (UNODC 2020c). In addition, the WCO reports provided data on the number of ITF cases detected in Mexico. The Mexican customs authorities reported around 100 ITF cases in the country from 2015 to 2018. In 2019, this number decreased to less than 100 (WCO 2020; 2019; 2018; 2017).

Regarding South America, the Small Arms Survey collected data on civilian ownership both of registered and unregistered firearms. In 2003, the number of civilian unregistered firearms ranged from 25,000 to 60,000 in Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela in total (Karp 2004). More recently, data collected from UNODC suggests that Colombia and Argentina were the most affected countries by the ITF in 2016 and 2017, registering around 25,000 seized firearms each. However, Colombia registered a significant reduction in the number of firearms seized from 2010 to 2017 (from about 45,000 in 2010 to 25,000 in 2017). The same significant decreasing trends was reported also in Mexico and Panama (Figure 3) (UNODC 2020c).

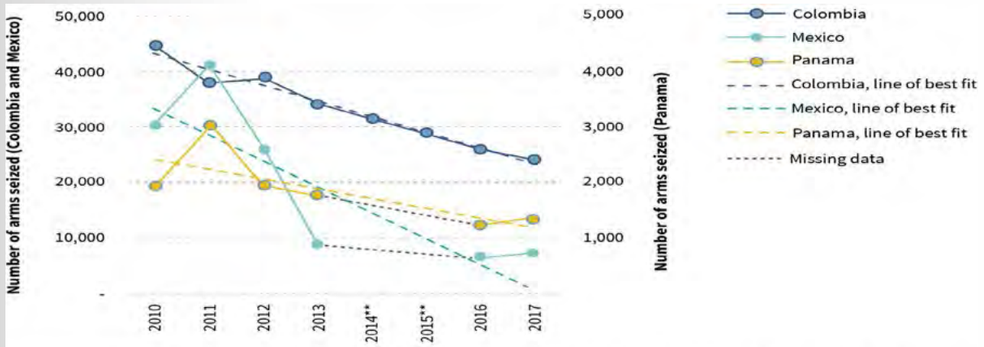

Figure 3. Significant longer-term trends in the number of arms seized in Colombia, Panama and Mexico, 2010-2017*
Source: Authors' elaboration of UNODC data (2020c)

The UNODC data reported that Cuba was the country with the lower number of firearms seized in 2016 and 2017 (less than 20), followed by Brazil and Peru (around 5,000 each) (UNODC 2020c). Regarding Cuba, the Cuban customs agency registered an increase in the ITF cases from 2015 to 2017 (from approximately 50 in 2015 to more than 100 in 2017) and then a reduction from 2017 to 2019 (from more than 100 in 2017 to less than 100 in 2019) (WCO 2020; 2019; 2018; 2017). Regarding Brazil, previous research pointed out that in the country there used to be many illicit firearms. In 2007, out of the 17,6 million small arms in circulation, 57% was reported to be illicit (Dreyfus et al. 2010). In 2015, data collected by Viva Rio organization stated that 3,857,799 firearms were in the hands of criminals, and 4,635,058 firearms were held by law abiding citizens (Brusky, Verspeelt, and Stickings 2005). The WCO annual reports provide some insights on the number of ITF cases registered in Argentina. It remained stable from 2015 to 2016 (78 cases) and then decreased from 2016 to 2019. In 2019, cases were less than 50 (WCO 2020; 2019; 2018; 2017).

The Small Arms Survey (2016) provided insights on the ITF in Honduras. In 2015, the country registered 64 violent deaths for 100,000 people, making it one of the most violent countries in the world. 81% of all homicides were committed using firearms by gang and drug-related violence (Nowak 2016). Despite this, the data regarding ITF gathered by the National Police are difficult to access, and there is no integrated reporting system for all firearms in the country. The few available data showed an increase in seizures from 2006 (slightly more than 2,500 SALW) to 2012 (between 3,5000 and 3,000 SALW seized) (Nowak 2016).

1.4 Asia and Oceania

Data and estimates on the illicit firearms trade in Asia and Oceania are limited. The latest available regional data are provided by the UNODC (2020c). According to these data, in 2016 and 2017 the higher number of illicit firearms seized was registered in Australia (around 25,000) followed by Japan (around 10,000) and Kazakhstan (around 5,000). In 2017, the Philippines and Nepal reported the lowest numbers of firearms seized. On the total of firearms seized, 82% was recorded as SALW. Shotguns were the most common weapons seized, followed by pistols, rifles, and revolvers (UNODC 2020c).

Focusing on Asia, South and South-East Asia register a challenging situation regarding the ITF. In the last decades, these areas have been ground for many different sub-regional conflicts (Picard 2021). Even if these conflicts did not began because of the presence of illicit firearms, their persistence can be in part attributed to the availability of illicit weapons (Siyech 2019). In 2017, it was estimated that 71% of the firearms in these regions (around 115 million firearms) were presumably illicit firearms (Karp 2004; Picard 2021). In particular, South-East Asia showed very high level of seizures compared to other regions (Figure 4).

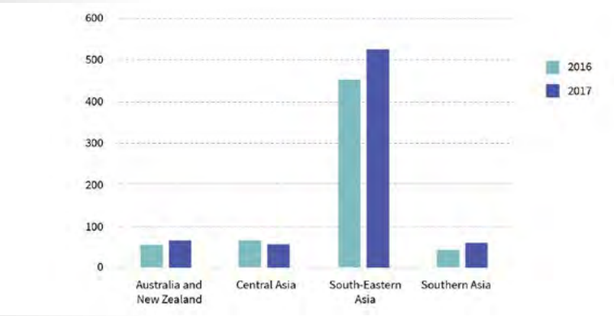

Figure 4. Firearms seized in Asia and Oceania by region, 2016-2017
Source: Authors' elaboration of UNODC data (2017a)

Some studies have also estimated the size of the illicit firearms market at country level, with a focus on India, Philippines, Afghanistan, Pakistan and Cambodia. In India, around 70 million firearms are estimated to be in civilians' possession, of which only 14% are properly registered (Picard 2021). According to the National Crime Records Bureau, 74,877 firearms were seized in 2018, out of which 3,742 arms were licensed and 71,135 unlicensed (Ashok 2020). The huge diffusion of illicit firearms can be explained by the presence of both sporadic but fierce outbreaks of armed violence since the 1980s and the activities of many extremist groups (Picard 2021). The Philippines have experienced in the last five decades sub-national violence linked to the communist insurgency throughout the country or to the struggle of the Bangsamoro separatist movements for the autonomy in Mindanao (Picard 2021). Data collected from Small Arms Survey indicate that, in 2012, the number of unregistered or altered firearms amounted to 610,000 (Rivas Pattugalan 2003; Matt Schroeder 2013).

Afghanistan has been involved in a conflict in the latest 20 years and it sees the stable presence of extremist organizations such as the Taliban, ISIS-K and the Haqqani Network (Picard 2021). According to the data provided by the US Army and the British Ministry of Defense, around 9,600 SALW and 200,000 rounds of ammunitions were seized from caches in the nation between 2007 and 2008 (Schroeder and King 2012). In Pakistan, there have been direct conflicts between the Pakistani security forces and various National Surveillance General Agencies from 2001 and 2016. According to a recent estimate, out of 43 million firearms owned by privates in the country, only 6 million are registered (Picard 2021). Finally, it was estimated that in 2017 between 22,000 and 85,000 illicit weapons circulated in Cambodia (Ward 2017).

Regarding Oceania, information on the ITF is available for Australia only. Based on available data, the Australian Criminal Intelligence Commission (ACIC) conservatively estimated that in the domestic illicit market there were 260,000 firearms in 2016. This estimate is based on firearm importation figures, seizure trends and other intelligence sources (ACIC 2016). Moreover, in one Australian jurisdiction where blank-firing firearms were sold legally there was a potential market for homemade, modified or converted firearms including shotguns and blank-firing firearms (UNODC 2020c).

1.5 Europe

Many studies have focused on measuring the extent of the illicit firearms circulating in Europe. Some of them focused on lost and stolen firearms data. They show that in 2014 almost a half a million firearms were reported as lost or stolen in the EU (Eurostat 2018a). In addition, a study carried out by the Flemish Peace Institute reports that annually between 20,000 to 25,000 firearms are stolen in the EU from both privates and the public sector, including private individuals, armed forces, destruction sites, law enforcement agencies and commercial actors, such as authorized arms dealers and private security companies. It is possible that this number is even higher due to the number of stolen firearms not being reported because illicitly owned (de Labbey, Duquet, and Smets 2021).

Other contributions have estimated the illicit market starting from the seizures data. Transcrime collected seizures data in the EU Member States between 2010 and March 2015 from online news and press releases (Savona and Mancuso 2017). The study identified 3,875 seizures of firearms. The majority of seizures occurred in Western Europe (35.17% of EU total). Most of the cases happened in the Netherlands (40.72%), Germany (27.22%), and

France (16.51%). Southern Europe was the region with the second largest amount of firearm seizures cases (25.65% of EU total, of whom 49.60% registered in Italy), followed by Northern Europe (20.88% of EU total). In this region, the largest number of cases occurred in Sweden (33.62%), Ireland (33.255) and the United Kingdom (14.59%). The last region in terms of number of seizure cases was Eastern Europe registering 18.30% of EU total cases. The largest number of cases within Eastern Europe happened in Poland (36.11%), followed by Hungary (19.32%) and Bulgaria (14.25%) (Savona and Mancuso 2017).

The results of the Transcrime's research also show that the total number of firearms seized in the EU between 2010 to March 2015 was 19,246. Western Europe and Southern Europe remained the first and second region in terms of number of firearms seized (51.19% and 24.03% of EU total, respectively). Among these regions, Austria, Germany, Belgium and Spain were the countries where most firearms were seized (Box 2). Eastern Europe surpassed Northern Europe in terms of number of firearms seized (13.63% and 11.15% of EU total, respectively). Here, Poland, Romania, Bulgaria, Denmark, the United Kingdom and Ireland were the countries registering the highest number of firearms seized (Savona and Mancuso 2017).

Box 2: ITF in Belgium

The attention to the ITF in Belgium has been triggered by a series of violent episodes, like the attacks to the police with assault rifles in the streets of Brussels in 2010 and the terrorist attacks on the Jewish Museum Brussels in 2014. Despite this, estimating the illicit firearms market in the country is difficult due to limitations in the official statistics. An estimate has been produced by taking into account some data provided by the media and the police. The national media estimated that, in 2006, there were between 1.5 and 2 million licit and illicit firearms circulating in the country. The Belgian police's Central Weapons Registry in the same year registered 870,000 legal firearms in the country. This means that there were between 630,000 and 1.1 million illicit firearms in circulation in 2006 (Duquet and Van Alstein 2016). Moreover, data from official police statistics indicate that the Belgian police services registered almost 27,500 cases of illicit firearms possession between 2011 and 2015. Between 2009 and 2015, 11, 262 firearms were used in robberies (Duquet and Goris 2018b).

The number of firearms seized varied not only per macro-region, but also within countries (Figure 5). Usually, high numbers of firearms were seized in proximity to the main ports and along borders, especially in regions close to non-EU countries with numerous stockpiles (Box 3) (Savona and Mancuso 2017). The presence of criminal groups is another factor that affects the distribution of firearm seizures since they need firearms to pursue their activities and they are key players in the trafficking of different goods (see Section 5.1) (Savona and Mancuso 2017).

Box 3: Eastern and South-Eastern stockpiles

Eastern and South-Eastern Europe is home to many firearms stockpiles. These arsenals present great risks of theft, that could allow to move the firearms from the licit to the illicit market (de Labbey, Duquet, and Smets 2021). Regarding Eastern Europe, stockpiles were generated during previous conflicts, especially in the Balkans, and the dissolution of the Soviet Union, especially in Belarus, Russia and Ukraine (Griffiths and Karp 2008; Gobinet 2011). In the 1990s, due to lack of controls many of the firearms stored in these arsenals were stolen (Pyadushkin, Haug, and Matveeva 2003). Still, large quantities of firearms remained available in Eastern Europe stockpiles. For example, in Ukraine, stockpiles amounted to around 7 million firearms in 2010. Similarly, former Soviet Union stockpiles remained in the Transnistria area, mainly in Moldova, which has become tactic location for criminal and extremist organizations to store narcotics and firearms smuggling (Savona and Mancuso 2017).

In South-Eastern Europe, former Yugoslav countries have been major sources for the ITF. There were still plenty of firearms in the region at the start of the twenty-first century, particularly in Albania. Even though some stockpiles have been destroyed in Bulgaria, Croatia, Romania and Serbia, it was believed that around 8 million guns were still accessible in excess in former Yugoslav nations at the beginning of the 21st century (UNODC 2010; Savona and Mancuso 2017).

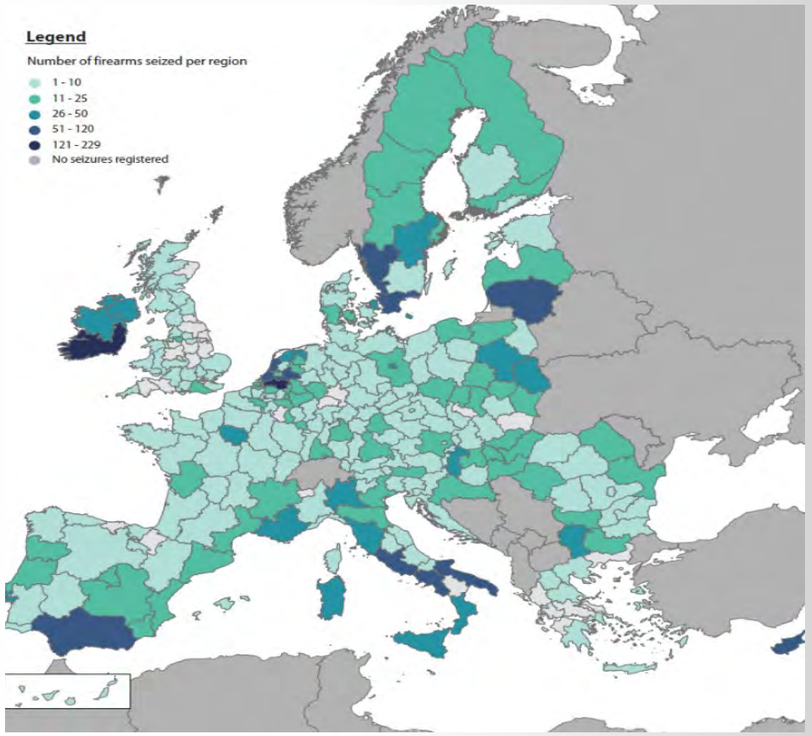

Figure 5. Number of firearms seized in the EU per region, 2010-2015*
Source: (Savona and Mancuso, 2017)
*For 2015, data are available only for the first three months of the year.

The UNODC 2020 Firearms Report gives information on how trends in firearm seizures differ across European countries. On one hand, between 2016 and 2017, most countries showed a significant decrease in firearms seized, in particular Hungary (from 350 to 200), Greece (from almost 10,000 to 2,000), Italy (from more than 6,000 to 4,000) and Slovakia (from 1,6000 to 500). On the other hand, some countries showed an increase in the same quantities, like Spain (from around 8,000 to more than 10,000) and Belarus (from under 8,000 to more than 8,000) (UNODC 2020c).

The UNODC also highlights that Europe is the region with the greatest diversity of weapons seized worldwide. From the analysis of the seizure data

diversity of weapons seized worldwide. From the analysis of the seizure data related to 2016 and 2017, pistols accounted for 35% of the seizures, followed by rifles at 27%, shotguns at 22%, and revolvers at 11% (UNODC 2020b). Likewise, Transcrime provided some insights on the types of firearms seized in the EU from 2010 to March 2015. Most seizures involved pistols (34%) and rifles (27%), while all other categories accounted for less than 10% each.[2] Handguns like pistols are the most common type of firearms acquired for use in criminal activities, since the longer range of rifles is not usually needed. They are portable and easier to use and conceal than long guns (Marsh 2015). Rifles, especially assault rifles, can be used in certain types of shootings, especially for socio-political purposes. Hunting rifles may instead be illicitly owned for example by hunters and gun collectors (Savona and Mancuso 2017).

In Europe, research reveals that there are also many converted firearms in the illicit firearms market. This is likely because the national legislations of some European countries do not forbid the sale of non-lethal arms that can easily be turned into lethal ones. In addition, converted blank-firing weapons are the cheapest illicit firearms to buy in Europe (UNODC 2020d). Although official statistics sometimes fail to report if weapons had been converted or not and there are no European standard protocols for recording information on conversion, forensic data can be useful to understand firearms conversion, its extent and evolution at a national level (Florquin and King 2018). In the United Kingdom, firearms conversion is well reported given the strict regulations regarding firearms possession. All seized firearms undergo forensic analysis and are registered in the National Ballistics Intelligence Service (NABIS) database. The data reveal that from 2010 to 2015/2016, the United Kingdom Border Force seized 7,058 imitation firearms compared to

2 The firearms classification used in the Transcrime study was based on the Study on Firearms by UNODC (2015).

1,680 real firearms. Most of these firearms originated from Slovakia (Florquin and King 2018; Holtom, James, and Patmore 2018).

Other studies have estimated the illicit firearms market in single European countries. In the Netherlands, in 2002 between 10,000 to 15,000 illicit firearms were recorded being smuggled into the country and in total from 85,000 to 125,000 illicit firearms were recorded (Bruinsma and Spapens 2018). In Croatia, the South Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons (SEESAC) estimated around 597,000 illicit firearms in 2006. In 2014, Small Arms Survey estimated that the number of firearms illicitly owned amounted between 150,000 to 600,000. Looking at the number of firearms seized, the Ministry of the Interior recorded 63,913 arms seized overall from 2007 to 2016. This number peeked in 2010 reaching 9,102 and then showed a decrease in the following years, reaching 4,019 in 2016 (Dragovic et al. 2018). Between 2015 and 2016, converted signal and air weapons were up to 44% of illicit firearms seized (Florquin and King 2018). In Ukraine, the armed conflict in the east region of the country started in 2014 increased the number of firearms related homicides and other crimes. Seizure data point out that, from 2013 to 2016, the number of weapons seized in Ukraine has swung between 1,000 and 2,500. In particular, the peak of 2,500 weapons seized was reached in 2014 when the internal conflict began (Martyniuk 2017). In Romania, from 2014 until the first half of 2017, 514 cases of SALW seizures were recorded, for a total of 3,771 SALW seized (Albisteanu, Dena, and Lewis 2018). Data show that in the illicit market there is a big quantity of non-lethal firearms, such as blank-firing pistols or air rifles, that can be easily modified to become lethal weapons. In 2016, the Border Police seized 202 firearms of which 114 were non-lethal (Albisteanu, Dena, and Lewis 2018; Florquin and King 2018).

In France, the number of firearms seized by the Police and the Gendarmerie Nationale increased from 2014 to 2016. Indeed, in 2014 5,300 firearms were seized, in 2015 6,145 and in 2016 9,845 (Florquin and Desmarais 2018). In 2016, customs seizures involved 38% firearms subject to authorization, 31% firearms subject to declaration, 22% converted and deactivated firearms and 9% prohibited weapons (Florquin and Desmarais 2018). Moreover, between 2015 and 2016, the Institut de Recherche Criminelle de la Genrarmerie Nationale recorded that out of 930 firearms seized and examined, 8% were converted alarm guns and 57% was made by Turkish-origin imitation firearms (Florquin and King 2018). In Denmark, data from the Danish authorities indicate that from 2013 to 2016, 3,0001 firearms were seized (Grip 2018).

Regarding the number of ITF cases, the WCO reports show a decrease from 2015 to 2016, an increase in 2017 and then the number remained almost stable in 2018, always under 100 cases (WCO 2019; 2018; 2017). In Estonia, the trend of the number of ITF cases decreased passing from more than 100 cases in 2015 to less than 100 in 2018 (WCO 2019; 2018; 2017). In Germany, the trend showed an overall decrease in the number of ITF cases (from more than 200 in 2015 to less than 100 in 2019). The Russian Federation showed a general decreasing trend, as well. The ITF cases decreased from 2015 to 2017 with a significant reduction from 2015 to 2016 when they dropped by 82.4% (from more than 200 to less than 100). In 2018, cases increased by a very small quantity remaining under 100 to decrease again in 2019 (WCO 2020; 2019; 2018; 2017).

1.6 Country level estimates

Table 1 provides an extensive list of the available estimates of the ITF at country level.

Table 1. Estimates of illicit firearms markets (country-level)

Author	Country	Year
UNODC 2015; 2020c	81 countries	2014 and 2019
WCO 2017; 2018; 2019; 2020	50+ countries	2015-2019
Africa and Middle East		
CAR 2017	Burkina Faso, Central African Republic, Libya, Mali, Niger, Nigeria, Somalia, South Sudan	2014-2017
de Tessières 2017	Niger	2014-2016
iTrace 2021a	African and Middle-Eastern countries	2021
Karp 2004	Iraq	2004
Schroeder and King 2012	Iraq, Somalia	2008-2009
Americas		
Arsovska 2014	Canada and the U.S.	2010
Brusky, Verspeelt, and Stickings 2005	Brazil	2005
Cook, Cukier, and Krause 2009	Canada and the U.S.	2006-2007
Dreyfus et al. 2010	Brazil	2007
Ford 2009	Mexico and the U.S.	2006-2008
(Karp 2004	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, Venezuela	2003
Matt Schroeder 2013	Mexico	2012
Nowak 2016	Honduras	2007-2015
UNODC 2010	Mexico and the U.S.	2004-2008
Asia and Oceania		
ACIC 2016	Australia	2020
Yang 2015	China	2015
Picard 2021	India, Pakistan	2020
Rivas Pattugalan 2003	Philippines, Thailand	2003

Author	Country	Year
Matt Schroeder 2013	Philippines	2012
Schroeder and King 2012	Afghanistan	2008-2009
Europe		
Albisteanu, Dena, and Lewis 2018	Romania	2010-2016
Dragovic et al. 2018	Croatia	2007-2016
Duquet and Van Alstein 2016	Belgium	2006, 2009-2015
Florquin and Desmarais 2018	France	2016
Florquin and King 2018	Croatia, Romania, the United Kingdom, France, Romania	2015
Holtom, James, and Patmore 2018	The United Kingdom	2015-2016
Martyniuk 2017	Ukraine	2013-2016
Savona and Mancuso 2017	EU Member States	2010-2015

2. Cross border trafficking routes

Illicit firearms can be trafficked along both inter-regional and transnational flows. The transnational trafficking flows are mostly concentrated within the same continent. Europe and North America are mainly characterized by inter-regional flows (UNODC 2020c). Still, relevant inter-continental flows connect the U.S. to Europe and South America, Europe to Africa, and both South and North America and Asia (Figure 6) (UNODC 2020c; 2015; Dressler, Duquet, and Eckelmann 2021; Europol 2013).

Countries involved in the ITF networks can play a different role. They can be countries of manufacture, i.e. countries where firearms and their components

are produced; countries of origin, i.e. countries where the firearms enter the illicit trade and the illicit flows originate; transit countries, i.e. countries where the firearms pass through before reaching the final destination; and destination countries, i.e. countries where the illicit firearms are directed to be sold (UNODC 2020c; 2015). A country can have more than one role. For example, the country of manufacture can also be the place of origin for trafficking, but it should not be automatically assumed as such (UNODC 2015).

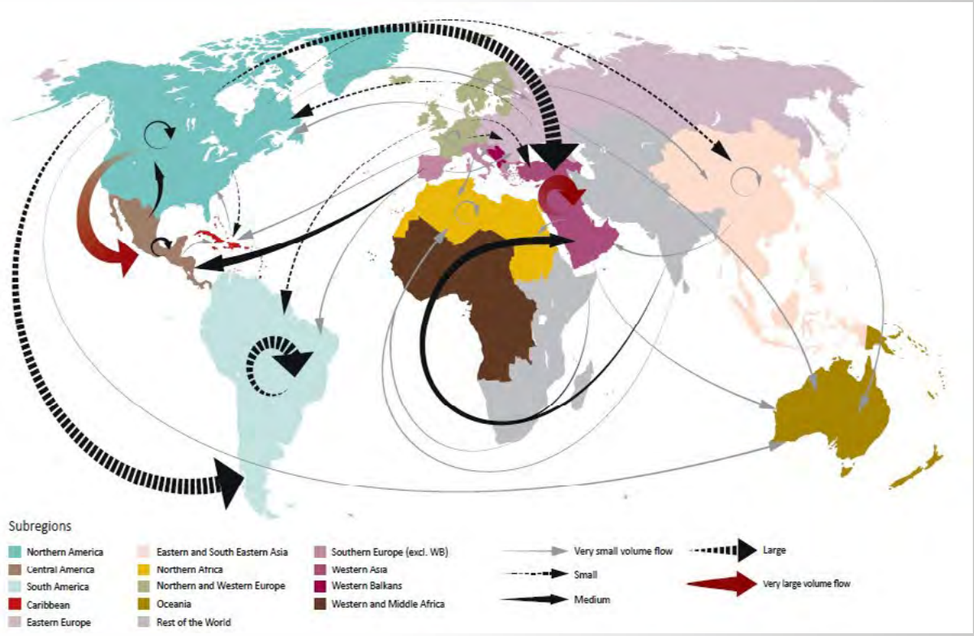

Figure 6. Main transnational ITF flows as defined by routes of seized firearms, 2016-2017
Source: (UNODC, 2020c)

Reconstructing the routes used in the illicit firearms market is complex. Firstly, illicit firearms can originate in different ways. For example, firearms can be diverted from the licit to the illicit market and the point of diversion can vary and involve different countries. Again, firearms can be illicitly manufactured everywhere by assembling parts and components purchased online (see Section 4). Further, seizure data are mainly used to retrieve

information regarding trafficking routes, but they have some limitations. Most of the firearms' seizures happen within national territories, only 10% of these interceptions occurs at the borders. In addition, seizures are likely to happen in those countries where the firearms are diverted into the illicit market. It is very rare that the seizure occurs in the country of manufacture. Moreover, the majority of the seizures are carried out before the illicit firearms reach the destination countries (UNODC 2020c). Thus, even though seizure data across countries help to create a picture of the ITF's dynamics and patterns, these limitations make the identification of the origin and destination countries very challenging, resulting in a partial picture of the overall trafficking networks. Secondly, obtaining reliable and systematic data across countries and years is hardly achievable (Gallagher et al. 2019; Reuter and Majmundar 2015; Mancuso and Manzi 2021). Consequently, existing estimates should be considered as general indications of overall tendencies, rather than exact descriptions of the actual illicit flows. This section summarizes the existing knowledge about the more consolidated trafficking routes for ITF.

2.1 Africa and Middle East

Regarding Africa, available information reveals the primary existence of intra-continental trafficking routes (Floriquin, Lipott, and Wairagu 2019). The main evidence on these routes is in West Africa, where organized criminal groups and militias transport firearms, but also human beings, counterfeit products, and drugs across national borders (Figure 7). These routes are mostly chosen by criminals because of the lower controls due to the lack of resources and equipment of national authorities to detect and investigate cargos moving across the borders (Sollazzo and Nowak 2020).

The tri-border areas of Burkina Faso–Côte d'Ivoire–Mali and Ghana–Côte

d'Ivoire– Burkina Faso are key hubs for smuggling firearms. Burkina Faso, Côte d'Ivoire, Ghana, and Niger serve mainly as transit or origin countries for illicit firearms, while Mali is a primary destination country for the firearms trafficked in the region (Mangan and Nowak 2019). In particular, Ghana, together with Algeria and the Central African Republic, are key countries of manufacturing of firearms by using scrap and sheet metal (UNODC 2020c). In the tri-border areas, there are two main trafficking routes. The first one is used to traffic firearms from Ghana to Cote d'Ivoire, specifically from the city of Bondoukou, passing through Bouna, Varale and Doropo. The second is used to traffic firearms from Cote d'Ivoire to Burkina Faso and Mali. This route splits in two paths, both of them starting from Ferkessédougou– Ouangolodougou– Laleraba, in Cote d'Ivoire. One goes to Yendéré in Burkina Faso, the other to Zégoua in Mali (Sollazzo and Nowak 2020).

Libya became a major source country given the numerous stockpiles left after the collapse of the Ghaddafi regime in 2011 (Alaraby and Muller 2020). Since then, Niger has been one of the first and most affected country by Libya's arms proliferation (de Tessières 2017; Mangan and Nowak 2019). In particular, in the last years, Niger has been a key transit country for firearms originated in Libya and transiting across Mali and Nigeria (de Tessières 2017). According to UNODC, Libya is one of the countries that reported most incomes of illicit firearms from neighboring countries. The routes from Libya pass though several different areas close to Algeria, Chad, Sudan, and Egypt (UNODC 2020c). Firearms originated in Libya are also trafficked in Tunisia, where there is a high demand from jihadists terrorists' groups (Strazzari and Zampagni 2018b).

Three other routes are widely used to traffic firearms in Africa. One route connects Namibia to South Africa, passing through Cape Town and ending

in Gauteng. The second one runs from Angola and Zambia via Botswana into South Africa. The third one originates in Mozambique, passes through South Africa and ends in countries like Burundi, Uganda, Rwanda, Kenya and Zambia (UNODC 2020c).

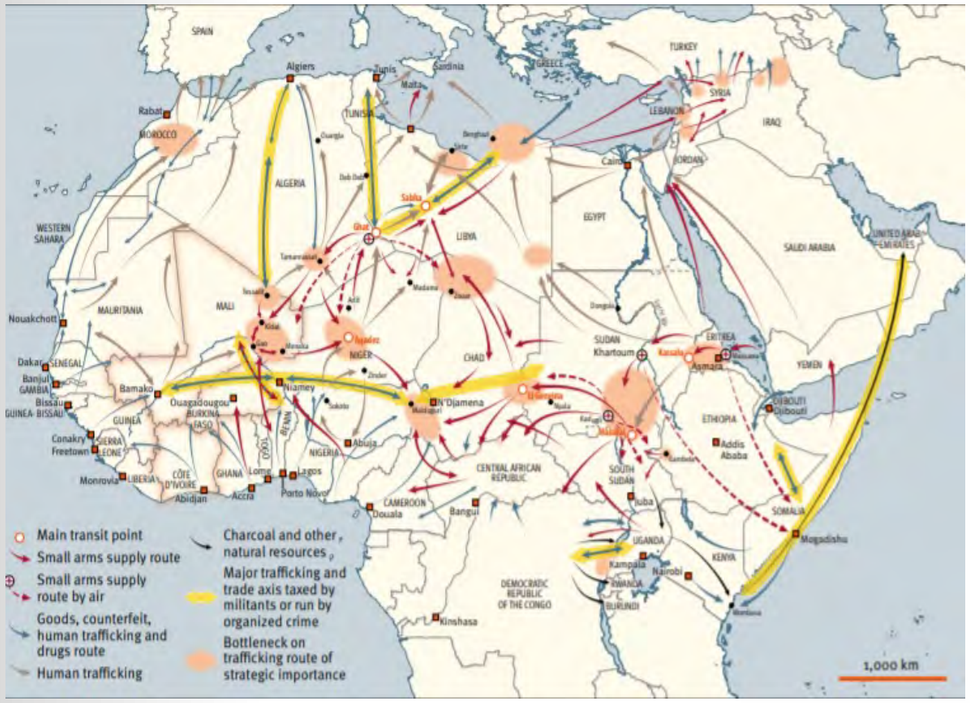

Figure 7. West African and Trans-Sahara ITF trafficking routes, 2019
Source: (Sollazzo and Nowak, 2020)

Regarding the Middle East, data availability on the routes is quite limited. Research suggests that Iran and Iraq are mostly involved in the trade. The largest quantity of weapons seized in Iraq came from Iran (Maa Schroeder and Lamb 2018). Besides Iran, many of the firearms seized in Iraq, for which it was possible to identify the country of origin, originated from Bulgaria, China and Russia (Schroeder and King 2012). Moreover, according to the data recorded by the iTrace system in 2019, Iraq seems to be a key country for firearms diversion, in particular for rifles, carbines, and small caliber ammunition (iTrace 2021a). Furthermore, a study stressed the relevance of

the mutual illicit routes of firearms between Afghanistan and Pakistan, with Afghan firearms flowing to Pakistan and vice versa (Schroeder and King 2012). In Syria, the major source of illicit firearms in 2012 were government stockpiles used by rebels to obtain firearms by corrupting officials or by assaulting soldiers and stealing. However, other illicit firearms flowed into the country also from Eastern Europe, Turkey, Sudan, and Libya (Herbert 2013).

Furthermore, a study conducted on the contrast to the illicit arms transfers in the Middle East and North Africa region focused on the flows of arms into Yemen (Alaraby and Muller 2020). Although it does not provide data, it pointed out how the country has been a trafficking hub for many years, starting after the president Saleh's resignation in 2011. Indeed, in 2018, Yemen was the world's second most heavily armed country after the U.S.. The same study reported how some firearms and military equipment originally destined to different countries ended up in Yemen. For example, some American and European weapons destined to Saudi Arabia were found in Yemen. This is probably due to the fact that many militant and terrorists groups, such as Al Qaeda, are able to put their hands on these weapons (Alaraby and Muller 2020).

2.2 Americas

In North America, the U.S. is one of the major producer not only of firearms, but also ammunitions and firearms components (UNODC 2020c; 2015). The U.S. is primarily an origin country for firearms intended to Mexico and Canada. In both cases, criminals and criminal groups exploit the long borders to move illicit firearms. The U.S. is also an important firearms country of manufacture for overseas regions, such as the Middle East, Asia, and South America, in particular Brazil (Figure 8) (UNODC 2020c).

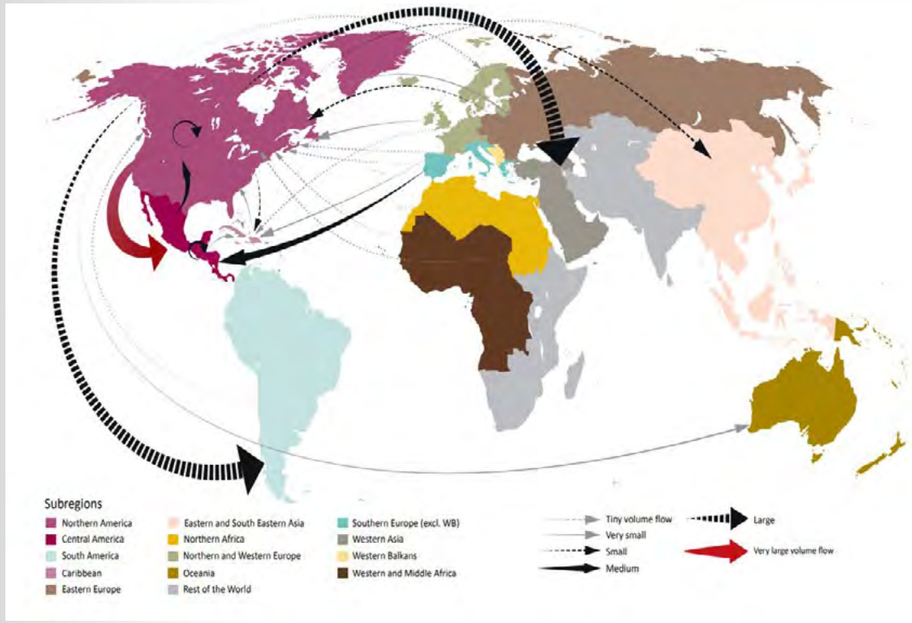

Figure 8. Transnational ITF flows affecting Northern and Central America as defined by routes of seized firearms, 2016-2017
Source: (UNODC, 2020c)

Mexico is the major destination for firearms coming from the U.S. (UNODC 2020c). In particular, Texas, California and Arizona are the most relevant origin states for the illicit firearms intended to Mexico (Agrawal 2019). A study in 2010 identified two major routes used to traffic firearms from Texas to Mexico. The first is called the "Houston Corridor" and it goes from Houston, San Antonio and Laredo to Nuevo Laredo, Reynosa, and Matamoros. The second one, called the "El Paso Corridor", starts in El Paso and goes directly to Ciudad Juarez (Goodman and Marizco 2010). From Arizona to Mexico, the same study identified the route called "Tucson Corridor", running from Tucson and crossing the border at Nogales (Goodman and Marizco 2010). From California, firearms enter Mexico mainly through the cities of Tijuana and Mexicali (Agrawal 2019). Florida was another key origin state for firearms directed to Mexico. From Florida, trafficking routes passed through Guatemala to reach Mexico (Goodman and

Marizco 2010; Goodman 2013). Independently from the entry point, once in Mexico firearms originating in the U.S. were further trafficked inside the country, moving from cities in the North, like Tijuana and Ciudad Juarez, to cities in the South like Oaxaca and Veracruz (Figure 9) (Agrawal 2019; Goodman and Marizco 2010; UNODC 2010). The U.S. is not the only source for the Mexican illicit market (Cook, Cukier, and Krause 2009). Illicit firearms also came from Central America, China, Russia, and Eastern Europe (UNODC 2020c; Cook, Cukier, and Krause 2009). In particular, illicit firearms transiting in Panama and pass through the Guatemala to reach Mexico (Salcedo-Albarán, Santos Cubides, and Salamanca 2017).

Figure 9. Main ITF routes from the U.S. to Mexico
Source: Authors' elaboration of UNODC data (2010)

Central America is a key hub for the ITF in the America. Countries like Honduras receive firearms from Guatemala and El Salvador. Part of these firearms originate in the U.S. (Nowak 2016). In addition, Central America is an important origin region for illicit firearms destined to Latin America. In particular, Guatemala, Nicaragua and El Salvador are key origin countries since they register a surplus of firearms generated by the three civil wars they experienced in the last decades (i.e. Guatemala from 1960 to 1996,

Nicaragua from 1972 to 1991, and El Salvador from 1980 to 1992) (Salcedo-Albarán, Santos Cubides, and Salamanca 2017). Firearms illicitly move from Central to Latin America both via land and via sea, mainly from Nicaragua to Costa Rica, Panama and Colombia (Salcedo-Albarán, Santos Cubides, and Salamanca 2017; UNODC 2020c). Panama has a central role in the ITF because many firearms are legally bought there and then smuggled to both South and Central America (Salcedo-Albarán, Santos Cubides, and Salamanca 2017). Regarding the trafficking between Panama and Colombia, routes are mostly via sea entering the country of destination from three cities (Acandi, Jurado and Buenaventura) and from the Golfo de Uraba, Bahia de Cupica and Golfo de Tibuga. The only trafficking route via land passes through the Parque National Darién (Figure 10) (Salcedo-Albarán, Santos Cubides, and Salamanca 2017; UNODC 2012).

