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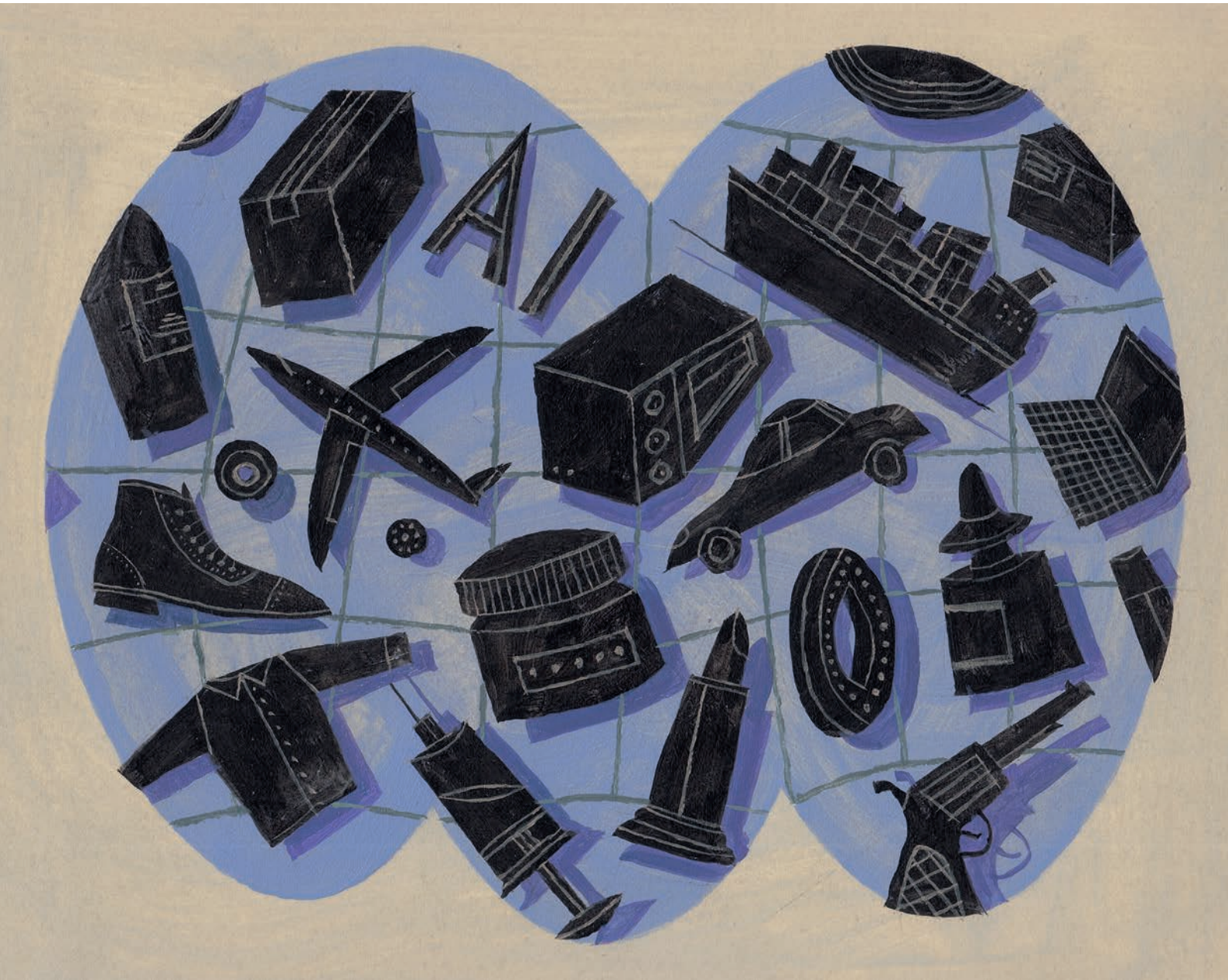
Illicit Trade

Mapping Global Trade in Fakes 2025

Global Trends and Enforcement Challenges



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GLOBAL TRENDS AND ENFORCEMENT CHALLENGES

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Foreword

The growing trade amongst global economies has created new opportunities not only for trade, but also for innovation and economic growth. However, while expanding supply chains have improved efficiency, they have also introduced significant challenges, particularly as concerns the protection of intellectual property and the enforcement of trade regulations. Illicit trade of counterfeit goods threatens businesses, public safety, and economic stability, undermining the rule of law. To address these issues, a comprehensive strategy is required, one that focuses on strengthening regulatory frameworks, enhances cross-border co-operation, and leverages technology to secure global supply chains. The increase in e-commerce and digital trade further complicates enforcement efforts, as counterfeiters are quick to adapt to changing trade patterns. Co-ordinated international efforts are therefore vital to preserving market integrity and consumer confidence.

Monitoring and understanding this evolving threat are crucial to developing effective governance responses. This report, based on a methodology originally developed for a 2008 OECD study, provides an updated analysis using the most recent (2021) global customs seizure data. It offers a comprehensive overview of the key characteristics of trade in counterfeit goods and estimates its scale and magnitude, including a deep dive into how this affects the European Union. This report also provides insights into emerging trends, drawing from discussions with IP experts and industry representatives.

The findings are concerning. In 2021, counterfeit and pirated goods accounted for up to 2.3% of global trade. Within the European Union, fake goods represented up to 4.7% of total imports, underscoring the persistent risk illicit trade poses to globalised economies.

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The database on customs seizures was provided by the World Customs Organization (WCO) and supplemented with regional data submitted by the European Commission's Directorate-General for Taxation and Customs Union, the US Customs and Border Protection Agency and the US Immigration and Customs Enforcement. The authors express their gratitude for the data and for the valuable support of these institutions.

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Executive summary

Globalisation, trade facilitation, and industrial specialisation have significantly reshaped supply chains, extending them across multiple countries and continents. While this evolution has enhanced efficiency, economic growth, and consumer choice, it has also increased the complexity of managing and securing supply chains. In addition, the rising importance of intellectual property (IP) embedded in global production underscores the need for international collaboration and enforcement to safeguard innovation and brands across jurisdictions.

The intricate nature of global supply chains, however, creates vulnerabilities that contribute to intellectual property infringement. Counterfeit goods that infiltrate supply chain networks undermine legitimate businesses, deprive governments of revenue, and pose public health and safety risks. Illicit trade in counterfeit goods is also linked to organised crime and corruption, exploiting gaps in regulations and enforcement. These challenges are amplified by the increasing complexity and global nature of supply chains.

The COVID-19 pandemic had a significant impact on global trade. Although trade volumes decreased in 2020, they have since strongly rebounded. This growth, however, was largely driven by raw materials rather than manufactured goods. As such, since trade in counterfeits was, and continues to be, almost exclusively limited to manufactured products, this surge in global trade did not translate into a comparable increase in counterfeit trade. This study finds that counterfeiting continued to focus on specific product categories, such as clothing, footwear, and electronics, and did not mirror the broader post-2020 trade growth trend.

The People's Republic of China (hereafter "China") continues to be the primary source of counterfeit goods, although other regions contribute significantly. Indeed, the General Trade-Related Index of Counterfeiting (GTRIC) index, which estimates the likelihood of specific countries being major sources of counterfeit exports, indicates that during 2020-21 the sources of counterfeit clothing products were numerous and spread across the world; Bangladesh, Lebanon, Syrian Arab Republic, and Türkiye were considered to be key sources of such illicit goods.

Counterfeiting affects nearly 50 of the 96 product categories, with high-value goods such as clothing, footwear, leather goods, and electronics the top targets. Trade routes continue to evolve as counterfeiters use international waterways such as the Danube River to move goods and adopt "localisation" strategies to produce fakes closer to end markets. Free trade zones, which benefit from reduced oversight, play a pivotal role in this trend. Localisation tactics, such as importing unassembled components or separate packaging with a view to producing or assembling counterfeit goods close to or within the destination market, complicate enforcement efforts and require new strategies for detection.

Counterfeiters also exploit online platforms and modern logistics to infiltrate legitimate trade, with postal services emerging as the primary channel for distribution. Small parcels, often classified as *de minimis* trade, evade scrutiny and create challenges for enforcement agencies. Indeed, the size of seized shipments has generally decreased; in 2020-21, shipments containing fewer than ten items accounted for 79% of all seizures, up from 61% in 2017-19.

In 2021, global trade in counterfeit goods was valued at approximately USD 467 billion, or 2.3% of total global imports. This absolute value represents an increase from 2019, when counterfeit trade was estimated at USD 464 billion, although its relative share decreased compared to 2019 when it accounted for 2.5% of world trade. For imports into the European Union, the value of counterfeit goods was estimated at USD 117 billion, or 4.7% of total EU imports.

The European Union is a key target for counterfeit imports, with China and Hong Kong (China) accounting for the highest value of seized counterfeit goods. Counterfeit goods range from everyday consumer items to luxury products, with a worrying increase in the trade of dangerous goods such as counterfeit automotive parts and pharmaceuticals. Despite a decrease in counterfeit trade values post-COVID-19, EU exposure remains significant as counterfeiters have adapted by relocating production closer to destination markets.

Data analysis reflects evolving counterfeiting trends and enforcement challenges. Counterfeiters exploit gaps in enforcement, including limited resources and shifting priorities, with “localisation” and small parcel shipments further complicating detection. Strengthening enforcement requires better co-ordination, information sharing, and collaboration with rights holders and trade intermediaries. Enhanced engagement with trade intermediaries, including postal and shipping services, is critical to curbing illicit trade and safeguarding global supply chains.

1 Illicit trade in counterfeit goods: Context

1.1. Introduction

Globalisation, trade facilitation, and the specialisation of industries across countries have reshaped the way products are designed, manufactured, and delivered. As a result, supply chains have grown increasingly long and complex. Where production may have been confined to a single country or region in the past, today's supply chains extend across borders, involving numerous countries and continents. This evolution has promoted greater efficiency and access to global resources, but has also introduced new layers of complexity in managing and securing these extensive networks.

With this global expansion, the intellectual property (IP) content embedded within products has grown significantly, underscoring the importance of IP protection on an international scale. The increase in IP-intensive goods reflects advances in technology and innovation across multiple sectors. As production processes span multiple countries, managing the IP that fuels the innovation has become more challenging, requiring safeguards and mechanisms to protect brands, products, and technologies across jurisdictions. This global scope of production is both a product of and a contributor to the rising value of IP, placing new demands on international collaboration and enforcement to secure these assets.

Globalised supply chains have brought numerous benefits by, for example, enhancing the welfare of nations, boosting consumer satisfaction, and driving economic growth. By allowing products and services to be sourced and sold worldwide, businesses have been able to expand their markets while consumers have been able to gain access to a broader array of goods, often at lower prices. This dynamic has created significant opportunities for economic development, innovation, and social progress. With more choices available, consumers enjoy better quality, lower prices, and more variety, all of which are hallmarks of a thriving global economy.

However, the extended and complex nature of global supply chains introduces new vulnerabilities, particularly regarding intellectual property infringement. Supply chains that stretch across numerous countries are more challenging to monitor and protect, creating opportunities for counterfeiters to infiltrate these networks with fake goods. This exposure weakens the resilience of the supply chains, putting companies and consumers at risk and amplifying the need for stringent IP enforcement along entire supply chains.

The proliferation of counterfeit goods has emerged as a significant threat to global economic health, innovation, and public safety. Illicit trade in counterfeit goods undermines legitimate businesses, deprives governments of revenue, and poses risks to consumer health and safety. Moreover, such trade fuels corruption and crime, with the illicit proceeds often funding organised criminal networks. The risks are amplified by the intricate web of supply chains that span the globe, providing counterfeiters with greater opportunities to exploit gaps in regulations and enforcement across borders.

Organisations like the OECD and EUIPO have been studying these risks in-depth for many years. Their findings are sobering: counterfeit goods are increasingly infiltrating global supply chains, taking advantage of liberalised trade and developments in transportation logistics. The two organisations have identified vulnerabilities where "bad actors" misuse trade facilitation tools, such as online marketplaces (OECD/EUIPO, 2021[1]) and fast parcel delivery systems (OECD/EUIPO, 2018[2]), to distribute counterfeit products. Their studies underline the importance of securing global supply chains to protect innovation, economies, and public well-being.

Online marketplaces, free trade zones, and expedited shipping are some of the mechanisms that facilitate global trade. These mechanisms facilitate transactions and rapid movement of goods, thus meeting the demands of today's fast-paced, consumer-driven markets. However, counterfeiters exploit these same mechanisms to circulate illicit goods, making it imperative for policymakers and industry leaders to consider safeguards and tighter regulations to curb their abuse without compromising trade facilitation.