Figure 10. Main ITF flows from Panama and Central America to Colombia
Source: Authors' elaboration of UNODC data (2012)

In South America, two countries have a strategic role in the ITF: Brazil and Paraguay. On one hand, Brazil is mostly a country of origin for neighboring countries. However, cities like Sao Paolo and Rio de Janeiro are also two very important destinations for illicit firearms (Cook, Cukier, and Krause 2009;

UNODC 2020c). On the other hand, Paraguay does not produce firearms, but it is a key transit country for the whole region. Evidence shows how Brazilian organized criminal groups (OCGs) exploit the land border between Brazil and Paraguay to transport firearms and different types of drugs (UNODC 2020c).

2.3 Asia and Oceania

In Asia and Oceania, illicit flows of firearms are both outgoing and incoming the region. As reported by the UNODC, incoming illicit firearms trafficking flows come from the U.S. and Northern Europe, while outgoing flows are mostly directed to the Middle East, or inside the continent (Figure 11) (UNODC 2020c).

Regarding Asia, the region most involved in the illicit firearms trade is Western Asia. International flows in this area are mainly of small volumes coming from Eastern Europe or North America, while the region is a source country for the Middle East and both for intra and extra-regional trafficking (UNODC 2020c). Southeast and Northeast Asia are affected by ITF as well. Southeast Asia registers illicit firearms flows especially between Indonesia, Philippines, and Singapore (AK and Fidelia 2018; UNODC 2020c). Cambodia has been one of the most important source of illicit firearms in the region (Ward 2017). Furthermore, Myanmar is defined as a manufacture country due to the presence of different groups that own craft-shops or semi-industrial shops where they produce firearms (Picard 2021).

In Northeast Asia, an analysis of seizures data from the 1960s to the first years of the 21st century revealed that illicit firearms mostly came from Pakistan, the U.S., the United Kingdom, Czechoslovakia, Afghanistan,

Bangladesh, Cambodia, Myanmar and Israel (Bhattacharyya 2010). In particular, Pakistan is a key manufacture country. It houses the Darra Adam Khel (The Arms Market), which is the largest firearms market in the world with significantly low prices. Sellers in this market operate in a grey area that allows them to operate outside the country's laws. Close to the market are located dozens of factories producing copies of different firearms both of low and high quality level (Arsovska 2014; Hashim 2019).

Regarding Oceania, data availability is restricted to Australia. Here, the major flows of illicit firearms start from the Philippines, the Middle East, North America and Eastern Europe, even though the large majority of the illicit firearms is of domestic origin (ACIC 2016; UNODC 2020c).

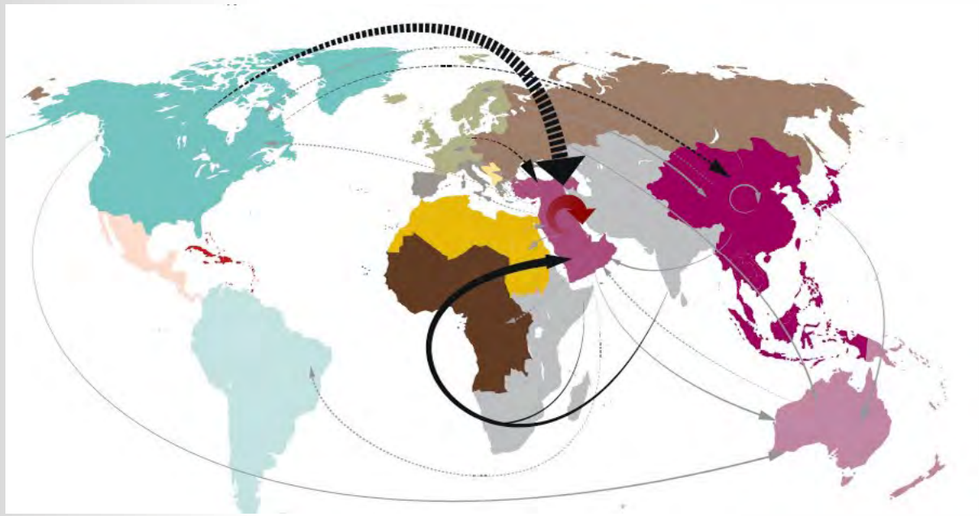

Figure 11. Transnational ITF flows affecting Asia and Oceania as defined by routes of seized firearms, 2016-2017
Source: (UNODC, 2020c)

2.4 Europe

Europe is a key region for both licit imports and exports of firearms. In particular, Germany and Russia accounted for most licit imports in the region

between 2016 and 2020, while France, Germany, and the United Kingdom registered the major licit arms exports in the same timespan (Wezeman and Wezeman 2021). Europe is also an important source of illicit firearms in both intra-regional and trans-regional flows. Regarding intra-regional flows, data on seizures collected in Finland revealed that of the 60-70% of firearms illicitly moved in international trafficking, only 10% was being trafficked from outside Europe (UNODC 2020d). In trans-regional illicit flows, Europe is connected to the rest of the world, especially Central America, Africa and Western Asia where the majority of firearms coming from Europe were reported (Figure 12) (UNODC 2020d; 2020c).

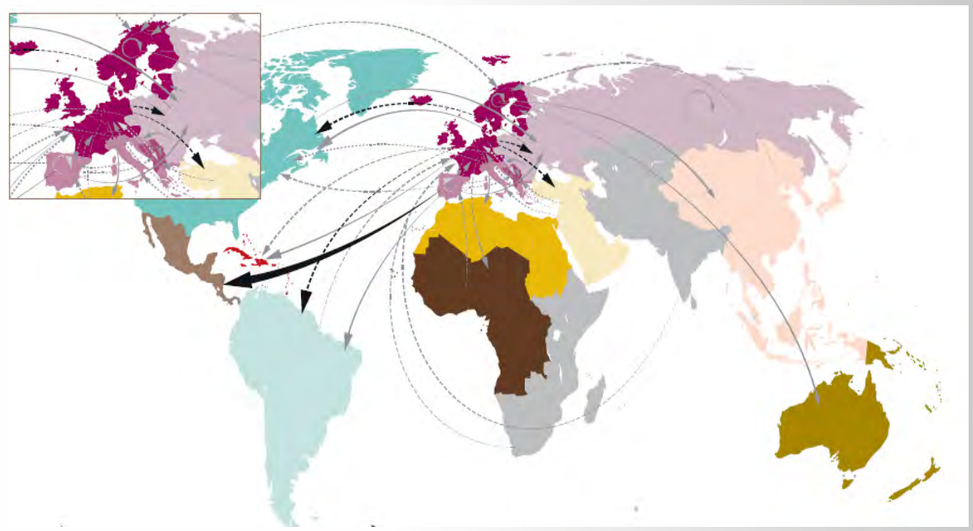

Figure 12. Transnational ITF flows affecting Europe as defined by routes of seized firearms, 2016-2017
Source: (UNODC, 2020c)

In Europe, many countries are involved in the ITF, and they play different roles in trafficking routes. For this reason, information regarding Europe's routes is divided by whether a country is a country of manufacture, origin, transit or destination for illicit firearms.

Among the countries of manufacture, Italy, Croatia, Czech Republic, and

Bulgaria produce many weapons intended to the illicit trade (UNODC 2020c; 2015; Dressler, Duquet, and Eckelmann 2021). In addition, Turkey and Slovakia are key source countries for converted firearms. Turkey is key manufacture country for modified alarm pistols. These arms are not just trafficked into Europe, in countries like Belgium, Bulgaria, Croatia, Denmark, Finland, France, Germany, Greece, Italy, the Netherlands, but also in Canada and North and West Africa (Florquin and King 2018; UNODC 2020d). Slovakia is the major manufacture country for Flobert-calibre weapons that are bought legally in the country and then converted and moved to other countries (UNODC 2020d). Another key manufacture country is Slovenia where the manufacture of alarm weapons and replica is managed freely without license (European Commission 2014). This makes it possible to buy these weapons without any licensing or registration, convert and trade them on the illicit market (Duquet and Goris 2018a).

Regarding countries of origin, Austria, Belgium, Germany, Spain, Switzerland, and the Western Balkans region are the leading countries for the European illicit firearms trade (UNODC 2020c). In particular, the Western Balkans more than the others are a key source region for trafficking of firearms with criminal ends (Box 4) (UNODC 2015; Dressler, Duquet, and Eckelmann 2021; Europol 2013). To a lesser extent France is also an origin country for firearms and ammunitions intended to the United Kingdom (Florquin and Desmarais 2018).

Focusing on transit countries, Croatia, Romania and Slovenia are the main countries through which firearms are trafficked from Eastern Europe and the Balkans to other European countries (UNODC 2020c). Bulgaria shares a mutual relationship with Romania, since many of the firearms produced or stored in the former country are trafficked by the latter (Savona and

Box 4: Western Balkans as a key source country

The EU 2020 - 2025 Action Plan on firearms trafficking reaffirmed the key role of the Western Balkans as one of the primary supplying regions of illicit firearms intended to the EU Member States (European Commission 2020). The end of the armed conflicts in Yugoslavia in the 1990s produced a high number of stockpiles as well as a huge number of unregistered firearms in the Western Balkans countries (Dressler, Duquet, and Eckelmann 2021). The big availability of firearms created unprecedented opportunity for traffickers that exploit also the proximity to the EU Member States and the regulatory asymmetries to traffic firearms in the EU (European Commission 2020). Several investigations have verified the continued threat coming from the Western Balkan region. The most recent one emphasizes that guns used in terrorist attacks in the EU came from the Balkans, such as the pistol used in the 2016 Christmas market shooting in Berlin (Duquet and Goris 2018a). While being a major source for illicit firearms within the EU, Western Balkans are also transit and destination countries (UNODC 2020d).

Mancuso 2017). Other routes are destined to both European countries and Africa, passing through Portugal, Belgium, Greece, and Italy (Calderoni et al. 2014). This latter country is also included in routes originating from the former Yugoslavian countries (Savona and Mancuso 2017). Also, the Netherlands can be defined as a transit country for firearms trafficked from the U.S. and Germany to United Kingdom and Ireland (Bruinsma and Spapens 2018).

Finally, the main destination countries in Europe are France, Germany, the Netherlands, Italy, Scandinavian countries, Spain, Greece, and Ireland (Savona and Mancuso 2017). Considering the Scandinavian countries, Sweden records a strong connection with Denmark. The Öresund Bridge

connecting Copenhagen with Malmo is used to traffic firearms from Denmark to Sweden and vice versa (Grip 2018). In Italy, firearms come into the country mostly from the Balkan region. This is mostly due to the 'Ndrangheta families who moved to the Balkans countries in the 1990s (Strazzari and Zampagni 2018a). Indeed, in Italy most of the illicit trade is in the hand of OCGs that possess their own arsenals and pursue an internal trade with other criminal groups (Savona and Mancuso 2017; UNODC 2020c; 2015). For the other countries, clear explanations of the reasons behind their position in the trade have not been particularly investigated. However, for France, Scandinavian countries, Spain, Greece and Ireland, the demand for illicit firearms could be related to their use to commit crimes. Indeed, these countries registered medium-high rates of deadly shootings in most of their regions between 2010 and March 2015 (Figure 13) (Savona and Mancuso 2017).

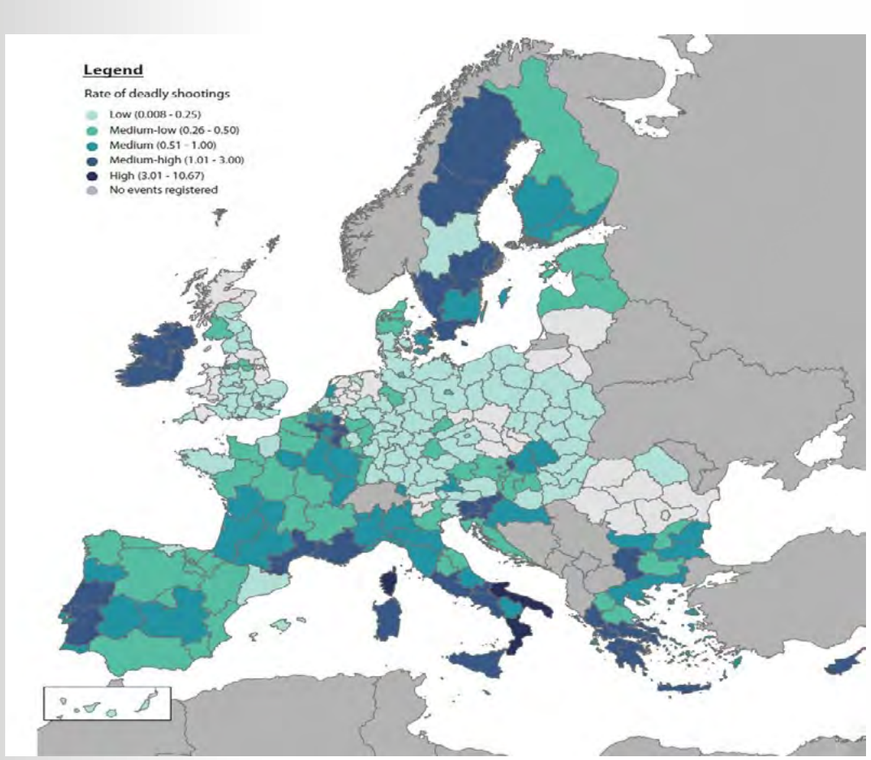

Figure 13. Rate of deadly shootings with illicit firearms in the EU per 100,000 inhabitants per region, 2010-2015*
Source: (Savona and Mancuso, 2017)
*For 2015, data are available only for the first three months of the year.

3. Drivers and contextual factors

There are different contextual elements that can facilitate ITF and affect the demand for illicit firearms. They vary country by country depending not only on the national regulatory framework, but also on economic, social, and cultural aspects. Providing an extensive review of all the contextual elements potentially affecting ITF is beyond the scope of this document. However, this section provides a brief description of some of the main factors that could influence ITF.

3.1 Regulation and enforcement

Differences among countries' regulatory frameworks can explain the diffusion of ITF both at international and intra-regional level. The lack of harmonized regulation in terms of firearms possession, types of firearms considered as illicit, and acquisition process impacts on the demand for illicit firearms and allows criminals to exploit the regulatory asymmetries to traffic them. In the EU, for example, some countries have fully implemented the EU Directive 2017/853/EC and thus have strict legislations, while other countries have not (or not yet) implemented it, resulting in softer measures and dispositions (European Commission 2020; UNODC 2020d). These regulatory asymmetries enable criminals to buy firearms that are considered legal in a country and then convert and move them in another country in which they are considered illegal. It is also possible to buy parts and components in one country and then illicitly assemble a firearm in another. As an example, a case was reported in Italy, where the 'Ndrangheta was able to traffic firearms and ammunitions after buying them legally in Switzerland (Dressler, Duquet, and Eckelmann 2021; Savona and Mancuso 2017).

In addition, the lack or softening of borders controls due to specific agreements, like the Schengen Agreement, or the possibility to avoid them by for example corrupting officials, allow criminals to transport illicit firearms across borders. In particular, ITF is predominantly a small-scale traffic, hence firearms are usually moved in limited quantities reducing the risk of being detected and charged (Savona and Mancuso 2017). This smuggling practice, also called ant trafficking, is particularly relevant in the ITF between the U.S., Canada and Mexico (see Section 4.2) (Cook, Cukier, and Krause 2009). Moreover, ineffective cooperation among customs authorities and other law enforcement agencies, as well as poor information and data sharing strongly contribute in limiting the prevention of and the fight against firearms trafficking (Mancuso and Manzi 2021).

Furthermore, the way in which law enforcement interventions are planned can have an impact on the demand for illicit firearms. For example, if law enforcement agencies focus their attention on a specific type of illicit firearm, the retail price of that kind of illicit product usually increases. As a consequence, criminals may switch towards other types of firearms having a lower cost or being more easily available (Duquet and Goris 2018a; de Labbey, Duquet, and Smets 2021).

3.2 Availability and prices

The availability of firearms in a specific region affects their demand. For example, in Europe the increased availability of military weapons due to the end of the conflicts in the Balkans during the 1990s has contributed to an augmented interest from criminals in acquiring this type of firearms (de Labbey, Duquet, and Smets 2021). Another example of how availability impacts the illicit firearms market can be found in the relationship between

Mexico and the U.S.. As previously stated (see Section 2.2), the U.S. has a wide range of legal firearms available, and more specifically guns, which represent a low-cost supply channel for criminals in Mexico, who have to confront with strict regulations and high prices (Cook, Cukier, and Krause 2009). Furthermore, a wide array of new models of less expensive but still powerful firearms are becoming more and more available, and this has brought to the creation of a demand for these specific types of weapons. For example, Turkish-made replicas are particularly attractive for criminals because they are cheap, small and almost identical to real firearms (Duquet 2018).

Besides availability, prices have also an impact on the illicit firearms market. Usually, considering the risks and costs required for the supply or transport of illicit firearms, the prices of these illicit goods are much higher than the licit ones. However, there are some exceptions. For example, prices are lower in certain geographic areas, such as Latin America and the Caribbean. Also, some types of firearm are less expensive, such as handguns or revolvers, because easily available on the illicit market (UNODC 2020c). Prices can often vary among countries, when considering similar or equal typologies of firearms. Nonetheless, it is important to notice that the price hierarchy is mostly similar, meaning that prices change from country to country, but there is concordance about which are the most expensive types of weapons (UNODC 2020c; Duquet 2018).

Prices on the licit market can also be a driver attracting criminals looking for firearms, especially when paired with vulnerable borders. For example, Bulgaria has very low prices for blank-firing firearms, and this, together with the lack of efficient border controls, makes this country a firearms supply channel largely exploited from criminals operating in Romania. The firearms

are bought legally in Bulgaria, trafficked in Romania, and sold to Romanian criminals (Duquet 2018). The same situation can be found in the trafficking relation between the U.S. and Mexico, where lower prices of the firearms in the U.S. are accompanied by a long and vulnerable border (Cook, Cukier, and Krause 2009).

3.3 Gun culture

The term gun culture refers to a perception of armed violence as acceptable and legitimate in people's interactions. It is a system of values and cultural elements that create preferences and attitudes in favor of guns possession and usage (Arsovska and Zabyelina 2014). For this reason, it creates a general social acceptance around firearms use and it legitimates illicit ways to purchase them. The gun culture can be the result of guns' availability, long-lasting armed conflicts or of a social system that values gun ownership. It gives weapons a positive image as strictly connected to honor, masculinity and status, making them part of the person's identity (Maa Schroeder and Lamb 2018; Arsovska and Zabyelina 2014). Gun culture also refers to the cultural practice of carrying a gun as part of everyday life. Even if this aspect is mostly grounded in the U.S., other countries have developed a gun culture, such as Honduras, Australia, Canada, Philippines, Germany, and the Balkans (Arsovska 2014). For example, in the Balkan region guns are associated with strength and courage and are used in celebrations such as weddings and births (Arsovska 2014).

Gun culture is also relevant among criminals. Firearms are perceived as instruments to assist criminal operations and are used both as offensive and defensive tools (Duquet 2018). Possessing a firearm can often be an element increasing the status and prestige of criminals. In some criminal communities,

owning top brand firearms or military grade firearms is interpreted as a sign of elevated criminal status because it means to be involved in serious criminal activities and to be part of significant criminal networks, that are able to obtain that type of products (Duquet 2018). A widespread gun culture in a state or community largely increases the demand for firearms that can be often satisfied by illicit suppliers.

3.4 Organized crime, armed conflict, and corruption

The long and stable presence of OCGs in specific territories is a driver for ITF (Alaraby and Muller 2020; Duquet 2018; Savona and Mancuso 2017). On one hand, these groups increase the demand for firearms. This happens for example in Western and Eastern Europe, where OCGs were the major driver for the activation of the routes to traffic firearms across the Balkans (Duquet 2018). On the other hand, in areas that experience armed conflicts, OCGs act as suppliers or brokers providing firearms, military equipment and ammunitions (Davis, Hirst, and Mariani 2001). In fact, the presence of armed conflicts has a reciprocal relation with firearms trafficking. In many countries where armed conflicts have been going on for a long time, a high level of firearms trafficking is registered because the demand for firearms is large to sustain violent actions (Siyech 2019).

Corruption also plays a key role. OCGs and other criminals often traffic firearms thanks to corrupted officials connivance (Davis, Hirst, and Mariani 2001). In fact, corrupting public officials allows them to bypass controls or to falsify the necessary certificates to move firearms in the illicit trade. In particular, firearms end-user certificates are very easily forged and abused (Bromley and Griffiths 2010).[3] Moreover, corruption can also help criminals

3 An end-user certificate is "a document issued by or on behalf of the end-user that identifies, at a minimum, the material to be transferred, the destination country and the end-user. In addition, it may contain information about the exporter and assurances regarding the use and potential re-transfer of the goods, thereby providing additional checks on the potential risk of diversion (Bromley and Griffiths 2010, 2).

and OCGs to have access to government stockpiles. Corrupted employees and security forces allow criminals to easily enter the stockpile facility and steal firearms by sabotaging control systems (de Labbey, Duquet, and Smets 2021).

4. Crime script and modi operandi

ITF is a complex crime that encompasses different steps to be carried out, namely the illicit production or diversion of the firearms; their transportation to reach the final destination markets; the selling to the consumers; and the use of the illicitly acquired firearms (Figure 14). All these steps can be performed in different ways according to the actors involved, the criminal opportunities, and the existing risks and resources (UNODC 2020c). This section reports the main operational methods used by criminals in each one of these stages.

Figure 14. The business model of the ITF

4.1 Supply and production

Criminals can use different ways to obtain the firearms that fuel the ITF. In general, these activities can be summarized in two main categories: firearms diversion and illicit production (UNODC 2020c).

4.1.1 Firearms diversion

The vast majority of trafficked firearms are manufactured legally by licensed manufacturers and diverted into the illegal supply chain on a later stage. The diversion occurs when firearms are moved or transferred in violation of national laws or international provisions. The diversion can take place in different moments of the firearm's life cycle, e.g. transfers, storage or final disposal. The so-called "point of diversion" is crucial since it defines when a firearm passes from the licit to the illicit market and it corresponds to the beginning of the trafficking chain (UNODC 2020c).

Diversion can occur in different ways. The main ones are theft, inheritance from individuals and conflict legacies, falsification of declarations and, finally, conversion. Theft from legitimate owners (e.g., national law enforcement, private individuals, security forces, etc.) is a relevant source of firearms for the illicit market. Theft from private households usually involve an exiguous number of firearms stolen at one specific time. Thieves may not even be looking for firearms, but when they find them, they can either keep them or sell them to intermediaries who have knowledge about the illicit market. However, these thefts can also occur with the main objective of gaining firearms. In this case, the victims of the thefts are usually sport shooters, hunters, any person who is allowed to own a gun or collectors owning a great quantity of sophisticated firearms (Duquet 2018; de Labbey, Duquet,

and Smets 2021). Thefts can also occur in government stockpiles, especially available in conflict and post-conflict countries, factories, or gun stores. These thefts are usually well organized with the objective of obtaining a large quantity of firearms or specific types of firearms. On one side, the security measures applied to these places make the thefts more challenging and this is the reason why they are less common than the ones from individual households. In addition, criminals often need to rely on insider knowledge to perform this type of thefts successfully (Duquet 2018; de Labbey, Duquet, and Smets 2021). On the other side, with specific reference to military stockpiles, it has to be considered that the political instability of the countries in which they are usually located can weaken the ability to manage and protect these places (UNODC 2020c).

Firearms can also be diverted into the illicit market through inheritance since they are durable goods that can operate for a long time. When a private citizen inherits a firearm from a deceased relative or acquaintance two situations can occur. On the one side, the previous owner had a legal permit to own the gun, but the successor does not. On the other side, the firearm was already illicitly owned and it passes to next owner illicitly (Dressler, Duquet, and Eckelmann 2021; Duquet 2018). Firearms can be also retrieved in previous conflict zones through a method called “black digging”. This method refers to all the activities pursued with the objective to find weapons that have been left behind during a conflict, mostly hidden in the soil or into waters (Dressler, Duquet, and Eckelmann 2021; Duquet 2018; Small Arms Survey 2013). Examples of conflict legacies concern the firearms used in World War II, in the Balkan conflicts and in the Yugoslav Republic’s disintegration, that are still held illicitly by citizens (Dressler, Duquet, and Eckelmann 2021).

Chapter 3: Illicit Firearms Trade

Another way to divert firearms consists in illegally transferring firearms that are legally acquired or held in one country to another country. The transfer occurs violating the existing dispositions, for example by concealing the firearms during the transportation or by using falsified certificates (UNODC 2020c). In most cases, individuals falsify deactivation certificates to claim that firearms have been deactivated following new standards and that they will not be sold to other people (Dressler, Duquet, and Eckelmann 2021). Criminals can also use forged import licenses to acquire large volumes of firearms directly from a legal gun manufacturer. Alternatively, authorized arms dealers can produce false legal exports or domestic sales that allow them to sell the weapons illicitly to criminals (Dressler, Duquet, and Eckelmann 2021; Duquet 2018). Also, end-user certificates are exploited to pursue ITF. The first method to divert firearms through end-user certificates, called “Point of Departure Diversion”, involves forgery and document falsification in order to allow firearms to directly reach a destination country, which could not legally receive firearms. The second method, called “Post Delivery Onward Diversion”, consists in producing valid and legal documents in which an authorized destination country is declared. The firearms, once reached the destination, are diverted to another final destination not declared in the official document (UNODC 2010).

Another diversion method can be applied by an individual who falsely reports a firearm as stolen or lost to the authorities and then sold it on the black market. This method can also be used by criminal organizations relying on straw purchases. In this case, an individual outside the organization buys a firearm legally on the criminal organization’s behalf. The firearm is then reported as stolen or lost, while in reality it is acquired by the criminals and its serial number is erased (Duquet 2018; UNODC 2020b).

Conversion is a relevant and diffused way to divert firearms. Conversion can be defined as a process through which a firearm is modified or altered to produce an illicit firearm possibly resulting in modifying the weapon's lawful status (King 2015; Savona and Mancuso 2017). It can be performed in private settings and instructions on how to convert arms are available on the internet (Savona and Mancuso 2017). More specifically, conversion can be carried out in different ways:

• **Reactivation of deactivated firearms**. Deactivated firearms are real firearms made inoperable so not to be able to expel projectiles (King 2015). Their reactivation entails the process of restoring their original functionalities. Since countries have different deactivation requirements, it is possible to buy deactivated firearms in countries without very strict requirements and then to reactivate them with low effort (Mavrellis 2017; Savona and Mancuso 2017).

• **Modification of semi-automatic firearms into fully automatic ones**. In many countries, such as the EU Member States, semi-automatic firearms can be owned by private citizens (with prior authorization or declaration according to the specific type of firearm), while fully automatic firearms cannot be held unless they are fully deactivated. This means that semi-automatic firearms can be easily bought in these counties and later converted into fully automatic ones to satisfy their demand mainly feed by OCGs (Savona and Mancuso 2017; UNODC 2020c).

• **Conversion of blank-firing guns and replicas**. To convert blank-firing guns, it is necessary to remove the barriers that blocks normal firearms functionality. The conversion of blank-firing firearms is very common in Europe (King 2015). In some cases, the owner himself has converted the weapon after purchasing it on the internet or abroad. Replicas, including airsoft or trauma guns, can be quite easily converted as well, especially trauma guns since they are already designed to expel projectiles. However,

these types of weapons are less diffused than blank-firing firearms because they are considered as actual firearms in some countries (King 2015). The lack of common standards regarding blank-firing firearms and possession of replica allows for the conversion of these firearms in order to make them fully operative (Duquet 2018; Savona and Mancuso 2017).

Firearms conversion is a global practice due to regulatory asymmetries across countries, the huge availability of firearms than can be converted, the ease of conversion, and the lack of a tracking and tracing system for firearms like replicas and blank-firing firearms (UNODC 2020c; Duquet and Goris 2018a). Conversion can occur anytime along the firearm lifecycle. Indeed, firearms can be: a) imported into a country and then converted, b) converted in the place of production and then exported to the destination country, and c) manufactured in one country, exported to another one where they are converted and then exported to the destination country (King 2015; HM Government 2013; de Vries 2012).

4.1.2 Illicit production

Illicit production is rare since the majority of illicit firearms are legally produced before entering the illicit market. Nevertheless, illicit firearms can be manufactured in factories, private workshops, residences, and production sites managed by OCGs relying on existing or original designs obtained thanks to the involvement of workers, ex-workers or retired people of the legal firearms companies (European Commission 2013; Kinsella 2014; Mangan and Nowak 2019; Savona and Mancuso 2017; UNODC 2020c).

Artisanal manufacture of illicit firearms can be either conducted ex novo or by assembling a firearm starting from parts and components bought

separately to circumvent regulatory dispositions (UNODC 2020c; Floriquin, Lipott, and Wairagu 2019). The artisanal production mostly occurs in Africa and Asia. In Africa, illicit production is frequent in Algeria, Ghana and Central African Republic. These firearms are produced using scrap or sheet metal (UNODC 2020c). Illicit production in Asia can be found in Myanmar, where different groups, such as the United Wa State Army, have craft-shops or semi-industrial facilities to produce firearms (Picard 2021). In Italy, especially in Calabria, Sicily and Campania, amateur gunsmiths provide their knowledge and talents in workshops or in their households (Duquet and Goris 2018a). These gunsmiths are typically unconnected to organized crime, although they frequently sell their products to OCGs members. They are regarded as reliable workers and their prices are cheap. They also convert toy weapons into live-firing weaponry (Duquet and Goris 2018a).

Finally, there have also been cases of usage of 3D printing to illicitly produce firearms (Box 5) (UNODC 2020c). 3D models that allow home-based print of firearms and their components are available on crypto markets. The increasing attention given to 3D printing is mostly related to the fact that this type of illicit production offers some significant benefits, particularly for terrorists planning an attack since they need to utilize these guns only once (Duquet and Goris 2018a). In specific, existing 3D-printed guns are capable of firing up to 14 rounds, which is frequently sufficient for an individual intending to carry out a terrorist assault. Furthermore, 3D-printed weapons are difficult to regulate and hard to trace or detect using regular metal detectors since the only component comprised of metal is the firing pin (Duquet and Goris 2018a).

3D printing is not considered to be a great component of the illicit firearms supply chain yet, because of the technological complexity required, the low

reliability of the 3D weapons shown in some past cases, and the availability of high-quality firearms that can be purchased for cheaper prices on the illicit firearms market (Duquet and Goris 2018a). However, law enforcement agencies have underlined that, in the future, technological progress could make 3D printing a more attractive option by offering new opportunities for the production of illicit firearms. There is also a possibility that an increasing number of people may be able to 3D print some parts or accessories, such as lower receivers, to complement traditionally manufactured firearms (European Commission 2020; Duquet and Goris 2018b; Savona and Mancuso 2017).

Box 5: 3D weapons workshop dismantled in Spain

In April 2021, authorities of the Charge Organization and specialists of the National Police destroyed the primary unlawful 3D weapons fabricating workshop in Spain after an investigation carried out by the Traditions Observation of the Assess Office, the Common Commissariat of Data, and the Common Data Brigade of Tenerife. The operation led to the capture in Santa Cruz de Tenerife of an individual for illicit ownership of weapons and explosives. The materials seized during the operation include: two 3D printers, 11 spools of 3D printers, various computer gadgets utilized to fabricate firearms, 19 weapons outlines made by 3D printing, two silencers, two unnumbered short weapon slides, two pieces for rifling barrels, two terminating pins, a copy AR-15 Airsoft attack riffle, a carbine with adjustable locate, a few metal tubes to form barrels, a holographic scope, a plastic share to form outlines and different parts of short weapons (Gorombey 2021).

4.2 Moving the products

The second step of the ITF concerns the transport of the firearms across borders or, domestically, from one location to another. The choice of which strategies and techniques are the best ones depends on several factors, such as the risk of detection, the border controls, the quantity of firearms, and the geographical distance to be covered (UNODC 2020c). Data on firearms seized show that the majority of firearms are seized within the national territory, while cross-border seizures are marginal (UNODC 2020c). Despite this, cross-borders trafficking is relevant especially in some areas. For example, in Europe, intra-EU trafficking is prevalent due to the discrepancies between countries legislations, the lack of customs controls at national borders, the freedom of movement and the presence of consolidated networks of criminal groups (Duquet 2018).

Worldwide trafficking by land is the most common transportation method. Indeed, an analysis carried out by the UNODC highlights that more than two thirds of seizures cases recorded in 81 countries between 2016-2017 concerned illicit transportation of firearms in motor vehicles (UNODC 2020c). These means of transportation usually allow to traffic small or medium quantities of firearms by guaranteeing a low risk of detection. Traffickers can conceal firearms in cars, trucks and busses; they often use vehicles with false bottoms to increase the chances of remain unnoticed or they can deliver packages with firearms. Land trafficking is used as the prevalent smuggling method in different countries, for example in Libya, Albania, Croatia, Slovenia and Denmark (UNODC 2020c). In particular, in Denmark, the Öresund Bridge connecting Copenhagen and Malmo is regularly used to traffic firearms both from Denmark to Sweden, and from Sweden to Denmark (Grip 2018).

Vessels are mostly used for cross-border trafficking of large quantities of firearms mainly destined to parties involved in armed conflicts. Their use is quite rare since large-scale trafficking is less common than the small-scale one given the difficulties in transporting huge quantities of firearms and the high risk of being detected (UNODC 2020c). This kind of trafficking was recorded in Tunisia in the Port of La Goulette, in France in the Marseille's Port, and in the Port of Genoa in Italy. In sea trafficking, firearms can be hidden in vessels from the departure to the final destination or transported in vessels up to a defined location, away from the cost, where they are then launched overboard and successively picked up by small boats. This latter method is most frequently used in the Philippines (UNODC 2020c). Water trafficking can also be performed using small boats passing through rivers and lakes. This is the case in Brazil, where border crossing with the purpose of trafficking happens across the Panama river and the Itaipu lake (UNODC 2020c). In addition, traffickers also exploit leakages in legitimate importations, for example using private ports, wharves or by not declaring firearms alongside different goods addressed to fictional subjects (Duquet and Goris 2018a; UNODC 2020c; 2015). Trafficking by air is also less frequent than land trafficking. Some South American countries reported seizures cases related to air freight especially in Paraguay and Brazil (UNODC 2020c). Also, in Africa, the air route from Libya to Syria has been used to move large scale transports of illicit firearms (Duquet and Goris 2018a).

A last method for trafficking firearms is called ant trafficking. It refers to carry or transport across borders very small quantities of firearms by many single individuals. The individuals involved in this type of trafficking are usually connected by loose criminal networks that are also in charge of the firearm sale in the destination country. Although ant trafficking happens in small-scale individual consignments, it can result in significant illegal

flows and stockpiling of illicit guns, and it may also be the consequence of an organized crime's planned strategy, or the conclusion of a supply and demand mechanism related to larger scale operations. The use of ant trafficking strategy has mostly been found in the border between the U.S. and Mexico (UNODC 2020c; Mavrellis 2017). In particular, the hormingas (ants) drive across the border concealing very small quantities of firearms. In these networks, every element is easily replaceable, so possible arrests do not preclude the criminal business (Agrawal 2019). This reduces the costs associated with a potential apprehension (Figure 15) (UNODC 2020c).

Besides these more traditional trafficking methods, traffickers are increasingly using parcels and postal services to reach customers and reduce the likelihood of being discovered by the authorities (UNODC 2020d; Duquet 2018). For example, in the U.S., arms dealers send in Europe firearms components that they are not authorized to sell by postal couriers and services (Duquet and Goris 2018a; Duquet 2018). There are different ways to mitigate the risk of detection, including: drop-off locations far from the seller's houses or place of work; using a middle man to receive the package; mislabeling package to ship it as another good; packaging firearms' parts with other goods; or corrupting employees of postal services (UNODC 2020d).

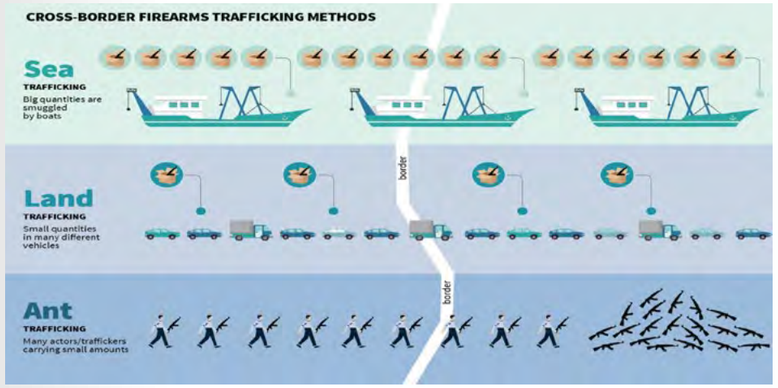

Figure 15. Methods used to traffic illicit firearms across borders
Source: Authors' elaboration of UNODC data (2020c)

4.3 Selling the products

The third step of ITF concerns the selling of the illicit firearms to the final customers. The sales can take place both offline and online. Focusing on offline selling, transactions often occur face to face during in-person meetings because firearms acquisition is usually determined by an individual's trusted contacts in the criminal environment. If buyer and seller do not know each other, there is always an intermediary who provide assurance for the contacts (de Labbey, Duquet, and Smets 2021; Duquet 2018). In the case of previously stolen firearms, research suggests that intermediaries play a key role in organizing the selling of the product. Professional intermediaries buy the stolen firearms directly from the thief and, after concealing them, they sell them to interested buyers. These actors often use legitimate business to cover their illicit activities (Eurostat 2018a). Similarly, also authorized arms dealers, who are involved in ITF, can sell firearms to criminals and criminal groups pretending to conduct licit transactions. For example, they can use fake exports or domestic sales, report forearms as stolen, or illegally reactivate firearms (Duquet and Goris 2018a).

Regarding online selling, the growing use of online platforms to sell and buy firearms has facilitated the flows of information between gun enthusiasts and collectors. It has also created new opportunities for the trade of illicit firearms, firearms components, and ammunitions, such as various equipment and strategies for concealing the identities of the traders, and the possibility to reach a wide range of customers. Indeed, the online ITF is mostly international rather than domestic (Duquet and Goris 2018a; Europol 2013; Persi Paoli 2018). For example, in Spain, second-hand internet forums are key sources for specialized illicit weapons dealers and collectors looking for

historical live-firing weaponry, the majority of which date from the Spanish Civil War (1936–1939) (Dressler, Duquet, and Eckelmann 2021). In France, there are a number of online market platforms that offer firearms for sale (Duquet and Goris 2018a). In the U.S., purchasing firearms from online dealers is a common practice. Similarly, in developing countries, like Libya and Yemen, the use of social media-to sell and buy illicit firearms is quite diffused (Mavrellis 2017).

The use of the internet for pursing ITF is still growing and it possibly will become a more important marketplace in the future (Duquet and Goris 2018a). Usually, firearms are bought on the Internet and transported to the customer through postal and courier services. Still, this method is vulnerable to different risks mostly related to possible interception by customs agents and the dimension of the package. As underlined in Section 4.2, some sellers have found ways to mitigate these risks, for example using drop-off locations with a long distance from where the individuals involved live or work. Others prefer face-to-face transactions, physically handing over the package instead of using postal packages (Duquet 2018).

Firearms can be sold both on the surface and on the dark web. The use of surface web and the consequent online sale of illicit firearms have increased in the last years. Deactivated firearms or gun parts and components are usually sold on surface web because in many jurisdictions they are legal products (Mavrellis 2017). The use of the dark web has also increased in recent years due to some characteristics that make it appealing for criminals and very complicated to be detected and prosecuted. First of all, it provides anonymity to users (sellers and buyers) and payments by means of encryption. Secondly, the websites on the dark web often remain available only a limited period of time (e.g., for few days or weeks). Thirdly, it allows

criminals to conduct their illicit activity remotely. In addition, the dark web can create opportunities for both the trafficking of illicit firearms already on the market and the diversion from legal sources (Savona and Mancuso 2017). A study conducted by Broadhrust et al (2021) on the extent of the dark net in online firearms trafficking revealed that there are many online markets that provide illicit firearms, such as Agartha, Dark Shades, Empire and Nightmare. Armory and Middle Heart are reported as two other illicit online websites that provide firearms. These websites provide different typologies of firearms that can be bought in different quantities, detailed information about the products, photographs and a code to guarantee that the vendor is reliable (Savona and Mancuso 2017).

Crypto markets also provide buyers with manuals on how to manufacture firearms and explosives. These manuals come in forms of e-books, and they provide different instructions, from home-made manufacturing to information on how to modify firearms, their components, parts, and ammunitions. These manuals come together with videos on how to use the explosives and the firearms, how to reactivate firearms, and how to convert replicas or alarm guns into functioning firearms. Moreover, manuals and video include instructions on how to use 3D models to support additive manufacturing and to be able to home-made print fully functioning firearms or/and their parts using 3D printing modelling (Persi Paoli 2018; Persi Paoli et al. 2017).

4.4 Motivations behind trading or purchasing illicit firearms

An essential element of every illicit market is its financial management. Unfortunately, the existing knowledge on this aspect of the ITF is scarce. Research in Europe points out that illicit firearms dealing is not a very

lucrative business. Most of the illicit dealers are also involved in other types of trafficking activities that provide more revenues and are considered as core activities, while firearms trafficking remains a secondary activity (Duquet and Goris 2018a). Moreover, there are also still little evidence and research on the actual financial management of the illicit firearms market. This is mainly due to the characteristics of the demand for illicit firearms that comes from different actors with diversified goals (i.e., individual criminals, collectors, or OCGs).

Several individuals can be interested in purchasing firearms on the illicit market. First, gun enthusiasts or collectors who wish to own a firearm, but for different reasons cannot obtain it in the legal market (e.g., because they want a prohibited firearm, or they do not have the formal license to own it). These people desire a firearm mostly for collection purposes, emotional reasons (e.g., heritage), or for self-protection. Individuals can also be involved in criminal activities; thus, they need a firearm to commit crimes. Both these individuals' categories generally do not consider firearms as goods that can be resold to earn money (Brennan and Moore 2009; Savona and Mancuso 2017).

OCGs usually do not consider ITF a main business, but they generally engage in this illicit market in addition to other crimes (Brennan and Moore 2009). They purchase or acquire illicit firearms mainly to commit crimes (e.g., homicides, robberies, intimidations, extortion) or for their symbolic value. Indeed, criminals can intimidate just because people know they possess a firearm (Brennan and Moore 2009; Spapens 2007). For example, in Italy, OCGs involved in the ITF do not aim at making profits, but rather they use the ITF to strengthen their social position (Duquet 2018). There is evidence attesting that OCGs may use illicit firearms as exchange goods for

other illicit products. For example, in Italy, firearms stolen from stockpiles have been used as payment for drugs by OCGs that have the control over the drug trade (Duquet 2018). Similarly, Albanian OCGs that operate in the Italian drug market are known to leave the firearms they used to their Italian counterparts and Italian OGCs also accept firearms as exchangeable goods for the use of their territory for human trafficking (see Section 5.1) (UNODC 2015; Duquet and Goris 2018a).

4.5 COVID-19 and firearms trafficking

The COVID-19 pandemic has imposed constraints to criminals dealing with different illicit trades due to the significant limitations of cross-border movements and to the consequent increase in the border's controls. However, it has also provided unexpected criminal opportunities (Mediterranean Dialogues 2021). In particular, the pandemic and its economic and societal consequences impact on firearms trafficking.

First, the health crisis and its consequences boost uncertainty and a desire for more safety and security. This may lead to an increase in the demand for self-protection firearms as proved by the increase of legal gun sales in some countries (e.g. the U.S. and Hungary) (Hoops et al. 2020; Dressler and Duquet 2020). According to a study carried out in the U.S., thirty-nine out of forty-three states and the District of Columbia considered firearm retailers as essential businesses and so they asked for provisions to allow they remained open during the stay-at-home orders issued in March or April 2020 (Hoops et al. 2020). The increased demand for firearms can be satisfied by recurring also to the illicit market especially in the countries with a strict legislation on gun ownership (Dressler and Duquet 2020).

Second, the availability of illicit firearms could be potentially fostered by the Covid-19 pandemic. On one side, individuals could decide to sell their legally or illegally owned firearms to cope with the economic difficulties derived from, for example, the increasing unemployment. On the other side, the reduction of the staff dealing with the protection of the stockpiles could lead to an increase in the number of firearm thefts (Dressler and Duquet 2020).

Third, the limits on the movement of people across countries and the national lockdowns imposed to limit the COVID-19 circulation might cause a change in the modi operandi traditionally used to traffic firearms. Traffickers could move from the physical transport of firearms to the online sales and shipments through parcel and postal services as done for other illicit markets (Dressler and Duquet 2020; Mediterranean Dialogues 2021; UNODC 2020d). The extensive use of online marketplaces allows them to enlarge the number of potential customers on a global scale (Mediterranean Dialogues 2021). Further, it expands the possibility to purchase weapons like blank-firing firearms or components in countries where they can be bought legally, and then to convert or assemble them to obtain fully functioning firearms. The online sales involve also the dark web that could be increasingly used as exchange platform making criminal investigations more and more challenging for law enforcement agencies (Dressler and Duquet 2020).

5. Actors

Different actors are involved in the illicit firearms trade. The main ones can be broadly categorized in organized crime or extremist groups, single individuals, and legal actors linked to the illicit market. All these actors engage in the illicit trade for different reasons. First, carrying and using illegal firearms is instrumental to commit crimes or to satisfy the desire for

self and asset protection (Savona and Mancuso 2017). Second, possessing a firearm can also have a strong symbolic value since in many cases it can be used to intimidate or to strengthen a social role within a community (Brennan and Moore 2009; Spapens 2007). Third, people may ask for illicit firearms for collection purposes (Brennan and Moore 2009). Finally, to some limited extent, criminals can enter this illicit market for economic reasons. This chapter presents the main characteristics of the different types of actors and delineates their different roles in the illicit firearms market.

5.1 Organized crime and extremist groups

Several types of OCGs, such as stable and hierarchical criminal syndicates (e.g., Mafias or drug cartels), criminal gangs, and other loose organizations, are involved in the ITF both in the demand and the supply side (Table 2) (Savona and Mancuso 2017). Regarding the demand side, OCGs need to rely on illicit firearms to conduct their criminal activities (Massari 2013). For example, both Italian and Mexican OCGs have firearm arsenals where they store different types of weapons (e.g., revolvers, AK-47, and rifles) (Elkus 2011; Sullivan 2008; Savona and Mancuso 2017). In Italian OCGs, dedicated members are in charge of procuring, storing and distributing firearms among the other members according to the needs (e.g., some firearms are used to commit homicides, other can be used to intimidate or control other illicit activities) (Savona and Mancuso 2017). OCGs ask for illicit firearms also for their symbolic value besides being an instrument to commit crimes (see Section 3.3). For example, possessing specific types of firearms and the number of firearms owned may reflect the status of the criminal gang members (Bjerregaard and Lizotte 1995).

Regarding the supply, the ITF is mainly a side activity for OCGs. This is

explained by the low profit margins of ITF, especially if compared with other illicit markets. In addition, it is very difficult to smuggle a large number of firearms since the risk of detection is rather high. This further decreases the potential economic gains of ITF (Savona and Mancuso 2017). Therefore, research suggests that usually economic profitability is not the main reason for OCGs to get involved into this illicit trade. OCGs traffic firearms mainly for opportunistic reasons, such as providing other criminals with weapons in exchange for other illicit goods (Savona and Mancuso 2017).

When engaged in firearms trafficking, OCGs usually exploit routes, contacts, networks and skills used in other criminal activities (Hales, Lewis, and Silverstone 2006; Calderoni et al. 2014; Savona and Mancuso 2017). For example, OCGs in the Western Balkans use the same routes used for drug trafficking to move firearms, which allows them to have a good knowledge and control over the paths decreasing the risk of being intercepted (UNODC 2015; Duquet and Goris 2018a). As a consequence, ITF can be carried out together with other trafficking activities, such as drug trafficking and human trafficking (Duquet and Goris 2018b; Savona and Mancuso 2017). For example, an investigation conducted in 2004 and 2005 dismantled a large criminal network made of Eastern European criminals and Italians members of local 'ndrine (small criminal groups belonging to the 'Ndrangheta) involved in sex trafficking, drug trafficking, and ITF. In particular, Eastern European criminals provided the 'ndrine with drugs and firearms in exchange for the possibility to sexually exploit women in areas controlled by 'Ndrangheta groups. In many cases, firearms were trafficked together with drugs (mainly marijuana) and humans from Albania to Italy though the Otranto Channel (Savona and Mancuso 2017).

Research suggests that Eastern European OCGs are largely involved in the

ITF[4]. Albanian, Russian and Balkans OCGs were known to traffic firearms, especially in Italy, Greece, Spain, the UK, and in their countries of origin (Europol 2011; Arsovska and Kostakos 2008; Duquet and Goris 2018a; Cheloukhine and Haberfeld 2011). Also the Italian Mafias, in particular the 'Ndrangheta, participated in trafficking firearms in Europe, Asia and South America (Calderoni et al. 2014). Evidence underlined how the Italian Mafias were involved in the ITF together with Bulgarian, Albanian, and Russian criminal organizations. For example, Albanian OCGs carried weapons to traffic drugs into Italy and then they left their firearms to the Italian OCGs as a gift (Strazzari and Zampagni 2018a).

Also criminal gangs are involved in the ITF.[4] They are mainly buyers of illicit firearms since they need them to commit crimes and violent actions against other gangs to control territories, provide security to their community and assure stable relationships between their members (Rainelli 2012; Duquet and Goris 2018a; UNODC 2020a).
In addition, as already mentioned, firearms represent a status symbol for gangs, which contributes to explain their demand for illicit weapons. Gangs are not usually connected with firearms traffickers, but they obtain firearms through thefts, cross-border purchases, private sales, straw purchases, conversion of non-lethal firearms into lethal ones or through online purchases. There is not much evidence of their involvement in the supply chain as one of their primary activities. In some cases, gangs can be involved in small-scale trafficking, but more often firearms are trafficked for the internal use of the gang (UNODC 2020a).

A special case regards the outlaw motorcycle gangs (OMGs) that were known to engage in the ITF in many countries worldwide, including the U.S., Europe, and Australia. Since the late 1980s and beginning of the 1990s the U.S. registered the involvement of OMGs in this illicit trade. For example, the Southern White Knights operating in Georgia and the Brothers Speed operating in Idaho purchased illegal weapons from the Aryan Nations, an American hate group (Richardson 1991). More

4 A criminal gang is defined as "a group or association of three or more persons who may have a common identifying sign, symbol, or name and who individually or collectively engage in, or have engaged in, criminal activity which creates an atmosphere of fear and intimidation" (NAGIA 2021).

recently, the Pagan's Motorcycle Gang in New Jersey is known for its involvement in drug trafficking, violent actions, and ITF (The United States Attorney's Office District of New Jersey, 2021). OMGs take part in this trade both because they need firearms to commit violent actions and because they use firearms as exchange goods. For example, criminals belonging to other gangs provided protection to OMGs' members in prison in exchange for weapons and narcotics, or OMGs in Southern California illicitly traded weapons and explosives with methamphetamine (Richardson 1991). In Europe, some cases reported in 2015 in Belgium have underlined how OMGs were directly involved in the ITF exploiting the same routes they used to traffic other goods, such as drugs (Duquet and Goris 2018b). Also in Denmark, OMGs are involved in ITF, together with other street gangs, although their main purpose is to acquire firearms to pursue their criminal activities (Grip 2018). In the Netherlands, OMGs members have been involved in the sale of big quantities of illicit firearms (Bruinsma and Spapens 2018). Finally, OMGs have been reported to be involved in importing illicit firearms in Australia (SSAA 2016).

Regarding the Mexican drug cartels, previous research conducted by the United Nations suggested that for Mexican drug cartels firearms trafficking was not a core activity (UNODC 2010). The illicit trade between Mexico and the U.S. was not fully controlled by the drug cartels, but rather by independent brokers who communicate with the drug cartels, arrange funding, coordinate smaller players, and conduct the final transaction (UNODC 2010). On the contrary, more recent research points out that some Mexican drug cartels have the monopoly over trafficked goods, including firearms. In particular, Mexican cartels organize trafficking from the U.S. (Agrawal 2019). A recent article published by the USA Today News revealed how ant-smugglers are regularly sent from Mexico to the U.S. to smuggle

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firearms for the cartels mainly hidden in their vehicles (Warren 2021). This evolution may be linked to the changes and fragmentation of the Mexican criminal organizations and the raise of internal violence, requiring a more direct control on the firearms supply channels (Beittel 2020).

Loose networks of criminals can also engage in the ITF. For example, loose networks made of individuals who share strong ties, such as family or personal relationships, are the main actors involved in the ITF in Romania. Some of these networks do share contacts with larger OCGs, while others do not (Albisteanu, Dena, and Lewis 2018).

Finally, also extremist or radical groups engage in the ITF. The available information related to political terrorist groups operating in Europe has highlighted the historical involvement of four main groups in the ITF: the Irish Republican Army (IRA), the Real Irish Republican Army (Real IRA), the Basque Euskadi Ta Askatasuna (ETA) and the Front De Libération Nationale Corse (FLNC). The IRA, active in Ireland mainly in the second half of the 1990s, got firearms mostly from outside Ireland and during the Gaddafi regime in Libya engaged in the ITF from Europe to Libya and the U.S. (Strazzari and Zampagni 2018b). The Real IRA, a paramilitary organization born from dissidents of the IRA, was involved in both trafficking and acquiring of illicit weapons mostly in the Balkans (Arsovska 2014). The Basque ETA, an armed Basque nationalist and separatist organization active in the Basque area from 1959 to 2018, used to be involved in firearms trafficking in the Balkans moving firearms from Spain, their origin country, and from France (Arsovska 2014; Florquin and Desmarais 2018). In France, they mostly obtained firearms from thefts from local firearms retailers. In addition, some of the illicit firearms used and trafficked by ETA in the 1980s and 1990s were illicitly manufactured by the group's members (Florquin

and Desmarais 2018). The FLNC, a militant group that from 1976 to 2016 advocated an independent state on the island of Corsica, illicitly acquired firearms both from outside and inside Corsica (mainly through theft) (Florquin and Desmarais 2018).

In Asia, many politically motivated groups have been involved in the ITF since the 1990s. The United Wa State Army was reported to be involved in cross-border firearms trafficking in particular along the Sino-Myanmar border (Arsovska 2014). In Northeast Asia, other groups engaged in the ITF, such as the Kanglei Yawol Kanna Lup (KYKL), Zomi Revolutionary Organisation (ZRA) and Kuki National Army (KNA) (Bhattacharyya 2010). In India, research has underlined the involvement of the Jamaat-ul-Mujahideen Bangladesh in the ITF (Siyech 2019).

Extremist groups are major customers for the ITF and the way they acquire or come into possession of illicit firearms mostly depends on where they are based (Duquet 2018). In Northern Africa, these groups rely on illicit manufacturing factories or thefts from government stockpiles. After the fall of the Gaddafi regime, Libya has been a major source of firearms for terrorists due to the dispersals of firearms from government stockpiles (Duquet 2018). In Europe, and in particular in countries like Belgium, the United Kingdom, Denmark and Italy, terrorist or extremist groups have very limited access to high level criminal networks operating in the ITF. This is mainly because these networks may be less willing to supply terrorists with firearms given the attention that it may draw to them from law enforcement authorities (Duquet 2018; UNODC 2020c). In France, for example, OCGs tend to not be involved in the trade with terrorists since they do not support their actions and the risks are very high (Florquin and Desmarais 2018).

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However, there are some exceptions. In some limited cases OCGs provide terrorist groups with illicit firearms indirectly or in exchange for other goods as they do among themselves (Box 6). For example, Italian Cosa Nostra was suspected of supplying firearms to crime syndicates in North Africa and to extremists in Western Europe. In 2015, several assault rifles that were supposed to be transferred from Catania to Malta, appeared to have been delivered to an Egyptian people-smuggler in Alexandria. These weapons could have been destined to extremists groups once reached Egypt (Townsend 2016).

Box 6: Firearms trafficking and trafficking in cultural goods

Some recent investigations have underlined the existence of connections between ISIS and OCGs. In particular, affiliates of ISIS provide artifacts in exchange for a wide range of weaponry. This exchange is complex and involve different actors. The firearms come mainly from Moldova and Ukraine and are provided by the Russian mafia. The Italian mafias (especially Camorra and 'Ndrangheta) arrange for the exchange, and the Chinese mafia transport firearms in Chinese-flagged cargo ships from Sirte to the Calabria port of Gioia Tauro. Firearms either return to Libya on the same container ships or remain in Europe available for foreign fighters. The artifacts, once in Europe, were mainly bought by American museums and collectors until they discovered that their money was supplying the Islamic State with additional firearms. More recently, they are purchased by private collectors in Russia, China, Japan, and the Emirates (Nadeau 2016; Quirico 2016; Savona and Mancuso 2017).

Terrorist groups acquire firearms mainly from lower level of criminality. For example, in the Netherlands, in 2017, law enforcement authorities reported

that terrorists' groups operating in the country mostly acquired firearms thanks to connections with local criminals (Bruinsma and Spapens 2018). In Denmark, terrorist groups, such as ISIS, could access to the illicit firearms market mostly thanks to Danish citizens who supported their activities. These individuals usually had previous criminal records or belonged to a criminal gang (Grip 2018). Most of the firearms provided to the terrorists were stolen. For example, firearms stolen from the Danish Home Guard members have been used in multiple jihadi attacks, such as the attacks in Toulouse and Montauban in March 2012 or the attack in the Krudttønden Cultural Centre in Copenhagen in February 2015 (de Labbey, Duquet, and Smets 2021). In Belgium, terrorists' networks usually obtained firearms thanks to members who already had connections in the ITF market.

Still, terrorists also acquired firearms by exploiting the vulnerabilities of the legal market. For example, they bought reactivated firearms that had previously been sold as deactivated on the legal market, or they legally purchased parts and components to assembly their firearms (Duquet and Goris 2018b). In the Philippines, UNODC reported in 2016 a case of an individual involved in gunrunning operations to supply the Abu Sayyaf Group (ASG), a terrorist group that engages in criminal activities from kidnappings to bombings (UNODC 2016).

Radical groups are not only customers for the ITF, but they also play a role in smuggling firearms. Jihadi groups, like the Ansarullah Bangla Team and the Harkat-ul-Jihadi al-Islami (Huji), have been involved in the ITF mainly on the Indian Eastern border (Siyech 2019). The presence and involvement in the ITF of jihadi terrorists' groups has also been recorded in Africa, in particular between borders in Burkina Faso, Cote d'Ivoire and Mali (Sollazzo and Nowak 2020). In the same tri-border region the al-Murabitun terrorist

organization is active in cross-border firearms trafficking (Mangan and Nowak 2019). In addition, evidence from previous research point out that the terrorist group Ansar Al-Shari'a in Libya diverted many firearms after the fall of the Gaddafi regime (Alaraby and Muller 2020). Finally, extremists' groups in Malaysia are reportedly involved in the ITF, in particular from Thailand. ISIS members are suspected to be the clients for these firearms (Rodzi 2017).

Table 2. OCGs involved in ITF

Country	OCGs	Source
Africa and Middle East		
Burkina Faso	Al-Murabitun, Jihadi terrorists' groups	Mangan and Nowak 2019; Sollazzo and Nowak 2020
Cote d'Ivoire	Al-Murabitun, Jihadi terrorists' groups	Mangan and Nowak 2019; Sollazzo and Nowak 2020
Libya	Ansar al-Shari'a	Alaraby and Muller 2020
Mali	Al-Murabitun, Jihadi terrorists' groups	Mangan and Nowak 2019; Sollazzo and Nowak 2020
Americas		
Caribbeans	Gangs, Motorcycle gangs	Rainelli 2012
Colombia	Italian OCGs	Europol 2011
Mexico	Mexican cartels	UNODC 2010; Agrawal 2019
U.S.	Mexican cartels, IRA, Motorcycle gangs	Duquet & Goris 2018b; Richardson 1991; The United States Attorney's Office District of New Jersey 2021; UNODC 2010
Asia and Oceania		
Australia	Motorcycle gangs	SSAA 2016
China	United Wa State Army	Arsovska 2014

Country	OCGs	Source
India	Ansarullah Bangla Team, Harkat-ul-Jihadi al-Islami (Huji), Jamaat-ul-Mujahideen	Siyech 2019
Myanmar	Ansarullah Bangla Team, Harkat-ul-Jihadi al-Islami (Huji), United Wa State Army, Jamaat-ul-Mujahideen	(Siyech 2019; Arsovska 2014
Northeast Asian counties	Zomi Revolutionary Organization (ZRA), Kanglei Yawol Kanna Lup (KYKL)	Bhattacharyya 2010
Philippines	Abu Sayyaf Group (ASG)	UNODC 2016
Europe		
Albania	Albanian speaking OCGs	Europol 2011
Belgium	Basque ETA, Real IRA, Motorcycle gangs	Duquet and Goris 2018b; Arsovska 2014
Bulgaria	Albanian speaking OCGs, Balkan OCGs,	Europol 2011; Arsovska and Kostakos 2008
Croatia	Balkan OCGs, Italian OCGs	Europol 2011; Arsovska and Kostakos 2008; Calderoni et al. 2014
Denmark	Jihadi terrorists' groups, Motorcycle gangs	Grip 2018
Ireland	IRA	Duquet and Goris 2018a
Italy	Balkan OCGs, 'Ndrangheta, Italian OCGs, Russian OCGs	Europol 2011; Arsovska and Kostakos 2008; Cheloukhine and Haberfeld 2011; Calderoni et al. 2014
France	Balkan OCGs, Basque ETA, Jihadi terrorists' groups	Europol 2011; Arsovska and Kostakos 2008; Florquin and Desmarais 2018; Arsovska 2014
Germany	Italian OCGs	Europol 2011; Calderoni et al. 2014
Greece	Albanian speaking OCGs, Balkan OCGs	Europol 2011; Arsovska and Kostakos 2008
Netherlands	Balkan OCGs, Motorcycle gangs	Arsovska and Kostakos 2008; Bruinsma and Spapens 2018

Country	OCGs	Source
Poland	Italian OCGs, Russian OCGs	Cheloukhine and Haberfeld 2011; Europol 2011; Calderoni et al. 2014
Romania	Albanian speaking OCGs, Muslim Brothers, Russian OCGs, Italian OCGs	Europol 2011; Borov and Bowers 2022; Cheloukhine and Haberfeld 2011; Calderoni et al. 2014
Serbia	Balkan OCGs	Europol 2011; Arsovska and Kostakos 2008
Spain	Balkan OCGs, Real IRA, Italian OCGs; Russian OCGs, Basque ETA	Europol 2011; Arsovska and Kostakos 2008; Cheloukhine and Haberfeld 2011; Arsovska 2014; Duquet 2018; Calderoni et al. 2014
The United Kingdom	Balkan OCGs	Europol 2011; Arsovska and Kostakos 2008

5.2 Individuals

In several countries many amateurs and collectors take part in the ITF. Most of them are private citizens who have no connections with OCGs or extremist groups, but possess firearms for self-protection, collecting, or emotional reasons (for example inherited guns) without the necessary permit. Some of them can also have criminal intent; for example, people who buy a firearm to carry out a crime or a terrorist attack without being affiliated to any group (the so-called "lone wolf"). They can purchase firearms online or obtain them thanks to their personal contacts with gun enthusiasts (Savona and Mancuso 2017).

Collectors who have been collecting firearms for a long time may result as possessor of illicit firearms because of changes in legislation. This happens when a state modifies its legislation on firearms, making certain models

prohibited or reclassified. For example, changes in the Belgian legislation on firearms possession occurred between 2006 and 2013 increased the share of illicit possession. Further, gun enthusiasts may organize garage sales of unregistered weapons involving other gun enthusiasts belonging to their private contact networks (Duquet and Goris 2018a; Dressler, Duquet, and Eckelmann 2021).

Other individuals involved in the ITF are handymen with a specific expertise on firearms. In particular, they are able to reactivate deactivated firearms and to self-assemble firearms. There are different types of handymen. Some of them have no criminal intentions (Duquet and Goris 2018a). Others do reactivate firearms with the aim of directing them toward terrorists, criminals, and OCGs or selling them (see Box 7) (Duquet and Goris 2018a; Duquet and Van Alstein 2016).

Box 7: Link between handymen experts on firearms and OCGs

Some investigations have underlined the connections between OCGs and handymen experts on firearms. One of these involved a group of criminals belonging to the 'Ndrangheta engaged in the illicit trade of deactivated firearms from Slovakia to Italy. In particular, two members of the group were from Slovakia and they were in charge of contacting local sellers of deactivated firearms in order to see the firearms, take some photos and then buy them. Once in Italy, the criminal group relied on an artisan, who reactivated firearms in his workshop. His expertise was also useful to allow criminals to estimate the profits of the reactivation (Savona and Mancuso 2017).

5.3 Actors with legitimate roles in the market

Some legitimate actors can also have a role in the ITF. They are mainly representatives of public authorities, authorized arms dealers, legal manufacturing companies, and employees of firearms factories.

5.3.1 Members of public authorities

Cases of corrupted officials are linked to leakages and thefts from state arsenals where the personnel would sabotage the control systems or directly steal the firearms (de Labbey, Duquet, and Smets 2021). Corrupted officials can also falsify users' certificate (de Labbey, Duquet, and Smets 2021). For example, this can happen when the end users' certificate is not authenticated by the exporting state, so it is forged to get an export license (UNIDIR 2017). Finally, corruption can also happen at the borders (Seniora and Poitevin 2010; Greene and Kirkham 2010). Officials are corrupted by criminals and OCGs members to avoid controls when a suspicious cargo or vehicle is crossing the border (Seniora and Poitevin 2010). This happen in many ports, such as the Port of Genoa in Italy or the Port of Melbourne in Australia, where OCGs corrupt officials to let them traffic different products such as cigarettes, drugs and firearms (Sergi 2020).

5.3.2 Arms dealers

Authorized arms dealers can also be involved in the ITF, especially in the firearms diversion since they have access to huge assortments of firearms and they are experts in the different types of firearms or legislation and procedures governing their importation, sale, and distribution. Therefore, they know where vulnerabilities exist and how they may be most effectively

exploited (Arsovska 2014). Generally, arms dealers can either sell their firearms directly to criminals or they can sell deactivated firearms together with essential components to reactivate them (Duquet and Goris 2018a; Duquet 2018; Dressler, Duquet, and Eckelmann 2021).

5.3.3 Registered firearms factories

Legal manufacturing companies may play a role in the ITF. For example, it is reported that in the U.S. there are many cases of underreporting of firearms production (Box 8). In this scenario, at least three forms of noncompliance appear to be frequent. First, some companies fail to submit data to the authorities on time. Second, it appears that many businesses 'skip' reporting for specific years. Third, some companies use censored reporting, in which they do not report for the first year or first few years of existence, then report consistently for a period of time, and then do not report for the last year or last few years before going out of business (Jurgen and Small Arms Survey 2013).

Box 8: Mexico and U.S. gun manufacturers

On August 2021, Mexico started a lawsuit against some of the biggest gun manufacturers in the U.S. of being part in the ITF that comes from the U.S. into the country. The companies involved include Smith & Wessons and Barrett Firearms. Many actors involved in the ITF come from Mexico to buy firearms in supermarkets or arms fair located in the U.S. to pursue gun-related crimes back in their nation. Mexico is accusing these companies of being knowingly involved in the ITF that fuels Mexican levels of violence. In 2019, it was reported that 17,000 murders in Mexico were related to trafficked firearms (BBC 2021).

5.3.4 Employees of firearms factories

Cases of theft by employees of firearms factories were reported in Belgium and in Poland. In Belgium, in the late 2000s, a group of employees and security guards from the firearms manufacturer FN Herstal stole parts of firearms with the objective of reassembling them and selling them on the criminal market (de Labbey, Duquet, and Smets 2021). Another case of attempted theft was reported in Poland in 2006 where five employees from the manufacturer Archers created a system to steal 170 firearms components with the purpose of selling them to criminal groups. They would make sure that records of production would not have discrepancies without leaving traces that the production records were forged (de Labbey, Duquet, and Smets 2021).

6. Countermeasures

The illicit firearms market causes significant negative impacts on the society. The damages that the wrong use of a firearm can produce are several and very serious. Many firearms bought on the illicit market, offline and online, are used to purse different crimes, from robberies and homicides to civil conflicts and terroristic attacks, thus jeopardizing national and international safety and licit arms controls. Further, firearms trafficking contributes to the instability of an area by fueling armed conflicts, like in the Middle East and North Africa, or increasing the level of interpersonal violence (European Commission 2020).

In addition, the criminal opportunities related to firearms trafficking are growing. For example, the use of internet and social media to buy illicit firearms or to have access or exchange knowledge on firearms (e.g., through

blogs and forums on how to assemble a firearm) has increased in the last years by allowing to reach a wide range of customers worldwide. New trends are emerging. In Europe, for example, they include innovative conversion techniques to circumvent the legislation, technological improvements in 3D printing that could facilitate the manufacturing of illicit firearms, and the increasing use of fast parcel and postal service to traffic firearms (European Commission 2020).

In light of the serious impact and the emerging trends and challenges, identifying effective and efficient countermeasures to tackle ITF is become more and more urgent to ensure a safer life to people. These remedies should be planned by taking into account the specificities of the market at the regional level and its evolution over time. The different ways in which ITF can be carried out imply also the need for applying multiple solutions that include an enhanced cooperation among different stakeholders (e.g., LEAs, prosecutors, forensic experts, etc.) and the definition of international standards and procedures. Authorities and law enforcement agencies should collect precise, systematic and standardized data to monitor the illicit firearm market, share regularly data and useful information, investigate different paths and distinguish between the different actors who play a role in this trade to improve the intelligence picture (Mancuso and Manzi 2021). Other more specialized measures have to be implemented as well, such as improving controls on manufacturing and international transfers, and strengthening stockpile management and security (UNODC 2015; De Martino and Atwood 2015).

This section discusses how regulation, cooperation, and innovative technologies or solutions can counteract or prevent the illicit firearms trade. All the countermeasures presented are linked with firearms and they do not

consider interventions on wider socio-economic or cultural factors despite their relevance (see Section 3).

6.1 Regulation

6.1.1 Legislation

Some international dispositions have been established to fight against the production and the trafficking of illicit firearms due to the seriousness of the illicit firearms market and its global dimension (Box 9). Despite this, there are significant differences in the definitions and the legal frameworks concerning illicit firearms both at the regional and the country level (Box 10). In addition, firearms trafficking and its related crimes (e.g., illicit possession of firearms) are criminalized in different ways across countries and the penalties vary making the enforcement uneven and the establishment of join contrast actions more challenging. For example, in 2021 Japan, Australia, and Indonesia had the higher maximum penalties for illicit possession of firearms, while Yemen, Spain and France were countries registering the lower penalties for the same crime (Figure 16). All these discrepancies are exploited by criminals, who plan the trafficking by limiting the risk of being detected and convicted.

Box 9: International legislation on firearms

Import, export, and transit of firearms must be compliant with the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components and Ammunition supplementing the United Nations Convention against Transnational Organized Crime (Firearms Protocol). It was established by the UN General Assembly Resolution 55/25 in May 2001 and went into force in June 2005. The Firearms Protocol provides some common definitions and establishes some dispositions the States Parties have to follow in order to combat and prevent the illicit trafficking of firearms, their parts and components, and ammunition. These provisions include the criminalization of unlawful manufacture and trafficking in firearms, the provision of sufficient security measures over stored firearms, the definition of a system of permission or licensing for legitimate manufacturing, and the establishment of single points of contact at national level specifically addressing the firearm issue (Marsh 2016; Eurostat 2018b; UNODC 2016; UN 2001).

The Arms Trade Treaty (ATT), opened for signature in June 2013 and entered into force in December 2014, is another important international treaty that regulates the international trade in conventional arms and seeks to prevent and eradicate illicit trade and diversion of these arms. ATT's main goal is to create international standards that are as high as feasible in order to govern arms transfers. In its 28 Articles, ATT strengthens the weapons implementation regime by establishing mechanisms to prevent diversion and urging states to increase their cooperation in combating diversion. The ATT underlines the necessity to foster the formation and maintenance of international peace and security while diverting as few of the world's human and economic resources as possible towards weaponry (Parker 2014; UNODC 2016; UN 2014).

In addition, there are voluntary international standards, such as the International Small Arms Control Standards (ISACS). They give practical assistance on implementing effective controls throughout the whole lifetime of SALW in order to limit their acquisition by criminals, terrorists, and anyone who would misuse them. They require the use of effective, time-tested technologies and techniques that produce the intended result at a fair cost (UN CASA 2013).

Box 10: Regional and national firearms legislations

There are different regional and national legal instruments that address the illicit firearms market. Here below some examples are presented.

In the EU, the Directive 91/477/EEC contains a few measures that are tangentially related to the leaking of guns to the illegal market. It requires Member States to domestically register weapons that enter the market, as well as to exchange and share firearms-related information. This Directive has been amended in 2008 (Directive 2008/51/EC) and in 2017 (Directive 2017/853/EU). The 2008's amendment supplemented the minimum criteria for the acquisition and ownership of firearms for civil use, as well as standardized administrative procedures for their transfer and circulation throughout the EU. The 2017's amendment requires Member States to implement stricter restrictions on firearm labelling to better monitor firearms in the event of theft, loss, diversion from the licit market, or illegal trafficking (Ponti 2018; de Labbey, Duquet, and Smets 2021; European Parliament 2008; EU Council 1991).

In the U.S., there are strict regulations on the import and export of guns, including a requirement that importers label firearms with a serial number. Firearm dealers are required by state and federal law to obey state and federal law in their transactions, and their operations are controlled by the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF). Federal law restricts mail-order shipments to federally licensed dealers and requires them to conduct background checks on customers to establish their eligibility to acquire a firearm. Ex-convicts, anybody involuntarily committed to a mental hospital, and anyone under the age of 18 (for a rifle or shotgun) or under the age of 21 (for a pistol) are among those barred from acquiring a gun (for a handgun) (Cook, Cukier, and Krause 2009).

Australia and New Zealand report significant differences in their legal frameworks. In Australia, gun control legislation comprehends the National Firearms Agreement (NFA) of 1996 and 2017, the National Firearms Trafficking Policy Agreement (NFTPA) of 2002, the National Handgun Agreement (NHA) of 2002, and the Firearms Acts and Regulations of each State and Territory. The maximum penalty for the illicit possession of firearms is up to 20 years in prison, depending on the jurisdiction and the category of the firearm (GunPolicy 2021a). In New Zealand, the arms control legislation is made of the Arms Act of 1983, the Arms Amendment Act of 1992, the Arms Regulations 1992, the Arms (Military Style Semi-Automatic Firearms) Order 2019, the Arms Legislation Act of 2020, and the Customs Export Prohibition Order. Here, the penalties for possessing illicit firearms go from three months to three years in prison and/or a fine (GunPolicy 2021b).

In Africa, at regional level, there are different instruments through which nations fight against the ITF. In North Africa, there is the Physical Security and Stockpile Management, which entered into force in June 2015. In Central Africa, regional instruments comprehend the 2017 Central African Convention for the Control of SALW, their Ammunition and all Parts and Components, that has the objective to reduce the proliferation of SALW. In East Africa, the Nairobi Protocol for the Prevention, Control and Reduction of SALW in the Great Lakes Region and the Horn of Africa entered into force in 2005. In West Africa, the ECOWAS Convention on SALW, their Ammunition and Other Related Materials entered into force in June 2006 and encourages states to create databases of arms in government stockpiles. In South Africa, the Southern African Development Community (SADC) Protocol on the Control of Firearms, Ammunition and Other Materials entered into force in November 2004 (Alusala 2018).