Recent crises, such as the COVID-19 pandemic and the ongoing war in Ukraine, have only added to the complexities of global supply chains. These events have shifted enforcement priorities and placed additional strain on risk profiling. The disruptions have underscored the vulnerabilities of international trade networks, prompting governments to rethink their approaches to supply chain security, risk management, and IP enforcement. Policymakers need to adapt to an evolving landscape, balancing the need for secure supply chains with the goal of promoting economic resilience.

This report marks the fourth instalment of an ongoing OECD and EUIPO collaboration to assess the scale and scope of illicit trade in counterfeit goods. It provides policymakers with a data-driven analysis grounded in a robust econometric framework. The purpose is to help inform decision-makers and enhance strategies for combating counterfeit trade. The study examines trends and risks associated with counterfeit goods in international markets, delivering insights into enforcement challenges and providing a foundation for effective policy responses.

The report's findings illustrate the threats posed by counterfeit trade and identify governance gaps that may allow such illicit activities to persist. These insights are critical for policymakers aiming to strengthen supply chain integrity and address vulnerabilities. By highlighting specific areas where governance improvements are needed, the report offers suggestions for designing effective policies that address these risks and protect the global economy from the adverse impacts of counterfeit trade.

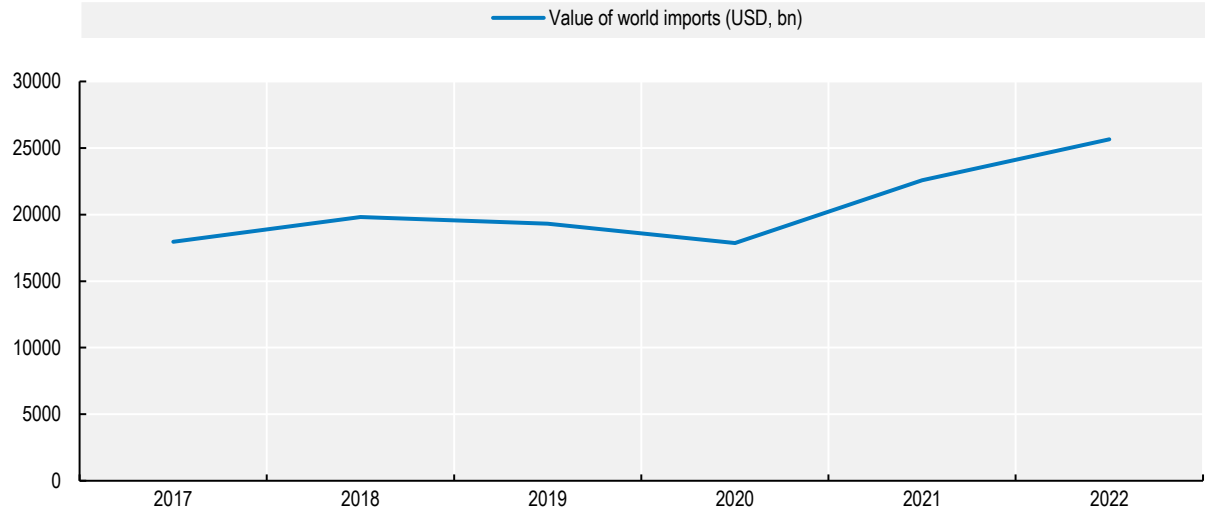
1.2. Trends in global trade during the pandemic

Analysing illicit trade over a given period requires an understanding of how legitimate trade is evolving. This is particularly relevant to this report, given the changes to trade caused by the COVID-19 pandemic.

Global trade in goods slowed during COVID-19, falling in 2020 to a level slightly below that of 2017 (Figure 1.1). This was followed by strong growth in goods trade in 2021 and 2022. By 2022, the value of merchandise trade was nearly 43% higher than in 2017.

Figure 1.1. World trade in merchandise

Annual value in USD billion



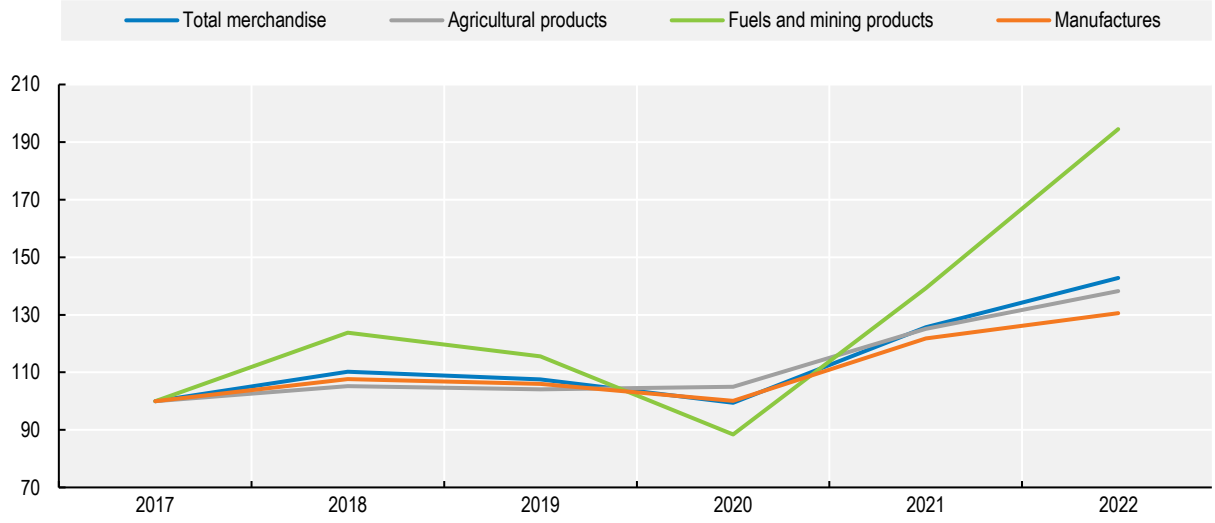
Source: WTO International Trade Statistics.

In recent years, all trade sectors have experienced growth; however, the increase in manufactured and agricultural products has been comparatively modest (Figure 1.2). A closer examination of merchandise trade reveals that growth in 2021 and 2022 was primarily driven by a substantial rise in mining products, which was due in large measure to increases in their market prices.

This distinction in products is crucial when assessing trade in counterfeit goods. Manufactured products, particularly those with lower trade volumes, tend to be more vulnerable to counterfeiting, whereas mining products and raw materials are rarely, if ever, subject to such illicit activities. Consequently, while overall trade growth may be substantial—largely driven by raw materials—this trend does not necessarily reflect significant increases in the volume of trade of goods susceptible to counterfeiting.

Figure 1.2. Index of world trade by sector

Index 2017=100



Source: WTO International Trade Statistics.

1.3. Scope of the study

Counterfeiting and piracy are terms used to describe a range of illicit activities related to the infringement of intellectual property rights. As with the OECD (2008[3]) and OECD/EUIPO (2016[4]) (2019[5]) (2021[6]) studies, this report adopts the definitions contained in the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). It focuses primarily on the infringement of copyright, trademarks, design rights and patents. The term counterfeit used in this report refers to tangible goods that infringe trademarks, design rights or patents, while the term pirated describes tangible goods that infringe copyright.

1.4. Data

Following the approach taken in earlier reports (OECD, 2008[3]) (OECD/EUIPO, 2016[4]) (OECD/EUIPO, 2019[5]) (OECD/EUIPO, 2021[6]), the present analysis is based on international trade statistics and customs seizures of infringing products.

1.4.1. Trade data

The trade statistics are based on the United Nations (UN) Comtrade database which reflects the value of merchandise assigned by customs officials (i.e. the landed customs value). With 171 reporting economies and 247 partner economies, the database covers the majority of world trade and is considered the most comprehensive trade database available. Products are classified based on the six-digit Harmonised System (HS), an international commodity classification system developed and maintained by the World Customs Organization (WCO); the level of detail on products is, therefore, relatively high. Data used in this study are based on landed customs value. In most instances, this is the same as the transaction value appearing on accompanying invoices. Landed customs value includes the insurance and freight charges incurred when transporting goods from the economy of origin to the economy of importation.

1.4.2. Seizure data

Data on customs seizures originate from national customs administrations. This report relies on customs seizure data from the WCO, the European Commission's Directorate-General for Taxation and Customs Union (DG TAXUD) and from the United States Department of Homeland Security (DHS). The latter submitted seizure data from US Customs and Border Protection (CBP), the American Customs Agency, and from the US Immigration and Customs Enforcement (ICE). In each year analysed (i.e. 2020 and 2021), the total number of customs seizures of counterfeit and pirated goods worldwide consistently exceeded 130 000. Overall, the unified database on customs seizures of IP-infringing goods includes almost 297 000 observations. A detailed analysis of these data reveals a number of limitations. Some of them concern discrepancies between the datasets, others concern product classification levels or outliers in terms of seized goods or provenance economies. These limitations are discussed in detail in the OECD/EUIPO 2016, 2019 and 2021 reports (2016[4]) (2019[5]) (2021[6]); the reports propose ways to address each limitation. This report relies on the same methodology presented and discussed in the 2016 study, and it employs the same solutions to the seizure-data limitations.

1.5. Limitations

Several key considerations should be noted regarding the scope and data used in this study.

Within the scope of this study, terms such as “counterfeits” or “fakes” are employed solely for the purpose of this report and should not be interpreted as definitions applicable beyond this context. Additionally, this study does not account for intangible infringements, such as online piracy). Certain products—such as substandard, adulterated, or mislabelled items (e.g. pharmaceuticals that do not infringe on trademark, patent, or design rights) or replacement automotive parts like oil filters and headlamps made by firms other than the original equipment manufacturer (OEM), provided they do not violate any IPR—are outside of the study’s scope.

Concerning the data, the study relies primarily on enforcement data. However, ongoing analyses on illicit trade in counterfeits suggest that enforcement has become more difficult, especially following the COVID-19 pandemic. This increase in difficulty can be attributed to two primary factors.

Firstly, the detection of counterfeit goods has become increasingly challenging. The sharp rise in small parcel shipments complicates identification efforts due to limited and delayed information, with customs often receiving insufficiently detailed declarations such as “stuff” or “daily necessities (Morini et al., 2024[7]). Furthermore, many small parcels are now routed through air cargo facilities, as increased parcel volumes have made air cargo a cost-effective option for shipment. Unfortunately, these facilities are not equipped to effectively screen small parcels, and the COVID-19 pandemic has disrupted traditional trade routes, complicating risk profiling.

Secondly, enforcement agencies face competing priorities, with anti-counterfeiting initiatives relatively low on a lengthy list. Other pressing priorities include combating narcotics and arms smuggling, countering terrorism (e.g. intercepting illicit cash or forged identification), addressing tax and fiscal crimes (e.g. trade-based money laundering), and mitigating consumer health and safety risks associated with fake medicines and cosmetics, which fall under health regulation rather than anti-counterfeiting enforcement.

2 Global trade in fakes: The current picture

2.1. Trade routes

The global dataset on customs seizures reveals that China and Hong Kong (China) were the primary sources of counterfeit goods during 2020-2021 (Figure 2.1). This continues the pattern observed before the COVID-19 pandemic.

Interviews with industry and enforcement experts reveal that trade routes for counterfeit goods are evolving. They noted, for instance, that smuggling activity along the Danube River is increasing. This is due in part to the river's status as an international waterway, which is conducive to less restricted movement across borders.

Shifts in trade routes for counterfeit goods can be attributed to several factors. First, during the COVID-19 pandemic, border closures prompted criminal networks to explore alternative transport methods, some of which proved effective and therefore continue to be utilised. Additionally, current geopolitical tensions, such as the ongoing conflict in Ukraine, have disrupted traditional trade routes. Finally, in some cases, enforcement agencies have redirected their focus to higher-priority areas, allowing illicit traders to exploit the less-monitored channels.

2.1.1. "Localisation" of assembly of fakes

Interviews with enforcement and industry experts have highlighted an increasing "localisation" of production, a practice that, while existing previously, has only recently been identified as a growing phenomenon. Localisation refers to the manufacturing of counterfeit goods close to, or even within, destination markets. These counterfeit goods are often assembled from imported subcomponents or raw materials and are packaged and labelled with logos to mirror authentic products.

Interviewed enforcement and industry experts highlight that localisation presents added challenges for counterfeit goods suppliers, as it requires establishing production facilities; these are frequently set up in some free trade zones that offer reduced oversight. This approach enables counterfeiters to circumvent detection by creating facilities closer to end markets, while capitalising on the flexibility that free trade zones offer.