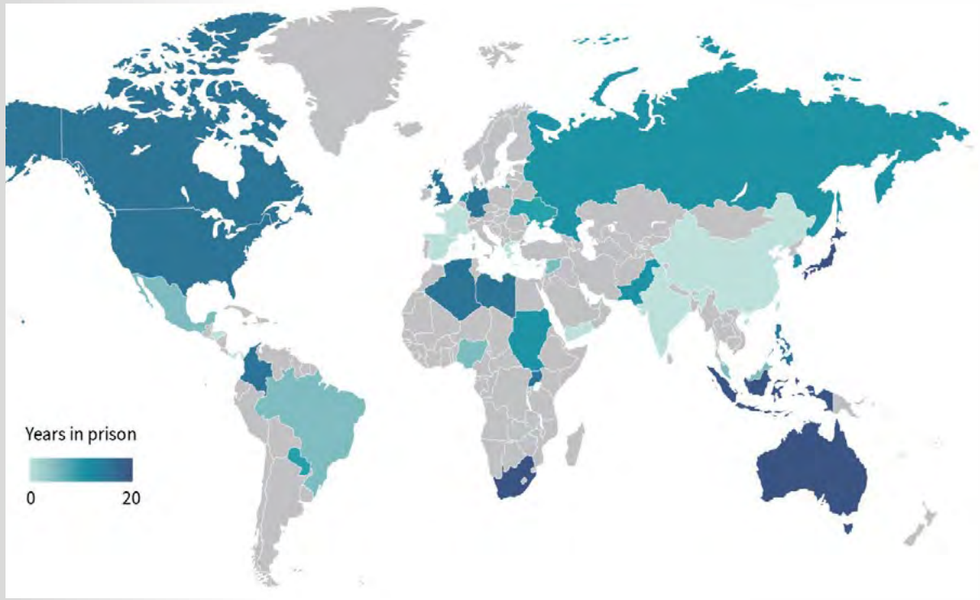

Figure 16. Maximum penalties for illicit possession of firearms, 2021
Source: Authors' elaboration of Gun Policy data (GunPolicy.org)

In Europe, differences in national legislations and in the implementation of different aspects, such as firearms possession, trafficking and punishment of criminal and administrative offences relevant to the ITF represent an obstacle to control the illicit trade in the EU (European Commission 2020). For example, many EU Member States have not fully transposed and implemented the EU Firearms Directive 2017/853 (European Commission 2020) and significant loopholes have been identified due to the lack of an homogeneous implementation of the EU Regulation 258/2012 on import, export and transit of civilian firearms (European Commission 2017b). A recent study carried out by Transcrime pointed out how the discrepancies among countries negatively impact on the operational cooperation among different law enforcement agencies. For this reason, some legislative interventions are necessary to force EU Member States to implement common standards and procedures (Mancuso and Manzi 2021). In the U.S., the asymmetries in the firearms regulation between U.S. and Mexico facilitate the illicit trafficking (see Section 1.3). Strengthening firearms laws in the

states that have been recorded as central in the ITF across the border, such as Texas and Arizona, or putting a federal ban on multiple sales could be effective improvements to stop or reduce the trafficking (Agrawal 2019). In post-conflict countries, such as Yemen and Libya, firearms regulations should be enforced as well to maintain order and prevent the proliferation of illicit firearms (Alaraby and Muller 2020). Finally, in Africa, both the arms embargos and the regulations on artisanal manufacture should be enforced (Alusala 2018).

6.1.2 Free Trade Zones

Generally, criminals use Free Trade Zones (FTZs) to carry out their illicit activities. In particular, FTZs can be exploited to repackage and relabel goods, to switch bills of landing, containers, and their contents, or to change the destination with a fake one, with the objective to hide the source or the identity of the supplier and reach the intended destination. Transit goods are the most vulnerable to this type of actions (OECD 2018; ICC BASCAP 2020). Among the different types of smuggled goods, FTZs are used to illicitly move also firearms (ICC BASCAP 2020). Shipments directed to high-risk countries use the FTZs transshipment points to avoid both sanctions and arms control agreements (Viski and Quentin 2016; OECD 2018). This is because FTZs are less regulated, less overseen and the power of authorities is weaker. Indeed, FTZs are not explicitly addressed in international binding agreements on firearms and, among the four major international non-binding agreements that regulate dual-use goods possibly used for the proliferation of mass destruction weapons, only the Wassenaar Arrangement includes FTZs in its guidelines (Kenji Omi 2019).[5]

5 The Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies was established in Wassenaar (the Netherlands) and entered into force on November 1996. It is a voluntary export control regime whose 42 members exchange information on transfers of conventional weapons and dual-use goods and technologies. The aim is to prevent the destabilizing accumulation of conventional arms and related goods and technologies in regions and countries worldwide by increased transparency and responsibility (Kimball 2017).

Specific countermeasures should be implemented to address the FTZs vulnerabilities in relation to ITF. First, security measures should be adopted by custom administrations to control goods entering from existing FTZs. Second, more awareness campaigns, targeted trainings or analytical tools should be promoted to highlight the risks to which FTZs are exposed in terms of ITF (OECD 2018; Viski and Quentin 2016). More in general, some initiatives targeting FTZs can positively impact also ITF. For example, in 2019 the Organization for Economic Co-operation and Development (OECD) has adopted the Recommendation of the Council on Countering Illicit Trade: Enhancing Transparency in Free Trade Zones. It includes some recommendations to counter illicit trade in the FTZs, such as empowerment of the competent authorities, prohibition to legal or natural persons convicted for illegal economic or financial activities from operating within FTZs, and promotion of the international cooperation between law enforcement agencies (OECD 2021). Moreover, BASCAP has also underlined the importance of checking the certificates of origin of the goods transiting in the FTZs. In particular, these certificates are actually self-certifications made by the exporters. BASCAP suggested to foresee a trusted third party that should validate the certificates of origin to ensure the authenticity and integrity of the products (ICC BASCAP 2020).

6.2 Cooperation and exchange

6.2.1 Cooperation among public authorities

International cooperation among public authorities is a key asset in countering and preventing the ITF. Some international institutions are in place with the aim of increasing this cooperation at both international and regional level (Box 11, Box 12, Box 13). Despite their efforts and their added

value, the cooperation is often still patchy. The reasons range from the lack of comparable data, the limited sharing of information and intelligence outside specific investigations, and the absence of coordination and communication both within and across countries.

Regarding data collection, the establishment of national databases and the development of standardized templates and automated programs are recommended to disaggregate information, decrease the risk of reporting or counting mistakes, and obtain comparable data. Centralized databases can also help in conducting tracing activities and identifying the illicit origin of firearms (UNODC 2020c; de Labbey, Duquet, and Smets 2021). Data sharing is also crucial to improve cooperation since ITF often has a transnational dimension. Data and information on firearms illicit market have to be systematically registered in the existing international databases and shared with institutions in charge of providing a comprehensive picture of the ITF dynamics across the world to be used both for strategic and operational action (UNODC 2020c; Mancuso and Manzi 2021). For example, the results of a research carried out by Transcrime in Europe pointed out some gaps in the data collection and sharing and stressed the importance of adopting in the EU both legislative and non-legislative actions to improve both of them (e.g., introduction of mandatory minimal requirements for the type of data collected and the frequency of data sharing) (Mancuso and Manzi 2021). In this regard, the European Commission, in the 2020-2025 EU Action Plan on firearms trafficking, has identified as one priority to fight against ITF "building a better intelligence picture". That means improving and making more efficient data collection and data sharing which are essential both to identify new trafficking trends and to establish risk profiles (European Commission 2020).

Promoting effective coordination and communication related to firearms issues would also enhance the operational cooperation among public authorities. For example, some EU Member States have not yet established a Firearms Focal Point or they have one with inadequate competences and skills. Still, the cooperation is difficult due to the different procedures in place in the countries (Mancuso and Manzi 2021). Therefore, another priority set up by the European Commission concerns "increasing pressure on criminal markets" by appointing Firearms Focal Points with appropriate competences, improving the cooperation among law enforcement agencies and prosecutors and forensic specialists, and between law enforcement and parcel and postal services (European Commission 2020). The identification of a single point of contact is also included in the UN Firearms Protocol (UN 2001).

More in general, the countries should improve their cooperation on all policies areas and also their cooperation with third countries, especially the ones with which more significant illicit firearms flows are registered (Savona and Mancuso 2017). In Africa, national organizations and law enforcement should coordinate efforts to disrupt terroristic groups since they are one of the major driver for ITF (Alusala 2018). Finally, in the U.S., states should increase cooperation with non-governmental agencies with the objective of fighting the ITF across the border with Mexico (Agrawal 2019).

Box 11: The Global Firearms Programme

In 2011, UNODC launched the Global Firearms Programme aiming at preventing and combatting the illicit manufacturing of and trafficking in firearms, their parts and components, and ammunition. The Programme assists member states in building criminal justice systems to respond to the challenges posed by organized criminality specifically related to trafficking in illicit firearms, and to promote the implementation of the UN Firearms Protocol. In particular, it provides policy and legislative assistance to states, it supports states in developing preventive and security measures for firearms controls, it promotes effective law enforcement and criminal justice responses as well as international cooperation and information exchange, and finally it monitors illicit arms flows. The geographical scope of the Programme includes South America, Central America and the Caribbean, Western Central and Eastern Africa, the Middle East and North Africa, the Western Balkans, Eastern Europe, and Central Asia (UNODC 2021).

In a 2020 newsletter published by UNODC, it is underlined that the UNODC Global Firearms Programme will assist countries in fighting against ITF also in light of the new challenges. In particular, UNODC mentioned some ways to strengthen the arms control regimes, such as the provision of virtual training and capacity building workshops, the development of guidelines to improve the document control of arms transfers, and the assistance to promote the use of centralized and digitalized firearms control regimes (UNODC 2020b)

Box 12: The role of Europol in the fight against firearms trafficking

In Europe, Europol works on increasing cooperation among EU Member States to tackle ITF. In particular, the Analysis Project has the objective to support national law enforcement agencies in identifying individuals and criminals involved in the illicit manufacturing, possession and trafficking of firearms, ammunitions, part and components, and other weapon related substances. In addition, two key Europol hubs support the contrast to the illicit firearms market, i.e. the European Counter Terrorism Centre and the European Migrant Smuggling Centre. Both of them assist EU Member States in sharing information and data on illicit firearms trafficking in the context of terrorism and crime areas afflicted by migrant smuggling (Europol 2021a).

Europol is also one of the EU institutions supporting EMPACT, the European Multidisciplinary Platform Against Criminal Threats, which in 2021 is become a permanent instrument driven by the Member States to define multidisciplinary cooperation to fight organized and serious international crime. Firearms trafficking was one of the priorities of the EMPACT cycle in place from January 2018 until December 2021 and has been confirmed as a priority also in the current EMPACT cycle (January 2022 – December 2025) (European Commission 2021).

Box 13: The role of INTERPOL in the fight against firearms trafficking

INTERPOL considers the fight against firearms trafficking as one of its top objectives since the unlawful use of firearms is viewed as a danger to world security, peace, stability, and development. It conducts several operations cooperating with local authorities and other international institutions, such as the UNODC, the WCO and the EU. For example, the six Trigger Operations conducted from 2016 to 2021 allowed to seize illicit firearms in Europe (Operation Trigger I, II), Africa (Operation Trigger III and IV), the Middle East (Operation Trigger IV) and South America (Operation Trigger V, VI) (INTERPOL, 2021).

INTERPOL has also established the INTERPOL Firearms Programme, which is critical in combating illicit firearms market and promoting cooperation and data exchange. It strives to promote awareness on the broader criminal scheme that firearms may be a part of, and to encourage firearm investigations to focus on identifying and prosecuting firearms traffickers. It provides training as well as a variety of intelligence and ballistic instruments to assist its member countries in conducting such investigations. These tools include: the INTERPOL Ballistic Information Network (IBIN), which is a global ballistics data-sharing network based on IBIS technology that allows INTERPOL member nations to share and compare digital ballistics images; the Illicit Arms Records and Tracking Management System (iARMS), that is a web-based platform for reporting and querying lost, stolen, trafficked, and smuggled guns, as well as for submitting and responding to international firearms tracing requests; and the INTERPOL Weapons Reference Table (IFRT), which is an interactive tool for law enforcement officers to access or verify firearms data (INTERPOL, 2018).

6.2.2 Cooperation among public authorities and private actors

Information and data sharing should also include the private sector (Savona and Mancuso 2017). Since many firearms in the illicit market are diverted from legal production, the private sector should cooperate with public authorities to tackle firearms diversion. In the EU, for example, the EU Firearms Directive 2017/853 reinforces the action of private actors in preventing firearms to move from the legal to the illicit market. In particular, private actors should be connected to central firearms registers and a

system to inform when an authorization is refused should be implemented (European Commission 2017a; Savona and Mancuso 2017).

Moreover, important initiatives that reinforce the cooperation among public authorities and private actors are the so-called gun buyback programs. They are government or private's initiatives aiming at collecting guns from gun owners in exchange for cash, gift cards, or other compensations. In order to encourage the participation, people are not required to reveal their identity and no records are maintained of the individuals who gave the gun (Braga and Wintemute 2013). These programs are used worldwide. For example, Australia started adopting this program in the 1990s, when the Commonwealth aimed at establishing a system for returning guns to include in their National Firearms Program in exchange for compensation (Commonwealth of Australia 1998). In New Zealand, in 2019, the Arms Act has banned from circulation semi-automatic firearms, parts that allow to convert firearms into semi-automatic firearms, magazines over a certain capacity, and some shotguns. For selected groups who possessed newly prohibited firearms, a buyback programme was activated. Up to the end of September 2019, more than 300 weapons were handed in (Reuters Staff 2019). In Brazil, a buyback program was successfully implemented in 2004. In three months, the police collected about 80,000 guns (BBC 2004). In the U.S., gun's buyback programs have been used in different cities. In Los Angeles, the program was launched in 2009 as a part of the strategy to reduce violence by creating awareness and education about gun violence. In this specific case, participants received gift cards based on the weapon type and condition (GRYD 2018). In Oakland and San Francisco, thanks to gun buyback programs implemented in December 2012, it was possible to collect nearly 600 guns, including modern assault weapons and vintage World War rifles, that had been melted and turned into light posts and stop signs

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(Bender 2012).

Other similar initiatives have been promoted in some countries. For example, in Croatia different campaigns aimed at reducing the circulation of weapons in the country have been organized. Dragovic and colleagues (2018) reported that thanks to these campaigns, from September 2007 to December 2014, 9,484 firearms, 3,340,835 kg of explosives, 87,691 explosive devices and 3,988,457 rounds of ammunition of various calibers were voluntarily given from citizens. An example of these campaigns was the "Less Weapons, Less Tragedies", later changed to "Get Rid of Weapons without Sanctions and Make Your Life Safer". It began in 2009 and ended in 2011. From 2010, it was funded by the EU (Dragovic et al. 2018).

Finally, cooperation between law enforcement agencies and public and private postal couriers is needed to tackle the online illicit market. Sharing information regarding suspicious packages or senders postal couriers can let law enforcement intervene on time (Persi Paoli et al. 2017).

6.3 Technologies and solutions

6.3.1 Traceability systems

Traceability of firearms is a key element in preventing, combating and eradicating illicit manufacture and trade as well as firearms diversion to the illicit market. Therefore, developing harmonized measures and systems for marking, record-keeping and tracing of firearms, their parts and components and ammunition is crucial (Ponti 2018; UNODC 2011).

Marking refers to a tool that allows to uniquely identify a firearm in a register.

Three Articles of the UN Firearms Protocol deal with firearms marking. Article 8 requires firearms to be marked at the time of manufacture, when they are imported and when they are transferred from government stocks to permanent civilian use. Article 6 concerns marking of confiscated or seized firearms that will be disposed of as opposed to destroyed, while Article 9 refers to marking of deactivated firearms (UN 2001). Marking is important to track each firearm and allows authorities to have a control both on the transfers and on the manufacture of firearms. Therefore, implementing measures to adequately mark firearms becomes essential (UNODC 2011). In particular, firearms manufacturing industry should cooperate with national authorities in developing solutions to protect against the removal and alteration of markings.

Record-keeping consists in the adequate registration of firearms in specific databases securely stored to help in identifying and tracing firearms (UNODC 2011). Article 7 of the UN Firearms Protocol obliges the state parties to maintain records for all the firearms that are present in the State party as well as for firearms that are the subject of international transactions. Where appropriate and feasible, records shall also be maintained on firearms' parts and components and ammunition. In this regard, for example, a 2008 analysis carried out in the City of Los Angeles by Ridgeway and colleagues used ammunition sales to screen prohibited ammunition purchasers. The City of Los Angeles keeps records of all ammunition purchasers in a logbook. Using the data from the logbook, results indicated that 3% of ammunitions purchasers had a condition that prohibited them from buying ammunition in 2001. According to this finding, law enforcement could use the logbook on ammunition sales to identify those who possess ammunition illegally, and probably an illegal firearm (Ridgeway et al. 2008).

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In addition, states should maintain the information that is necessary to trace and identify firearms that are illicitly manufactured or trafficked for a period of not less than ten years. This is a minimum standard due to the durability of the firearms (UN 2001). In Europe, for example, according to the Firearms Directive, EU Member States should have computer data-filing systems and should keep data for a period of 30 years after the destruction of the firearm or its essential components (European Commission 2017a). A study carried out by Transcrime has underlined how some EU Member States still have to develop and use ad hoc databases to record data on firearms (Mancuso and Manzi 2021).

Regarding tracing, its purpose is to identify the point at which legally held firearms and ammunition have been diverted into the illicit market. For doing this, it is essential to have clear information about the last known legal owners of the firearms and ammunition (UNODC 2011). Article 12, paragraph 4, of the UN Firearms Protocol asks for the cooperation among states in the tracing of firearms that may have been illicitly manufactured or trafficked. In order to have an efficient tracing, firearms must be properly marked, a record-keeping system must be in place, and a tracing system must be set up to allow states parties to respond to tracing requests belonging to other states (UN 2001).

All the marking, record-keeping and tracing systems have to be used in a systematic way by law enforcement authorities across countries to be effective (Savona and Mancuso 2017).

6.3.2 Scanner technologies

The use of technological instruments, such as scanners, may provide to be a valuable element to detect cross-border ITF (European Commission 2020; UNLIREC 2021). The development of this kind of instruments is an ongoing process. However, some technological solutions have been recently implemented. For example, the United Nations Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean (UNLIREC) has supported the use of x-ray scanning technologies to detect illicit firearms moved through land, air and sea borders in Latin American and the Caribbean countries (UNLIREC 2021).

Furthermore, initiatives developed to prevent the cross-border movements of illicit goods in general can also successfully be used to detect illicit firearms. For example, UNODC and the WCO developed the Container Control Programme (CCP) (UNODC and WCO 2020). Its objective is to help countries seeking to improve the security of their supply chain and of the trade passing through airports, seaports and land borders by reducing the illicit trafficking. Thanks to the implementation of the CCP, the Customs Agency's Cargo Imaging Unit (CIU) of Jamaica was able to seize in 2019 an assortment of firearms and ammunitions on a shipment that came from Miami, Florida. Routine scanning operations identified a suspicious image of a crate, which was declared to be containing households' goods, food and clothes. The CIU together with the Contraband Enforcement Team and the CPP conducted further investigations that revealed the hidden firearms and ammunitions (WCO 2020).

6.3.3 Securing stockpiles and storage facilities

Theft is one of the major ways used to enter firearms in the illicit market (see Section 4.1.1). Implementing security measures on the places where firearms are stored is necessary to prevent and contrast firearm thefts (de Labbey, Duquet, and Smets 2021; Saferworld 2012; de Tessières 2019).

Specific attention must be paid to stockpiles management, which includes the security of small arms, light weapons, their parts and ammunition. It should be guaranteed in their storage, transport, disposal and use in order to avoid diversion into the illicit market and possible explosions. Among the actions to be carried out in stockpiles management, keeping accurate records on the firearms, parts and ammunitions stored in each stockpile is essential. According to the Programme of Action (PoA) on the illicit trade in small arms and light weapons stocks should be regularly reviewed and surpluses destroyed (Marsh and Gugu 2014). Besides PoA, regional agreements related to stockpiles management exist. For example, the Organization for Security and Co-operation in Europe (OSCE) provides support to its member states regarding stockpile management (OCSE 2003). In particular, it developed the Best Practice Guide on National Procedures for Stockpile Management and Security, which provides guidelines to implement the necessary measures to increase stockpiles' security. These guidelines include physical security measures, such as the use of vault doors, metal containers, alarm and intruder detection system, external lighting system, fences, and guard patrols. They also include the implementation of access control measures, inventory management, and protection measures during emergencies or during transport (OCSE 2003; 2017). The implementation of all the dispositions concerning stockpile management is still uneven since it is a politically sensitive issue. An effort should be done to increase attention

on this problem and the negative consequences it can produce if neglected (Marsh and Gugu 2014).

In Africa, weapon and ammunition management (WAM) has become a key element in conflict prevention. WAM can be useful in mitigating the risks related to theft from stockpiles, which is one of the major sources of illicit firearms for non-state armed groups and criminal networks, including terrorist groups. To improve WAM of national stockpiles, physical security measures need to be applied together with record-keeping measures (UNIDIR 2017). In Europe, important steps have been implemented in some Member States to organize and upgrade storage facilities in order to limit the potential for theft from huge inventories of excess and confiscated guns. Stricter criteria were implemented to improve the physical security of stockpiles and to create the habit of supervising safe storage at home in EU Member States that have not recently experienced armed conflicts (de Labbey, Duquet, and Smets 2021).

Destruction is a key solution to avoid firearm thefts and other risks related to firearms stockpiles, especially when countries are facing surplus in stockpiles (UNODA 2021). Also the UN Firearms Protocol stresses the need to destroy firearms that have been seized to prevent the possibility of further theft or misappropriation (UN 2001). However, the destruction of firearms is vulnerable to the risk of theft as well. Firearms may be destined to be destroyed and stolen before it happens. For this reason, it is important to keep records of destruction and monitor if firearms were effectively destroyed (de Labbey, Duquet, and Smets 2021).

6.3.4 Online monitoring

The use of the Internet (both dark web and surface web) to sell and purchase illicit firearms has been increasing in the last years (see Section 4.3). For this reason, the online illicit market has attracted the attention of law enforcement and government agencies. In Europe, for example, the Europol's specialists and analysts assist Member States in developing their own resources to monitor and tackle the dark net and the online selling of firearms (Europol 2021a).

In tackling and countering the illicit trade online, law enforcement agencies adopt four main strategies. The first one is the use of traditional investigation techniques, such as controlled deliveries, and surveillance. The second strategy is to use methods to track and trace parcels through postal detection and interception. The third one consists in using different tools to continuously monitor the dark net and the bitcoin transactions with block chain analysis. The fourth strategy aims directly at disrupting online markets by infiltrating crypto markets to dismantle them (Persi Paoli et al. 2017; Persi Paoli 2018). All these strategies have to be combined with national policies and legislations that fully recognize the threat posed by online firearms trafficking. They have also to be compliant with existing national and international instruments that prevent and address the ITF to limit the availability of firearms. The validity of the existing instruments should be tested to understand if their use effectively reduces the online ITF (Persi Paoli et al. 2017).

Glossary

Airsoft guns	Imitation guns that fire plastic pellets using compresses air, gas, or a spring drive (King 2015)
Alarm weapons	Firearms producing noise and flash without expelling projectiles (EY and SIPRI 2014)
Antitank weapons	Any of several guns, missiles, and mines intended for use against tanks (Brittannica, The Editors of Encyclopaedia 2008)
Assault rifles	Military firearms that are chambered for ammunition of reduced size or propellant charge and that have the capacity to switch between semiautomatic and fully automatic fire (Brittannica, The Editors of Encyclopaedia 2017)
Blank firing weapons	Firearms designed to produce noise and flash without shooting projectiles. They include alarm weapons and gas pistols (UNODC 2020c)
Craft weapons	Small arms fabricated by hands. They include homemade firearms made from basic household materials (Small Arms Survey 2021)
Converted firearms	Firearms that have been modified or altered to produce an illicit firearm possibly resulting in modifying the weapon's lawful status (King 2015; Savona and Mancuso 2017)
Diverted firearms	Firearms that are manufactured legally by licensed manufacturers and moved into the illegal supply chain in different ways (UNODC 2020c)
Flobert weapons	Firearms with a limited fire power (up to 7.5 Joule) and a small caliber (generally 6 millimeter or 4 millimeter M20) (Duquet 2018)
Gas pistols	Firearms producing noise and flash without expelling projectiles (EY and SIPRI 2014)

Grenade launchers	A device attached to the muzzle of a rifle, permitting the firing of rifle grenades (Penguin Random House 2019)
Handguns	Any firearm small enough to be held in one hand when fired (Brittannica, The Editors of Encyclopaedia 2015)
Imitation weapons	Anything which has the appearance of being a firearm, whether or not it is capable of discharging any shot, bullet or other missile (The Crown Prosecution Service 2020)
Light machine guns	Also called the squad automatic weapons, they are equipped with a bipod and are operated by one soldier. They usually have a box-type magazine and are chambered for the small-caliber, intermediate-power ammunition fired by the assault rifles of their military unit (Brittannica, The Editors of Encyclopaedia 2020)
Light weapons	Weapons designed for use by two or three persons (UN 2005)
Machine guns	Fully-automatic firearms that continue to load and fire ammunition until the trigger, or other activating device, is released, the ammunition is exhausted, or the firearm is jammed (UNODC 2017b)
Non-lethal firearms	Firearms that do not cause death or irreversible injury, but are designated to incapacitate people (Small Arms Survey 2021)
Pistols	Firearms designed for a more automatic operation. Cartridges are loaded into an ammunition magazine which is inserted into the firearm. They can be designed to fire semi-automatically or fully automatic. Semi-automatic operation requires a pull of the trigger to fire each cartridge. Fully automatic operation allows for multiple cartridges to be fired with a single trigger pull for as long as ammunition is available to be fired (UNODC 2017b)

Replicas	Tools that are not genuine weapons but have been made to seem like real firearms. They include trauma guns and airsoft guns (King 2015)
Recoilless rifles	Any of several antitank weapons developed during World War II. They are lightweight and can be operated by one or two men (Brittannica, The Editors of Encyclopaedia 2016)
Revolvers	Firearms that have a cylinder with a number of chambers. These chambers are designed to be manually loaded with cartridges (UNODC 2017b)
Rifles (including carbines)	Relatively long-barreled firearms, fired from the shoulder, having a series of spiral grooves cut inside the barrel (a process called 'rifling') imparting a rapid spin to a single projectile (UNODC 2017b)
Self-loading pistols	Also referred to as semiautomatic pistols. Handguns that utilize either recoil or blowback to discharge the empty cartridge, reload, and cock the piece after each shot (Rattenbury 2005)
Shotguns	Shoulder-fired long guns with no rifling in the barrel, designed to shoot a large number of small projectiles ("shot") rather than a single large projectile ("a bullet") (UNODC 2017b)
Small arms	Weapons designed for individual use (UN 2005)
Sub-machine guns	Hand-held, lightweight machine guns consisting of relatively low-energy handgun type cartridges and fired from the hand, hip, or shoulder (UNODC 2017b)
Trauma guns (or traumatic guns)	Kinetic-energy weapons, designed to make a blunt or traumatic impact on a target by firing of a rubber or plastic projectile (King 2015)

CHAPTER
Four

Illicit Tobacco Trade

Marco Dugato, Flaminia De Biase

Introduction

The legal tobacco market has a global dimension; tobacco demand is present all around the world generating a huge number of potential consumers (Brandt, 2012). Although the smoking rates have been reducing steadily in the last years (WHO, 2018), about one adult out of six is still a tobacco consumer (WHO, 2021b). According to the most recent estimates, tobacco products are currently used by 1.3 billion individuals globally, with over 80% of them living in low- and middle-income nations (WHO, 2020). This very large number of potential clients and the consequent revenues can explain why the tobacco market is appealing for criminals. However, the attractiveness of this market is also boosted by a variety of other reasons.

First, the tobacco market is a typical dual market in which a licit and an illicit dimension coexist (Calderoni et al., 2017; Kulick, 2017). Dual markets arise because the regulation on their product is more severe than those applied to other products (Savona et al., 2017). The legal tobacco market is highly regulated and its products are heavily taxed (Merriman et al., 2000). For example, among the European Union (EU) member states, taxes account on average to 80.5% of the final retail price of factory-made cigarettes in 2021 (European Commission, 2021c). In the United States, the average incidence of state and federal taxes is significantly lower (around 38% in 2019), but still relevant on the final price (Orzechowski & Walker, 2021). Given this high taxation, diverting tobacco products into the illicit market allows large profits (Joossens & Raw, 2011). Further, tax avoidance allows criminals to price illicit products significantly less than legal ones. According to Joossens and colleagues, illicit cigarettes cost between 25% and 90% less than legal ones (Joossens et al., 2009). Price differentials are a primary factor in determining the consumption of illicit products (Aziani, Calderoni, et al., 2020; Baltagi &

Levin, 1986; Prieger & Kulick, 2018a; Thursby & Thursby, 2000).

Second, the illicit tobacco market is particularly appealing for criminals given the limited entry costs (Chionis & Chalkia, 2016b). The large majority of circulating illicit products are legally produced and then diverted into illegal channels. This entails that criminal have usually limited costs for producing or procuring them. Even when tobacco products are illicitly manufactured, the costs are minimal. On the first hand, tobacco is cultivated in many countries, allowing a widespread availability of the main raw material (Hu et al., 2008; van Liemt, 2002). On the second hand, the manufacturing process can rely on low level technologies and skills. Finally, both raw materials (e.g., acetate tow used in the production of cigarette filters) and manufacturing machineries are usually not subject to any form of restrictions in the legal market (Reuter & Majmundar, 2015).

Third, the tobacco market offers a wide range of products. Despite factory-made cigarettes are the most common form of tobacco consumption, the tobacco market entails a variety of other alternative products such as cigars, snuff tobacco, chewing tobacco, waterpipe tobacco, cut or loose tobacco, and, recently, smokeless tobacco products. This assortment is further amplified by the different types, flavours, and brands of tobacco and the different manufacturing procedures used by the producers. This variety of products generates and meets multi-faceted requests by consumers. Criminals can meet the demands for specific products that are not available through legal channels by supplying genuine diverted, counterfeited, or substandard tobacco products. For example, there is evidence of smuggling of banned products such as Cuban cigars into the United States or some forms of tobacco for oral use in the EU (van Walbeek et al., 2013).

Finally, the illicit tobacco market presents lower risks for criminals than other illicit trafficking activities such as drugs or firearms trafficking (Ellis, 2017; Europol, 2011). On the one side, the selling and consumption of illicit tobacco is socially accepted in many communities worldwide. On the other side, trafficking in tobacco products is often associated with light penalties and considered a low-priority target for enforcement agencies (Meneghini et al., 2019). This fosters the involvement of criminals in this high-reward but low-risk market.

Due to all these factors, the Illicit tobacco market is a global issue that occurs to some extent in all regions and countries (von Lampe, 2011). OECD identifies the illicit tobacco market as "perhaps the most widespread [...] sector in the shadow economy" (OECD, 2016, p. 16). This illicit trade covers a wide range of illegal behaviors or activities involving the production, distribution, or sale of tobacco products including: tax evasion (selling of tobacco goods without paying appropriate taxes), counterfeiting, concealing product origin, and smuggling (Joossens & Raw, 2011; WBG Global Tobacco Control Program, 2019). The illicit tobacco market is fostered by economic incentives to transport and sell a tobacco product sourced from a low-cost market in a higher-cost market or to produce and sell this product at a lower price that its legal alternatives (FAFT, 2012a). As matter of fact, the illicit products can both be sold in the domestic market or trafficked into another country (Joossens & Raw, 2011). The intensity of this illicit market varies from country to country depending not only on the country's taxation, legal, regulatory, and political context, but also on social, historical, cultural, geographical, and economical factors. Further, various countries assume diverse roles in the illicit tobacco trade networks because the market changes in relation to whether a country is engaged in growing tobacco or producing tobacco products, or it is a relevant transit point for both licit or

illicit trade routes (Aziani & Dugato, 2019a; INTERPOL, 2014a).

Boosted by the large profits from illicit tobacco market and by the success of law enforcement counteraction, traffickers have continued to develop alternative smuggling strategies (Bate et al., 2020; WCO, 2020). Illicit products are obtained in a variety of ways for distribution on the black market, with varying degrees of illegality and levels of cooperation among the actors involved (von Lampe, 2011). Governments are facing either well-networked traffickers and a significant number of loosely organised groups or even individuals that are involved in several stages of the illicit tobacco trade, making difficult to identify and prevent their operations (Aziani & Dugato, 2019a; Di Nicola & Terenghi, 2016; von Lampe, 2006). Further, some steps of this illicit trade can be undertaken or facilitated by legitimate players of the legal market (Foltea, 2020). Thus, the challenges of understanding, framing, and contrasting the illicit tobacco market is increasingly problematic.

This report aims at providing an overview of the global evidence of the illicit tobacco trade in order to improve the current understanding of this illicit market and consequently orient effective policies. The report is structured as follows. Section 1 reports the main types of products typically entailed by the illicit tobacco market; Section 2 discusses the size of the market for illicit tobacco products; Section 3 examines the different trafficking routes used for the illicit tobacco trade; Section 4 displays drivers and facilitators that ease or boost the illicit tobacco market; Section 5 provides an overview of the activities and modi operandi behind the illicit tobacco trade and how these methods are evolving; Section 6 illustrates the different actors who conduct and organize the illicit tobacco market; Section 7 explores international and national countermeasures to fight this crime.

1. Types of illicit products

This section defines and describe the main types of illicit tobacco products resulting from the different schemes in both production and distribution included in the illicit tobacco market.

1.1 Contraband products

Contraband tobacco products, most often cigarettes, are products that have been created lawfully and then diverted to be smuggled from lower-tax to higher-tax jurisdictions or fully evading taxation (Aziani & Dugato, 2019a; Reuter & Majmundar, 2015). Contraband occurs when otherwise legal products are illegally traded across borders, while circumventing border controls in order to avoid excise taxes or to evade rules prohibiting the sale of specific goods in a market (FAFT, 2012a; Joossens & Raw, 2011). Contraband of tobacco products can take the form of large-scale smuggling or bootlegging, which are usually performed by different types of actors (Chapter 6) and requires the adoption of different countermeasures to be mitigated (Aziani, Dugato, et al., 2020; Reuter & Majmundar, 2015).

Large-scale smuggling refers to the diversion of large quantities of genuine tobacco products, usually from well-known brands, in order to resale them into another market. Genuine products can be stolen or diverted at different stages of their supposed supply chain, from the production sites to the destination markets (Transcrime, 2015).

Bootlegging refers to when individuals or small groups take advantage of tax differentials to smuggle a limited quantity of cigarettes for resale. Taxes

are paid in the nation where the cigarettes are bought, but not in the country where the cigarettes are consumed (Allen, 2013). In comparison to large-scale smuggling, bootleggers are unlikely to resist repeated interdiction by law enforcement, which is why they usually rely on the purportedly modest size of their smuggling to escape discovery. Furthermore, their methods are frequently characterized by a low level of complexity and travel patterns to obtain the item in order to appear to be legal (FAFT, 2012a).

1.2 Illicit whites

Illicit whites (or cheap whites) are cigarettes that are manufactured lawfully in one nation with the deliberate intention of smuggling and then sold them into one or more different markets where the brand owner has limited or no permission to distribute them (Aziani and Dugato 2019a). Because these products are produced legally and conform with national regulations, they are usually not subject to any interference during the production and export processes (INTERPOL, 2014a). In addition, although some illicit whites do successfully resemble the packaging of more popular international brands, they do not infringe on the trademarks rights of the producers (Allen, 2013). Since the manufacturing of illicit whites occurs in legal facilities, the quality of these products is usually higher than other illicit alternatives (e.g., counterfeits) increasing the competitiveness of the illicit whites versus licit cigarettes (Ross, Vellios, et al., 2015). The diffusion of the illicit whites has grown dramatically between the 2000s and 2010s in many regions worldwide (Gomis et al., 2018; Oxford Economics, 2019; Transcrime, 2015)

1.3 Counterfeiting and other illicitly produced cigarettes

Counterfeits and other illicitly produced cigarettes are the only products in

the illicit tobacco market that are illegally manufactured and not diverted from the legal market. Counterfeiting refers to the manufacturing of tobacco products, including packaging and fiscal markings, without the agreement of the legitimate trademark owner (Aziani & Dugato, 2019a). Counterfeiting infringes on the trademark rights of the brand owners and avoids paying of taxes. Beyond counterfeiting, tobacco products can be also illicitly manufactured as branded or unbranded products. The majority of counterfeit or illicitly manufactured products are produced in illicit facilities, and they differ in every aspect from genuine products, including tobacco, paper, lighter tips, and packaging (von Lampe, 2011).

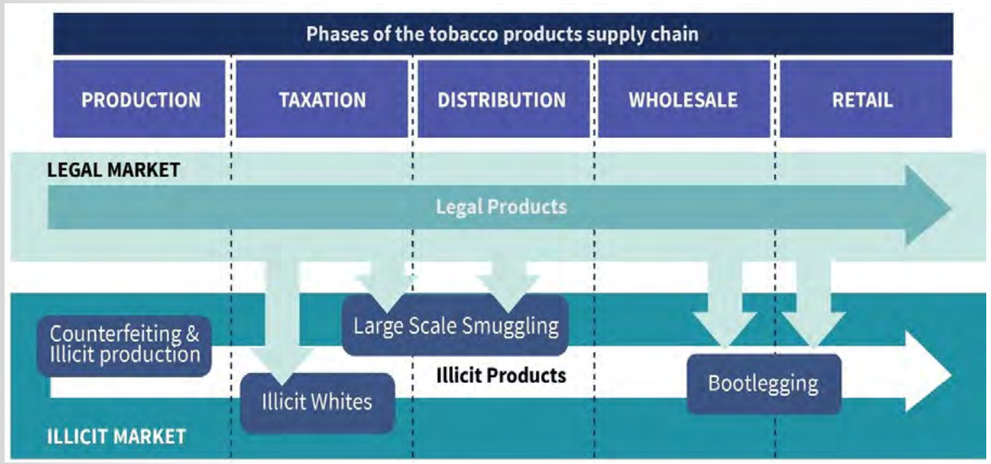

Figure 1. Types of illicit tobacco products and the phases on the supply chain
Source: Authors' elaboration of Reuter and Majmundar (2015)

1.4 Not only cigarettes

The most common products in illicit tobacco market are factory made cigarettes. According to the WCO, the seizures of illicit cigarettes in 2019 account for more than a half of all seizures of excise goods (55.2%), including alcohol and other tobacco products (WCO, 2020). Still, there is a wide range of other different products that are part of the illicit trade. The most relevant

or emerging ones are summarized below.

1.4.1 Cut tobacco

Cut, or loose tobacco, is by definition any type of tobacco shredded or cut, which is smoked in handcrafted cigarettes as roll-your-own tobacco or put into empty cigarettes tubes (Crime&tech, 2016). Despite the existence of some forms of contraband and counterfeit cut tobacco, most of the loose tobacco sold outside the legitimate channels are typically priced by weight and packaged in bags without adequate labelling or health warnings (Allen, 2013; Crime&tech, 2016; OECD, 2016). This type of illicit tobacco is usually produced and consumed locally limiting the transnational dimension of this activity (Crime&tech, 2016; Kupka & Tvrdá, 2016). However, evidence of cross-border smuggling of cut tobacco exists, especially towards those countries in which the cultivation of local tobacco is limited (Antonopoulus & Hall, 2016a; Greenhalgh et al., 2020) According to the WCO, 2019 recorded a dramatic increase (+3644%) in the seizures of cut tobacco in comparison with 2018 (WCO, 2020).

1.4.2 Water pipe tobacco

Waterpipe tobacco accounts for a significant and growing share of tobacco use globally. It is most prevalent in Asia and Africa, and it is more consumed than factory-made cigarettes in some countries of the Eastern Mediterranean Region (WHO, 2015). Illicit waterpipe tobacco includes both unauthorized domestic production and smuggling from other countries (Uznay & Gümüş, 2020). According to the latest data provided by the WCO, the seizures of water-pipe tobacco increased steadily from 2017 to 2019. In a few countries, namely Denmark and Lebanon, water-pipe tobacco is the most seized

tobacco product in 2019 (WCO, 2019, 2020). This trend is also confirmed by OLAF that identify in trafficking of water pipe tobacco one of the major trends in the European illicit tobacco market (OLAF, 2021).

1.4.3 E-cigarettes and heated tobacco products

These products imitate the smoking experience of a traditional factory-made cigarette, but without the combustion of tobacco. An e-cigarette is a device that produces vapor by heating a liquid solution, usually containing nicotine, with electrical energy taken from a battery. In the heated tobacco products, the tobacco is heated using battery-powered heating-systems in order to release nicotine (Prieger et al., 2019). The primary differences between e-cigarettes and heated tobacco products are that most e-cigarettes do not contain tobacco. Both these products are relatively new with a lower number of consumers than conventional cigarettes. However, their use is rapidly expanding in many countries (Prieger et al., 2019; WHO, 2021a). This growth is accompanied by a rise of an illicit parallel market of devices and their components (Aziani, 2020; Leung, 2019; Omaiye et al., 2017; Saxena et al., 2018).

2. Size of the market

Globally, it is estimated that one out of every ten cigarettes and tobacco products consumed is illicit (WHO, 2020). However, this incidence varies significantly across countries and regions worldwide. Unfortunately, a comprehensive and updated estimate of the size of the illicit tobacco market that is comparable across many countries worldwide is missing. The only source that provides a yearly estimate for a high number of countries in the world is Euromonitor International. However, these values are not publicly

available, as Euromonitor International's business consist in the provision of market analysis and market data. Therefore, assessment on the size of the market largely relies on a limited number of studies, often adopting different methodologies and having different geographical scopes. In some cases, these efforts are funded or supported by major tobacco producers, such as many studies by KPMG or the same estimates by Euromonitor International. Some scholars question these estimates as potentially influenced by the tobacco industry or because of the lack of transparency of the adopted methodologies (Blecher et al., 2015; Gilmore et al., 2013; Joossens et al., 2014). However, in many regions worldwide these analysis are currently the only sources that provide consistent cross-national estimates on the illicit tobacco market on a regularly basis (Aziani, Calderoni, et al., 2020; Ramboll, 2014).

After a short discussion of the main challenges in the estimation of the illicit tobacco market, this section presents the available evidence about the size of the illicit tobacco consumption in different regions worldwide. This review is mainly limited to the most recent estimates available at the country level. Most of these quantitative estimates look only at the consumption of illicit cigarettes. However, a few quantifications of the illicit market of other tobacco products are also present.

2.1 How to estimate illicit tobacco market size

Estimating the size of the illicit tobacco market is challenging. First, as for many other illicit markets, it is difficult to retrieve reliable, updated and systematic data because illicit merchants tends to hide or disguise the extent of their business and law enforcement agencies or other regulatory authorities may prefer not to publicize their actions (Joossens & Raw,

2011). Second, the complexity of the illicit tobacco market, due to the high number of products, actors, and countries involved, hinders the possibility of reaching a comprehensive picture of the phenomenon (Aziani, Dugato, et al., 2020). Furthermore, comparable data between countries are scant and dispersed (Hoffman et al., 2019).

Several methodologies and data collection methods exist to provide an approximate measure of the illicit tobacco incidence (Calderoni, 2014; Reuter & Majmundar, 2015; Ross, 2015b). Each approach has advantages and disadvantages (Table 1). Some methods are based on the collection and analysis of secondary data. Gap analyses can be used to measure the size of the illicit market by comparing different data sources, such as declared consumption, tax-paid sales, and exports and imports. They allow an estimate of unexplained consumption or production that may suggest the extent of an illicit trade, but they usually require strong assumptions and provide large-scale or wide-ranging estimates (Reuter & Majmundar, 2015; Ross, 2015b). Similarly, econometric modelling guarantees reproducible and comparable results across countries or regions, but these models usually rely on very strict assumptions on the functioning of the illicit tobacco market, thus hindering the consistency of their results (Aziani, Dugato, et al., 2020). Alternative methods rely on the direct collection of primary information. Surveys or direct observations can be useful to collect data on types of tobacco products and on illicit purchasing and consumption. However, these methods are affected by the risk of under-reporting or misleading answers, further they are heavily dependent on the representativity of their samples (Gallus et al., 2011; Johnson, 2014; Reuter & Majmundar, 2015). Other methods rely on unobtrusive data collection approaches, meaning that the information is gathered without an active involvement of the consumers (Webb et al., 1966). This eliminates the danger of under-

reporting and social desirability biases. The most frequently used method in the study of illicit tobacco consumption is the Empty Pack Surveys (EPS). The EPSs allow measurement of the presence and characteristics of illicit consumption by examining a sample of littered packages of tobacco products. This method is often considered among the most reliable ones, as it provides rich information about the type of the consumed illicit products and potentially can be applicable at both a macro and micro geographical scale. The main drawbacks are the high costs of implementation and the difficulties in achieving a representative sample (Aziani, Kulick, et al., 2017; Calderoni, 2014; Gilmore et al., 2013; Ross, 2015b; Scollo et al., 2014). An alternative approach is the so-called Sewage Epidemiology, which estimates the consumption of a specific substance through the measurement of its concentrations in wastewater. This method provides results only at the micro level and it may face several issues in obtaining reliable estimates (Castiglioni et al., 2015). For a more extensive discussion of these different estimation methods, see Reuter and Majmundar (2015), Aziani et al (2020), and European Commission (2021a).

Seizures can also be used as an indicator to assess current trends in the illicit tobacco market (Allen, 2013). As reported by the WCO, between 2018 and 2019, there was an 45.6% increase in the number of cigarettes seized, while the number of seizures of other tobacco products and cigars and e-cigarettes almost doubled (+98.9%) (WCO, 2020). However, these data are largely influenced by law enforcement agencies priorities, efficiency and resources, and by the data collection systems in place, which may deter the reliability of these data for representing the actual size and characteristics of the illicit tobacco market (Transcrime, 2015).

In conclusion, measuring the size of illicit tobacco consumption is extremely

difficult like for many other illicit markets, and therefore the existing estimates should be considered cautiously (Greenhalgh et al., 2020).

Table 1. Methods for estimating the illicit tobacco markets

Data-Collection/ Estimation Method	Main Strengths	Main Weaknesses
Population Surveys	• Provide multiple information on purchasing and consumption	•Potential social desirability bias •Cost •Hard to achieve representative samples •Cannot detect the consumption of illegal tobacco that respondents believe to be licit
Pack Observation, Pack Swap and Pack Return Surveys	• Reduced social desirability bias • Allow to reach subpopulations not reached by population surveys • Provide information on the origin of the tobacco	• Cost • Hard to achieve representative samples • Directly identify tax avoidance but not all forms of tax evasion

Data-Collection/ Estimation Method	Main Strengths	Main Weaknesses
Gap and Trade Data Analysis	• Low cost • Provable and reproducible • Easy to explain	• Does not detect bootlegging • Strong assumptions • No local-level estimates
Econometric Modelling	• Low cost • Easily provable and reproducible • Reliable international comparisons • Direct policy implications	• Requires high level of expertise • Does not detect large-scale smuggling • Hard to produce local-level estimates
Sewage Epidemiology	• Unobtrusive • Local-level estimates	• Hard to achieve representative samples • Requires also secondary data • Privacy issues • Identifies tax-avoidance but not all forms of tax evasion

Data-Collection/ Estimation Method	Main Strengths	Main Weaknesses
Empty Pack Surveys	• Unobtrusive • Local-level estimates • Differentiate between types of tobacco • Provide information on the origin of the tobacco	• Cost • Hard to achieve representative samples • Directly identifies tax avoidance but not all forms of tax evasion

Source: Aziani et al (2020) adaptation from Merriman (2013) and Reuter and Majmundar (2015).

2.2 Africa and the Middle East

In lower-income and middle-income countries in the Middle East and North Africa, data on the size of illicit markets are limited. Regarding the size of the illicit tobacco consumption in Middle East and North Africa, two main regional efforts tried to estimate its proportions. Both are mainly based on EPS data. The first study is the Nexus project that estimated the illicit consumption in several countries in North Africa[1] and the Middle East.[2] In 2017, the illicit consumption amounted to about 8.4% of the overall consumption in the North Africa and to 21% in the Middle East countries considered (Aziani & Dugato, 2019a). However, differences among the considered countries were remarkable, with the highest values recorded in Iraq, Tunisia, Oman, Lebanon and Morocco (Aziani & Dugato, 2019a). The second effort is a study by KPMG (2017a) estimating that, in 2016, 20% of the overall cigarettes' consumption in Algeria, Libya, Morocco, and Tunisia

1 "Algeria, Egypt, Morocco, and Tunisia."

2 "Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Saudi Arabia, and United Arab Emirates."

comprised illicit cigarettes. Of these illicit cigarettes, over 80% were illicit whites. Among the analysed countries, Libya had the greatest amount of illicit consumption, accounting for 93% of all cigarette use. The spread of illicit products has been favored by the political instability of the country (Meneghini & Milani, 2019). Algeria had the lowest volumes of illicit cigarettes (0.7%), while, in Tunisia, illicit cigarettes constituted 43% of the total consumption recording the second largest volume of illicit consumption following Libya. Of these illicit cigarettes, 44% were illicit whites. In Morocco, illicit tobacco accounted for 12% of total consumption, although the country recorded a significant decrease (-39%) in the volumes of illicit cigarettes between 2015 and 2016 (KPMG, 2017a).

In Western Africa, the consumption of illicit cigarettes has been recently estimated in Gambia and Nigeria. In Gambia, the estimated share of illicit consumption was about 8.6% in 2017 and the majority of the illicit cigarettes were likely originating within the country (Chisha et al., 2019a). In Nigeria, a recent estimate stated that, in 2016, 26.3% of the total cigarettes consumed is illicit, for a total of about 6.08 billion sticks (Adeniran et al., 2020).

In South Africa, a few studies have estimated the size of illicit markets, finding out that the illicit cigarettes market comprised between 30% and 35% of the total consumption in 2017 and 2018 (van der Zee, van Walbeek, et al., 2020; van der Zee, Vellios, et al., 2020; Vellios et al., 2020). Evidence also suggested that illicit trade was ubiquitous across the country and not concentrated in townships (van der Zee, Vellios, et al., 2020). According to one of this study, the illicit consumption in South Africa was primarily due to illicit domestic products rather than to cigarettes smuggled from other countries (van der Zee, van Walbeek, et al., 2020).

Key countries 1: United Arab Emirates

According to the Nexus project, the United Arab Emirates is the primary source of illegal cigarettes consumed in 57 countries in Europe, North Africa, the Middle East, and Central Asia. There are at least ten facilities in the United Arab Emirates, especially in the Jebel Ali free trade zones (FTZs), with a total manufacturing capacity of up to 63 billion cigarettes per year. Some of the manufacturers create "lookalike" brands that violate the trademark rights of established businesses. Furthermore, cigarettes made lawfully in Jebel Ali are frequently exported to other nations, circumventing import tax and sales taxes. In 2017, more than 2 billion illicit cigarettes transited through either Mauritania or Western Sahara. About 0.2 billion of them were produced in the United Arab Emirates. 2.6 billion illicit cigarettes arrived in Tunisia from the United Arab Emirates. In Europe, as well in 2017, 1.2 billion illicit cigarettes came from the United Arab Emirates (Aziani and Dugato 2019a).

2.3 The Americas

Regarding illicit tobacco data in North and South America, different studies have assessed the size of illicit cigarette market and illicit consumption.

In the United States, research have estimated the illicit cigarette market size using EPS indicating the amount of tax avoidance and evasion, as well as the frequency of counterfeit cigarette sales in a market. A national estimate for 2013 assessed that the illicit sales in the United States accounted for between 8.5% and 21% of the entire market. This range reflected an annual estimate of 1.24 to 2.91 billion packs of illicit cigarettes (Reuter & Majmundar, 2015). For the same year, Euromonitor International projected that illicit cigarette accounted for 7.3% of the overall United States consumption, indicating that the value was increasing from the previous decades (Chaloupka et al., 2015). Further evidence shows that the illicit tobacco market can vary significantly from one state to the other. Specifically, it is

higher in high-tax states like New York and California (Reuter & Majmundar, 2015). Further studies support these findings (Prieger & Kulick, 2018b; von Lampe & Kurti, 2016). A study carried out in 2017 using EPS data shows that New York City had the highest non-state taxed cigarettes among the considered metropolitan areas and Virginia resulted as the largest supplier (Aziani, Kulick, et al., 2017).

KPMG produced a regional estimate of the illicit consumption of cigarettes in Canada and 18 Latin American countries[3] based on EPS data. In 2018, it was projected that 22% of total cigarette volume consumed in these countries was illicit, equal to almost 52.5 billion cigarettes (KPMG, 2019d). These estimates show a sharp increase in respect to the previous ones for 2016 (+41% in the share of illicit and +31% in the estimated volume) (Figure 2).[4] The largest component of the illicit consumption is due to illicit whites, accounting for over three out of four illicit cigarettes (KPMG, 2017b).

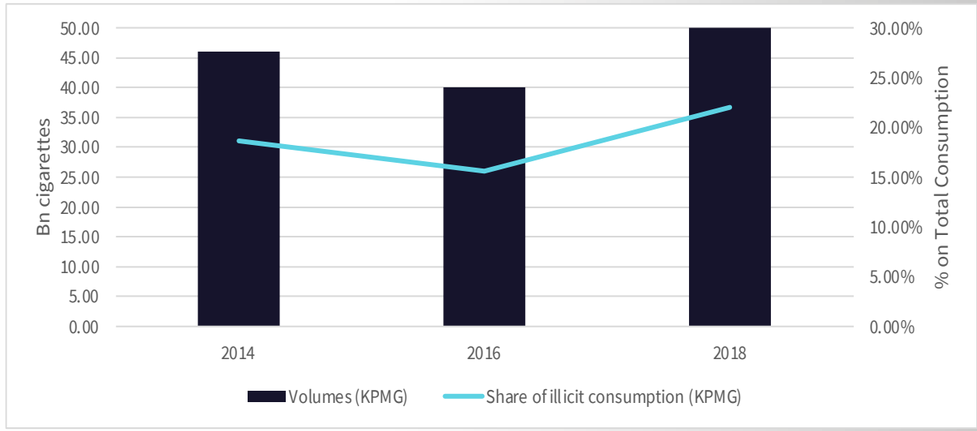

Figure 2. KMPG estimates of the illicit cigarettes' consumption in the Americas
Source: Authors' elaboration of KPMG data (2015, 2017b, 2019d)

3 Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Venezuela and Uruguay.

4 2014 estimate refers to Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Peru, Suriname, Trinidad y Tobago, Venezuela and Ontario (Canada).

In Canada, KPMG estimated that the illicit consumption of cigarettes in 2016 was around 20.8% of the overall consumption, with the highest incidence recorded in the Ontario province (33.5%) (KPMG, 2017b). The concentration of the illicit market in the provinces of Quebec and Ontario is further confirmed by other researchers (Guindon et al., 2017). All the available estimates suggest that the majority of the illicit tobacco consumed in Canada is of domestic origin, largely manufactured in the First Nations reserves (Barkans & Lawrance, 2013).

In Latin America, each country shows different values regarding the size of illicit tobacco market and even though there is scant information on the characteristics of the illicit trade, many specific studies have focused on quantifying it at the country level. In Mexico, a study in 2019 compared two different methods on how to estimate the illicit cigarettes trade: a smoker survey and a discarded pack survey. The results from both methods showed little difference, based on the discarded packs analysis the share of cigarettes not intended for the Mexican market was 8.8%, while it was 7.6% for the smokers' survey (Juarez et al., 2021). An alternative estimate by Oxford Economics (2021) based on EPS data and other surveys projected that the use of illicit cigarettes in 2020 accounted for 18.3% of the overall consumption and remained stable also in the first months of 2021.

In Argentina, a recent study estimated that the incidence of the illicit consumption equaled to 13.8% in 2019 starting from the analysis of EPS in several cities (FIC Argentina, 2020; Pizarro et al., 2021). According to this analysis, in Argentina, the illicit products were almost equally produced locally or imported from other countries, except in the regions close to the Paraguayan border where the incidence of contraband foreign products was predominant. In Colombia, illicit cigarettes accounted for 3.4% of total

consumption in 2016 and this value risen to 6.4% in 2017. Illicit cigarettes were mostly found in cities close to border areas, especially the ones close to the border with Venezuela (Cúcuta) and to the Caribbean (Cartagena). The cities had significant differences between each other with Bogotá at the bottom (1.5%) and Cúcuta at the top (22.8%) (Maldonado et al., 2018).

The consumption of illegal cigarettes is particularly high in Brazil. Available estimates indicate the Brazilian illicit market to be equal to about 49% of the overall consumption in 2020 (INCA, 2021). Historically, in Brazil, from 2008 to 2013, there was an increase in the estimated percentage of illicit cigarette use (from 16.6% to 32.3%), followed by a decrease from 2013 to 2014 (32.3% to 28.8%), and then a sustained trend of increase from 2014 to 2016 (28.8% to 42.8%) (Iglesias et al., 2016; Szklo et al., 2018). Similar to Colombia, in Brazil, there is a significant difference in illicit trade levels between the cities, with Campo Grande having the highest and Rio de Janeiro having the lowest proportion of both individuals using illicit cigarettes and illicit cigarette consumption (Szklo et al., 2020). Furthermore, the proportion of people smoking illicit cigarettes is lower than the proportion of illicit cigarettes consumed in each city. For most cities the vast majority of illicit brands are produced in Paraguay (Szklo et al., 2020).

Key countries 2: Paraguay and the MERCOSUR area

Paraguay is the largest illicit cigarette supplier in the Mercado Común del Sur (MERCOSUR) countries. The value of its illegal cigarette market would be around USD 612.5 million per year. In 2007, through more than two dozen tobacco companies, around 70 billion cigarettes could have been transported illegally. The illicit cigarette trade in the MERCOSUR area is estimated to be worth 45 billion units (sticks) each year, with Paraguay accounting for 90% of this total (Ramos, 2009). In 2014, a study from KPMG showed that Paraguayan cigarettes were found in 13 out of the 16 Latin American countries, reaching 70% of the whole non-domestic cigarettes (KPMG, 2015). In 2016, the total production was estimated to be around 40 billion million cigarettes. The legal exports were declared at 4 billion cigarettes, while the legal domestic sales at 2.5 billion (Vela Meléndez, 2013). The MERCOSUR area is dominated by illicit commerce in low-cost, lesser-known brands. Price, rather than the attraction of well-known brands made by international tobacco corporations, is the major factor for its low-income users (Ramos, 2009).

2.4 Asia and Oceania

Oxford Economics[5] conducted a regional study from 2012 to 2017 on the illicit tobacco market in Asia and Oceania. As for the KPMG's studies, these analyses are funded by tobacco producers and are based on EPS data. According to the latest estimate, the regional prevalence of illicit tobacco consumption was 14.6% across 16 countries in 2017. This indicates that one out of every seven cigarettes consumed was illegal. Moreover, in 2017, the volume of illegal cigarettes consumed decreased compared to 2016, owing to a reduction in illicit consumption in three of the major markets considered: Indonesia, Pakistan, and the Philippines (Oxford Economics, 2018) (Figure 3).

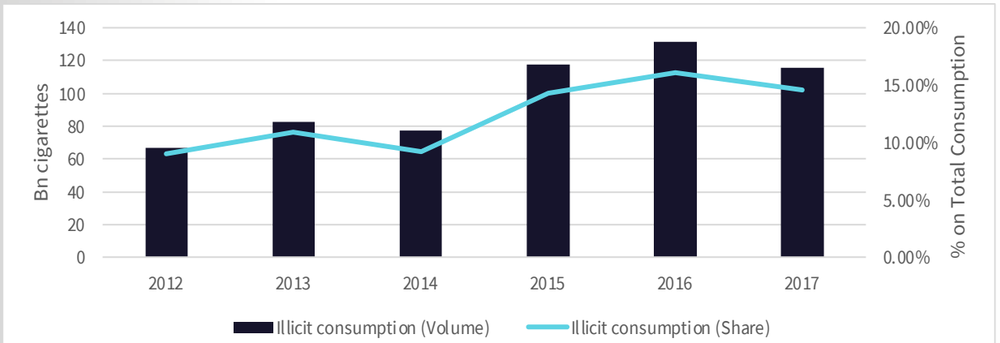

Figure 3. Oxford Economics and International Tax and Investment Center estimates of the share of illicit tobacco consumption in consumption in Asia
Source: Authors' elaboration of Oxford Economics and International Tax and Investment Center data (2013, 2014, 2016a, 2016b; 2017, 2018).

Illicit consumption in Indonesia fell to 9.7% in 2017 down from 12.2% in 2016, coinciding with an increase in enforcement and surveillance efforts by the Customs and Excise Agency. Despite a 14% drop in unlawful consumption, Pakistan became the highest-ranked market by volume of illicit cigarettes consumed in 2017. The Philippines saw the sharpest drop in illicit consumption (-51.8%) (Oxford Economics, 2018). However, in 2017, illicit tobacco incidences increased in 12 of the 16 markets included in the Asia

5 From 2012 to 2015 in cooperation with the International Tax and Investment Center.

Illicit Tobacco Indicator. These markets include Malaysia and Vietnam (Oxford Economics, 2018).

Illicit cigarettes have become a substantial challenge in Malaysia. In 2018, 59% of Malaysia's cigarette market was illicit, counting around 598 million packs of cigarettes each (Oxford Economics, 2019). Around 55% of total tobacco consumption in 2018 was illicit product (FTI Consulting, 2019a). In 2017, in Vietnam, illicit cigarettes accounted for just approximately 13.7% of overall cigarette use. Illicit use increased by 9.3% in Vietnam in 2017 to 24.3 billion cigarettes, accounting for 23.4% of total consumption. Instead of being fairly spread across the country, illegal commerce is significantly concentrated in the south (over 84%), implying that location has a significant influence in deciding illicit trade. Tay Ninh, Long An, Dong Thap, and An Giang, and four other southern provinces bordering Cambodia are among the most active smuggling hotspots in Vietnam (Depocen, 2019a; Nguyen et al., 2020; Oxford Economics, 2018).

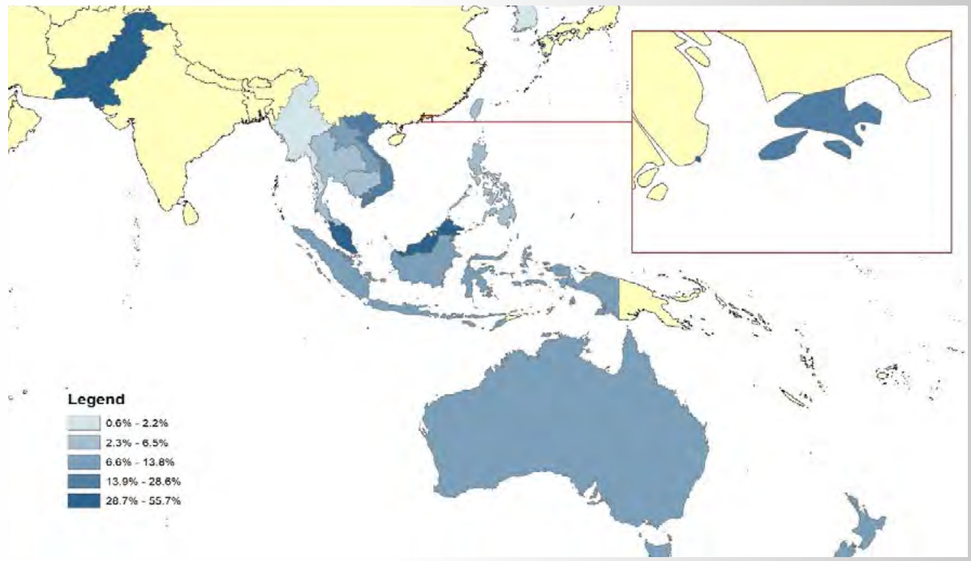

Figure 4. Oxford Economics estimates of the share of illicit tobacco consumption in consumption in Asia (2017)
Source: Authors' elaboration of Oxford Economics data (Oxford Economics, 2018).

Studies have also estimated the size of the Indian illicit cigarettes market. According to a recent estimate by Euromonitor International and reported by the Tobacco Institute of India, one cigarette consumed out of four in 2019 was illicit (The Tobacco Institute of India, 2021). Other studies provide significantly lower values. One study found that between 2016 and 2017 illicit cigarettes accounted for 6.0% of the total consumption. (Goodchild, 2020). Another study assesses the Indian illicit cigarettes market share at 2.7% of the overall consumption in 2016. This study, based on a survey in Indian cities, shows that illicit cigarettes share was higher among cheapest cigarettes brands and the highest prevalence of illicit cigarettes was found at the borders with Bangladesh and Myanmar (John & Ross, 2018).

Key countries 3: CHINA, the leading counterfeit

According to several evidence, China is the source of most of the fake cigarettes consumed or confiscated worldwide (Allen, 2013; von Lampe et al., 2012). In the past decades, counterfeit cigarettes were exported mainly to Europe and North America (Allen, 2013). However, current trends see also developing nations, such as India, Pakistan, and South Africa, are primary destination markets for Chinese counterfeit cigarettes (Herbert, 2020).

Regarding Oceania, yearly estimates on the illicit tobacco market are provided by KPMG and some information can also be retrieved by the Oxford Economics studies (KPMG, 2019c, 2020; Oxford Economics, 2018). According to the last estimates by KPMG, Australia presented an increase in illicit tobacco consumption. The rate of illegal use has risen from 14.1 percent in 2018 to 20.7 percent in 2019. Despite a decrease from 53.7% in 2018 to 52.8% in 2019, contraband consumption continues to account for the bulk of total illicit tobacco use (KPMG, 2020). New Zealand presents a similar

Chapter 4: Illicit Tobacco Trade

situation. According to KPMG, although tobacco consumption decreased between 2017 and 2019, the share of illicit consumption on the total consumption increased from 9.2% to 11.5% (KPMG, 2019c). In 2019, the consumption of unbranded domestic tobacco (58% of the illicit) overcome the share of contraband and illicit whites, mainly coming from China and South Korea, while counterfeit still represent a small portion of the illicit consumption (KPMG, 2019c).

Illicit consumption in Asia and Oceania is made of various products, both domestically manufactured and non-domestic manufactured. According to the latest Oxford Economics regional study, the proportion between the two categories is balanced (Oxford Economics, 2018). On the one hand, the estimated overall consumption of non-domestic illicit cigarettes in 2017 was 57.3 billion. This volume was made up of contraband, counterfeit, and cigarettes of unknown origin. The latter makes up the majority of non-domestic illicit consumption in 2017 (73%). Vietnam, Malaysia, and Pakistan accounted for almost 85% of these types of illicit cigarettes, with Vietnam alone accounting for 19.1 billion. Contraband cigarettes were discovered in virtually every market, accounting for roughly a quarter of all non-domestic illicit inflows. The country with the highest amount was again Vietnam, which consumed an estimated 5.2 billion contraband cigarettes. Contraband accounted for more than 90% of total illegal consumption in five markets: Macao, Myanmar, New Zealand, Singapore, and South Korea. Counterfeit was the lowest component of the illicit consumption, accounting for just 3.2 percent of total illicit market across the 16 countries covered by the report (Oxford Economics, 2018).

2.5 Europe

A few recent estimates exist of the prevalence of the consumption of illicit cigarettes across the EU countries and for multiple years (European Commission, 2021a). One of them is the yearly estimates provided by KPMG. Starting from 2006, KPMG produces annual estimates of the illicit consumption of cigarettes in the EU and in other countries or regions worldwide. This estimate is the most recent publicly available assessment for the entire European region. According to this study, citizens in Europe[4] consumed about 39.9 billion illicit cigarettes in 2020, corresponding to about 8.3% of overall consumption. This estimate is largely consistent with the total amount of 39.5 billion estimated for the previous year, despite the consequences of the COVID-19 pandemic (KPMG, 2021). The 2020 value recorded a -19% in the volume of illicit cigarettes in respect to the 2016 estimate (Figure 5). However, this reduction is partially due to a general decreased consumption of cigarettes. In the same period, the incidence of illicit on the overall consumed cigarettes is decreasing by only -8%.

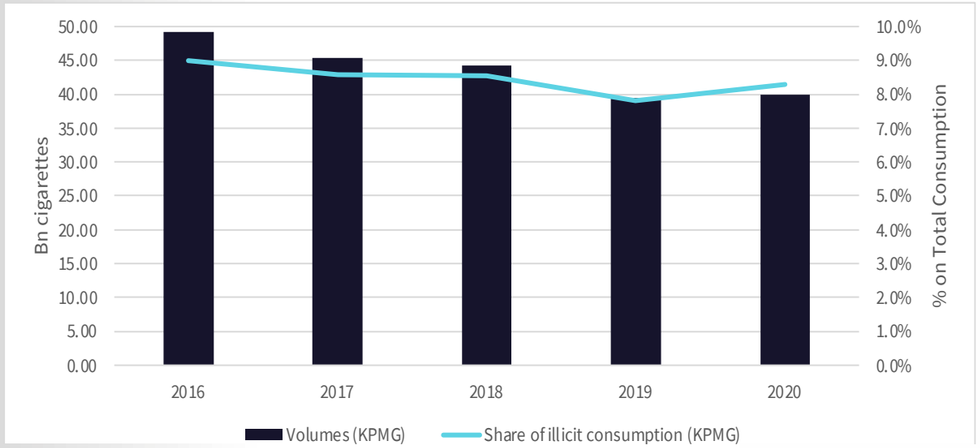

Figure 5. KMPG estimates of the illicit cigarettes' consumption in Europe
Source: Authors' elaboration of KPMG data (2021)

4 Here, Europe includes the 27 EU Member States, Norway, Switzerland, and the UK

Another estimate is resulting from the project ITTP NEXUS in Europe and Beyond (hereafter NEXUS)(2020), which refers specifically to the years 2008-2017 and focuses on the EU member states and other 30 bordering countries starting from EPS data (Aziani & Dugato, 2019b). Prieger and Kulick (2016) estimate the illicit market share of cigarettes comparing the declared cigarette consumption and the legal sales in 25 EU countries from 1999 to 2013. Their country-specific estimates are not available; however, the authors claim that the illicit market averages around 10% of the total consumption of cigarettes. Finally, Joossens and colleagues (2014) provide an estimate of the prevalence of the illicit consumption of cigarettes and hand-rolled tobacco in 18 European countries in 2010 through face-to-face interviews and an assessment of the last purchased pack of tobacco by the respondent. The study indicates that illicit consumption is 5.9% for cigarettes and 11.7% for hand-rolled tobacco. Despite the relevance of this study, the low sample size (about 300 respondents per country) and some differences in the sampling methodologies across countries suggest to consider these results cautiously (Joossens et al., 2014). Although it is impossible to say which of these measures better approximate the actual market, the fact that most of these estimates are not largely divergent reassure about their overall reliability (Aziani, Dugato, et al., 2020).

Not all the European countries are equally affected by illicit tobacco market. According to the latest KPMG estimate, in 2020 France (23.1%), Greece (22.4%), Lithuania (20.2%), Latvia (19.1%), Ireland (17.3%) and the United Kingdom (UK) (17.1%) are the countries with the highest shares if illicit consumption (KPMG, 2021). These values are largely consistent with the previous year estimates (Figure 6). Focusing on these countries, in France counterfeit and contraband consumption increased by 4.6 billion cigarettes in 2020, gaining the highest volume in the EU. Greece is second

only to France in counterfeit volume in the EU, even though overall illicit consumption decreased in 2020. In Lithuania, 94% of the total illicit consumption was made of illicit whites. In Latvia, following three years of decline, consumption of illicit cigarettes increased slightly in 2020. In Ireland and the UK, illicit consumption declined in 2020 in line with the overall reduction of cigarettes produced abroad resulting from the COVID-19 restrictions (KPMG, 2021).

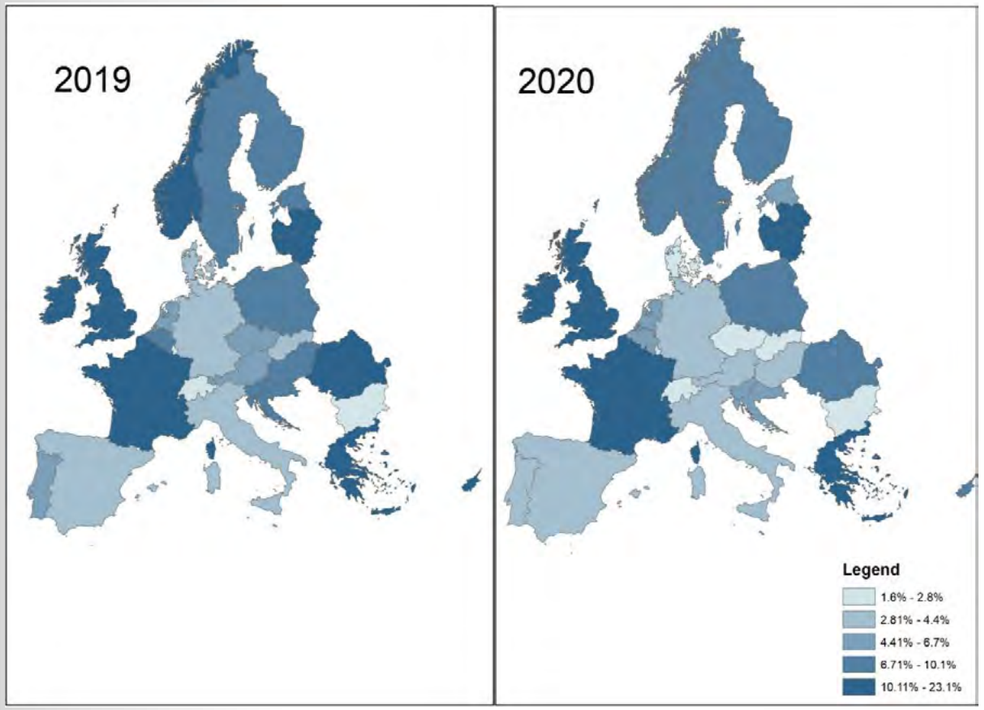

Figure 6. KMPG estimates of the share of illicit cigarettes' consumption in Europe (selected countries 2019-2020)
Source: Authors' elaboration of KPMG data (2021)

Key countries 4: Greece

In 2013, the Papastratos Tobacco Company estimated that 20% of the total market is made by illicit cigarettes. Similarly, the European Outlook Report reported that illicit cigarettes accounted for almost 20% of the national market; more specifically, the illicit tobacco consumption level was particularly high in Attica (1,753 million sticks) and Central Macedonia (745 million sticks). These two locations accounted for 63 percent of the Greek illegal tobacco market (Transcrime, 2015). In 2017, the situation seemed to not have changed. According to the Nexus Report, the level of illicit cigarettes consumption was one of the highest in Europe, around 20% of the total cigarettes' consumption. Moreover, Greece is a focal point for illicit whites. These cigarettes are smuggled from Greece to many different countries, for example 2.2 billion cigarettes travelled from Greece to Turkey (Aziani & Dugato, 2019b).

Existing estimates of the illicit tobacco consumption have been usually calculated at the country level. However, the consumption of illicit cigarettes is driven by several contextual factors that could change significantly even within the same country (see Chapter 4). Therefore, not all the countries are homogeneously affected by the illicit tobacco market in all their areas. With regards to European countries, Transcrime provided an estimate of the illicit cigarette market among 247 subnational areas of the EU member states for the period 2006-2013 (Transcrime, 2015). The results show remarkable territorial differences in the prevalence of illicit cigarettes consumption within several of the considered countries (Figure 7). Further, the temporal analysis denotes how only a few areas remained constantly problematic in all the considered years, while the consumption of illicit cigarettes changed considerably in many regions. This demonstrates that the illicit tobacco market is constantly developing and it is subject to even dramatic changes in reaction to the evolution of the contextual conditions (Transcrime, 2015).

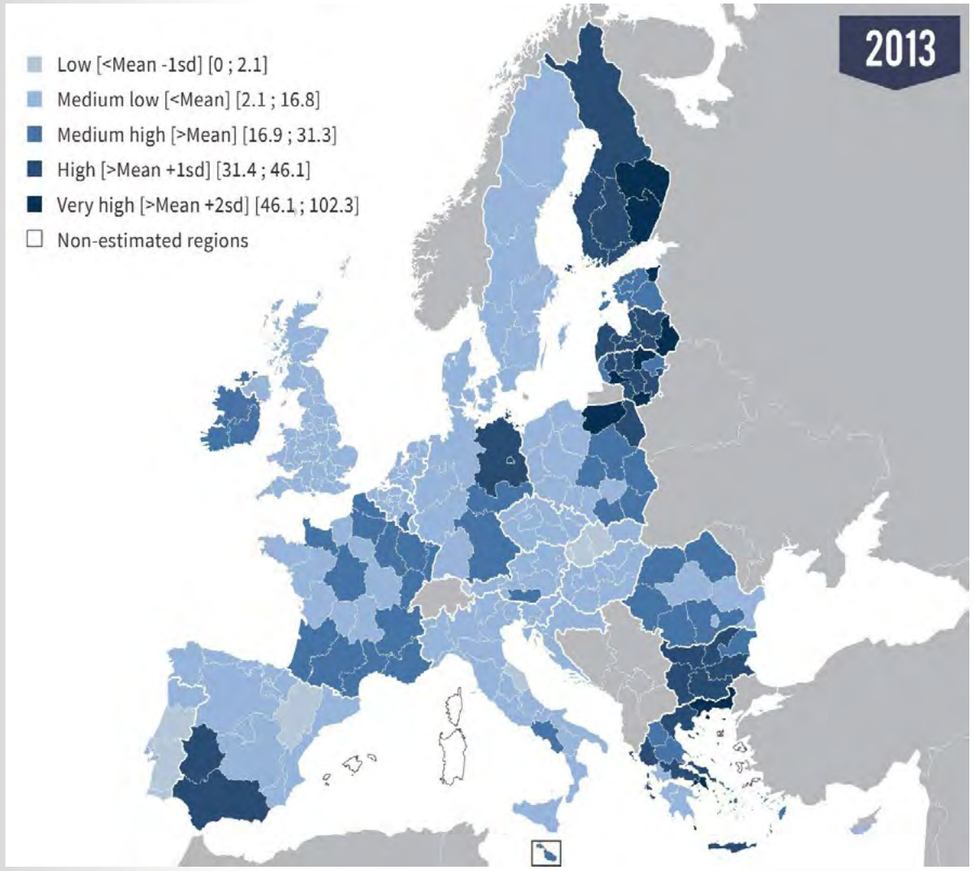

Figure 7. Prevalence of illicit cigarettes' consumption in million sticks per 100,000 inhabitants (2013)
Source: Project EU Outlook on ITTP (Transcrime, 2015)

An analysis of the incidence of the different illicit products shows how the evolution of the illicit tobacco market in Europe. Historically, contraband cigarettes accounted for the majority of the EU market. According to some scholar, this was partially due to the direct involvement of legal tobacco manufacturers that, particularly during the 1990s, facilitate the illegal sales of their own products through parallel trade mechanisms (Joossens & Raw, 1998). However, since the early 2000s there was a steady decline in the consumption of contraband products. For example, Transcrime estimates that the share of smuggled cigarettes decreased from 85.5% in 2006 to 64.6% in 2013 (Transcrime, 2015) and reached around 56.5% in 2017 (Aziani

Chapter 4: Illicit Tobacco Trade

and Dugato 2019a). According to the latest KMPG estimate, smuggled cigarettes in 2020 account for a share of 41.6% of the overall illicit consumption (KPMG, 2021). This decline is due to several factors, such as the increased efforts by LEAs and the main multinational manufacturers and the growth of alternative products (Joossens & Raw, 2008; Transcrime, 2015).