Several tactics are employed by counterfeiters to help reduce the risk of detection for activities associated with localisation. One tactic involves shipping packaging materials separately from an item, which would result in only a fraction of the fake shipment being vulnerable to seizure. Additionally, components that may infringe on intellectual property rights, such as trademarks, designs or patents, are less likely to attract scrutiny if they are shipped unassembled and unbranded.

The trend towards localisation significantly changes the traditional characteristics of counterfeiting, creating new challenges for enforcement authorities. Moreover, enforcement agencies are increasingly prioritising

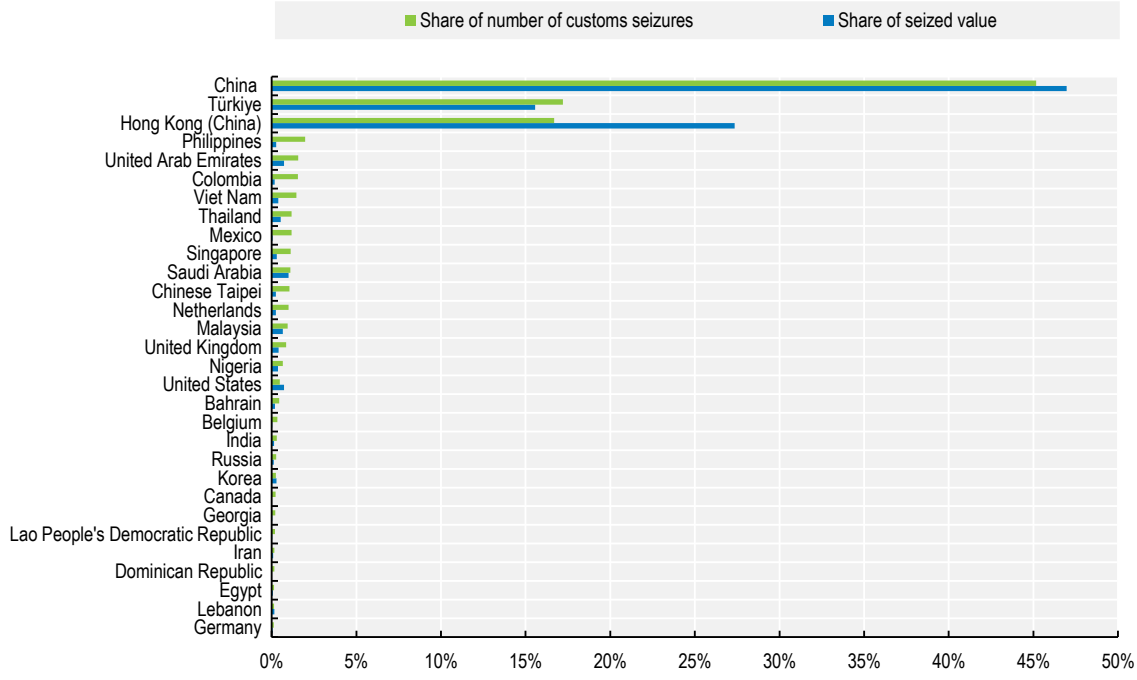
their attention on counterfeits that pose health, safety, or environmental risks, thus lowering the focus on other locally produced counterfeit goods. Localisation allows counterfeiters to exploit this enforcement gap, particularly for items perceived as less harmful.

Seizure data corroborate the localisation trend, with a notable share (20%) of all seizures involving packaging materials, labels, and other authentication components, such as holograms or QR codes.

2.1.2. Provenance economies

China remains the dominant source of counterfeit goods, accounting for 45% of all reported seizures. As illustrated in Figure 2.1, China and Hong Kong (China), continued to be the leading provenance economies for seized counterfeit goods in 2020 and 2021. Respectively 47% and 27% of the total value of seized goods originated from these two economies. In addition to China and Hong Kong (China), other regions contributing to the trade in counterfeit goods include other Asian countries, Gulf countries, and certain Latin American countries. A large number of geographically dispersed countries are thus involved in global counterfeit trade, albeit to different extents.

Figure 2.1. Top provenance economies for trade in counterfeit goods, 2020-21



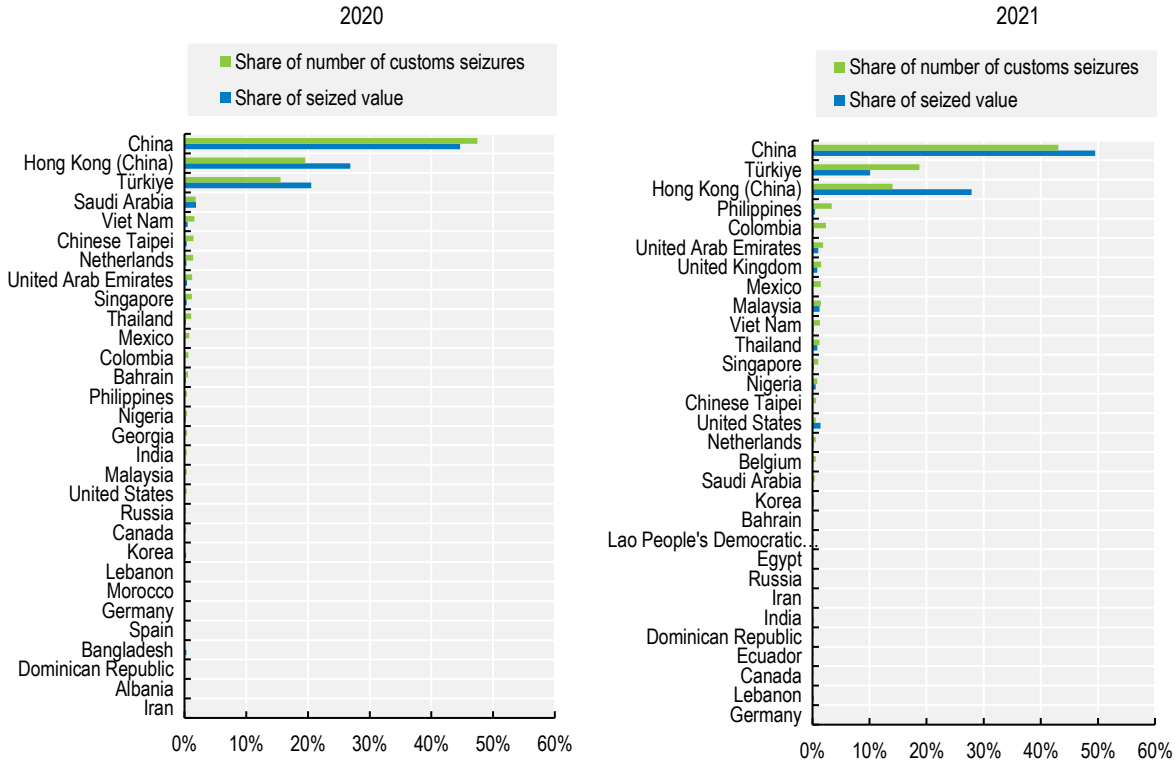
Source: OECD-EUIPO global customs seizures.

An interesting shift is observed with respect to Türkiye's place in counterfeit trade's statistics. Previously, Türkiye held a higher position on the list of provenance economies. Recent data indicate, however, a decline in the country's share in the total value of seized counterfeit goods in 2021 compared to 2020. In contrast, the shares of China and Hong Kong (China), in the total value of seized counterfeits increased over the same period.

Türkiye's prominence in the provenance economies for seized counterfeit goods can be attributed to some extent to its strategic geographical location and modern logistical infrastructure, which make it favoured ground for transit counterfeiting goods. In this context, Turkish customs data offers valuable insights,

showing that 21% of all seizures carried out by Turkish customs authorities in 2023 were related to import procedures, while 19% and 26% involved transit and warehouse operations respectively.

Figure 2.2. Top provenance economies for trade in counterfeit goods, by year



Source: OECD-EUIPO global customs seizures.

A separate analysis examines the relative propensities of economies to export counterfeit goods. Unlike assessments of absolute volumes, that analysis considers the estimated share of counterfeit goods within trade flows, providing insights into the relative prevalence of fakes rather than their total export values.

The relative propensity to export counterfeit goods is measured by the GTRIC-e score, a nuanced indicator that requires some interpretation. Broadly, economies with a high GTRIC-e score are those that either report substantial absolute values of counterfeit and pirated products or demonstrate a high proportion of counterfeit goods within their exports. Further information on this index is available in Annex A2.

Table 2.1 ranks the top provenance economies, based on their propensity to export counterfeit products, for the period 2020-2021. Notably, Hong Kong, Türkiye and Lebanon lead this ranking. Syria's presence on the list is of particular interest, considering the ongoing armed conflict within its borders and the associated tendency to obscure shipping documents and facilitate trade in illicit goods.

This observation is consistent with findings from an earlier OECD report (OECD, 2022[8]), which observed that armed conflicts can create fertile ground for illicit trade. In conflict-affected regions, weak or absent governance frameworks provide opportunities for illicit actors to operate with minimal oversight. The 2018 report concluded that profits from illicit trade can act as a strong incentive to prolong conflicts. The inclusion of Syria in the current rankings supports this hypothesis, underscoring how conflict conditions can exacerbate and sustain illicit trade activities.

Table 2.1. Top economies most likely to be provenance of counterfeit goods, 2020-21

GTRIC-e average 2020-2021

Provenance	GTRICe
Hong Kong (China)	1
Türkiye	1
Lebanon	1
Syrian Arab Republic	1
Andorra	1
Albania	1
Moldova	0.998
Cambodia	0.997
China	0.996
Sint Maarten	0.992
Senegal	0.972
Benin	0.924
Bahrain	0.878
Georgia	0.814
Mozambique	0.781
Bangladesh	0.749
Iran	0.715
Panama	0.705
Liberia	0.680
Jordan	0.660
Nigeria	0.611
Colombia	0.604
Saudi Arabia	0.536
Lao People's Democratic Republic	0.526

Source: OECD-EUIPO calculations.

2.2. Impacted industries

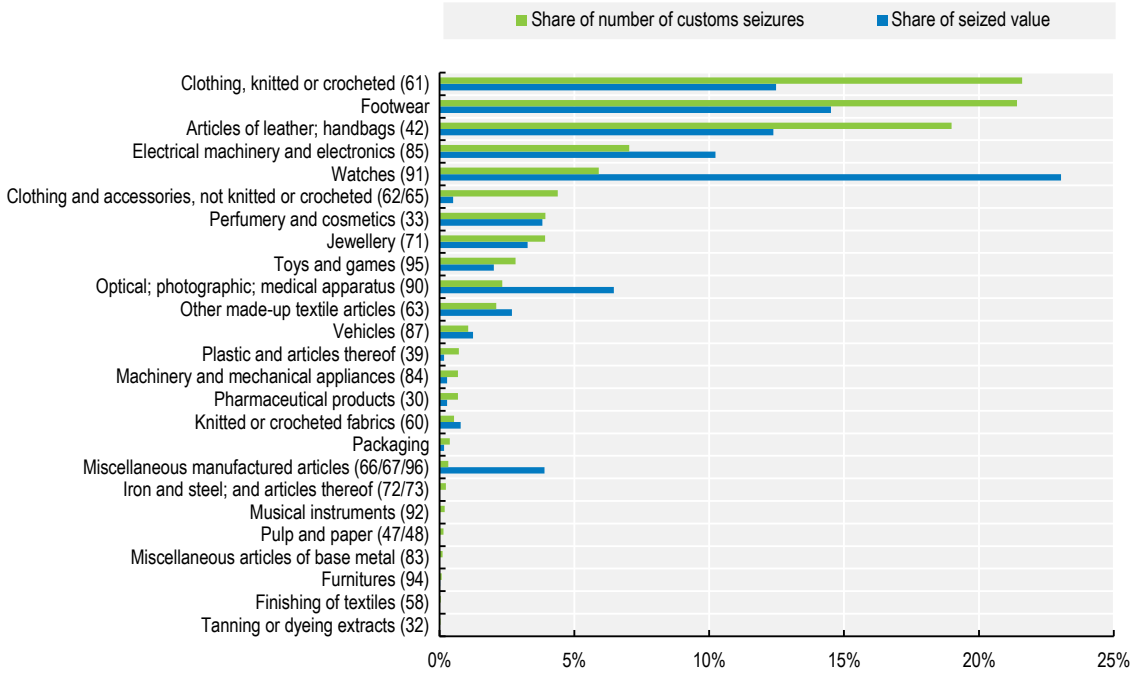
The range of industries affected by counterfeiting is extensive, spanning approximately 50 distinct product categories reported in global seizure data. Virtually any product protected by intellectual property (IP) rights is vulnerable to counterfeiting. As one enforcement officer remarked during interviews, “nothing can surprise me,” highlighting the pervasive reach of counterfeit operations.