A large illicit market share was progressively eroded by illicit whites. From a marginal illicit product at the beginning to the new century, the illicit whites became in a few years a relevant component of the illicit tobacco market (Antonopoulus & Hall, 2016a; Ross, Vellios, et al., 2015). Both KPMG and Transcrime estimate that illicit whites represented steadily about one third of the overall European illicit consumption in the last decade (Aziani & Dugato, 2019a; KPMG, 2021; Transcrime, 2015). The maps in Figure 8 show the progressive penetration of illicit whites consumption across the EU regions between 2006 and 2013 (Transcrime, 2015).

Counterfeits usually accounted for a marginal market share in respect to other illicit tobacco products. The consumption attested regularly to around 5% to 10% of the illicit market. However, recently KPMG registers a dramatic growth of the consumption of counterfeit cigarettes, picking at 31.5% of the illicit market in 2020 (KPMG, 2021). This can be partially related to the consequences of the COVID-19 pandemic that, reducing transnational trades, also reduces the opportunity for international flows of illicit products. This may have boosted local production of counterfeited or unbranded products directly in the destination market (KPMG, 2021). However, even previous estimates for 2018 and 2019 showed a tendential increase in the share of counterfeit cigarettes, which may denote a newer and more stable evolution of the market (Figure 9). The discovery of many illicit tobacco factories supports the hypothesis of an increase of the manufacturing of the illicit

tobacco products inside the EU. In particular, Poland accounted alone for more than 40 factories in 2016, with the capacity to produce several billion cigarettes per year (Aziani & Dugato, 2019b). However, illicit cigarettes coming from outside of Europe still accounted for the majority of the illicit consumption (Aziani & Dugato, 2019a; KPMG, 2017c, 2019e, 2021).

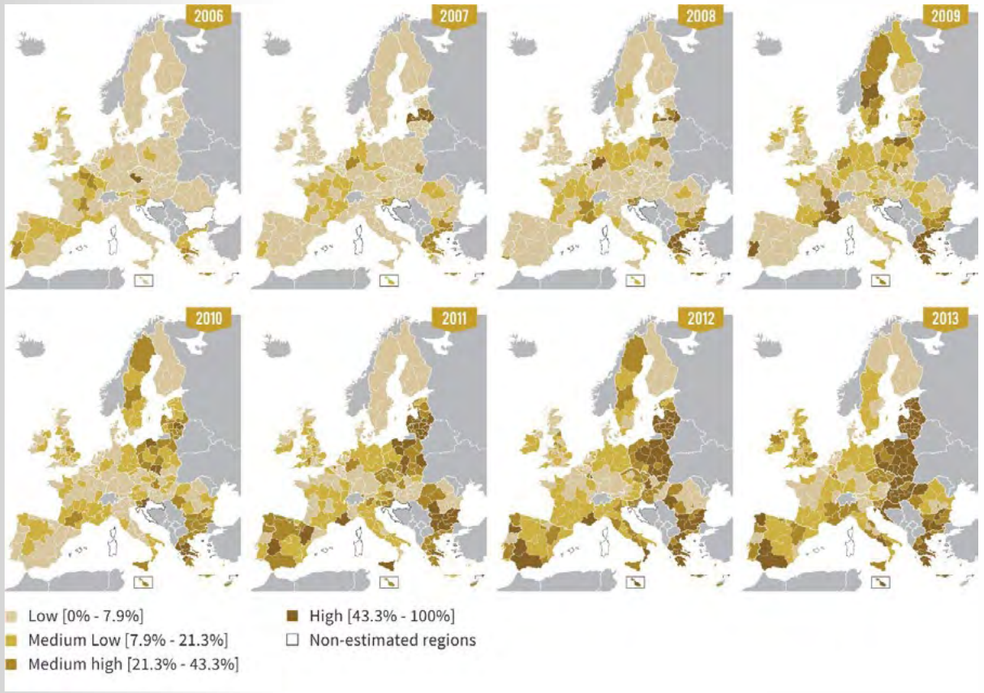

Figure 8. Share of illicit whites in the illicit cigarette market by area (2006-2013)
Source: Project EU Outlook on ITTP (Transcrime, 2015)

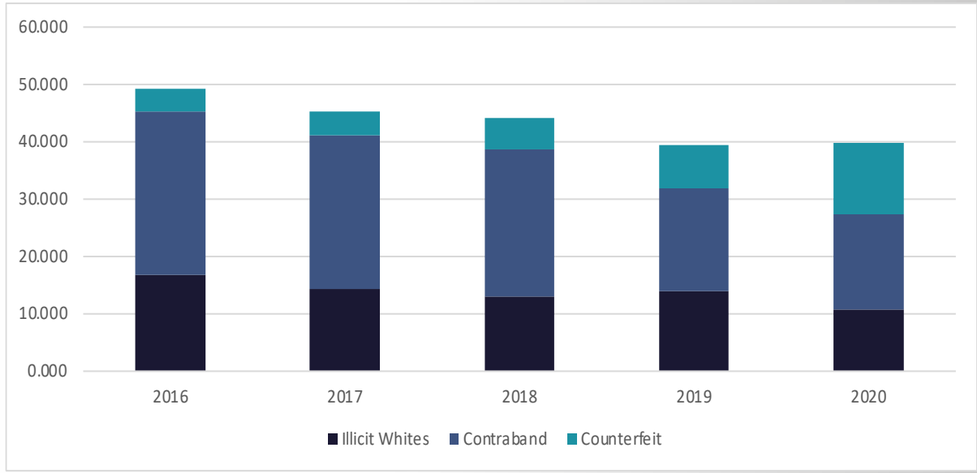

Figure 9. KMPG estimates of the illicit cigarettes' consumption in Europe by type of product
Source: Authors' elaboration of KPMG data (2021)

Beyond the illicit trade and consumption of cigarettes, the European countries are also affected by other forms of illicit tobacco, such as the trafficking in illicit roll-your-own or waterpipe tobacco. This is particularly relevant as the share of illicit is likely to be higher for some of these alterative products in respect to manufactured cigarettes (Joossens et al., 2014). However, systematic estimates of these alterative illicit markets are scant.

A cross-national effort to assess the consumption of illicit cut tobacco has been carried out by Crime&tech (2016) on behalf of major tobacco producers in 2015. The study focuses on 15 Eastern European countries, and it is based on data collected through face-to-face interviews including an analysis of the containers of the tobacco the respondents were smoking. The results estimate that about a half of the total cut tobacco consumed in those countries is illicit, with more than a half of the countries showing a significant incidence of the illicit consumption (Figure 10). The majority of the illicit cut tobacco is sold and consumed as unbranded "bulk tobacco", while the consumption of contraband and counterfeit fine-cut tobacco is marginal (Crime&tech, 2016). However, even in this case, the exiguity of the sample

considered by this study calls for cautiousness in interpreting these results.

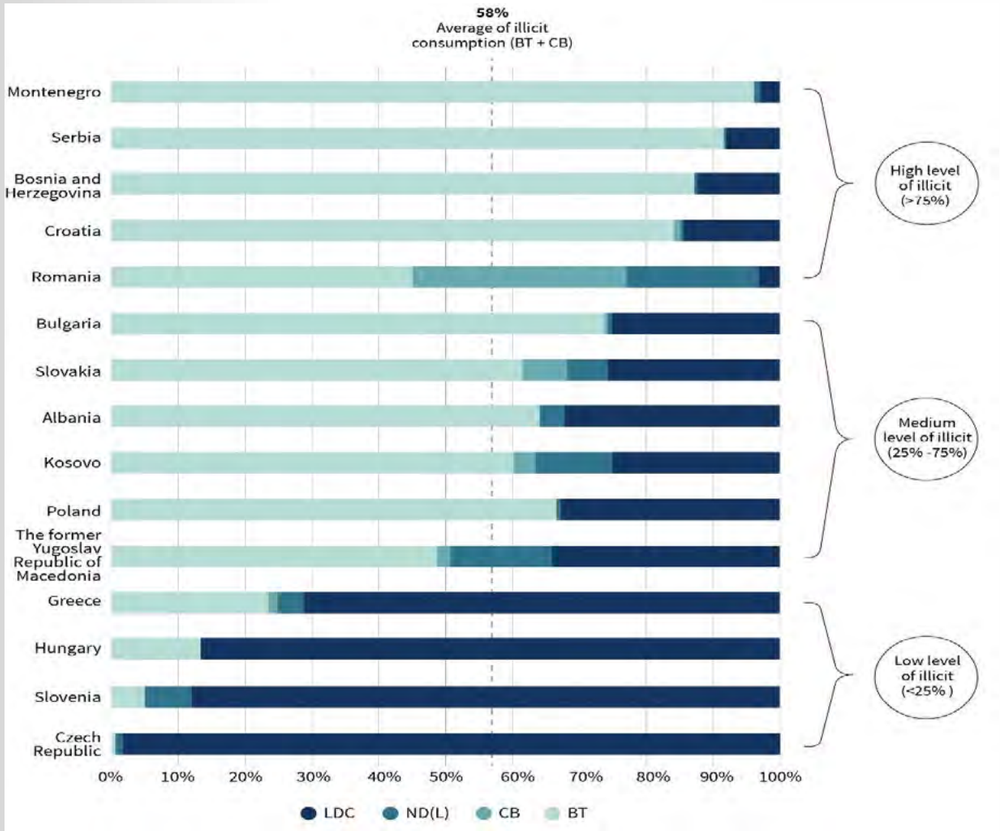

Figure 10. Crime&tech estimates of the share of illicit cut tobacco consumption in 15 Eastern European countries (2015)
Source: Crime&tech 2016.

2.6 COVID-19 and illicit tobacco market

The outbreak of the COVID-19 pandemic and the restrictive measures adopted by national governments has affected the illicit tobacco market. On the one side, lockdowns and border restrictions have hindered the possibility for criminals to move illicit goods across countries and to sell the products to the final consumers given the closing of some retail places and the changed routine of many customers (UNODC, 2020). This may have forced out of the market those criminals that were not enough resilient or flexible to adapt

to the new conditions by rethinking their strategies. On the other side, the worsening of the economic condition in some share of the population may have increased the request for lower priced products. Finally, in the case also legal supply chains were disrupted the shortage of products available through official and legal channels may have increased the social acceptance towards acquiring illegal items.

In regard to illicit tobacco consumption, a few studies investigate the impact of COVID-19 at the country level in South Africa, Argentina, and India. All three countries experienced an increase in the illicit market. South Africa's illicit consumption was particularly affected by the COVID-19 due to the state ban on cigarettes and alcohol during lockdown. Illicit markets responded providing these goods that could not be found in the legal supplies (Bloomberg, 2020; Cotteril, 2021). In particular, the tobacco illicit market became more profitable, and it attracted both organized crime groups and individuals. Counteract these emerging criminal actors could become a challenge in the future given the high profits they were able to gain during the period of the ban, that can be reinvested in the illicit market (Ross & Joossens, 2021). In Argentina, the consumption of illicit tobacco from Paraguay reached higher levels since the beginning of the COVID-19 pandemic. The number of illicit cigarettes smuggled into Argentina increased exponentially. The reason behind this increase can mainly be found in the economic and medical crisis that pushed smokers to search for cigarettes at a lower price (Euromonitor International, 2020). A similar situation can be found in India. According to the news, the illicit cigarettes market expanded rapidly as a result of Covid-induced disruptions in the country, resulting in tax evasion of Rs 400 from June to September (Mukherjee, 2020).

2.7 Country level estimates

Table 2 provides extensive list of the available estimates of the ITTP at the country level.

Table 2. Estimates of the illicit tobacco market (country-level)

Author	Country	Year	Products
Euromonitor	80+ countries	1997-2020	Cigarettes
Africa and the Middle East			
KPMG, 2017a	Algeria, Libya, Morocco and Tunisia	2016	Cigarettes
Transcrime - Project Nexus (Aziani and Dugato 2019a)	12 countries (North Africa, Middle East)	2008- 2017	Cigarettes
Chisha et al., 2019a	Gambia	2017	Cigarettes, hand rolled cigarettes, pipes, cigars
Adeniran, Ekeruche, & Castradori, 2020	Nigeria	2016	Cigarettes
Vellios et al., 2020	South Africa	2002-2017	Cigarettes
van der Zee, van Walbeek, et al., 2020	South Africa	2017	Cigarettes
van der Zee, Vellios, et al., 2020	South Africa	2017-2018	Cigarettes
Americas			
KPMG, 2015, 2017b, 2019d	From 17 to 18 countries (according to the years)	2014, 2016 and 2018	Cigarettes
Aziani, Kulick, et al., 2017	United States (selected metropolitan areas)	2010-2014	Cigarettes
Reuter & Majmundar, 2015	United States	2013	Cigarettes
Juarez et al., 2021	Mexico	2017	Cigarettes
Guindon et al., 2017	Canada	1999-2013	Cigarettes
Iglesias et al., 2016	Brazil	2008 and 2013	Cigarettes
Szklo et al., 2018	Brazil	2012-2016	Cigarettes
Paraje, 2019	Argentina, Brazil, Chile, Colombia, and Peru.	Various from 2008 to 2014	Cigarettes
Maldonado et al., 2018	Colombia	2016	Cigarettes
Pizarro et al., 2021	Argentina	2020	Cigarettes
Barkans & Lawrance, 2013	Canada	2009	Cigarettes and tobacco
Asia and Oceania			
Oxford Economics and International Tax and Investment Center data, 2013, 2014, 2016a, 2016b	From 11 to 17 countries (according to the years)	2012-2015	Cigarettes and loose tobacco
Oxford Economics, 2017, 2018	16 countries	2016-2017	Cigarettes and loose tobacco
Nguyen et al., 2020	Vietnam	2010-2016	Cigarettes
Depocen, 2019a	Vietnam	2012-2017	Cigarettes
Herbert, 2020	China	2020	Cigarettes
Ross et al., 2019	Mongolia	2017-2018	Cigarettes
Goodchild, 2020	India	2009-2010 and 2016-2017	Cigarettes
John & Ross, 2018	India	2017	Cigarettes
Oxford Economics, 2019	Malaysia	2018	Cigarettes

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Author	Country	Year	Products
Khan et al., 2021	Pakistan	2019	Cigarettes
Lavares et al., 2021	Philippines	1998-2018	Cigarettes
KPMG, 2018a, 2019b	Australia, New Zealand	2017-2019	Cigarettes
FTI Consulting, 2019a	Papua New Guinea	2018	Cigarettes, cigarillos
Europe			
KPMG, 2013, 2014, 2016, 2017c, 2018b, 2019e, 2021	30 countries (EU, Switzerland, Norway, the UK)	2006-2020	Cigarettes
Transcrime - Project Nexus (Aziani and Dugato 2019a)	45 countries (EU, Eastern Europe)	2008- 2017	Cigarettes
Aziani, Dugato, and Meneghini 2020	27 EU MS	2016	Cigarettes
Crime&tech, 2016	15 Eastern European countries	2015	Cut tobacco
Joossens et al., 2014	18 European countries	2010	Cigarettes and cut tobacco
Prieger & Kulick, 2016	25 EU MS	1999-2013	Cigarettes
Lakhdar, 2008	France	2003-2006	Cigarettes
Budak et al., 2021	Croatia, Bulgaria, Romania, Bosnia Herzegovina, Serbia, Macedonia	2014	Cigarettes
Calderoni, 2014	Italy	1998-2012	Cigarettes
Theofilopoulos (2013) reported in Chionis & Chalkia, 2016b	Greece	2008-2013	Cigarettes and tobacco
Ellis, 2017	Bulgaria, Greece, Italy	2014	Cigarettes
Europol, 2017	EU MS	2015	Cigarettes
Little et al., 2020	Georgia	2017	Cigarettes

Author	Country	Year	Products
Institute for Security and Development Policy, 2016	Latvia, Poland	2015	Cigarettes
Kaplan et al., 2017	Turkey	2004	Cigarettes
Liutkutė-Gumarov et al., 2020	Lithuania	2018	Cigarettes
KPMG, 2019a	Russia, Kazakhstan, Kyrgyzstan, Belarus, Armenia	2018	Cigarettes

3. Cross-border trafficking routes

Illicit tobacco products are mainly consumed in a different country or jurisdiction from the one in which they were produced. Cigarettes are therefore considered the most smuggled legal product worldwide and the illicit tobacco trade a primarily transnational crime (Mackay & Eriksen, 2002; Meneghini et al., 2019). For example, according to a recent estimate, the illicit cigarettes consumed in the 28 EU member states during 2017 originated in 128 countries worldwide (Aziani & Dugato, 2019a).

Countries involved in the illicit tobacco network can be classified as origin (where illicit tobacco products are produced), destination (where illicit tobacco products are intended to be sold), or transit (where illicit tobacco products pass through on their way to their final destination) (INTERPOL, 2014a). However, one category does not exclude the others: a country usually play multiple roles in the journey of illicit cigarettes (Allen, 2013). For example, destination countries could also be used as transit points to other markets (Europol, 2011). Most of the current information on the illicit cigarettes' movements focuses primarily on the origin and destination of the

illicit products (e.g., KPMG's reports). However, since transit countries are where much of the planning and facilitation for smuggling takes place, these nations play an important role in the understanding of the illicit tobacco supply chain (Aziani & Dugato, 2019a).

Although the smuggling of tobacco products can occur among any country worldwide, the largest volumes of the illicit flows cluster along identifiable routes. In this context, a route can be defined as a combination of different minor transnational movements of illicit cigarettes that geographically converge in connecting the main origin countries with the most relevant destination markets (Aziani & Dugato, 2019a). Reconstructing the illicit tobacco smuggling routes is not easy. On the one side, the production of illicit tobacco products is not limited in a few countries. This makes the illicit tobacco market peculiar in respect to other illicit markets in which the production of the illegal good is very much concentrated (e.g., cocaine) (Meneghini et al., 2019). On the other side, the smuggling routes are constantly changing and adapting to the evolution of several contextual factors (Mackay & Eriksen, 2002). Finally, obtaining reliable and systematic data across countries and years is hardly achievable (Gallagher et al., 2019; Reuter & Majmundar, 2015). Consequently, existing estimates should be considered as general indications of overall tendencies, rather than exact descriptions of the actual illicit flows. This chapter summarizes the existing knowledge about the more consolidated trafficking routes and highlights the peculiar role of some relevant countries as either source or transit hubs for the illicit tobacco trade.

3.1 Africa and the Middle East

Africa and the Middle East have a reciprocal relationship; many Northern

African countries serve as transit points for products destined for the Middle East or Europe and they also serve as destinations for goods originating in the Middle East (Babuta & Haenlein, 2018; Meneghini & Milani, 2019). Regarding North African countries and the Middle East, within the project NEXUS, Meneghini and Milani (2019) identify the Maghreb Route through

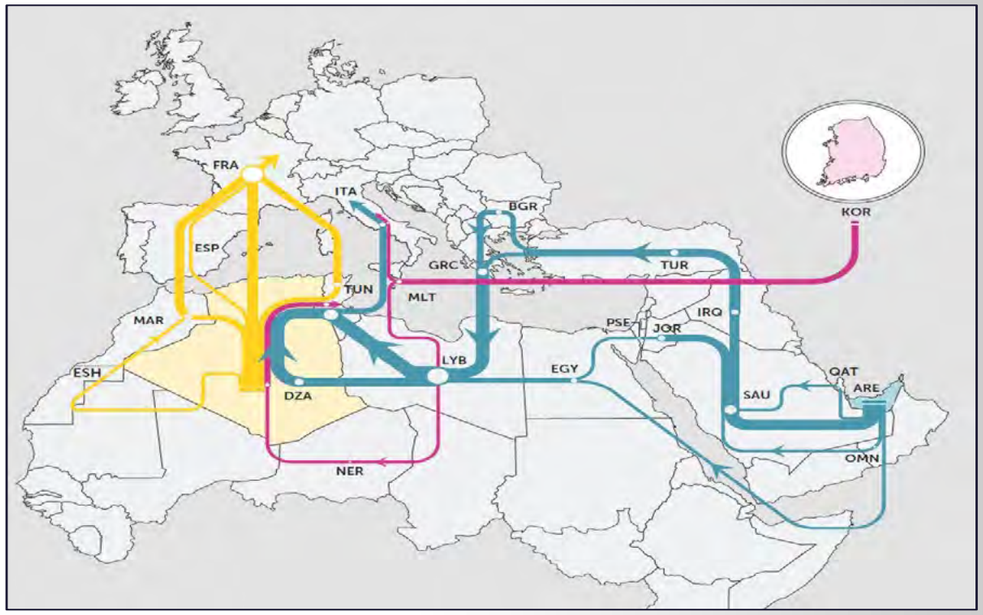

Figure 11. The Maghreb Route
Source: Aziani and Dugato 2019a

which Illicit cigarettes produced or transiting in the Arabian Peninsula reach Europe passing through the North Africa (Figure 11). More than 10 billion illicit cigarettes were estimated to flow along this route in 2017.

A key node of this route is the Jebel Ali FTZ in the United Arab Emirates. Stratified evidence shows how a large share of the illicit cigarettes transiting through this route are manufactured in or in transit through this FTZ (see page 12). Moroccan, Libyan, Tunisian, Egyptian and Algerian ports serve as

both departure and transit sites for illicit cigarettes moving along this route and destined for Europe, particularly Italy, France, and Spain (Transcrime, 2015). Regarding the different types of cigarette products that can be found on this route, most of the cigarettes tend to be illicit whites, although the real origin of many cigarettes is unknown or disguised as “duty-free”. Locally-made illegal cigarettes are also trafficked in the Maghreb region, mainly originating from Algeria (Meneghini & Milani, 2019).

Regarding Middle East, Iran and Iraq are key destination countries for the illicit cigarettes. Billions of cigarettes are shipped to ports in Cyprus or Lebanon that are meant for the illicit markets of Iran and Iraq. Most of these cigarettes are produced legally and disappear during transport (Little et al., 2020; WHO, 2008). Middle Eastern countries are also relevant transit points for illicit products destined for Turkey and European countries (Aziani & Dugato, 2019a; INTERPOL & ENACT, 2020).

Libya is a major hub for tobacco smuggling, mainly originating in the United Arab Emirates. Its long and porous borders with Egypt, Niger, Tunisia and its Mediterranean coast are all exploited to smuggle cigarettes. Additionally, Egypt is a main transit point for cigarettes reaching Libya either passing by through the Arabian Peninsula or directly from the Red Sea (Meneghini & Milani, 2019). Morocco is still an active transit country for products from Western Sahara to Spain, despite strengthening countering measures against the illicit tobacco trade. This is due to its geographical proximity to Spain’s ports that facilitates direct sea transshipment (Meneghini & Milani, 2019; Transcrime, 2015). Algeria is a crucial origin country in this area, as well as a transit and destination country for cigarettes produced mainly in the United Arab Emirates and Mauritania. Illicit cigarettes enter this country by exploiting the eastern border with Libya, the southern border with Mali

and Niger, and the western border with Morocco. Tunisia is also a relevant destination country and a transit hub for illicit cigarettes usually targeting France and Italy and originate from the United Arab Emirates (INTERPOL, 2014a; Meneghini & Milani, 2019).

Some ports in Western Africa and the Gulf of Guinea are likely entry points for cigarettes headed to Europe through the North African countries (Meneghini & Milani, 2019). Similarly, airports, like as Felix Houphouet Boigny International Airport in Cote d’Ivoire and Blaise Diagne International Airport in Senegal are relevant nodes for illicit cigarettes trafficking (INTERPOL & ENACT, 2020). Illicit cigarettes are then transported over the Sahara by land from West African ports to North Africa. The cigarettes are carried north to Libya, Algeria, and Europe passing through areas controlled by al-Qaeda affiliates or other OCGs. Illicit cigarettes are piled into convoys with armed guards and transported over thousands of kilometers of tortuous roads and desert tracks to Libya and Algeria, and as far east as Sudan, from the city, Bamako, and ports in Guinea, Benin, and Togo (OCCRP, 2021).

Another popular route in Africa goes through Togo’s Lomé Port. Cigarettes transit through Lomé and then are moved to another countries, such as Burkina Faso, Niger, or Côte d’Ivoire before arriving in Ghana or Mali. Illicit flows destined to mostly to Côte d’Ivoire and the Maghreb also come from Guinea (Lallerstedt, 2019). According to a recent estimate, about 0.2 billion illegal cigarettes passed through these nations in 2017, with 40 million of them coming from the United Arab Emirates. In 2017, nearly all these 40 million illicit cigarettes from the United Arab Emirates were destined for Algeria and arrived in Mali traveling through Togo, Benin, and Ghana. The overall illicit cigarettes flows between Mali and Algeria were almost 0.6 billion, demonstrating the importance of this link in the distribution of illicit

cigarettes from other regions (Meneghini & Milani, 2019). In Southern Africa, routes are mostly concentrated around Zimbabwe. Zimbabwe is a major transit hub of illicit cigarettes, which are trafficked into Eastern and Southern Africa, mainly counterfeits from China and illicit whites from Asia, the Middle East, and Eastern Europe (INTERPOL, 2014a). Internally in Southern Africa, illicit cigarettes are marketed in and transported via Botswana, Namibia, and Mozambique (Haysom, 2019).

3.2 The Americas

In the United States and Canada, the smuggling routes for the illicit tobacco are mostly intra-national (Reuter & Majmundar, 2015). Criminals mainly exploit inter jurisdiction differences in taxation to profit from the smuggling of the products. In general, exporting states have low taxes, either in absolute terms or in comparison to other states in their region. In particular, some states, such as Virginia, South Carolina, and North Dakota are net "exporters" of cigarettes, selling far more tax-paid cigarettes than are consumed by local residents, while others are net "importers," consuming far more cigarettes than are sold with state and local taxes (Chaloupka et al., 2015). A specific situation regards the sovereign status of some Native Americans in the United States and First Nations in Canada. Cigarettes can be sold to indigenous people for personal use without or with limited taxes in reservations or reserves (Aziani, Kulick, et al., 2017; Reuter & Majmundar, 2015). This condition generates incentives for small scale bootlegging and several American states with a large population located near Native American reservations are among the major "importing" states, such as Arizona, New Mexico, New York, and Washington (Chaloupka et al., 2015). Also, in Canada, the majority of the illicit consumption originates within the country, especially close to First Nations reserves (Guindon et al.,

2017; KPMG, 2017b). Regarding international inflows of illicit cigarettes, the counterfeit cigarettes discovered in the United States are primarily originating from China, North Korea, and Paraguay (Reuter & Majmundar, 2015; Shen et al., 2010).

In South America, Paraguay is the main regional source of illicit cigarettes (Iglesias et al., 2018; INTERPOL, 2014a). Paraguay is estimated to produce yearly a volume of cigarettes that is more than 23 times the actual internal consumption of the country (Dammert & Barahona, 2020). Only a small part of this overproduction is legally exported, while the majority exits illicitly the country and fuel the illicit markets in the surrounding countries, such as Argentina, Brazil, Chile, and Peru (Vela Meléndez, 2013). About a half of the illicit tobacco consumed in Brazil originates from Paraguay only (Dammert & Barahona, 2020). The Ciudad del Este FTZ, sharing the Triple Border with Argentina and Brazil, is one of the most active global hubs of cigarette counterfeiting and illicit traffic in cigarettes and other items (Ramos, 2009).

Other main sources of illicit cigarettes consumed in Latin America are China, India and Vietnam (Rico & Wiesner, 2018). A significant production of illicit cigarettes occurs also in Panama. Most of these illicit products are illicit whites. Evidence shows that illicit cigarettes are legally imported into FTZs in Panama, Belize and Colombia and then diverted towards their final destination countries (KPMG, 2017b; Vela Meléndez, 2013). Due to its strategic position and to the porosity of its borders, Bolivia is a main transit country for illicit products from Paraguay or originating overseas and entering in South America in the Chilean ports (Dammert & Barahona, 2020).

Figure 12. Main routes for illicit whites toward Latin America
Source: Authors' elaboration of Vela Meléndez, 2013

3.3 Asia and Oceania

Illicit tobacco trade problems also plague Asia and Oceania, ranging from the manufacture and distribution of illicit products to the consumption of these goods (INTERPOL, 2014a). In south-eastern Asia, Malaysia is a main destination country for illicit cigarettes originating from Vietnam, Indonesia and the Philippines. Price differentials with the neighboring countries, with the exception of Singapore, show the incentives for smuggling illicit cigarettes in Malaysia (Oxford Economics, 2019). Although dispute exist on the exact extent of the illegal market for cigarettes in India (John & Ross, 2018), the country is considered a huge destination market for illicit tobacco products and its size grows dramatically in the last decade (The Tobacco Institute of India, 2021). In the Asia-Pacific region, illicit cigarettes are known to come from China, as well as from North and South Korea; the main destinations are Taiwan and Hong Kong. Singapore is a regional and global transit hub for illicit tobacco as it hosts the world's busiest port and FTZ. In some populous countries of the regions, namely Pakistan, Indonesia and the Philippines, a large share of illicit consumption is due to domestic products that are sold without taxes (Oxford Economics, 2018). In central Asia,

Mongolia is a main destination for illicit cigarettes originating from the South Korea, Ukraine, Kazakhstan, China, and Russia (Ross et al., 2019).

Illicit products originating in East Asia are trafficked worldwide (European Commission, 2017b). In particular, counterfeits are mostly trafficked to the EU via sea (Europol, 2011). China is the largest source of counterfeits of famous brands (von Lampe et al., 2012). In certain situations, the quality of counterfeit cigarettes has improved to the point where it is difficult to distinguish them from real cigarettes (Europol, 2011). Chinese counterfeits can be found in markets all around the world, as well as in the domestic markets in China. The bulk of counterfeit cigarettes are made in Yunxiao County, Fujian Province, and Guangdong Province. The illegally produced cigarettes are subsequently shipped out of the China's major ports of Xiamen, Guangzhou, Shanghai, and Shenzhen. Illegal factories are tucked away in the hills and beneath the earth (INTERPOL, 2014a). Aside Chinese product, North Korea shipments containing illicit cigarettes have been confiscated in both Manila and Malta, these were most likely to be destined for the Jebel Ali FTZ in the United Arab Emirates to be transported to Syria. South Korea, produces illicit cigarettes mostly for the Maghreb area, in particular for Algeria and Libya moving through Malta, but also the EU (Aziani and Dugato 2019a). Asian countries are also primary sources of illicit tobacco products destined for Australia and New Zealand. China, South Korea and, to a lower extent, Indonesia are the most common origin countries for illicit cigarettes smuggled towards these countries (KPMG, 2019b, 2019c).

3.4 Europe

According to recent estimates, about 6 illicit cigarettes out of 10 consumed

in the EU are produced outside the EU (Aziani & Dugato, 2019a). The main sources of illicit cigarettes are Eastern Europe (mainly Belarus and Ukraine), the Middle East (mainly United Arab Emirates), North Africa (mainly Algeria) and Asia (mainly China, Pakistan, and South Korea) (Aziani & Dugato, 2019a). Among the EU member states, Bulgaria, Czech Republic and Poland are relevant origins of illicit cigarettes destined to other EU markets. Additionally, a consistent share of the illicit cigarettes is from unknown origins and some evidence suggests that these product may be manufactured in illegal factories within the EU itself (European Commission, 2017b; KPMG, 2021).

Transcrime recently provided an analysis of the illicit cigarette's flows moving through Europe and other bordering countries. In specific, researchers at Transcrime identifies three main routes that fuel the EU, meaning a combination of different minor transnational movements of illicit cigarettes that geographically converge in connecting the main origin countries with the most relevant destination markets (Aziani & Dugato, 2019a). The Maghreb Route has been already described in a previous paragraph (see 3.1). The other two routes identified are the North-Eastern Route and the extended Balkan Route.

3.4.1 The North-Eastern Route

The North-Eastern Route goes from Eastern Europe, mainly beyond EU borders, to Central and Western European countries (Figure 13). In 2017, about 10 billion illicit cigarettes consumed in the EU flowed along this route (Aziani et al., 2019). Along the North-Eastern Route, the key points are Belarus, Ukraine, Poland, the Baltic states, and Russia. Belarus and Ukraine are mainly origin countries of illicit cigarettes (Europol, 2021). In 2020, they account respectively for 9% and 4% of all illicit cigarettes seized in the

EU (Aziani et al., 2019). Poland and the Baltic states are primarily transit countries, while Russia is both a production and destination country.

The types of illicit cigarettes trafficked are primarily illicit whites and contraband (Aziani et al., 2019). Illicit whites are predominantly produced in Belarus and to a lower extent in Moldova, Russia and Ukraine (Aziani et al., 2019; Europol, 2021). These cigarettes are mainly smuggled to being sold in Eastern European Member States, such as Poland, the Baltic states, Romania, Slovakia, Hungary and Czech Republic. On the contrary, contraband cigarettes mainly headed towards Western, Northern or Central European countries (Aziani et al., 2019). The contraband cigarettes that enter the EU through the eastern border are mainly headed for Germany, the Netherlands, Belgium, and the UK, where they may be sold for greater prices (Maftei, 2012). The North-Eastern Route used to be a primary direction that fuel illicit consumption in Europe; however, the total volume of trafficked cigarettes along this route has decreased dramatically in the last decade (Aziani et al., 2019).

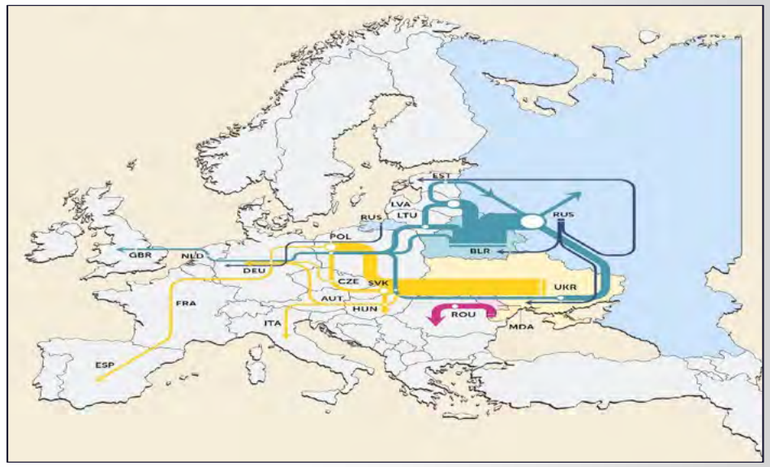

Figure 13. The North-Eastern Route
Source: Aziani & Dugato, 2019b

Belarus is the main source of illegal tobacco products, primarily illicit whites (Calderoni et al., 2016; European Commission, 2017b). These cigarettes bound for the EU member states and other extra EU bordering countries, such as Russia (Aziani et al., 2019; KPMG, 2019a, 2021). Russia and Ukraine used to play key roles in illicit tobacco trafficking as central suppliers of illicit products; however, their relevance as origins of illicit cigarettes has diminished in the past few years. According to project Nexus estimates, the outflows of illicit cigarettes from Russia dropped by about 85% over the period 2008-2017, while the country is becoming a primary destination market for Belarusian illicit products (Aziani et al., 2019). Due to its geographical position, its status of Special Economic Zone and the presence of illicit whites producers, the Russian enclave of Kaliningrad is still a key hub for the production and transit of illicit cigarettes (Aziani et al., 2019; Transcrime, 2015). Also ,Ukrainian outflows reduced significantly in the last decades, but the country still maintain a pivotal role as exporter of the illicit cigarette (Aziani et al., 2019; KPMG, 2021).

Poland is a destination, source and transit country because of its geographical position, sharing boarders with Russia, Lithuania, Belarus, Ukraine, Slovakia, Czech Republic, Germany and with coastline on the Baltic Sea (Aziani et al., 2019; INTERPOL, 2014a). The fact that Poland's cigarettes are less expensive than those in many of its European neighbors generates incentives for importing illicit cigarettes (INTERPOL, 2014a). The border between Poland and Germany is among the most relevant corridors used by cigarettes smugglers (Meneghini et al., 2020). Similarly, countless small-scale smuggling activities, typically operated by individuals, have occurred along the eastern border between Bialystok and Ukraine. Recent developments, however, show that increasingly organized multinational groups are conducting large-scale smuggling offenses (Institute for

Security and Development Policy, 2016). Furthermore, Poland is the world's third largest exporter of finished tobacco products and the top producer of finished tobacco goods in Europe. Illegal whites and counterfeits manufactured in Poland's neighbors and headed for Western Europe flow via the country (INTERPOL, 2014a). The Baltic states are mainly transit points and destination markets for illicit cigarettes. Their role is favored by their strategic position (Kego et al., 2011).