Distribution of seizures, however, tends to be concentrated within a more limited set of product categories (Figure 2.3). These categories are typically associated with high profits and are more readily detectable and seizable by enforcement agencies.

In 2020-2021, ready-to-wear items remained the most frequently seized counterfeit goods, with clothing and footwear representing the highest shares in this category. Clothing accounted for 21.6% of total seizures, while footwear represented 21.4%. These categories were followed by leather goods and electronics, consistent with prior data from 2017-2019, where these four industries were already the primary targets of counterfeiters.

In terms of the value of seized goods, counterfeit watches and footwear led, representing 23% and 15% of the total seized value globally, respectively. During the 2017-19 period, watches (25%) and articles of leather (17%) accounted for the highest share of global seized value. These findings underscore the sustained focus of counterfeiters on high-value, high-demand goods across a relatively narrow selection of product categories.

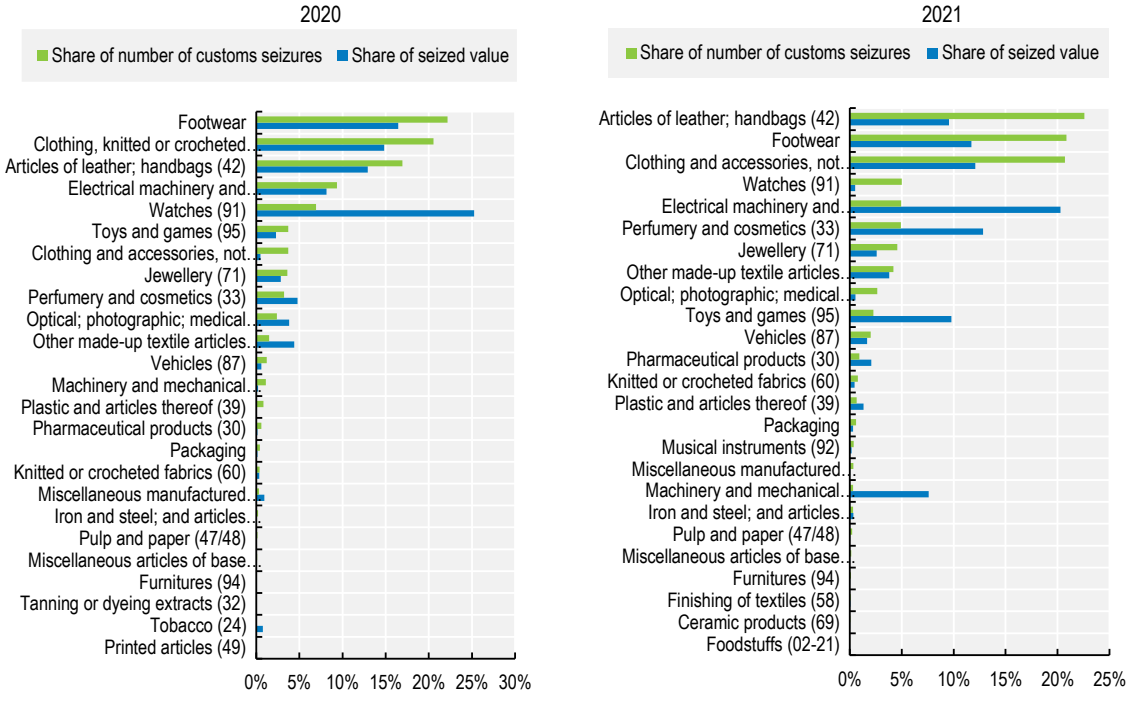
Figure 2.3. Top 20 product categories for counterfeit and pirated goods, 2020-21



Source: OECD global customs seizures data.

The comparison between 2020 and 2021, as illustrated in Figure 2.4, presents the breakdown of seizures by year and product category. In both years, footwear, clothing, and leather goods were the most frequently seized items, indicating that these product categories experienced sustained vulnerability to counterfeiting.

Figure 2.4. Top 20 product categories for counterfeit and pirated goods, by year, 2020-21



Source: OECD-EUIPO global customs seizures.

Notable differences in the share of seized values occurred during 2020 and 2021. For instance, the share of seized value for watches declined, while the values of seized electronics, toys and games, and machinery increased in 2021. However, these fluctuations are not believed to indicate a lasting trend but are rather temporary variations. Such changes reflect shifts in enforcement focus or, in some cases, the success of large seizures within specific product categories.

Further analysis examines the relative propensity for counterfeiting, providing a nuanced view that considers both the total volume of counterfeit goods and the estimated share of counterfeit goods in the overall trade volume for each category. The index, shown in Table 2.2, reveals that in 2020–2021, the industries most vulnerable to counterfeiting included footwear, clothing, leather items, and tobacco. This is evidenced by high GTRIC-p scores in these categories, which signify either high absolute values of counterfeit and pirated products or a high proportion of counterfeits within these sectors.

Table 2.2. Top 20 industries targeted by counterfeiters, 2020-21

GTRIC-p, average

Harmonised System Code (HS Code)	GTRIC-p
Footwear (64)	1
Clothing, knitted or crocheted (61)	1
Articles of leather; handbags (42)	1
Tobacco (24)	1
Knitted or crocheted fabrics (60)	1
Miscellaneous manufactured articles (66/67/96)	1
Perfumery and cosmetics (33)	0.9999
Jewellery (71)	0.8661
Electrical machinery and electronics (85)	0.5916
Optical; photographic; medical apparatus (90)	0.5328
Finishing of textiles (58)	0.4431
Other made-up textile articles (63)	0.4224
Vehicles (87)	0.3354
Clothing and accessories, not knitted or crocheted (62/65)	0.3202
Beverages (22)	0.2256
Pharmaceutical products (30)	0.2009
Printed articles (49)	0.1742
Machinery and mechanical appliances (84)	0.1416
Plastic and articles thereof (39)	0.1411
Foodstuffs (02-21)	0.1392

Source: OECD-EUIPO calculations.

A concerning aspect of counterfeit goods is their potential to be dangerous. Lacking any form of safety testing, these products can pose a wide range of health, safety, and environmental risks. Additionally, as no responsible company oversees these goods, accountability is absent when incidents occur.

Many counterfeits can present significant health and safety hazards, particularly in categories such as pharmaceuticals, cosmetics, food, and toys. These high-risk products are consistently prominent in seizure data, with counterfeit spare parts serving as another significant example (Box 2.1). Interviews with enforcement authorities reveal that products with serious health risks, including counterfeit cosmetics and pharmaceuticals, are specifically targeted by enforcement agencies tasked with safeguarding public welfare.

Furthermore, experts interviewed emphasise that counterfeiters are highly responsive to market trends, swiftly producing fakes of the products most in demand, using popular online platforms and services to

reach consumers. This includes tactics such as embedding links to counterfeit offerings in pop-up advertisements, thereby increasing their reach.

In conclusion, it is essential to exercise caution when interpreting seizure data, as these results can be influenced by biases arising from the evolving nature of counterfeiting and shifting enforcement priorities. As previously noted, enforcement efforts are increasingly directed toward counterfeits that present health, safety, or environmental risks. For counterfeiters, this has heightened the appeal of "localising" assembly of counterfeits, and shipping packaging and labels separately from other inputs. This "localisation" of assembly may result in an underrepresentation of certain counterfeit goods, such as fertilizers, cosmetics, toys, foodstuffs, and medicines, in seizure data, despite their prevalence in the counterfeit market.

According to a customs official interviewed for this study, another potential source of bias stems from the proactive role of large corporations in supporting enforcement through additional resources and information. While this assistance has strengthened enforcement against counterfeits that infringe on these companies' intellectual property, it may inadvertently contribute to a reduced effectiveness in detecting counterfeit goods that infringe the intellectual property rights of small and medium-sized enterprises (SMEs). Further analysis is needed to better understand the extent of this phenomenon and its impact on enforcement outcomes.

Box 2.1. Counterfeit car spare parts

Counterfeit car spare parts have consistently appeared in seizure statistics. While legal car spare parts must comply with strict safety norms and standards, counterfeiters tend to offer cheaper, fraudulently branded spare parts that fail to meet safety standards, posing significant risks to consumers. Recent data indicate a sharp increase in the average value of counterfeit spare parts, now exceeding USD 300 per item. This increase can be attributed to two key factors.

Firstly, counterfeiting has increasingly targeted more complex and sophisticated spare parts. For example, counterfeit, unsafe airbags—referred to as "zombies"—have been seized in significant quantities. Industry testing reveals that these counterfeit airbags often fail to deploy during accidents, thereby compromising vehicle occupant safety.

Secondly, counterfeiters are increasingly utilizing online platforms to market fraudulently branded spare parts, particularly targeting unscrupulous mechanics and repair shops. These counterfeit parts are then sold to end consumers, who are deceived into believing they have purchased authentic products, exposing them to potentially dangerous product failures.

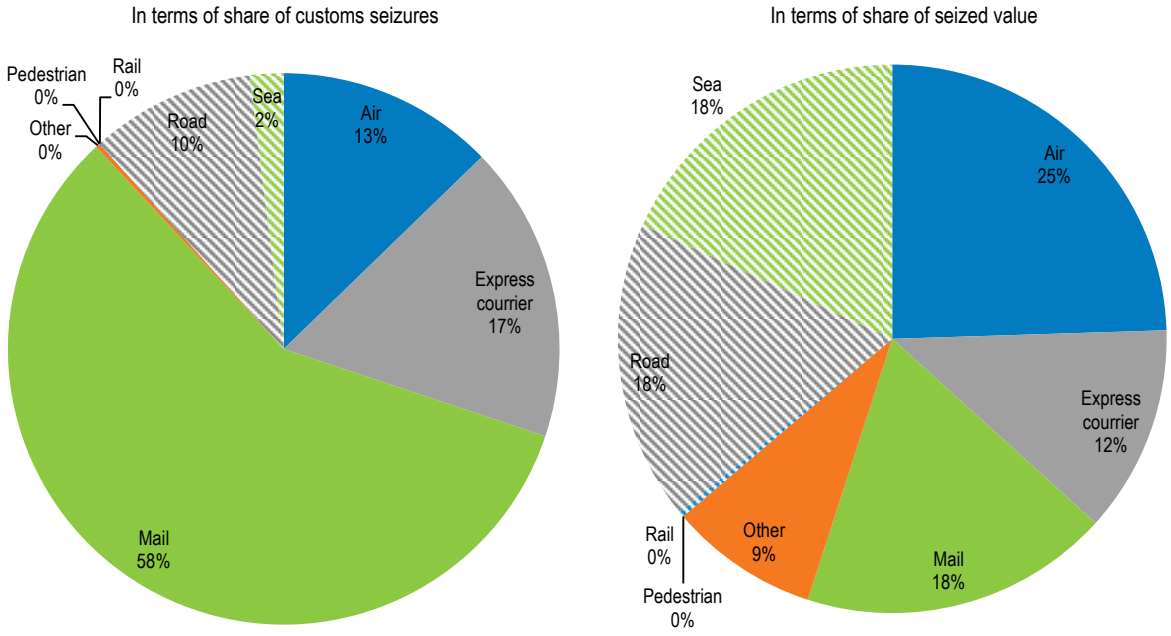
2.3. Shipping methods

Illicit trade in counterfeit goods increasingly takes advantage of modern logistical and technological advances; legitimate trade flows are penetrated, reducing the reliance on covert smuggling. This shift is partly enabled by the relatively low priority placed on intellectual property infringing goods by enforcement agencies, which are often overwhelmed by numerous competing priorities and lack the resources to address IP infringement adequately.

In 2020-21, postal services were the primary channel for transporting counterfeit goods, with almost 60% of seized items arriving by mail (Figure 2.5). This was followed by express courier services and air cargo, which accounted for 17% and 13% of global customs seizures, respectively. The reliance on postal services highlights the adaptability of counterfeiters in leveraging conventional shipping methods to distribute illicit goods widely and inconspicuously.

It is also noteworthy that the share of the value of seized goods shipped by mail is limited (18%) and equivalent to that of counterfeit goods seized and transported by sea, while maritime transport represented only 2% of number of customs seizures. This clearly highlights the challenge posed by the shipment of counterfeit goods in small postal packages, which represent a massive volume but have a negligible value compared to other modes of transport.

Figure 2.5. Conveyance methods for counterfeit and pirated products, 2020-21



Source: OECD-EUIPO global customs seizures.