3.4.2 The Extended Balkan Route

The Extended Balkan Route goes from the Middle East to South and Central Europe by crossing Turkey, Greece, and the Balkans (Figure 14). In 2017, about 29 billion illicit cigarettes have been trafficked along this route (Rutgers & Ierace, 2019). The key countries for the Extended Balkan Route are Turkey, Bulgaria, Greece, and the Balkan countries. Most of them are both primary destination markets and transit hubs towards other EU countries (Aziani & Dugato, 2019a). The cigarettes smuggled along this route are mainly illicit whites and originate primarily in the United Arabic Emirates, Bulgaria, Iran, Iraq, Romania, and Moldova. The final destinations of these cigarettes are the South and Central European markets, although a large share of them are consumed in countries along the route (Rutgers & Ierace, 2019). Indeed some countries along this route, as for instance Turkey and Montenegro, record very high levels of illicit consumption (Aziani & Dugato, 2019a). Interestingly, illicit cigarettes are also smuggled following a somehow opposite direction originating from Eastern Europe or the Balkans towards the Middle-East (Rutgers & Ierace, 2019). In other cases, cigarettes move back and forth between two countries to avoid taxation and then enter into the illegal market of one of the two. For example, evidence shows that criminals legally exported Bulgarian cigarettes to Turkish duty-free zones

and then them returned back to Bulgaria illegally (Kuyumdzhieva, 2014).

Bulgaria, in particular, is a main exporter of illicit whites and a key transit country for illegal cigarettes (Calderoni et al., 2016). The majority of the illicit cigarettes produce in Bulgaria are destined to be consumed in other countries of the region, namely Turkey, Greece, Romania and Serbia (Rutgers & Ierace, 2019). Further, Bulgaria is also a key access point for illicit products in the EU (Calderoni et al., 2016). Thanks to its geographical position, the border between Turkey and Bulgaria plays a pivotal role in the route and transit hub for illicit cigarettes moving from and to the Middle East and Europe (Aziani & Dugato, 2019a).

Other countries of the Balkans are also crucial transit points for illicit tobacco trade and other illicit traffics. With respect to illicit tobacco, they are characterized by both the transit of illicit cigarettes towards the EU and by smaller local trafficking activities (Rutgers & Ierace, 2019). At the regional level, licit and illicit flows appear to have opposite directions (Figure 15). While Croatia is the official net exporter of tobacco products to Bosnia and Herzegovina and Serbia, illicit shipments from Bosnia and Serbia to Croatia flowed in the reverse direction. The same occurs between Serbia and Bosnia and Herzegovina (Mikulić & Buturac, 2020). The Balkans are also characterized by a significant consumption of illicit cut tobacco. However, this illicit tobacco is often produced and locally without relevant transnational movements (Crime&tech, 2016). Greece is another crucial transit country for illicit tobacco thanks to its geographical position and the characteristics of its boundaries and coastlines (Chionis & Chalkia, 2016b; Rutgers & Ierace, 2019). Further, Greece is also a major destination countries recording one of the highest share of illicit consumption (Aziani, Dugato, et al., 2020; KPMG, 2021)

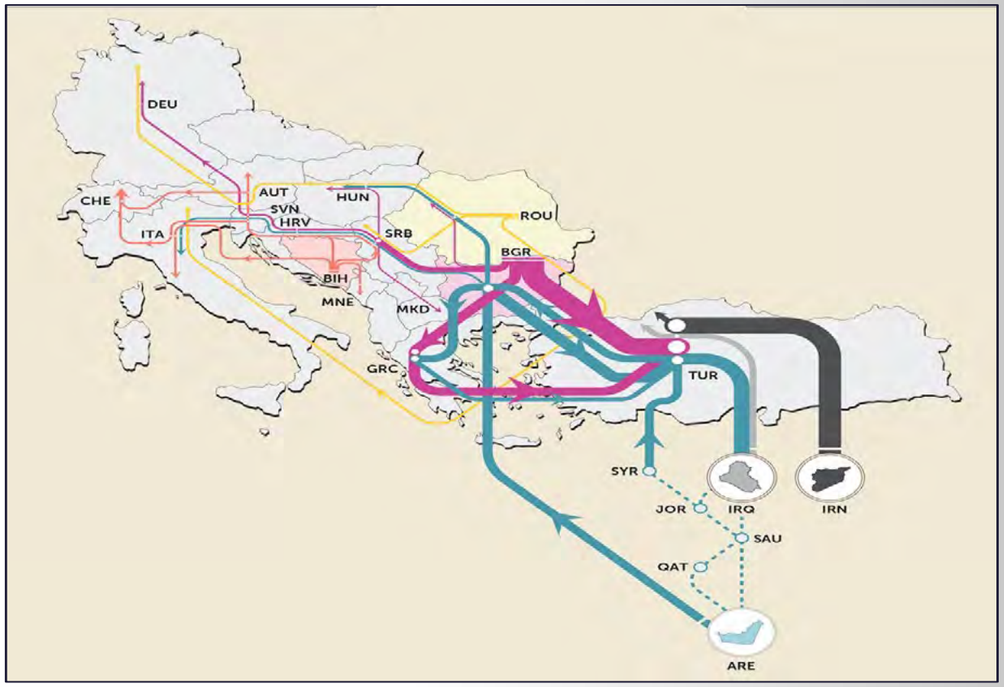

Figure 14. The Extended Balkan Route
Source: Aziani & Dugato, 2019b

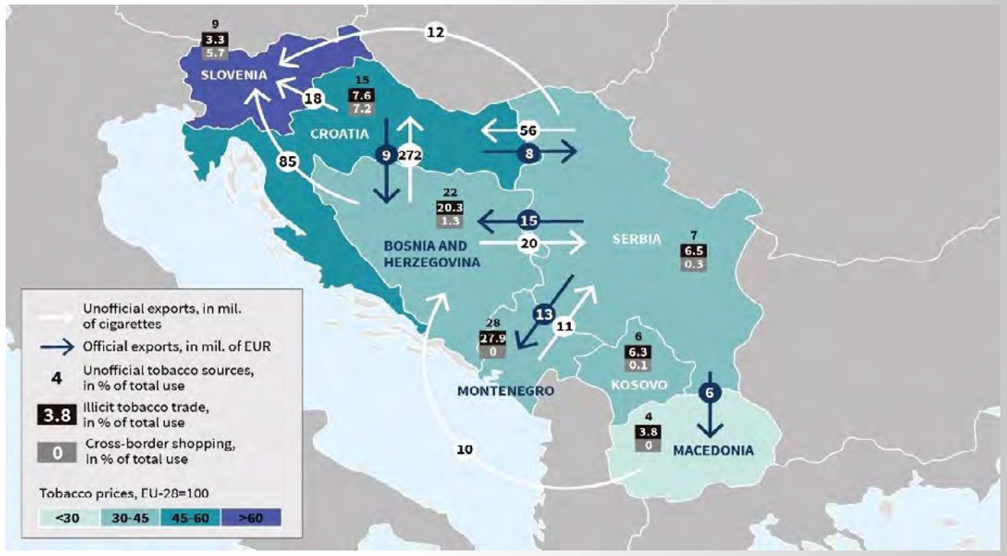

Figure 15. Official and unofficial tobacco trade flows, Western Balkan countries
Source: Authors' elaboration of Mikulić & Buturac, 2020

4. Drivers and contextual factors

As for many other transnational or complex crimes, the illicit tobacco trade is a multifaceted activity that is largely dependent from a wide range of social, economic, and environmental factors (Calderoni et al., 2017; OECD, 2016). Several studies and analysis investigated the characteristics of a country or an area that could enable the consumption or the trade of illicit tobacco products, sometimes providing mixed results (for a review see Aziani, Calderoni, et al., 2020). Providing an extensive analysis of these contextual factors is beyond the scope of this document. However, this section briefly reports some of the main factors that are usually considered having an influence on the illicit tobacco market and that should be considered for understanding the local, national, and regional specificities of this crime.

4.1 Affordability, prices, and taxation

One main factor connected to the illicit tobacco consumption is affordability, meaning the cost of tobacco products in comparison to the consumer's personal income. Countries or regions where products are more expensive in relation to the wealth of the population tend to have higher illicit consumption (Aziani, Calderoni, et al., 2020; Meneghini et al., 2019).

Affordability is strictly connected with the prices of tobacco products and, therefore, taxation. Studies and research underline how, in many countries, an increase in taxes and, consequently, in prices of the tobacco products have brought to a parallel increase in illicit consumption and encouraged smuggling (Chionis & Chalkia, 2016b; Curti et al., 2018a; Prieger & Kulick, 2018a; Savona et al., 2017).

Similarly, price differentials between countries and jurisdictions increase the likelihood of flow of illicit products towards the markets with higher prices (Aziani, Calderoni, et al., 2020; Aziani, Kulick, et al., 2017; Nicholson et al., 2016; Prieger & Kulick, 2018a). From these differences criminals can have the prospect of potential profits and their interest in the illicit tobacco market is incentivised (Aziani & Dugato, 2019a; Europol, 2021). This mechanism is further amplified especially if the origin and destination markets are bordering.

Discrepancies in affordability can also occurs when a currency depreciates and tobacco products from that country become more affordable to foreign customers. As a result, depreciation of the currency may result in an increase in illegal cigarette outflows from the nation with the devalued currency (Meneghini et al., 2019). For example, the depreciation of the Belarusian ruble at the beginning of the 2010s is considered one of the main reason for the raising flows of contraband cigarettes from Belarus to Russia in the following years (Calderoni et al., 2016).

4.2 Regulation and enforcement

The perception of both low chances of getting caught and low fines or repercussions if caught smuggling are all reasons that make the illicit tobacco market attractive for criminals (Allen, 2013; FAFT, 2012a; Meneghini et al., 2019). Given the legislative disparities across states and countries as regards the definition of illicit tobacco trade and the connected criminal offense, criminals may choose to organize or relocate their operations to countries with more lenient punishments (Transcrime, 2015).

When paired with ineffective border controls, the impact of low penalties

is amplified. Tobacco smuggling is not a priority for many law enforcement agencies or border authorities resulting in few resources dedicated to contrast this crime (Transcrime, 2015). Border control inefficiency is exacerbated by poor communication and collaboration between customs agencies, as well as a generalized lack of information sharing between them (Nitu & Matei, 2014). In some cases, lack of coordination among authorities can result in the displacement of the illicit trade routes in one lenient country as a direct consequence of the actions undertaken by a country nearby (Aziani et al., 2019).

The existence of free-trade agreements (e.g., AfCFTA, EAEU, Schengen, Mercosur) encourages the smuggling of illegal goods between the nations concerned. The right to free movement of natural legal people and products is guaranteed by agreements, but it is matched by the limitation of sovereign state authority. This means fewer border restrictions, which encourages tobacco smuggling (Meneghini et al., 2019).

Lacking controls of the manufacturing of tobacco products is another potential facilitator of illicit tobacco market. For example, overproduction of legal cigarettes is frequently uncontrolled in major origin nations of illicit products (e.g., Belarus, Russia, Paraguay). This excess of legal products might be marketed in neighboring nations as illicit whites (Curti et al., 2018a; FTI Consulting, 2019a; INTERPOL, 2014a; Meneghini et al., 2019). Similarly, lack of controls on the raw tobacco production (e.g., by licensing and record-keeping tobacco growers) may hinder the possibility of controlling the available amount of tobacco and to identify legitimate operators (Crime&tech, 2016; INTERPOL, 2014a)

4.3 Political, cultural, and social factors

Political instability may make it easier to produce or smuggle illicit tobacco products. In these conditions, national authorities usually lack the mandate or the resources needed to combat illicit trafficking and as consequence illicit tobacco flows were found to be substantially higher (Meneghini et al., 2019; WBG, 2019).

Additionally, social acceptance or tolerance of illegal behavior or for the consumption of illicit products may lead to an increase in illicit tobacco trade. This is further amplified because of poor living conditions, as individuals may engage in the illicit tobacco market due to lack of other means to generate income (Allen, 2013; Barbić et al., 2019; INTERPOL, 2014a; Transcrime, 2015; WBG, 2019).

Research has underlined the relation between illicit tobacco market and the “shadow economy”, referring to economic activity that are disguised from official authorities (Calderoni et al., 2017; Joossens et al., 2000; Zhang & Schwartz, 2015). The development of a substantial shadow economy may facilitate the trafficking and distribution of illicit tobacco products (Aziani, Calderoni, et al., 2020; Savona et al., 2017).

Corruption is frequently mentioned as a facilitator for a variety of illegal activities, including illicit tobacco trade (Joossens et al., 2000; Merriman et al., 2000). Corruption of public officials typically targets port and customs officers with the intention to induce them conduct superficial or no inspections on certain goods and boats. It has been stated that one of the driving causes for corruption at ports is the poor pay of law enforcement and customs officers. OCGs would pay cash or offer presents in exchange for their cooperation (Allen, 2013; INTERPOL & ENACT, 2020; Joossens et al., 2009; Meneghini et al., 2019; OECD, 2016).

4.4 Geographical factors

Finally, the illicit tobacco market can be facilitated by the geographical position or morphology of a country. Transit countries are typically near to markets where legal products are expensive and have easy access to the sea. Having sea access allows significant international illicit tobacco flows to be trafficked through marine shipments which allows to reduce costs and risks (INTERPOL & ENACT, 2020; Meneghini et al., 2019). Further, a country having long borders increases opportunities to smuggle cigarettes there because it is easier to exploit uncontrolled points on the frontier (Chaloupka et al., 2015; Oxford Economics, 2019).

5. Crime script and modi operandi

The illicit tobacco trade is a complex crime involving several stages that start from the ways in which criminals obtain or produce the tobacco products, continue with the modalities used for transporting these products to the destination markets and for reaching the consumers, and end considering the methods for managing the illicit gains of this activity. The modi operandi chosen by criminals in each of these stages are determined by several factors, such as the geographical distance to be covered, the risk of detection, the quantity and nature of the goods, and the expertise of the individuals or organizations involved (FAFT, 2012a). This chapter revises the main operational methods used by the actors involved in the illicit tobacco market for each of the four stages that compose this crime (Figure 16).

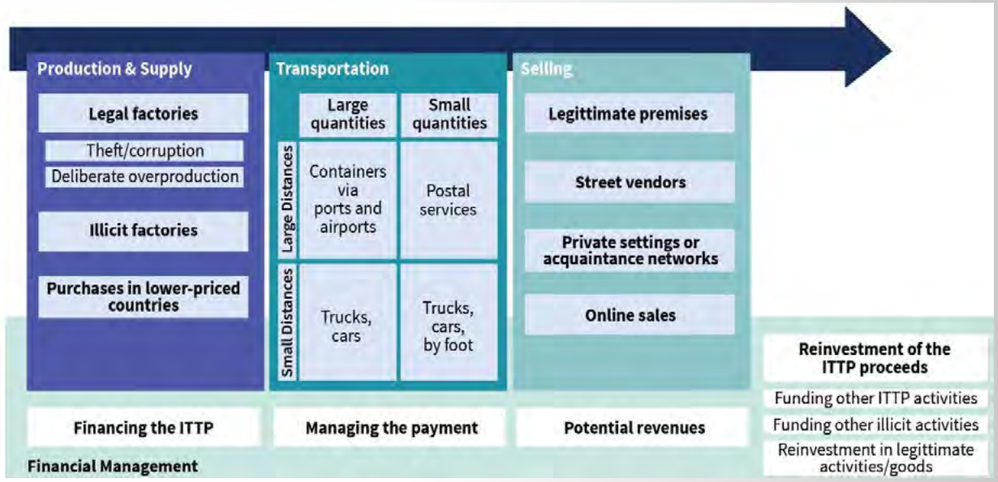

Figure 16. The business model of the illicit tobacco trade

5.1 Production and supply

The first stage of the illicit tobacco market regards the production or obtainment of the tobacco products. These methods can vary according to the types of products, to the availability of raw materials, to the involvement of legitimate producers and the structure of the legal market. The methods of production and obtainment are:

1)Establish an illicit factory to directly manufacture the products

2)Divert or steal products that are legally produced

3)Purchase the products in legal premises

As mentioned previously, tobacco products destined to illicit sales are usually originating outside the country of consumption (see Section 3). However, some exception exists. On the one side, illicit factories can be established in the country of consumption to minimize the transportation costs and risks. For example, for criminals it is easier to import raw materials rather than the final products (Europol, 2011). This tendency is further amplified considering that criminals may have been forced to move the

production within the destination countries to overcome the movement restriction caused by the COVID-19 pandemic (Europol, 2021; KPMG, 2021). On the other side, fictitious exportation schemes can be used to divert legally manufactured products and enter them in the illicit markets within the same country (Antonopoulos & Papanicolaou, 2018).

Illicit factories are mainly used to produce counterfeit or unbranded tobacco products. These factories can manufacture different quantities of products depending on the resources they have and the market they want to reach. Some factories are set up to supply a local area and produce a lower quantity of products, while others have the objective to reach international markets and for this reason produce larger quantities. According to a recent estimate, a low-capacity illicit factory has and approximate capacity of 60 million cigarettes per year, while a modern illicit plants can produce up to 420 million (KPMG, 2019e). These factories can either be installed within industrial plants and warehouses or be hidden in rural areas or private houses (KPMG, 2019e; Shen et al., 2010). Evidence in Europe suggests that illicit factories are usually dismantled after business is completed or have to be moved often to avoid detection (KPMG, 2019e). In other contexts, these production facilities are more stable as criminals tend to secure them using intimidation or corruption (Daudelin et al., 2013).

To establish a factory requires some basic conditions (Europol, 2021). First, there should be the possibility of obtaining, importing, or growing large quantities of raw tobacco (Hu et al., 2008). Second, other raw materials are also necessary, including filter rods, papers, and packaging materials. These elements are typically available through legitimate sources (INTERPOL, 2014b). However, some evidence from China also highlights the use of waste or damaged materials (Shen et al., 2010). Finally, there is the need

of obtaining qualified workers and specialized machineries (Ellis, 2017; KPMG, 2019e). Criminals may take advantage of the black market of the manufacturing equipment coming from dismantled plants (Calderoni et al., 2016; Shen et al., 2010). In other cases, newer machineries can be purchased online, mainly from the Middle Eastern or Asian countries, and then shipped to the destination divided in spare parts to avoid controls and detection (KPMG, 2019e).

Production is not always illicit. Tobacco products can be initially manufactured in legal premises and later illicitly sold or exported. This method of obtaining tobacco products is typical of both contraband products and illicit whites. The difference between the two is that in the first case the products are legally produced by an unwitting legal brand owner for a given destination market, but at a certain point of the supply chain, these products are acquired by external criminals that divert them towards the black market usually in another country of destination. The diversion of these products can occur by stealing them during the transportation or in warehouses or by corrupting some representative of the manufacturing or transportation companies (Goodwin, 2020; Haysom, 2019; Kajosevic, 2021; von Lampe, 2011). Regarding illicit whites, the manufacturers are in association with the smugglers and intentionally produce a higher quantity of tobacco products than the actual request of the legal market of reference, knowing that a large share of these products will be sold illicitly (Skinnari & Korsell, 2016). Producers of illicit whites are usually less subject to punitive actions by local authorities or legal actions by international brand owners since their production is in accordance with national legislation and does not infringe any trademark (Joossens & Raw, 2011). These mechanisms may be further facilitated by the fact that the company producing the tobacco products and the legitimate trademark owner are sometimes different legal

entities (Ross, Vellios, et al., 2015).

The methods described above are likely to be conducted by organized crime groups or by large networks of criminals given the complexity of the crime and the human and financial resources needed. The latest method is the one that it is usually applied by individuals who decide to exploit price differentials across two countries. In this case, criminals legally purchase tobacco products in a country with the intent of smuggling and selling them into a higher-priced country or state in larger amounts that overcome the limits foreseen by the national regulations (Antonopoulus & Hall, 2016a; ATF, 2018; Di Nicola & Terenghi, 2016; Joossens et al., 2009). This modus operandi can be applied only in the case of large price differentials among the production and destination countries. Indeed, the margin of criminals is given by the price of sale, which should be lower than the legal price in the destination country, minus the cost of the products in the origin countries and the travel or shipping expenses. Alternatively, this method can be used for supplying products that are not available in the legal market of the destination country (van Walbeek et al., 2013). In this situation, criminals can sell the products to a higher price than the legal one in the origin country.

5.2 Moving the product

In the second stage of the illicit tobacco trade, criminals must move the illicit products from the production sites to the retail marketplaces or directly to the customers. As for the majority of other illicit or licit goods, these movements usually happen in several steps and can be potentially carried out by different actors (Transcrime, 2015). The specific strategies used by the criminals to transport illicit tobacco products can vary according to the size of the consignments and the length of the movements (Aziani & Dugato,

2019a).

The distribution of large quantities of illicit tobacco is usually managed by specialized wholesalers and the products are generally moved using containers, cargos, and trucks. Transcontinental shipments are usually sent by sea or air-cargos. Counterfeit products are concealed among other licit goods (Europol, 2021; Kego et al., 2011; Shen et al., 2010). On the contrary, contraband and illicit whites cigarettes are often declared while in transit, and they are hidden only when arriving at the final destination (Merriman, 2013). According to some evidence, it could take even a year before the product is moved from the manufacture place to the consumer (KPMG, 2019e).

Consignments over long distances usually require a high level of logistic organizations (i.e., setting up large warehouses in remote industrial areas and well-connected to transportation hubs) and the capacity of infiltrating crucial transportation hubs (e.g., ports and airports) to elude controls through insiders' cooperation or corruption (Chionis & Chalkia, 2016b; Europol, 2021; Sergi, 2020a; Transcrime, 2015). However, they also demand a high understanding of customs regulation and often include forgery and falsification of documents needed for the transportation, or related to the customhouse certification (Chionis & Chalkia, 2016b).

In specific, several methods are used by criminals to import illicit tobacco products in a market:

- Misdescription of the actual contents of the consignment;
- Movement of containers through multiple ports and FTZs until an opportunity for entering the products unnoticed occurs. In FTZs, criminals can repackage the product and transport it to other country

and FTZs under a different company's name or eventually sneak it into marketplaces for sale;

•Numerous changes of the declared owners of a shipment of tobacco products along the transportation, often using subsidiaries or obscure intermediaries, to impede the identification of the involved actors;

•Fake exports with containers moved outside the country and then returning without being off-loaded

•Fake exports to "phantom markets", these markets are reported on export document as destination countries. However, these markets do not present sufficient demand for tobacco products to justify the amount supplied for the legitimate market and it is a signal of the hidden intention to sell the products into the black market in the region or in a neighboring country;

•Fake transits with containers of cigarettes declared as in transit in country A for a third country B but then diverted towards another destination C or illegally returned into the country A;

•Massive importation of finished products for repacking and re-export in such quantities that hinder effectively controls of the moved volumes;

•Non-containerized shipments moving across land, river and some sea borders without declaration.

•Non-containerized shipments moving across land, river and some sea borders without declaration. A vessel ("mother ship") stations in international waters or reaches a desert coastline and then the illicit tobacco is unloaded using smaller vessels and delivered to trucks waiting ashore (Chionis & Chalkia, 2016b; Haysom, 2019; ICC BASCAP, 2020; INTERPOL, 2014a; Joossens & Raw, 1998; Rico & Wiesner, 2018; Skinnari & Korsell, 2016; Sou & Preece, 2013; von Lampe, 2011, p. 20).

Chapter 4: Illicit Tobacco Trade

Once arrived closer to the destination markets, illicit products are usually moved by cars, vans, trucks, or trains hiding the goods in modified compartments of these vehicles (Europol, 2021; Kego et al., 2011; Vander Beken et al., 2008). In some regions, especially in South America and Africa, criminals also exploit inland waterways to transport large quantities of illicit tobacco products (Dammert & Barahona, 2020; Haysom, 2019). Criminals may use their own vehicles or rely on legitimate business to transport the products. The first option is more expensive but ensure a greater control over the whole activity. In some cases, the vehicles carrying the illicit goods are followed by escort cars and a smaller consignment is sent in advance to intercept potential controls by authorities (Skinnari & Korsell, 2016). In the second option, drivers can be unaware of their illegal cargo or they can be paid to transport illicit tobacco hidden among other legal products (Vander Beken et al., 2008).

Smuggling small volumes of illegal cigarettes over short distances can be done once a day or several times a day by lone smugglers or lightly organized groups of individuals (INTERPOL & ENACT, 2020). This movements are generally incorporated in the flow of non-commercial cross border activity (Ramos, 2009; von Lampe, 2011). The lone smugglers usually carry the tobacco products in cars or small vans, in their luggage on public transports or flights, or they can even walk across the borders (Dammert & Barahona, 2020; Di Nicola & Terenghi, 2016; Haysom, 2019; Merriman, 2013; Transcrime, 2015). In some cases, these movements can be coordinated by an organization that selects and supplies the individuals for every run, organizes test pilots to make sure the chosen route is viable and collects the smuggled products at the destination. The organized and movement of small quantities of tobacco by single individuals is commonly known as "Ant

Trafficking" (Antonopoulus & Hall, 2016a; Joossens et al., 2009; Joossens & Raw, 1998; Skinnari & Korsell, 2016). This method is not used only to smuggle tobacco and it is typical of those regions bordering with richer countries (Kupka & Tvrdá, 2016).

Small quantities of illicit tobacco can also be moved over long distances thanks to postal and delivery services (von Lampe, 2011). This method allows criminals to minimize the transportation costs but also the risk of detection, as the loss due to the value of a single parcel is usually limited and the possibility of tracing the dispatchers by the authority is very low. Also in this case, evidence suggests that this method can be use by both individual smugglers or organized groups that systematically delivers small quantities of products exploiting a wide range of different addresses and dividing consignments across different postal and delivery services (Babuta et al., 2018b). In Europe, this strategy changes whether the sellers are outside or within the EU. When sellers are outside, usually multiple parcels are consolidated into one larger consignment. The consignment is sent to a member state that presents weak customs checks. After completing this first step, the consignment is broken down into smaller packagers that will be distribute around Europe. When sellers are inside the EU, a popular method is to take advantages of trusted postal systems, travelling from low-tax products country to higher-priced markets in different countries (Babuta et al., 2018b).

5.3 Selling the products

The retail sales of illicit tobacco products to the final customers can occurs in different places and occasions. In many cases, criminals rely on a network of existing legitimate premises or activities that sale these products off

the books. Local bars, clubs, convenience stores, liquor retailers, service stations, tobacconists are among the most used facilities used to sale illicit tobacco (FAFT, 2012a; Kupka & Tvrdá, 2016; Shen et al., 2010; Skinnari & Korsell, 2016; von Lampe & Kurti, 2016). A peculiar example of these are small informal stores in South Africa known as spaza shops (Liedeman & Mackay, 2015). Retail premises involved in the illicit tobacco market can be directly managed by the smugglers, but in most cases shopkeepers' involvement is motivated by the economical profits of the illicit sales or to remain competitive with stores or activities who offers illicit tobacco (Skinnari & Korsell, 2016). Sometimes, illicit products are sold as legitimate ones defrauding unwitting customers (von Lampe, 2011).

A second form of the distribution of illicit tobacco is through vendors operating in street corners or flea markets (Calderoni et al., 2016; von Lampe & Kurti, 2016). Street selling is more common in low- and middle-income countries (Joossens et al., 2000). Usually, vendors are located in places largely accessible by the general public and where relevant flows of people congregate where they can easily advertise potential consumers of the opportunity to purchase illegal or cheap products (Nguyen & von Lampe, 2018; Shen et al., 2010; von Lampe, 2011).

A third selling channel for illicit products are private settings, such as apartments known to regular consumers, or through networks of friends and acquaintances (Di Nicola & Terenghi, 2016; Transcrime, 2015). In these cases, tobacco products are primarily distributed within the same ethnic, cultural, and economic groups or minorities of the smugglers (Merriman, 2013; Skinnari & Korsell, 2016). Cases of door-to-door selling have been also identified (Calderoni et al., 2013).

Finally, in recent times criminals and OCGs are increasingly exploiting social media and the internet to provide illicit tobacco products and to reach a wider range of consumers (Alderman, 2012; Babuta et al., 2018b). It is possible that, given technological advancements the online trade will continue to grow and expand, online platforms will play a central role in the distribution and sales of illicit goods. New technologies do indeed facilitate this type of trade because they provide access to products through an easy way of communicating (Europol, 2017; Shelley, 2018). There four main online places where the illicit tobacco trade happens: online marketplace, sites on the surface web, social networks, and purpose-built websites.

The surface web is exploited to trade illicit tobacco products using websites that are easily accessible through a simple search in standard browsers (Europol, 2017). Traditional e-commerce marketplaces have been exploited to sell illicit tobacco products. Amazon, eBay, Alibaba, Rakuten and Gumtree can all be cited as websites on the surface web used to trade illicit products. On one hand, Amazon, and eBay both have very clear guidelines prohibiting the sale of tobacco products and Alibaba only permits the sale of e-cigarettes. On the other hand, Rakuten and Gumtree do not specifically address tobacco products as forbidden items to sell but in a way do so when addressing counterfeit or copyright infringing products (Babuta et al., 2018b). However, their relevance as selling channels is currently insignificant due to the growing controls by authorities and private companies, and the dramatic increase of alternative selling platforms, such as social media (Babuta et al., 2018b).

Online marketplaces in the dark web, known as crypto markets, are alternative to these traditional platforms. The dark net is a key facilitator for the online trade, because in this section of the internet connections are

encrypted by default and the identity and localization of the users is highly protected (Europol, 2017). These web sites host multiple sellers and have a similar interface to famous sales platforms. Sellers have pages with details regarding past buyers and experiences, including evaluations on the services. When it comes to the illicit tobacco many different products are sold and advertised online. The most important products that can be found online are cigarettes, from various brands, rolling tobacco and e-cigarettes. However, in crypto markets tobacco products are quite rare (Barrera et al., 2019b). This could be due to the actors operating in the illicit tobacco market who may not have the necessary resources to operate on large platforms and could also have little to gain in shifting online because of the distribution network outside the internet (Décary-Hétu et al., 2018).

Social networks allow not only to communicate rapidly and easily and to send encrypted messages but also to reach a wider public (Babuta et al., 2018b; Shelley, 2018). Offenders operating on social media to sell illicit tobacco products can both be non-organized and organized. Individuals who operate alone directly post, using their profile, to advertise their products. Their network is mostly made of interested friends or acquaintances. Organized individuals use different profiles and groups to advertise their product and reach a broader network of potential buyers. These groups are often private, and to access them an invitation is needed (Dammert & Barahona, 2020). For both types of offenders, the range of contacts and buyers is usually regionally focused because most sales organized through social media are concluded as face to face interactions with cash payments. These meetings more than often occur in car parks or at the seller's home address. In the online illicit tobacco market, Facebook and Instagram used to play a central role. Mostly these social networks are still used to advertise for cigarettes. Once in contact with the potential buyer there is a shift in

social network for example to Snapchat, which is used to arrange place and location of the meeting to exchange the goods. Using more than one social network at the same time allows to maximize their coverage of potential buyers (Babuta et al., 2018b). Moreover, encrypted social media, such as WhatsApp and Telegram, offer a way to communicate and to provide access to illicit products by mitigating the risk of being caught (Shelley, 2018).

Intentionally built web sites are largely used in the online illicit tobacco market. These websites have the capacity to reach many visitors each month. The quantity of the products offered to the consumer is quite low, but it provides more options. Furthermore, these websites play a central role in the communication between criminals involved in the illicit tobacco market. They facilitate the communication between those who are interested in acquiring stock online to redistribute offline. Research has provided evidence that even though the quantity proposed to consumers is low, online seller do have access to large quantities of tobacco products (Babuta et al., 2018b).

Furthermore, there is evidence that OCGs are also involved in the online illicit trade. Online sale of illicit tobacco products provides for OCGs many advantages, for starters, it broadens their potential client base by reducing geographic barriers and making their products more accessible to new customers. Second, as compared to traditional retail, internet distribution has lower operating expenses. Third, while being more easily detected by law enforcement, the Internet provides substantial anonymity, particularly when domains are created using fake identities and locations are disguised via proxy servers. Fourth, there is the disturbance created by law enforcement (KPMG, 2017c).

Operation Jasper

Operation Jasper was lead in the UK by the National Markets Group for IP Protection and Trading Standards. Its aim is to find illegal online sales of counterfeit goods, including tobacco products. This operation was able to take down 7,800 Facebook profiles, execute 42 warrants, issue 210 warnings, send 55 cease-and-desist letters, and launch 46 investigations. The operation started in 2015 and it allowed to understand the modus operandi behind the online illicit cigarettes trade in England and Wales. These new trends included brokers who trough their Facebook profile connected the seller and the final buyer. The seller were usually OCGs based in England. Once the transaction was made, the product was sent through postal system to the local broker, who would smuggle it to the individual who ordered the package (Babuta et al., 2018b).

5.4 Financial management

The financial management of the illicit tobacco trade is crucial, especially for the smuggling or selling of medium to large quantities of products. The financial management of the illicit tobacco market usually entails three different steps. The first one is obtaining the initial funds for engaging in this activity, the second one is the management of the financial transactions among the different actors, and the last one is the management of the proceeds of the crime. Unfortunately, there are still little evidence of the actual financial management of the illicit tobacco market and most of the current knowledge come from European countries.

Raising the capital for starting the illegal activity is usually a critical issue for criminals, especially if they are not already involved in other illicit markets or part of a wider organization (Skinnari & Korsell, 2016). This money is necessary to acquire or produce the goods, to manage the transportation

and the sale, and to hire the involved individuals or intermediaries. According to the existing evidence, criminals collect the monetary resources needed to set up an illicit tobacco trade through three alternative sources. On the one side, criminals can invest money obtained from a legal activity, such as restaurants, bars, transportation companies, retail activities or real estate (Antonopoulus & Hall, 2016a; Di Nicola & Terenghi, 2016; Kupka & Tvrdá, 2016; Skinnari & Korsell, 2016). The actors relying on this method usually directly run these legal enterprises and see the trafficking or sales of illicit tobacco as complementary to their main activity. Usually the money available from legitimate activities or personal savings of the criminals are quite limited and allow only funding modest quantities of illicit tobacco (Antonopoulus & Hall, 2016a; Kupka & Tvrdá, 2016). As a second option, criminals can raise funds from other illegal activities. According to the criminal background of the actors involved and their available resources these activities can comprise financial crimes (e.g., VAT or invoice fraud, undeclared work), property crimes (e.g., thefts of vehicles, burglaries, robberies), extortion, loansharking or other smuggling activities (e.g. drug trafficking or dealing, counterfeiting) (Antonopoulus & Hall, 2016a; Chionis & Chalkia, 2016b; Di Nicola & Terenghi, 2016; Skinnari & Korsell, 2016).

A third option available to criminal start-ups is to rely on external financiers who finance their initial activities in exchange for a share of the profits or an interest rate to be added to the borrowed sum (Di Nicola & Terenghi, 2016). These investors can be either involved in illicit tobacco market or not. In the first case, they could be members of criminal organizations already involved in the trafficking who see opportunities for expanding their current market share or to minimize their risks by not be directly involved in some activities (Chionis & Chalkia, 2016b; Di Nicola & Terenghi, 2016). On the latter case, financers are people with non-criminal records who decide to invest

small to medium amount of money in the illicit tobacco market considering the high potential returns. These investors are often involved and joined by specialised brokers and their participation in these investment schemes could be either occasional or recurring (Antonopoulus & Hall, 2016a; Skinnari & Korsell, 2016). The role of brokers is also crucial to assist criminals who want to enter the illicit tobacco market in contacting the key person for purchasing the tobacco products and managing the transportation (Antonopoulus & Hall, 2016a; Chionis & Chalkia, 2016b).

The importance of raising enough funds to enter the illicit tobacco market is amplified by the fact that in this market credit is rare (Antonopoulus & Hall, 2016a). Payments are usually done in cash, both at the wholesale and the retail level and large part of the consignments are paid up front in order to minimize the risk for the suppliers and given the general lack of trust among the different actors (Di Nicola & Terenghi, 2016; Kupka & Tvrdá, 2016). In a few cases, especially in case of consolidated business relationships or very large consignments, alternative payment schemes can be envisages such as dividing the delivery of the agreed sum in multiple steps, typically one at the ordering of the goods and one at the actual delivery of the products, or postpone the payment after the selling of the products (Chionis & Chalkia, 2016b; Di Nicola & Terenghi, 2016). Sometimes criminals may also use legitimate transactions among controlled or infiltrated companies (e.g., transportation or import-export companies) to exchange money using regular invoices and payments (Di Nicola & Terenghi, 2016).

Illicit cigarettes across the world are usually sold for a price that is about one or two third of licit alternatives (Di Nicola & Terenghi, 2016; Haysom, 2019; Kupka & Tvrdá, 2016). However, considering the very low production costs and the avoidance of taxes, the overall profits for the trafficking and selling

of illicit tobacco products are huge (Alderman, 2012; Antonopoulus & Hall, 2016a; Chionis & Chalkia, 2016b; Haysom, 2019; Joossens & Raw, 1998). For example, according to Antonopoulus and Hall (2016a), participating in the illicit tobacco market could potentially bring an average profit that ranges from 75 percent of the original investment for contraband products up to 200 percent for counterfeit ones. Clearly, these profits are not equally shared among all the involved actors but are highly concentrated in the hands of the producers or the wholesalers (Antonopoulus & Hall, 2016a; Skinnari & Korsell, 2016).

There are different ways in which the profits from the illicit tobacco market are used by criminals. First, the profits are primarily reinvested in the illicit tobacco trade activities to increase the volume of the trafficked products and to expand their business (FAFT, 2012a; Kupka & Tvrdá, 2016). Money can be used to finance different steps of the trafficking such as purchasing new products, bribing officials and civil servants, installing more efficient new manufacturing facilities and make smuggling operations more efficient (Chionis & Chalkia, 2016b). Some funds can be also saved for facing temporal disruption of the activities due to law enforcement actions or other external factors (Di Nicola & Terenghi, 2016). Second, the money can be invested in other illegitimate activities (Lauchs & Keane, 2017; Skinnari & Korsell, 2016). This is typical of some organized crime or extremist groups that use the profits from the illicit tobacco to fund their main activities and operations (FAFT, 2012a; Lauchs & Keane, 2017). For example, some extremist groups such as the Taliban, the Irish Republican Army, the Taliban, the Kurdistan Workers' Party, FARC (Revolutionary Armed Forces of Colombia), and the CNDP, a Congolese rebel group, are suspected to raise funds through the selling of illicit tobacco (Alderman, 2012). However, for more specialized criminals in the illicit tobacco market engaging in other criminal markets may

be complicated by the very different nature of these activities (Di Nicola & Terenghi, 2016).