2.3.1. Road transport

An increase in road transport in illicit trade of counterfeit goods has been observed in 2020-21, both in terms of global customs seizures and the overall value of seized goods. Road shipments accounted for only 4% of global seized value in 2017-19 but rose to 18% in 2020-21. Conversely, sea shipments saw a marked decline, with the share of seized value dropping from 53% in 2017-19 to 18% in 2020-21. This shift in shipping methods, as reported by customs officers, would indicate evolving strategies by counterfeiters to bypass maritime routes and exploit other transport modes.

Counterfeit goods transported by road were primarily destined for European Union countries, and the United States. This increase underscores the need for heightened vigilance and stronger cross-border collaboration to address the spread of counterfeit goods entering these regions through road networks.

The rise in road-based shipments poses a significant challenge for customs officials, who often lack pre-shipment data and must make immediate decisions on whether to inspect or seize goods. The absence of pre-emptive information hinders effective enforcement, adding complexity to the task of detecting counterfeit goods in real time and diminishing the efficiency of seizure efforts.

2.3.2. Small packages and de minimis

The term *de minimis* refers to a threshold value below which shipments are exempt from import duties. This threshold was introduced to simplify customs procedures and alleviate the administrative burden on

enforcement and private individuals importing gifts or small items. While the *de minimis* threshold primarily applies to import duties, it is also customary for shipments under this threshold to be subject to streamlined procedures, receiving limited scrutiny from enforcement agencies. This approach aims to facilitate trade and reduce processing time for low-value goods.

A significant factor in the use of postal shipments is the small parcel format, which is often treated as *de minimis* trade that does not warrant close inspection. Moreover, these small parcels are particularly challenging for enforcement authorities to screen and detect, as limited data is often provided on invoices. As noted earlier, descriptions of contents are frequently vague, with terms like “stuff” offering little insight and further complicating detection efforts.

The popularity of small parcels has grown notably since the COVID-19 pandemic, reflecting the rise in online marketplace purchases. Small parcels are shipped not only via mail and express services but also by air cargo and, in some instances, maritime containers, further underscoring their importance in counterfeit trade (Figure 2.5). This development presents substantial screening challenges for customs, as air cargo facilities and ports are generally ill-equipped to handle the inspection of small parcels packed within larger cargo containers.

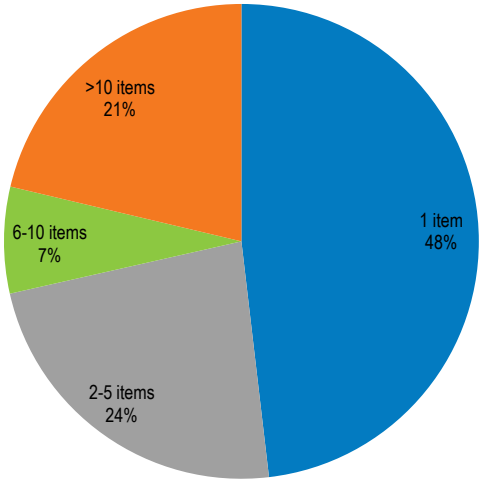
2.3.3. Size of seizures

Most shipments containing counterfeit goods are transported in small parcels, resulting in each parcel containing only a limited number of fake items. As illustrated in Figure 2.6, the size of seized shipments has generally decreased, with shipments containing fewer than ten items accounting for 79% of all seizures in 2020-21, up from 61% in 2017-19. This trend reflects the shift toward smaller, more fragmented shipments as a method to evade detection.

Small shipments, those with fewer than ten items, have been the most prevalent form of counterfeit conveyance in recent years. This pattern intensified during the COVID-19 pandemic, as the boom in e-commerce prompted a shift in consumer behaviour toward online purchasing.

Figure 2.6. Size of seized shipments, 2020-21

In terms of share of global customs seizures



Source: OECD global customs seizures.

2.4. Estimates of value of trade in counterfeits

Global seizure data for counterfeit goods provide insights into several key phenomena, including: (1) the propensity of certain countries to export counterfeit goods, (2) the vulnerability of specific industries to counterfeit infiltration, and (3) the estimated total value of global trade in counterfeit products.

The first two points—countries' propensity to export counterfeit goods and industry vulnerability—were discussed in previous sections. This section focuses on the third point: the total value of trade in counterfeit goods.

To estimate the total value of counterfeit trade, two significant methodological assumptions are made. First, it is assumed that countries' propensities to export counterfeit goods and industries' susceptibilities to counterfeiting are relatively stable and do not vary based on the destination market.

This assumption addresses the issue of incomplete data in certain importing countries, particularly those that do not enforce IP rights at their borders. A lack of IP enforcement could suggest that such countries receive counterfeit goods at higher rates, as they offer a safer environment for counterfeiters with lower risk of detection and higher profit potential.

Given this lack of enforcement at some borders, it is important to consider that the resulting estimates may be downward-biased. In reality, trade flows might contain even higher volumes of counterfeit goods than the estimates suggest, particularly in markets with low IP enforcement.

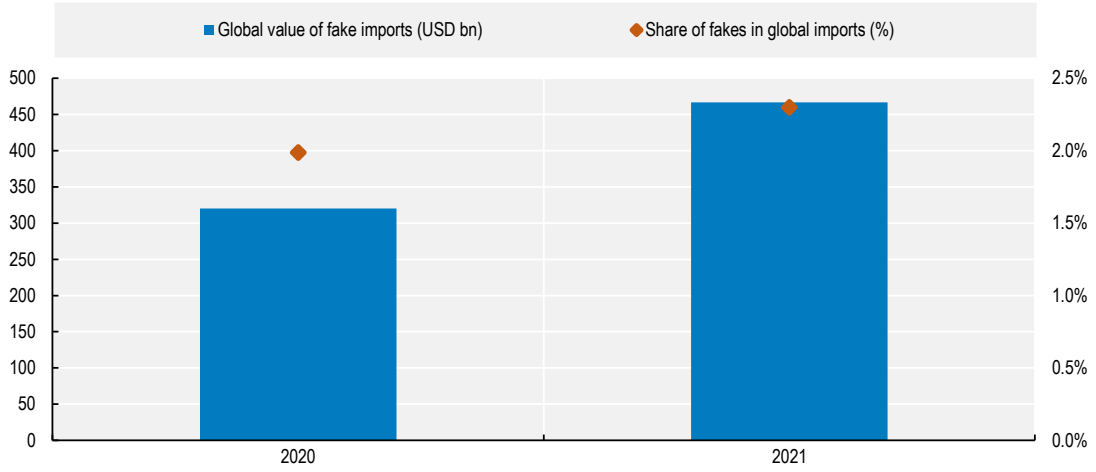
The second assumption involves a "fixed point"—the consistent proportion of counterfeit goods typically found within certain high-risk categories, originating from known counterfeit-exporting countries.

For this analysis, the fixed point is based on footwear imports from China. According to interviews with enforcement officials, approximately 27% of footwear shipments from China are counterfeit, which serves as a benchmark for this estimation model.

These two assumptions were used to calibrate an econometric model to estimate the total value of counterfeit trade, employing the same methodology as in previous studies. The details of the methodology are provided in the annex.

The resulting findings are of concern. In 2021, the global trade in counterfeit goods was valued at approximately USD 467 billion, accounting for 2.3% of total global imports (Figure 2.7). This absolute value represents an increase from 2019, when counterfeit trade was estimated at USD 464 billion; however, its relative share slightly decreased, as counterfeit trade represented 2.5% of world trade in 2019. For the European Union, the value of counterfeit goods trade was estimated at USD 117 billion, representing 4.7% of total EU imports. This represents a decrease both in absolute value and relative terms compared to 2019. All the details of the analysis of counterfeit trade in the European Union can be found in Chapter 4. The COVID-19 pandemic impacted counterfeit trade, with 2020 figures showing a decline to just under USD 320 billion, representing 2% of global trade. By 2021, counterfeit trade had rebounded, reflecting both an increase in absolute value and a relative stabilisation within global trade flows.

Figure 2.7. Global value of fakes by year, 2020-21



Source: OECD calculations.

3 Mapping trade routes: Industry analysis

This section analyses counterfeit trade in greater detail, on an industry basis, with attention to trade routes. The role of the main provenance countries is examined to better highlight industry-specific aspects.

3.1. Clothing sector (HS code 61)

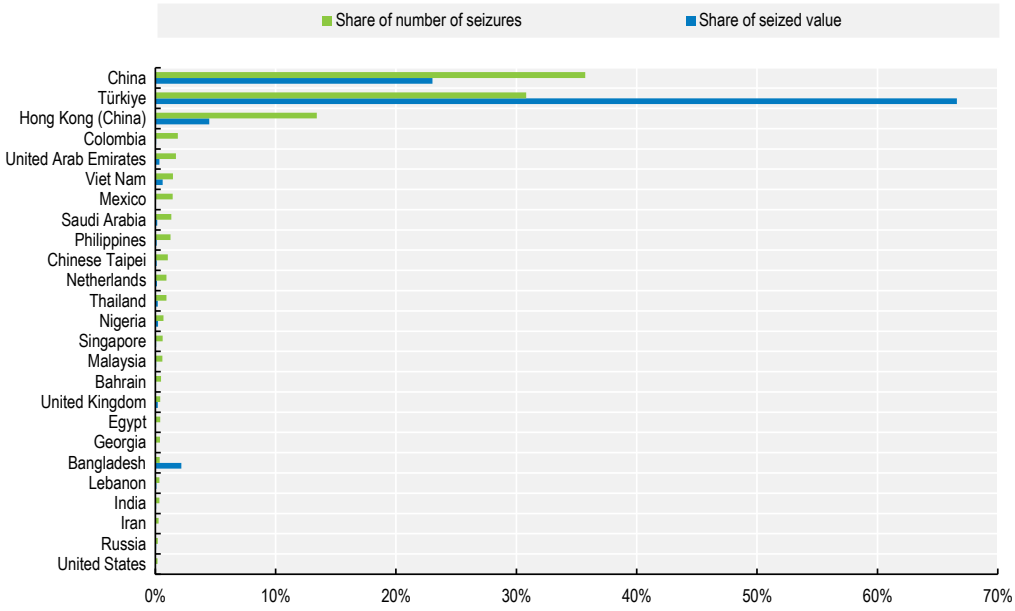
3.1.1. Trade routes

Clothing articles are among the most frequently counterfeited items. All types of clothing are counterfeited, including clothing, accessories (hats, scarves, headscarves), and a large number of brands are infringed upon. Seizure data clearly show that counterfeiters quickly adapt to fashion trends to meet consumer needs.

The analysis of the main provenance economies shows that China, Türkiye, and Hong Kong (China) remained the leading suppliers of counterfeit textile products in 2020-21. However, Figure 3.1 also reveals that new players have emerged. Notably, Colombia and Mexico ranked 5th and 7th, respectively, among the source economies of counterfeit textile products. This figure indicates a decline in the role of Asian countries (other than China and Hong Kong (China), which was more prominent in the past, in favour of Gulf countries and, more recently, Latin American countries.

The GTRIC methodology reveals that the sources of counterfeit clothing products are numerous and spread across the world, indicating a high likelihood that countries such as Bangladesh, Lebanon, Syrian Arab Republic, and Türkiye are key sources. A number of African economies (Senegal, Tanzania, Benin, and Nigeria) and European economies (Albania and Bulgaria in a lesser extent) are also likely sources, as is one country from the Caucasus region (Georgia).

Figure 3.1. Top provenance economies for trade in counterfeit clothing items, 2020-21



Source: OECD-EUIPO global customs seizures.

Table 3.1. Relative likelihood of an economy to be a source of fake clothing items

GTRIC-e world for clothing, average 2020-21

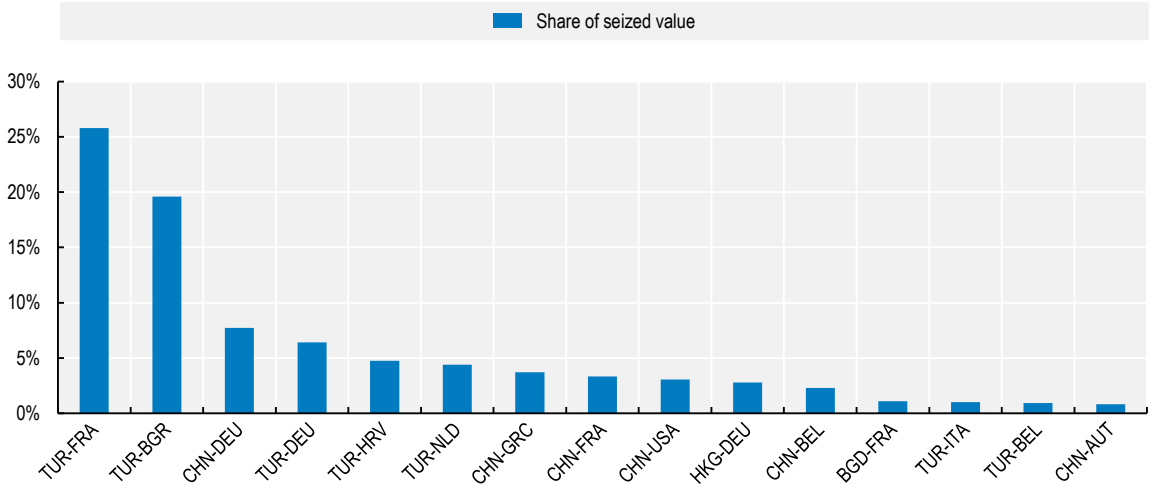
Provenance	GTRICe
Bangladesh	1
Hong Kong (China)	1
Lebanon	1
Syrian Arab Republic	1
Türkiye	1
Albania	0.954
Senegal	0.863
Georgia	0.848
China	0.846
Tanzania	0.816
Benin	0.764
Nigeria	0.703
Venezuela	0.646
Bahrain	0.483
Iran	0.409
Tunisia	0.406
Bulgaria	0.331
United Arab Emirates	0.315
Kenya	0.313
United Kingdom	0.308
Oman	0.291
Egypt	0.256
Pakistan	0.239
Colombia	0.220

Note: A high score on the GTRIC index means there is a greater likelihood the economy is a source of counterfeit goods.
Source: OECD-EUIPO calculations.

Figure 3.2 shows the main country pairs of provenance and destination for counterfeit clothing products. It indicates that, in terms of seized value, the flows of counterfeit textile products are dominated by exports from Türkiye to European countries, such as France and Bulgaria, as well as exports from China to European countries.

Figure 3.2. Top provenance-destination economies for clothing, 2020-21

In terms of share of seized value



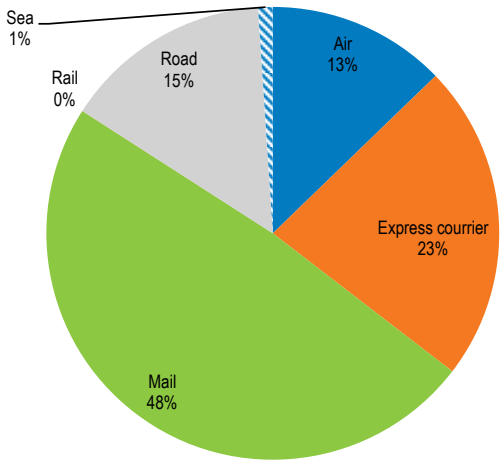
Source: OECD-EUIPO global customs seizures.

3.1.2. Conveyance methods

As shown in Figure 3.3, postal services (48%) and express courier (23%) are the most commonly used means of transport for delivering counterfeit clothing products. They are followed by road transport (15%), whose use has increased in recent years. Road transport is widely used for shipments originating from Türkiye to European countries and for intra-European flows.

Figure 3.3. Conveyance methods for trade in counterfeit clothing products, 2020-21

In terms of number of customs seizures



Source: OECD-EUIPO global customs seizures.

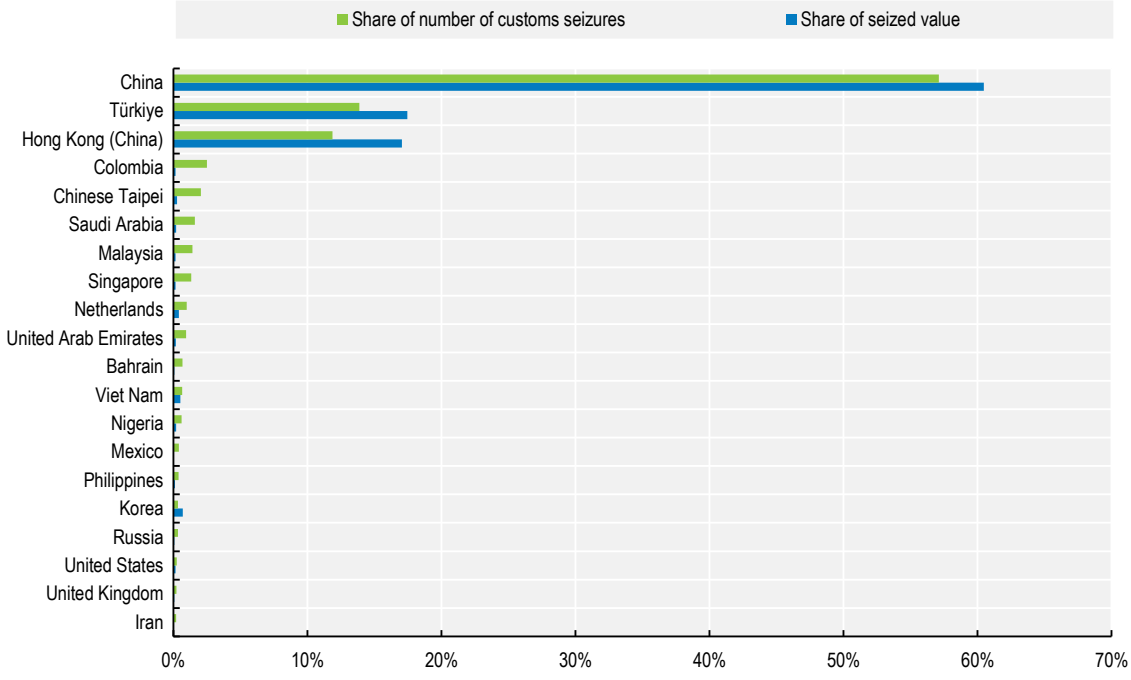
3.2. Footwear sector (HS code 64)

3.2.1. Trade routes

This product category has a broad range of counterfeit items, including luxury shoes to the latest trendy sneakers or sandals. There are also numerous brands whose IP rights are violated. As with the clothing category, the trade in counterfeit footwear reflects ever-changing consumer tastes and preferences.

During 2020-21, trade in counterfeit shoes was dominated by exports from China, Türkiye, and Hong Kong (China). Nearly 83% of the seized counterfeit shoes originated in these three countries. In terms of value of the seized goods, the share of the three countries amounted to 94%. Figure 3.4 lists the main source economies. It illustrates the emergence of Colombia as a supplier of counterfeit footwear, a development which should be monitored to determine whether it represents a structural shift in suppliers.

Figure 3.4. Top provenance economies for trade in counterfeit footwear, 2020-21

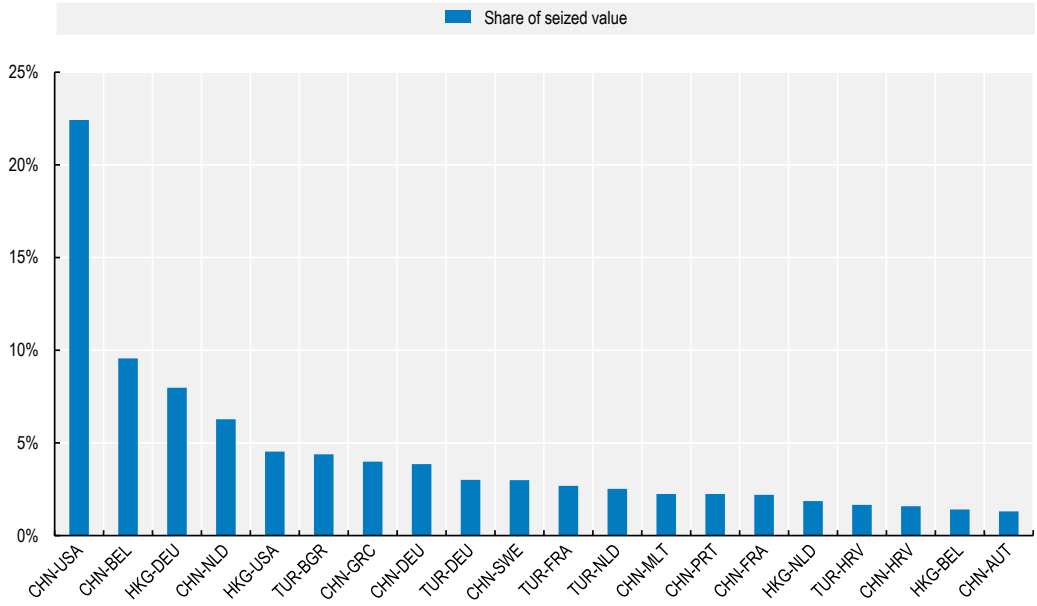


Source: OECD-EUIPO global customs seizures.

Figure 3.5, which shows the main provenance-destination pairs for trade in counterfeit footwear, indicates that a quarter of the seized value of counterfeit shoes flowed from China to the United States. The share of flows from China or Hong Kong (China) to European countries was also significant.

Figure 3.5. Top provenance-destination couples for the trade in fake footwear, 2020-21

In terms of share of seized value



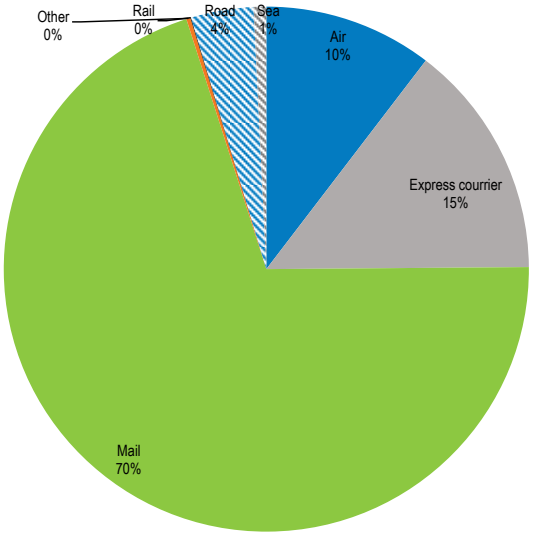
Source: OECD-EUIPO global customs seizures.

3.2.2. Conveyance methods

The trade in counterfeit footwear is characterised by the extensive use of postal services for the delivery of goods to destination countries. Some 70% of seized counterfeit footwear was transported through this channel (Figure 3.6). Seizure data also indicate that these goods were almost exclusively shipped in small parcels, as 90% of the seizures contained fewer than ten items, and more than 67% contained only one item.

Figure 3.6. Conveyance methods for the trade in counterfeit footwear, 2020-21

In terms of share of global customs seizures



Source: OECD-EUIPO global customs seizures.

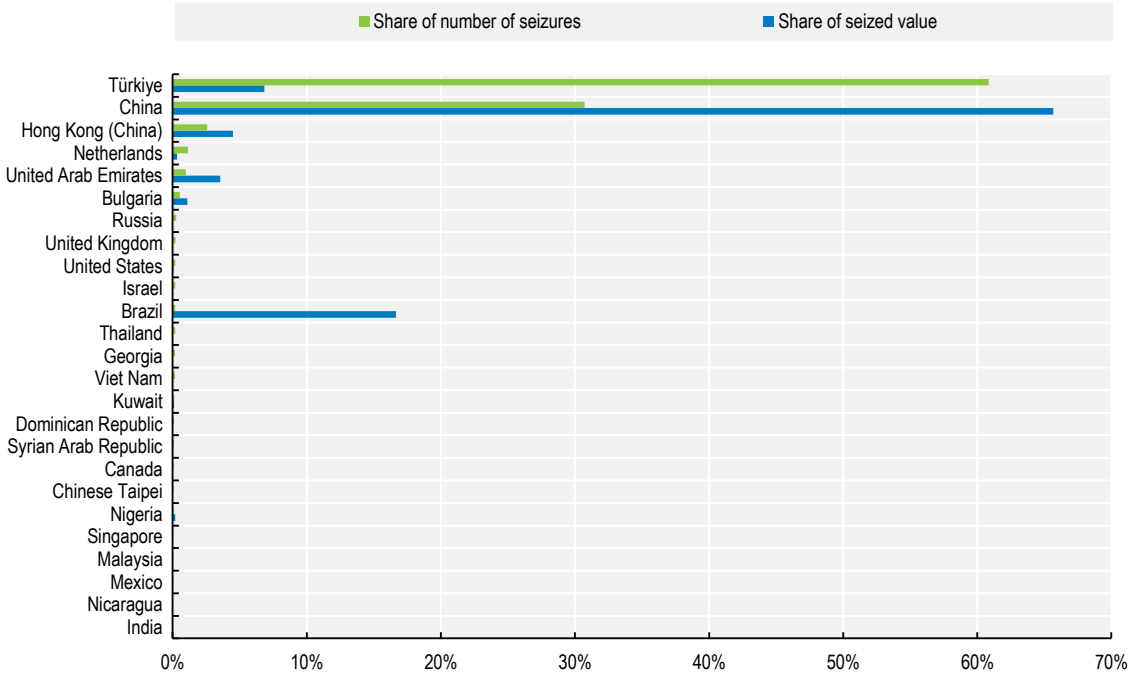
3.3. Cosmetics sector (HS code 33)

The trade in counterfeit cosmetic products is extensive and encompasses many products. This category includes perfumes, creams, personal hygiene products, makeup, toothpaste and baby care products. The counterfeits, substandard, can pose a significant threat to consumer health.