Third, the money can be invested in the legitimate economy. On the one side, these are actual economic investments to make legitimate profits; on the other side, they allow to lauder the proceeds of the illicit tobacco market (Skinnari & Korsell, 2016). Legitimate activities, such as shipping or transportation companies, can also be acquired to facilitate the expansion of the smuggling activities (Chionis & Chalkia, 2016b). Criminals mainly invests their funds in companies (e.g., bars, clubs, restaurants, retail companies) or real estate properties within or outside their home regions (Antonopoulus & Hall, 2016a; Di Nicola & Terenghi, 2016). Sometimes they use straw men and third parties, such as family members, to hide the real identity of the person controlling the illicit founds and casinos and real estate proprieties (FAFT, 2012a). Besides emitting fictitious invoices, legitimate companies can also be used to move illicit capitals off-shore or abroad (Chionis & Chalkia, 2016b; Di Nicola & Terenghi, 2016). A peculiar money-laundering scheme has been identified in Greece where criminals bought from the bookmakers or their customers the winning lottery tickets or bets at a higher price than the actual prices to justify their illegal revenues (Chionis & Chalkia, 2016b). Finally, profits can be spent for personal usage by the criminals. This is typical of the individuals involved at the lower levels of the trafficking activities (Antonopoulus & Hall, 2016a; Di Nicola & Terenghi, 2016).

6. Actors

The illicit tobacco trade is a complex and multifaceted crime in which various types of actors are involved. These different actors can either be alternative or complementary in carrying out one or more steps of the illicit trafficking

(Vander Beken et al., 2008). The main actors can be broadly categorized in organized crime groups—including extremist groups—, individual criminals, and actors with legal interests in the market. This chapter provides an overview of the characteristics of these different types of actors and delineates their different roles in the illicit tobacco market.

6.1 Organized crime and extremist groups

Adopting a broad definition of OCGs—i.e., a wide range of different kinds of criminal organizations that operates systematically to conduct one or more criminal activities—it can be safely asserted that OCGs are largely involved in the illicit tobacco market (Aziani & Dugato, 2019b; Joossens et al., 2000).

The majority of the involved OCGs are loose organizations or networks specifically dedicated to tobacco smuggling activities which are their main or unique business and usually the only reason that keep the member of the organization together, as for many other complex and transnational illicit markets (Bouchard & Morselli, 2014; Levi, 2016; Shen et al., 2010). These groups tend to be quite large and to comprise members from many countries as they usually have links in the countries of origin, transportation and destination of the illicit products; usually, within the larger organization, there is a small core of individuals how manage the activity and a various number of people recruited for performing specific tasks (Chionis & Chalkia, 2016b; Di Nicola & Terenghi, 2016). They usually do not have a strict composition, their network can be defined as loosely structured, and the collaboration between individuals is mostly encouraged by own benefit (Antonopoulus & Hall, 2016a; INTERPOL, 2014a). Different OGCs can cooperate and create partnerships with other groups or individuals especially for the management or consignments of large amounts of illegal

products. However, these relationships are largely flexible and opportunity-oriented (Antonopoulus & Hall, 2016a; Chionis & Chalkia, 2016b). Finally, evidence also shows the involvement of more stable criminal syndicates (e.g., Mafias, Drug Cartels) . For these stable criminal syndicates, the illicit tobacco trade is not the only criminal activity, as they are usually involved in a wide range of other illegal enterprises (Dammert & Barahona, 2020; Transcrime, 2015).

In general, there are three main roles that OCGs can perform in the illicit tobacco market. In the first role, the OCG is involved in every phase and aspect of the trade. Tasks and responsibilities are distributed entirely among their members (FAFT, 2012a; Kego et al., 2011). In the second role, OCGs still have a direct control on some activities, but use intermediaries to deal with some parts of the trade, including engaging with the source of tobacco or organizing the shipping of the products to better mitigate risks and ensure a success (INTERPOL, 2014a). In the third role, OCGs operate as brokers or service providers by managing only specific aspects of the trafficking (Di Nicola & Terenghi, 2016).

In the case of territories with a traditional presence of OCGs or influential insurgent groups, specialized organizations may raise under the protection or require the authorization of the syndicates or groups controlling the territory. Evidence of this is in Italy in the Campania region where small groups involved in the illicit tobacco market are subject to the permission and control of the Camorra (Di Nicola & Terenghi, 2016). Another example is the “Cartel de Tabaco” in Mexico. The “Cartel del Tabaco” is a new criminal organization, that has entered the ITTP as protegee of the Cartel de Jalisco Nueva Generacion. While this latter Cartel is involved in many activities, including extortion and firearms trafficking, the new “Cartel del Tabaco” is

exclusively involved in illicit tobacco market (Dammert & Barahona, 2020).

In Europe, research suggests that the more active OCGs in the illicit tobacco market are the Eastern European OCGs, including Albanian, Bulgarian, Lithuanian, Ukrainian, Russian, and Romanian OCGs (see Table 3). These OCGs operate in many different countries across Europe, from their countries of origin to Poland, the UK, Italy Ireland, and Spain (Angelini et al., 2015; Aziani et al., 2019; DNA, 2010, 2011, 2012; GdF, 2010; Rutgers & Ierace, 2019; The European House Ambrosetti, 2011; Transcrime, 2015). On the one side, these OCGs may be involved in different types of illicit activities from human trafficking to property crimes and may use the proceeds of the illicit tobacco to fund other criminal activities (see 5.4). On the other side, the fact that a large share of illicit tobacco consumed in Europe originates from Eastern European countries explain the large involvement of Eastern European OCGs (Aziani et al., 2019). Greek OCGs are also highly involved in the illicit tobacco trade (Rutgers & Ierace, 2019). While in Spain, local criminal groups, mainly from Galicia, primarily operate in the illicit tobacco trade (Baquero, 2013; Lalam et al., 2012; Paramo, 2013). There is also evidence of Turkish criminal groups involved in the illicit tobacco market, specifically in Greece and Albania (Aziani & Dugato, 2019b). Finally, all the Italian mafias, particularly Camorra and Apulian mafia-type OCGs, are involved in the illicit tobacco market. They operate in Italy but also across Europe and the Mediterranean by extorting protection fees from traffickers, as brokers or been directly involved in the trafficking activities (Angelini et al., 2015; Aziani & Dugato, 2019a; Di Nicola & Terenghi, 2016).

Regarding South America, in Paraguay and Colombia, mostly gang members who have links with local cigarette factories operate in this illicit market. Gangs are attracted to the illicit cigarettes market because, in comparison

with other forms of illicit trade, it can provide a large source of income at a lower risk (Ramos, 2009). Moreover, in Colombia there is evidence of a criminal group called Clan del Golfo, or Los Urabenos. This criminal group uses the routes traditionally adopted to export drug to introduce illicit cigarettes (Rico & Wiesner, 2018). A similar behavior characterizes some Mexican OCGs, particularly Los Zetas and the Sinaloa Cartel (Dammert & Barahona, 2020).

In Australia, there is evidence of transnational OCGs involved in the import of illicit tobacco products, mainly coming from China (Lauchs & Keane, 2017). In Asia, there is evidence of Chinese OCGs taking part in the trade of various illicit goods, including tobacco (Shen et al., 2010; von Lampe et al., 2012). Some cases also highlighted the collaboration between these groups and other OCGs, such as the Italian Camorra (Angelini et al., 2015).

Finally, sporadic cases also see the participation of extremist or radical organizations that trade in illicit tobacco essentially to fund other activities more closely related to their political, ideological, or religious aims, such as the purchase of weapons, diffusion of propaganda materials, organize actions, or sustain their members (Lauchs & Keane, 2017; Meneghini et al., 2019). However, the involvement of these groups in the illicit tobacco market seems to be mostly occasional (von Lampe, 2011). Over time, among the terrorists' groups or political extremists' groups involved in illicit tobacco market, the Irish Republican Army (IRA), Basque Fatherland and Liberty, the Kurdistan Workers' Party (PKK), Hezbollah, Revolutionary Armed Forces of Colombia, and the Congolese rebel group, CNDP, can all be mentioned. These extremist groups were all involved in the illicit tobacco market in the United States and the UK (Alderman, 2012; O'Reilly, 2012; Shelley & Melzer, 2011). In Europe, extremist organizations such as Hezbollah, al-Qaeda, the

Real Irish Republican Army (IRA), and the Kurdistan Workers Party (PKK) were also active in cigarette smuggling (Maftei, 2012).

In more recent years, the Jihadist groups are suspected of being part of the illicit tobacco trade. In particular, in Africa, they are involved in not only tobacco smuggling but also weapons smuggling at ports on the continent. In addition, these groups conduct illicit taxation at ports and airports so they can maintain control on the funding's of their criminal operations (INTERPOL & ENACT, 2020). Al-Qaeda, AQIM and Al-Mourabitoun militant organizations in the Maghreb took advantage of the lack of social welfare in countries such as Algeria, Libya, Morocco, and Tunisia, to intensify smuggling. In the late 2000s and early 2010s, cigarette smuggling generated the majority of AQIM's funding. Members used to make most of their money by charging local communities of Tuareg and Tebu protection fees for transporting illegal cigarettes over the Sahara (Meneghini & Milani, 2019).

Distinguishing among these different types of OCGs and their roles in the illicit tobacco market is not always easy, but it can be crucial to identify effective countermeasures. OCGs may need to modify their plans and tactics, changing routes, concealing methods, and modus operandi to mitigate risks and in reaction to law enforcement agencies' pressure (Skinnari & Korsell, 2016). Specialized groups are more flexible and capable to react quickly to these situations in these regards as they are usually less bounded to a specific territory or to other activities. However, these groups are also less resilient to a temporary interruption of the illicit trade. On the contrary, more stable organization can usually rely on other financial revenues. Further, traditional OCGs can take advantage of the routes used to traffic other goods like drugs and arms and exploit vulnerabilities ports and airports, that make them connected across borders (Calderoni, 2014; Europol, 2011;

INTERPOL, 2014a; INTERPOL & ENACT, 2020; Sergi, 2020a).

Table 3. OCGs involved in the illicit tobacco market

Country	OCGs	Source
Europe		
Albania	Albanian OCGs, Italia mafias, Turkish OCGs	Aziani & Dugato, 2019b
Bulgaria	Bulgarian OCGs	Aziani & Dugato, 2019b
Denmark	Albanian OCGs, Italia mafias, Turkish OCGs	Angelini et al., 2015
Czech Republic	Czech OCGs, Ukrainian, Russian, Moldovan, Polish OCGs, Vietnamese OCGs	Kupka & Tvrdá, 2016
Greece	Albanian OCGs, Italia mafias, Turkish OCGs	Aziani & Dugato, 2019b; Chionis & Chalkia, 2016b
Ireland	Irish criminal gangs, Chinese OCGs, Eastern European OCGs, IRA	Angelini et al., 2015; IBEC, 2012; Kaplan, 2009; Transcrime, 2015
Italy	'Ndrangheta, Camorra, Cosa Nostra, Chinese, Russian, Slavic, Ukrainian, Lithuanian, Bulgarian, Romanian, Moldovan OCGs	Angelini et al., 2015; Di Nicola & Terenghi, 2016; DNA, 2010, 2011, 2012; GdF, 2010; The European House Ambrosetti, 2011; Transcrime, 2015
Kosovo	Albanian OCGs, Italia mafias, Turkish OCGs	Aziani & Dugato, 2019b
North Macedonia	Albanian OCGs, Italia mafias, Turkish OCGs	Aziani & Dugato, 2019b
Poland	Lithuanian, Ukrainian, Russian OCGs	Aziani & Dugato, 2019b
Romania	Albanian OCGs, Italia mafias, Turkish OCGs	Aziani & Dugato, 2019b
Spain	Romanian, British, Bulgarian, Russian and French OCGs, Asian OCGs, Spanish OCGs, Galician OCGs, IRA	AEAT, 2014; Angelini et al., 2015; Baquero, 2013; Europa Press, 2013; Lalam et al., 2012; Paramo, 2013; Transcrime, 2015
Sweden	Not specified OCGs	Skinnari & Korsell, 2016
Turkey	Turkish OCGs	Aziani & Dugato, 2019b
UK	Chinese Triads, Eastern European OCGs, IRA, FARC, Congolese rebel group CNDP	O'Reilly, 2012; Transcrime, 2015

Country	OCGs	Source
Africa and Middle East		
Algeria	Al-Qaeda, AQIM and Al-Mourabitoun militant organisations	Aziani & Dugato, 2019b
Iraq	Kurdistan Workers Party (PKK)	Shelley & Melzer, 2011
Libya	Al-Qaeda, AQIM and Al-Mourabitoun militant organisations	Aziani & Dugato, 2019b
Morocco	Al-Qaeda, AQIM and Al-Mourabitoun militant organisations	Aziani & Dugato, 2019b
Tunisia	Al-Qaeda, AQIM and Al-Mourabitoun militant organisations	Aziani & Dugato, 2019b
Americas		
Colombia	Local criminal gangs, Clan del Golfo	Ramos, 2009; Rico & Wiesner, 2018
Mexico	Cartel del Tabaco	Dammert & Barahona, 2020
Paraguay	Local criminal gangs	Ramos, 2009
United States	Hezbollah, IRA, Kurdistan Workers' Party, FARC, Congolese rebel group CNDP, the Taliban	Alderman, 2012; Shelley & Melzer, 2011
Asia and Oceania		
Australia	Russian OCGs, Italian OCGs	Lauchs & Keane, 2017
China	Chinese OCGs	Angelini et al., 2015

6.2 Individuals

The illicit tobacco market sees a large involvement of individuals, who operate in it without being part of criminal organizations (Skinnari & Korsell,

2016; von Lampe, 2011). In general, two main categories of individual players can be identified in the illicit tobacco trade: individual smugglers and brokers.

Individual smugglers often move small quantities of tobacco products usually for personal consumption or for reselling to small networks of friends and acquaintances (Transcrime, 2015). Nonetheless, these individuals may also form small networks or be engaged by large organizations to carried out specific tasks. (Antonopoulus & Hall, 2016a; Aziani & Dugato, 2019b). Most of these people enter in the market due to opportunistic reasons (e.g., closeness to the borders) and usually became aware of this criminal opportunity thanks to informal networks or contacts. For example, prisons and taverns offer contact points to learn about initiatives and get involved in the smuggling (Antonopoulus & Hall, 2016a). In other cases, these individuals are influenced by family or community ties (Europol, 2013). Examples of this are the involvement in the illicit tobacco market of the Vietnamese community in Germany and of Chinese and Korean migrants in Australia (Lauchs & Keane, 2017; von Lampe, 2005).

Brokers (i.e., intermediaries) facilitate contacts among members of different criminal organizations, and between buyers and suppliers (Shen et al., 2010). They guarantee the deal and the arrival of the tobacco products (Di Nicola & Terenghi, 2016). The role of brokers is often central for the illicit tobacco market. Being largely a loosely organized markets with many actors involved across several countries worldwide, the possibility of reaching the right contacts and connecting with the right people is crucial for the criminals involved (Antonopoulus & Hall, 2016a). Brokers ensure these connections and act as main advisors for specific issues. Further, they can also help in facilitate financial transactions, guarantee trust among different parties of

an agreement and support in handling specific operations, such as dealing with customs' regulation (Antonopoulus & Hall, 2016a; Di Nicola & Terenghi, 2016; Skinnari & Korsell, 2016; van Duyne, 2003). They are usually either professionals, such as lawyers or accountants, or well-known criminals in the illicit markets.

6.3 Actors with legitimate roles in the market

Criminal players in the illicit tobacco market are increasingly using legal companies or professional to conduct their illicit activities (Chionis & Chalkia, 2016b; Vander Beken et al., 2008). As described in the previous chapter, a wide range of legal activities are used in the selling of the products and in laundering of the illicit proceeds (see 5.3 and 5.4). Similarly, professionals are largely engaged by criminals to support illicit activities. However, this section will focus explicitly on three of the legal actors most commonly involved in the illicit tobacco trade: registered producers of tobacco products, transportation companies, and public authorities.

6.3.1 Registered producers of tobacco products

The legal actors involved in the production of tobacco products might be large multinationals on the one side and independent producers on the other side. According to some scholars, large multinationals may have an interest in fueling the smuggling tobacco products (Joossens & Raw, 1998; LeGresley et al., 2008; Ramos, 2009). Evidence suggests that in the past there have been important cases regarding the direct involvement of members of large tobacco manufactures in the illicit tobacco market (Antonopoulus & Hall, 2016a; Shelley & Melzer, 2011). However, today, this is a limited phenomenon as major tobacco producers have undertaken some actions to better secure and control their supply chain (Calderoni, 2014; Joossens & Raw, 2008;

Reuter & Majmundar, 2015).

Independent producers are locally or regionally registered companies. Some of them play a crucial role in producing illicit products (Haysom, 2019). These producers may fail to declare the entirety of their production to the authorities which allows them to distribute a portion of their production on the illicit market (Adeniran et al., 2020). The role of these producers is particularly worrying when there is evidence of a direct involvement of the state in their ownership or management. In these cases, national governments can be prone to tolerate or even facilitate illicit conducts as they can leverage the revenue of the tobacco firms and also guarantee jobs for the local population. For example, this situation can be found in Belarus. In 2012, the National Government, which were the main stakeholders in the two main Belarusian tobacco producers, abolished limits for the manufacturing of cigarettes for export. In comparison to 2011, the declared exports increased from 343 million to 5,988 million sticks in 2012. The fact that over 40% of tobacco goods transported between January and November 2015 vanished in an unknown destination might be proof of illegal trade (Aziani et al., 2019; Calderoni et al., 2016).

Independent producers might also be involved in other illicit schemes. For example, in 2018 the Duvanski Kombinat Podgorica (DKP), a Montenegrin state-owned producer, was suspected to produce counterfeit cigarettes of an Egyptian brand called Cleopatra which are lately smuggled to Libya to be sold across the North African countries. The DKP denied any accusation regarding the counterfeiting activities claiming to be under contract with Liberty FZE, an offshore company in the Emirates, to produce the Cleopatra cigarettes. Still, moving these cigarettes to Libya was a violation since Eastern Company and not Liberty FZE or DKP owned the rights to sell the

cigarettes in that country (Rutgers & Ierace, 2019). Finally, research pointed out that independent producers can also buy and resold products from hijacked cargos containing cigarettes (Haysom, 2019).

6.3.2 Transportation companies

The second category of crucial legal actors who take part in the illicit tobacco trade, are transportation companies. These companies are an the essential mean used to effectively move the illicit products alongside other legal goods (Chionis & Chalkia, 2016b; LeGresley et al., 2008; Shen et al., 2010). In some cases, criminals can buy already existing companies or creating a new one (Chionis & Chalkia, 2016b; Di Nicola & Terenghi, 2016; Shen et al., 2010; Vander Beken et al., 2008). In other occasions, criminals use legitimate companies to move or store the illicit products; in this case, they usually involve other real or fictitious firms to disguise potential controls (Antonopoulus & Hall, 2016a; Chionis & Chalkia, 2016b). In both cases, the staff of these companies can be either witting or unwitting and are usually people who have no previous criminal record, this allows to decrease the risk of being stopped by authorities (Antonopoulus & Hall, 2016a; Chionis & Chalkia, 2016b; Shen et al., 2010).

6.3.3 Members of public authorities

Finally, members of public authorities may be involved in the illicit tobacco market. The infiltration of members of OCGs in port or airports authorities allows to use these transportation hubs to send and receive illicit tobacco products. Corrupted or infiltrated individuals are able to elude the security system to allow the movement of illicit shipments (Shen et al., 2010). A case study on the Port of Genoa Italy, shows how ports are used in the illicit

trafficking of tobacco products (Sergi, 2021). Criminals may also infiltrate or influence police or customs authorities. For example, in South America, it is reported that for wholesale trade, criminal organizations use the main transportation routes to move illicit tobacco products. The risks for the use of these routes is cancelled because of pre-agreements with authorities that guarantees safe passage in exchange for money (Rico & Wiesner, 2018). Similarly, in Europe the widespread corruption of local border officers in many Eastern European countries facilitate the porosity of that region to illicit trafficking (Aziani et al., 2019). In China, public officials can take active part to the illicit trade or just ignore the presence of illicit activities in exchange for a monetary reward (Shen et al., 2010). Even more impressive is a case occurred in several Mexican states where members of a criminal organization seize from legal tobacconists and retailers cigarettes produced by brand that are not their protegee pretending to be members of the public authorities such as the Protecion contra Riesgos Sanitarios or the Procuraduria Federal del Consumidor (Dammert & Barahona, 2020).

7. Countermeasures

The negative impacts of illicit tobacco market on the economy and society are several and significant. From an economic point of view, this illicit market damages national budgets by generating relevant losses in public revenues due to the tax avoidance and increasing expenditures in law enforcement actions (Kulick et al., 2016; OLAF, 2018). Further it damages the actors participating in the legal market, which lose market shares to illegal entrepreneurs (Aziani, Kulick, et al., 2017). Finally, illicit capital derived from these activities can pollute the legal economy, beyond the tobacco market (see section 5.4). From a societal point of view, illicit tobacco undercuts anti-smoking and public health programs, putting both consumers and

businesses at risk (Calderoni et al., 2017; Kulick et al., 2016; OLAF, 2020). Further, illicit tobacco generates unlawful proceeds that could fuel criminal organizations or other illicit activities (see 5.4 and 6.1).

Consequently, public and private authorities should aim at identifying potential solutions to contrast or prevent this illicit market. The adoption of these countermeasures should start from two basic assumptions. First, the choice of the best actions should be driven by an in-depth understanding and monitoring of the specificities of the local characteristics of the illicit tobacco market given the inherently dynamic and adaptable nature of this illicit market. Second, a comprehensive approach is needed in order to counter the illicit tobacco trade, as an action addressing a single dimension of the issue is usually not effective if not accompanied by other interventions (Chaloupka et al., 2015; WBG, 2019).

The following chapter discusses how regulation, cooperation, and innovative technologies or solutions can fight the illicit tobacco trade. It does not consider interventions on wider socio-economic or cultural factors. As previously discussed, these latter elements are fundamental for understanding the extent of the illicit tobacco market in a country or a region (see section 4). However, modifying these aspects often requires the systemic interactions of different stakeholders over a long time or peculiar conjunctures which are hardly controlled or predictable.

7.1 Regulation

7.1.1 Legislation

The legislation concerning illicit tobacco varies significantly across different countries or jurisdictions (see box below). For example, an analysis across

EU member states highlights the presence of relevant differences among the sanctions applied to illicit tobacco market actors (OLAF, 2017). The asymmetric sanctions is dangerous as it creates opportunities for criminals to relocate their activities in order to minimize their risk due to a lower risk of conviction or lenient penalties (Ellis, 2017; Meneghini et al., 2019). A country with no specific regulation against illicit tobacco might become a production or transportation hubs for illicit tobacco, generating negative externalities also to the bordering countries. This call for the need of homogenize the national legislations to reduce these asymmetries (Mancuso & Rutgers, 2019). On the same vein, increasing the penalties for illicit tobacco trade could reduce the attractivity of this criminal market (Joossens & Raw, 1998). Finally, although factory-made cigarettes remain the most popular products in the illicit tobacco market, the recent evolution of the market sees the increased role played by other products, such as cut tobacco, waterpipe tobacco or e-cigarettes and heated tobacco products (see section 1.4). This requires the legislation to adapt and consider these new products to contrast and anticipate their illicit trafficking.

The World Health Organization's Framework Convention on Tobacco Control

The World Health Organization's Framework Convention on Tobacco Control (FCTC) went into force in 2005 and created a comprehensive range of smoking control measures, including Article 15 on fighting illicit tobacco product trafficking (WHO, 2003). Based upon article 15 of the FCTC, the Protocol to Eliminate Illicit Trade in Tobacco Products is an international legally binding document that attempts to prevent tobacco products from being diverted from the legitimate tobacco supply chain and to strengthen sanctions and enforcement against illicit trafficking (Nowak, 2021; OECD, 2016; WBG, 2019; Protocol to Eliminate Illicit Trade in Tobacco Products, 2018). The parties agreed on a set of steps to achieve this aim, including the adoption of appropriate penalties against illicit trade and of measures to monitor and control tobacco products moving under suspension of duties, the development of a tracking and tracing system to ensure supply chain security, efforts in collaboration among national, regional, and international authorities in the fight against illegal commerce and the possibility to implement additional measures, such as licensing, to control or regulate the manufacture and distribution of tobacco products (Allen, 2013; OECD, 2016).

National laws against ITTP

At country level, there are different laws that address the illicit tobacco market, here are some examples are reported. In the United States, the first law to address the illicit tobacco market was the Internal Revenue Code of 1986, followed by the Jenkins Act, the Contraband Cigarettes Trafficking Act, the Prevent all Cigarettes Trafficking Act (US Department of State, 2015). In addition, in the United State Code, under Title 15 Commerce and Trade, in the section on Prohibited Acts, addresses buying, misbranding, manufacturing, selling, or moving illicit tobacco products(Office of the Law Revision Counsel, 2021). Finally, states can also individually pass their own laws to counter the illicit tobacco market (US Department of State, 2015). In South America, there are different approaches in fighting the illicit tobacco trade. In Colombia, the judicial system is weak and slow, and the aim of the penal approach is to maximize the number of arrests. In 2015, the Ley Anti-Contrabando was implemented but it did not generate the results it was expected. While in Ecuador, the system is very fast. The Ley Organica para el Equilibro de las Finanzas Publicas, implemented in 2016, addresses the illicit tobacco market by imposing taxes on the selling of cigarettes (Rico & Wiesner, 2018). In Australia, the Treasury Laws Amendment (Illicit Tobacco Offenses) Bills passed in 2018. This amendment includes both criminal and civils penalties for the charge of possessing, buying, selling, and manufacturing of producing illicit tobacco (Office Australian Taxation, 2021). The Association of Southeast Asian Nations has adopted, in 2002, a regional action plan which includes national action plans and tobacco control laws, to combat smuggling, and to regulate distribution, and sale of tobacco products. The nations included in these action plans are Brunei, Cambodia, Indonesia, Lao, Malaysia, Myanmar, Philippines, Thailand, and Vietnam (ASEAN Tobacco Control Resource Center, 2021). In Europe, the EU has adopted both the FTCT and the Protocol. Still, no legal EU instrument addresses penalties issues for the illicit tobacco, but illicit tobacco trade is considered criminal in national policies of the EU member states, so states can cooperate with European Institutions for criminal matters (Nowak, 2021). In South Africa, most laws regarding tobacco control give obligations regarding packaging standards, sale of tobacco products and advertising. Zimbabwe's legislation addresses directly the illicit tobacco in the Finance Act, Customs and Excise Act, and Criminal law (Haysom, 2019). Still, in the whole African continent, the penalties for the involvement in the illicit tobacco market are quite moderate when compared to drug or weapons trafficking (Nyoni & Chelin, 2020)

7.1.2 Taxation

Taxation of legal tobacco products is usually very high. On average in EU member states, taxes constitute about 70 to 80 percent of the retail price. Increasing the taxation on tobacco products, and consequently their retail

price, is considered one of the primary measures to reduce global tobacco consumption (WHO, 2003). Further, higher taxation can result in more revenues for public health and finances (Chaloupka et al., 2011). Despite these positive outcomes, both high prices and large disparities on the taxation of legal products across countries can encourage illicit trafficking. Like for the asymmetries in the legislation against illicit tobacco trade, criminals may be attracted to maximize their gains by moving products into countries where the prices of legal products are significantly high. Evidence show that an increase in the taxation of licit products in a jurisdiction can lead to a growth of the expected illicit consumption, especially when bordering with jurisdictions where tobacco products are more affordable (Aziani, Calderoni, et al., 2020; Prieger & Kulick, 2018a). These considerations call for the need of evaluating properly any further tax raise preferring gradual increases and trying on the one side to anticipate potential negative externalities and on the other to not create too large imbalances with neighbouring areas (Mancuso & Rutgers, 2019).

7.1.3 Free Trade Zones

The FTZs are key nodes in the illicit tobacco market network (ICC BASCAP, 2020). FTZs were created to support legal commercial and economic progress, but they have shown to be vulnerable to illicit activities and international crime. Goods stored or transiting within these areas are free of import duties, value added tax and other import charges (Transcrime, 2015). These zones are usually characterized by light regulations, little transparency and lack of interoperability with the national authorities (Allen, 2013; INTERPOL, 2014a). These make the oversee of the activities and economic exchanges occurring in these areas particularly challenging, in particular for certain types of goods such as tobacco products (Aziani &

Dugato, 2019b; INTERPOL, 2014a; OECD, 2016). Criminals often exploit these vulnerabilities to be able to conduct their activities, that varies from the transhipment of illegal products or the diversion of licit products in the black market (Transcrime, 2015). In specific, goods entering in the FTZs can be re-exported altering or concealing the original information of the shipment without custom intervention (EUROBSIT, 2018; ICC BASCAP, 2020). In some cases, illicit products are also produced within FTZs since the lax regulation in these areas causes the FTZs to not be fully compliant with regulative standards (Meneghini et al., 2019) . Therefore, there is the need to strengthen and harmonize the existing regulation of FTZs and to increase the control and monitoring on these special areas (Mancuso & Rutgers, 2019).

In 2005, the World Customs Organization (WCO) adopted the Framework of Standards to Secure and Facilitate Global Trade (SAFE Framework), which encouraged full customs operation within FTZs (ICC BASCAP, 2020). Customs usually control goods entering and leaving the FTZs only when there are doubts about potential violations. This can create a huge vulnerability because the operations that the products undergo within the FTZ (e.g., manufacturing, warehousing, or re-packaging) are not subject to any control. If these activities were to be controlled, counterfeit goods, illicit whites, and illicit tobacco products could be more effectively detected (INTERPOL, 2014a). In addition, many countries do not authorize their customs to report that goods have been seized or detained at ports in the FTZs. If customs were allowed to share this type of information it would support public-private partnerships, so that right holders can enhance investigations and enforcement efforts (ICC BASCAP, 2020). It is important to underline that FTZs are part of the country they are in, which means that they are subject to the nationals' customs laws. The Revised Kyoto Convention specifies that the goods are outside the customs' authority

only regarding duties and taxes (INTERPOL, 2014a). By strengthening the relationship between the FTZs and customs, the actors operating in the illicit tobacco market would have less vulnerabilities to exploit.

7.2 Cooperation and exchange

7.2.1 Cooperation among public authorities

The global dimension of the illicit tobacco market and its negative consequences request governments or authorities at the local and international level to cooperate and to exchange of accumulated knowledge in order to handle the issue comprehensively (Allen, 2013; Joossens et al., 2009; Nowak, 2021). At first, cooperation should regard an increasing number of cross-border investigations and actions. For being effective these joint interventions should be based, on the one side, on effective methods for sharing data or existing intelligence and, on the other side, on continuous training of law enforcement officers (Mancuso & Rutgers, 2019).

7.2.2 Cooperation among public authorities and private actors

Public authorities should seek the active participation of the private sector and other impacted stakeholders in these initiatives. These private actors include primarily tobacco producers and transportation companies, as the most vulnerable and exposed sectors to the illicit tobacco market. As for tobacco producers, some European countries have agreed with the main international tobacco companies in signing some Memoranda of Understanding (MOU)with the scope of promoting companies and governments collaboration against illicit tobacco. These MOUs are nonbinding but still they provide incentives for the tobacco industry to

control their supply chain and by having to demonstrate how the supply chain is controlled and monitored; and they discourage illicit behaviors (Foltea, 2020; Ross, 2015a). Moreover, the EU itself has adopted binding agreements with four of the major tobacco manufactures. In these agreements, tobacco manufactures are obliged to produce only a limited and permitted number of cigarettes, adopt know-your-custumer programs, and implement a track and tracking system (Transcrime, 2015). Another example of the involvement of tobacco producers in the fight against illicit tobacco trade is “Codentify” developed by Philip Morris in 2005. “Codentify” is an authentication tool that aims at becoming a patent for making and tracing products. To promote this initiative three major cigarettes companies and Philip Morris, British American Tobacco, Imperial Tobacco and Japan Tobacco International, have formed the Digital Coding and Tracking Association (DCTA). Even though this initiative presents few limitations, the technologies used can still be of use to identify products that have been illicitly manufactured or not properly taxed (Reuter & Majmundar, 2015).

7.3 Technologies and solutions

7.3.1 Tracking and tracing

Specific technologies are needed to improve the effectiveness of controls of the illicit tobacco market with a specific focus of the cross-borders activities, these would allow to block the illicit supply chain and to reduce illicit cigarettes reachability (Curti et al., 2018a). Regarding the supply chain management, one of the most pursued methods to restrict diversion of tobacco goods into illegal channels is tracking and tracing the product from manufacturing to seller (OECD, 2016). This system includes the distribution of security prints to enable the identification of legally traded products, as

well as increased border control to prevent the entrance of illicit goods. It identifies areas where cigarettes are mostly lost, and it can identify those products that were not properly taxed. This instrument also allows to reconstruct the flow of merchandise increasing the probability in identifying those involved in the illicit process (Chaloupka et al., 2015; Pizarro et al., 2021; Ross, 2015a). Implementing a tracking and tracing system at global level could reduce the international illicit tobacco market (Transcrime, 2015).

Article 8 of the Protocol to Eliminate Illicit Trade in Tobacco Products has the objective to develop a track and trace mechanism to aid in the combat of legitimate product diversion as part of measures to combat illegal trade. The Protocol synthesizes the main features of implementation of the track-and-trace system. These features include unique and nonremovable identification markings or high-tech stamps, that indicate where the product was produced, time of manufacture and payment records. In addition, records of all involved in the supply chain should be saved and secured with the objective of exchanging data easily and rapidly (Allen, 2013; Reuter & Majmundar, 2015; Ross, 2015a). Tracking and tracing should have the objective to seize the product before it reaches the market or point of sale. This strategy could be very effective on small volume smuggling, it would impair their capacity to gain a commercial footing, it would limit opportunities for bootlegging and smurfing schemes (FAFT, 2012a; Reuter & Majmundar, 2015). Different countries have implemented a tracking and tracing system. Up to a few years ago, in 2018, these countries were Turkey, Brazil, Kenya, Malaysia, Albania, Canada, Panama, Morocco, Kenya, and the Philippines. In the United States, this system had been implemented by California, Massachusetts, and Michigan (Chaloupka et al., 2015). However, a widespread implementation of this solution is held back by the limited resources available in some countries (Ross, Husain, et al., 2015).

7.3.2 New technologies at the borders

Many cargos and shipments containing illicit tobacco products overtake borders control at transportation hubs, such as ports or airports, and reach their intended destination or depart. This is due to many reasons. First, the large volumes of daily shipments allow an effective monitoring of only a minor part of the transiting goods (Nguyen, 2012; Sergi, 2020b). Second, lack of modern equipment, limited training for law enforcement and customs agents are all vulnerabilities exploited by criminals and individuals to smuggle illicit goods through airport security (INTERPOL & ENACT, 2020). Third, transportation hubs are frequently infiltrated by OGs with the aim of ease the movement of various illicit goods (Sergi, 2020a). This call for the need of using technologies for supporting border authorities in their inspections and investigations.

A wide range of solutions are currently tested or could potentially be implemented soon with the goal of ease and speed the controls at the borders or in transportation hubs. Two examples of these solutions can be identified. The first one is the development of new generation scanners capable to better detect illicit goods hidden or covered with other materials in both large containers and small luggage (Ross, 2015a). Some of those scanners are becoming smaller and even portable, reducing the need of unloading all the cargo for inspections and allowing a rapid monitoring of a large share of the transiting goods (Chen, 2020; Paoletti et al., 2019). The second one comprises the development of analytical software that boost the early identification of the riskiest shipments on which to focus the inspections starting from the available information (Mancuso & Rutgers, 2019; PwC, 2015).

7.3.3 Online monitoring

Online illicit trade has been expanding over the years and it will probably continue to expand. Sales happen through both the dark net and the surface web. Most of all criminals and individuals involved in the trade exploit the vulnerabilities these spaces offer, with a particular regard for social networks (Dammert & Barahona, 2020). Enforcement actions should be strengthened against online sellers. Law enforcement should cooperate with social networks and marketplaces on the surface to target those users and persecute them. Several marketplaces and social networks have been used for the illicit tobacco trade; as such, they all should modernize their guidelines and terms of use to explicitly prohibit the trade of illicit tobacco products (Babuta et al., 2018b). Further, automatic systems for the systematic scanning of the web and the identification of potential connections among web sites or accounts proposing illicit tobacco products should be implemented.

7.3.4 Due diligence on legal companies

To control the legal supply chain would mean to adopt adequate controls to identify the actors potentially involved in suspicious activities. The implementation of know-your-customer and know-your-partner regulations and practices along the supply chain is an efficient way to reduce the diversion of goods from the legal supply chain (FAFT, 2012a; INTERPOL, 2014a; OECD, 2016).

The SAFE Framework includes compliant merchants, known as Authorized Economic Operators (AEOs), which are given preferential customs treatment, including fewer or no inspections on products imported or

exported by or via the AEO (ICC BASCAP, 2020). If a company satisfies specific criteria, customs clearance will be faster and operator transportation expenses will be cheaper. In addition, this framework allows for customs contact with private companies, as well as customs to customs interaction, in which national customs administrations collaborate and mutually recognize AEOs (INTERPOL, 2014b).The AEOs could be seen as a vulnerability since some cargos are not inspected. A way to overcome this could be the use of Certificate of Origin. This document attests that a product can be safely considered as originating in a specific country according to certain criteria (ICC BASCAP, 2020). A Certificate of Origins also includes very important information for the shipment or movements of different goods, including tobacco products. It ensures that the product can be transported, and it provides information on both the exporter and the importer, which is a useful tool to customer profiling processes against not only illicit trade but also fraud and financial crimes (ICC BASCAP, 2020). The use of Certificates of Origin in global trade, and in the FTZs as well, could be an effective way to control the illicit trade. However, the Certificate should have the support of a competent, reliable and accountable issuing body to protect national and international interests by ensuring credibility of the declaration.

Besides favoring these certifications, public authorities and private companies should rely on systematic monitoring of the legal actors and counterparts. Criminals often use companies with complex or opaque ownership structures to facilitating the commission of their actions (Aziani et al., 2021a). Thanks to the systematic and automated analysis of various data sources (e.g., company data providers, sanction and enforcement lists), it is possible to identify companies showing anomalous characteristics and to detect existing ownership links across a set of firms, improving the detection of fraud schemes and conflict of interests. A promising example

of this type of solution has been developed by Transcrime in the EU funded project DATACROS, which aims at analysing the anomalies in the ownership structure of European firms which may lead to collusion and corruption (Bosisio et al., 2021). The same approach could be applied and customized to the control of specific activities or economic sectors.

Contributors

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