3.3.1. Trade routes

Türkiye and China were the two main provenance economies for counterfeit cosmetics in 2020-21, accounting for 92% of the number of seizures in this category. Figure 3.7, which shows the main countries of origin for the trade in counterfeit cosmetic products, indicates that in terms of seized value, China and Brazil were the most significant suppliers of the counterfeits. The situation in Brazil reflects two significant seizures of nearly 30 000 and 10 000 cosmetic products originating from this country. Customs data do not provide further information regarding the destination and transport modes used for these two large seizures.

Figure 3.7. Top provenance economies for the trade in counterfeit cosmetic goods, 2020-21

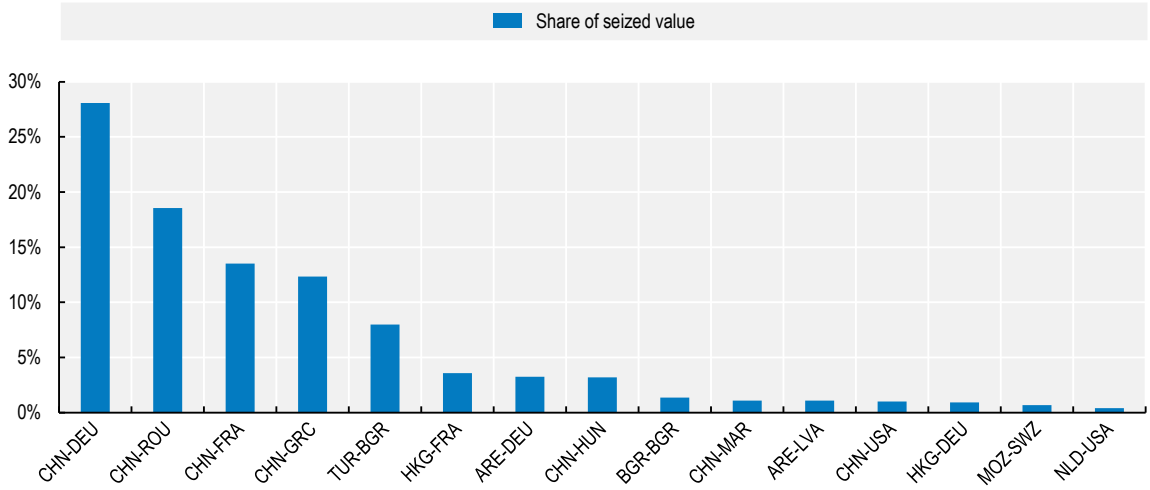


Source: OECD-EUIPO global customs seizures.

The flows from China to European countries dominate the trade in counterfeit cosmetics in terms of seized value. Figure 3.8 also reveals some unusual flows, such as those from China to Morocco, as well as an intra-African flow from Mozambique to Swaziland.

Figure 3.8. Top provenance-destination pairs for the trade in counterfeit cosmetic products, 2020-21

In terms of share of seized value



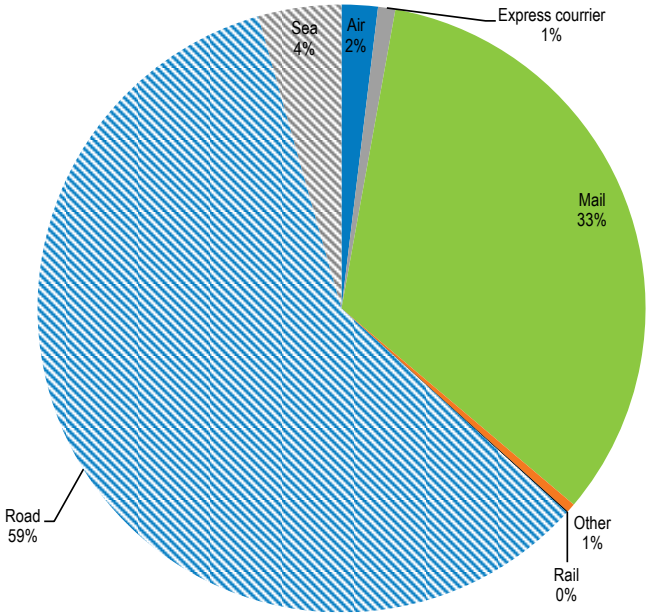
Source: OECD-EUIPO global customs seizures.

3.3.2. Conveyance methods

During 2020 and 2021, the preferred mode of transport for counterfeit cosmetics was by road, which accounted for nearly 60% of customs seizures of the products. The average size of parcels containing counterfeit cosmetics was relatively large, with nearly half of these parcels containing more than ten items.

Figure 3.9. Transport mode for the trade in counterfeit cosmetic products, 2020-21

In terms of share of global customs seizures



Source: OECD-EUIPO global customs seizures.

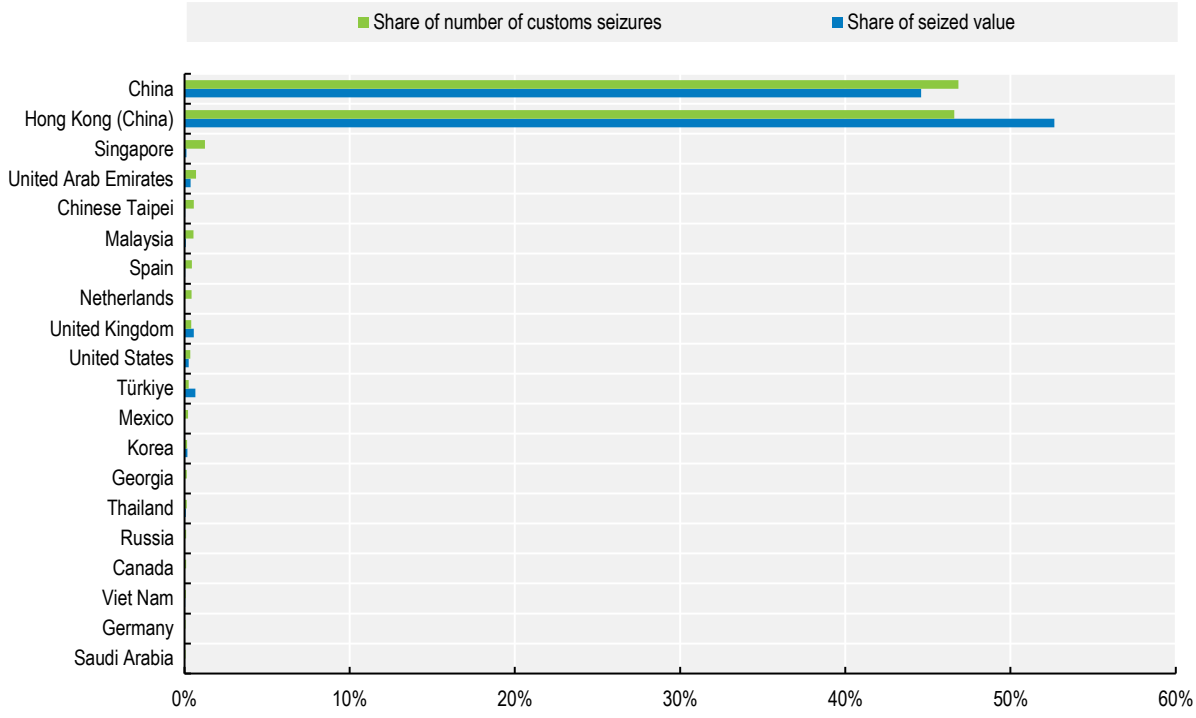
3.4. Trade in counterfeit electronics (HS code 85)

The most frequently seized counterfeit products are highly diverse and include phones and related accessories such as screens, chargers, back covers, but also TV or game controllers, batteries or cookers and hairstyling irons.

3.4.1. Trade routes

In 2020-21, China and Hong Kong (China) were the main provenance economies for counterfeit electronics goods seized and traded globally, representing 93% of global customs seizures of this category (Figure 3.10). Singapore and the United Arab Emirates, the third and fourth largest provenance countries, played relatively small roles.

Figure 3.10. Top provenance economies for trade in counterfeit electronics, 2020-21



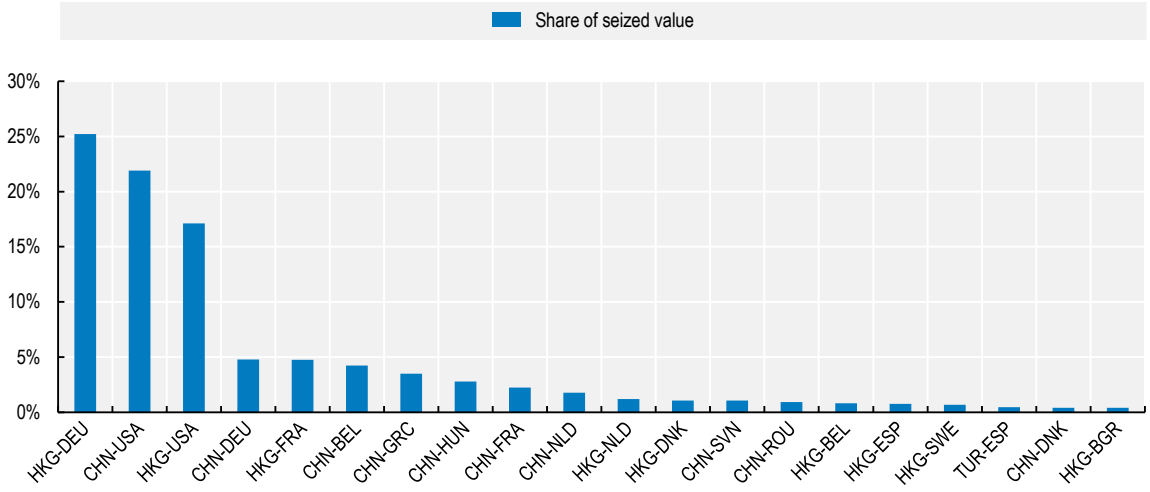
Source: OECD-EUIPO global customs seizures.

Figure 3.11, which shows the main provenance-destination pairs in the trade of counterfeit electronic products, indicates that a quarter of the seized value of these products was destined for Germany from China.

The United States was also a major destination for counterfeit electronic products, with 22% of the seized value of these goods from China destined for the United States, and 17% coming from Hong Kong (China).

Figure 3.11. Top provenance-destination pairs for trade in counterfeit electronics, 2020-21

In terms of share of seized value



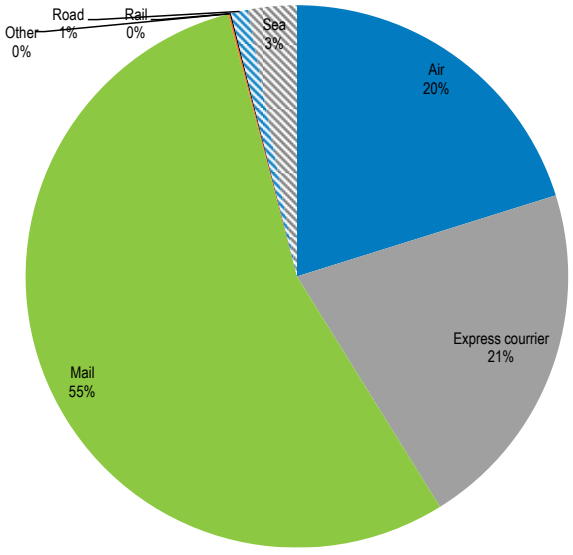
Source: OECD-EUIPO global customs seizures

3.4.2. Conveyance methods

During 2020 and 2021, counterfeit electronic products were primarily transported via postal services, with standard mail accounting for more than half of the seizures in this category and express courier representing 21%.

Figure 3.12. Conveyance method for trade in counterfeit electronics, 2020-21

In terms of the number of customs seizures



Source: OECD-EUIPO global customs seizures.

4 European Union Case Study

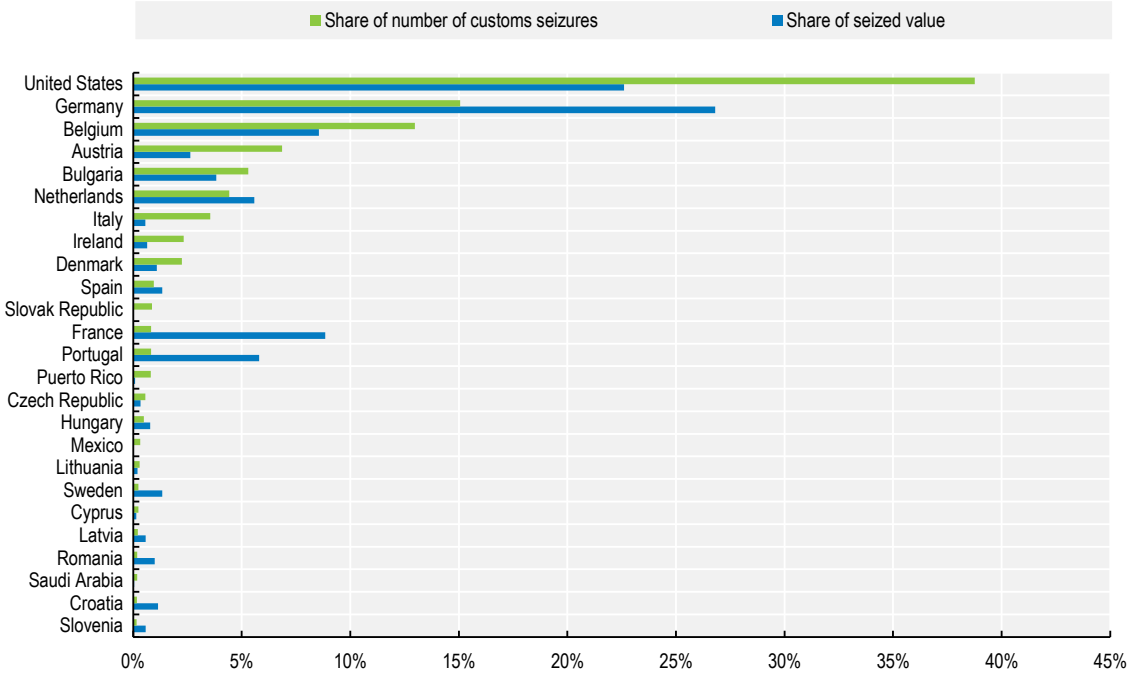
4.1. Trade routes of fake imports into the European Union

Although nearly all regions of the world are affected by imports of counterfeit products, Figure 4.2 which lists the main destination economies for the global trade in counterfeit goods, indicates that the United States and European countries were the most targeted areas. Twenty of the 25 main destination economies were EU Member states, albeit to different degrees. During 2020 and 2021, Germany was the most frequent destination for imports of counterfeit goods (15% of global seizures were destined for Germany). It was followed by Belgium (13%) and Austria (7%).

Globally, Germany was the top destination for counterfeit goods seized in terms of value, surpassing the United States. France and Belgium were also prime targets for counterfeiters; during 2020 and 2021, these two countries accounted for 9% and 7%, respectively, of the total global seized value.

The sources of counterfeit goods are numerous and spread across the globe. Between 2020 and 2021, some 140 provenance economies for counterfeit goods destined for the European Union were identified. This highlights the widespread nature of counterfeit trade and the global reach of the networks involved in the production and distribution of fake merchandise.

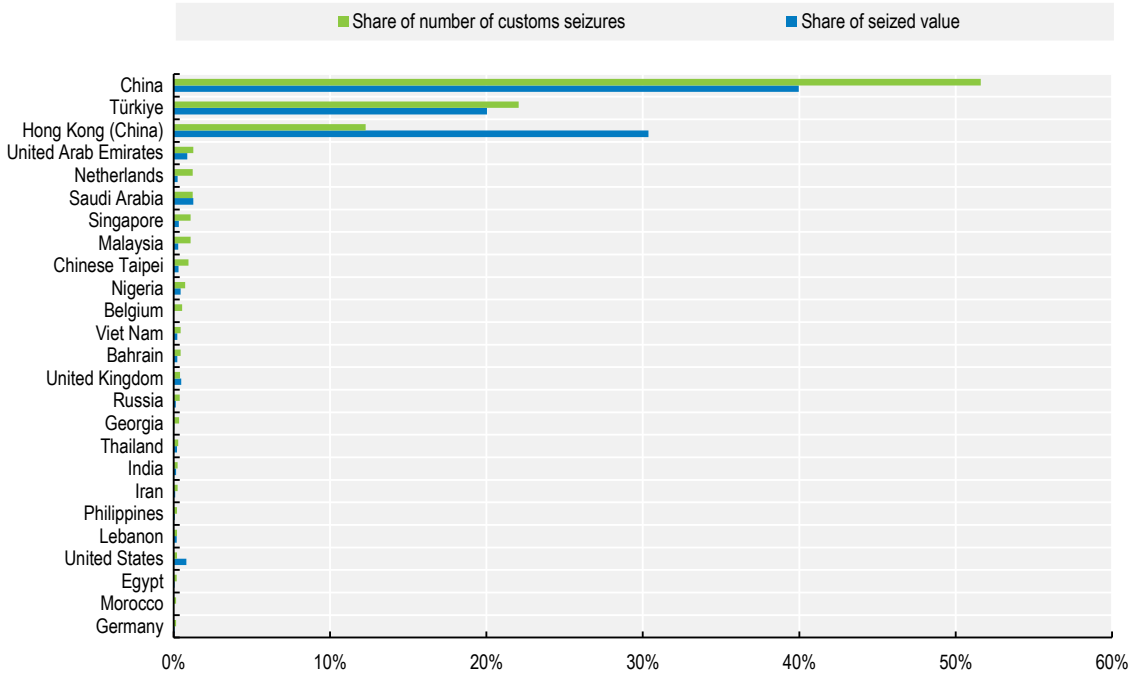
Figure 4.1. Top destination economies for global trade in counterfeit goods, 2020-21



Source: OECD-EUIPO global customs seizures.

China was by far the leading provenance economy of counterfeit products destined for the European Union, both in terms of the number of seizures and the seized value. More than half of seized counterfeit products destined to the European Union came from China, followed by Türkiye (22%) and Hong Kong (China) (12%) (Figure 4.2)

Figure 4.2. Top provenance economies for imports of fakes into the European Union



Source: OECD global customs seizures database.

Regarding the provenance economies of counterfeit goods destined to the European Union, the GTRIC-e index confirms that the scope is large, with provenances located in all world regions. The propensity to export counterfeits to the European Union was the highest for Benin,[1] Hong Kong (China), several Middle East countries and Türkiye. They were closely followed by Cambodia, Senegal, the United Arab Emirates and China. It is worth noting that economies with a high GTRIC-e score are those that either report substantial absolute values of counterfeit and pirated products or demonstrate a high proportion of counterfeit goods within their exports. This helps explain the presence of certain countries, such as those with relatively limited integration into global trade, on the list of source countries for seized counterfeit goods.

[1] The GTRIC-e is a weighted measure comprising (i) the absolute value of counterfeit and pirated product exports from a given economy, and (ii) the share of counterfeit and pirated products within that economy's total trade. Although Benin's absolute value of counterfeit exports is relatively low, the high proportion of counterfeits in its total exports results in a high GTRIC score.

Table 4.1. Top provenance economies in terms of their propensity to export counterfeit products to the European Union

GTRIC-e 2020-21

Provenance	GTRIC-e
Benin	1
Hong Kong (China)	1
Syrian Arab Republic	1
Lebanon	1
Türkiye	1
Bahrain	1
Jordan	1
Iran	1
Cambodia	0.998
Senegal	0.998
United Arab Emirates	0.997
China	0.994
Togo	0.994
Panama	0.986
Lao People's Democratic Republic	0.969
Andorra	0.944
Tanzania	0.918
Afghanistan	0.909
Albania	0.906
Saudi Arabia	0.867
Moldova	0.823
Georgia	0.818
Oman	0.797
Bangladesh	0.630

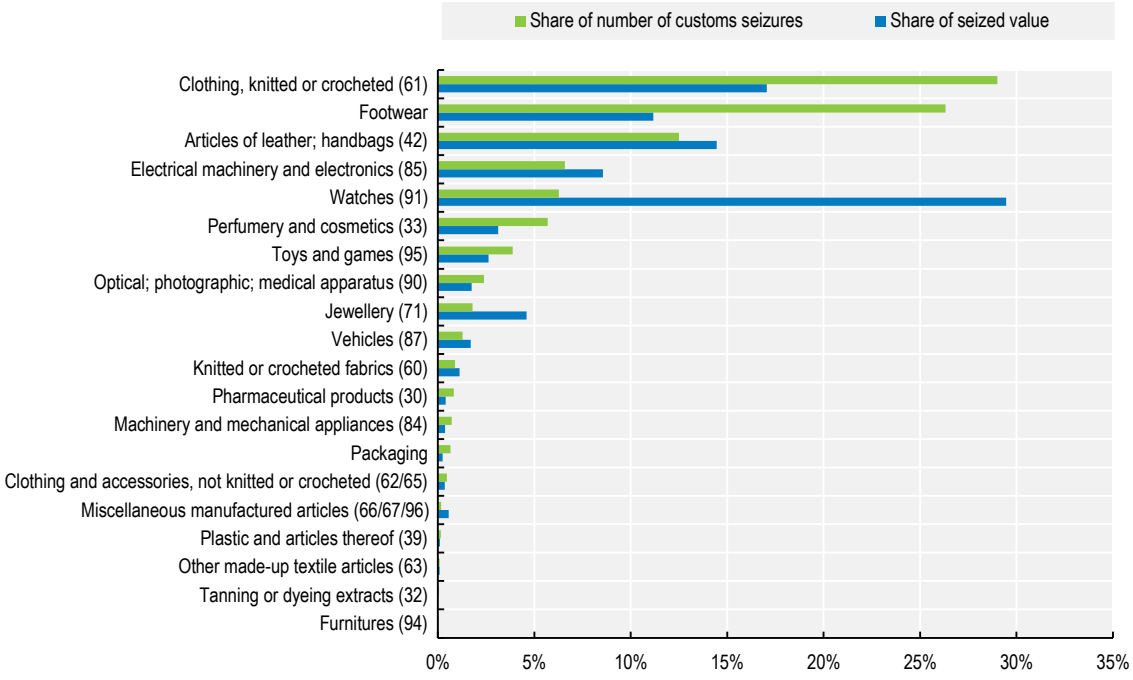
Source: OECD calculations.

4.2. Sectoral structure of fake imports into the European Union

Counterfeit products destined for the European Union varied during 2020-2021. However, there was a clear concentration around everyday consumer goods such as clothing, electronics, and toys, but luxury items like leather goods and watches were also prominent. This underscores the broad scope of counterfeiting, affecting both widely used products and high-end goods.

Among the wide range of counterfeit products imported into the European Union, EU customs officers reported significant volumes of fake goods that pose health and safety issues. In 2020-2021, these goods included cosmetics and toys, which were the 6th and 7th most frequently seized categories of counterfeit goods in the European Union. The presence of counterfeit automotive parts and pharmaceutical products, ranked 10th and 12th respectively, is also a significant concern due to the high safety risks they pose to consumers.

Figure 4.3. Top product categories for imports of fakes into the European Union, 2020-21



Source: OECD global customs seizures database.

The GTRIC product category analysis (GTRIC-p) for counterfeit imports within the European Union confirms the diversity of targeted categories and, more importantly, the high likelihood of counterfeiting involving dangerous products such as perfumes and cosmetics and toys (Table 4.2).

Table 4.2. Top 20 industries targeted by counterfeiters, 2020-21

HS code	GTRIC-p EU
Articles of leather; handbags (42)	1
Knitted or crocheted fabrics (60)	1
Clothing, knitted or crocheted (61)	1
Footwear (64)	1
Watches (91)	1
Tobacco (24)	1
Perfumery and cosmetics (33)	1
Toys and games (95)	0.999
Jewellery (71)	0.998
Miscellaneous manufactured articles (66/67/96)	0.681
Electrical machinery and electronics (85)	0.569
Optical; photographic; medical apparatus (90)	0.412
Finishing of textiles (58)	0.397
Other made-up textile articles (63)	0.224
Vehicles (87)	0.214
Clothing and accessories, not knitted or crocheted (62/65)	0.187
Beverages (22)	0.153
Musical instruments (92)	0.140
Pharmaceutical products (30)	0.127

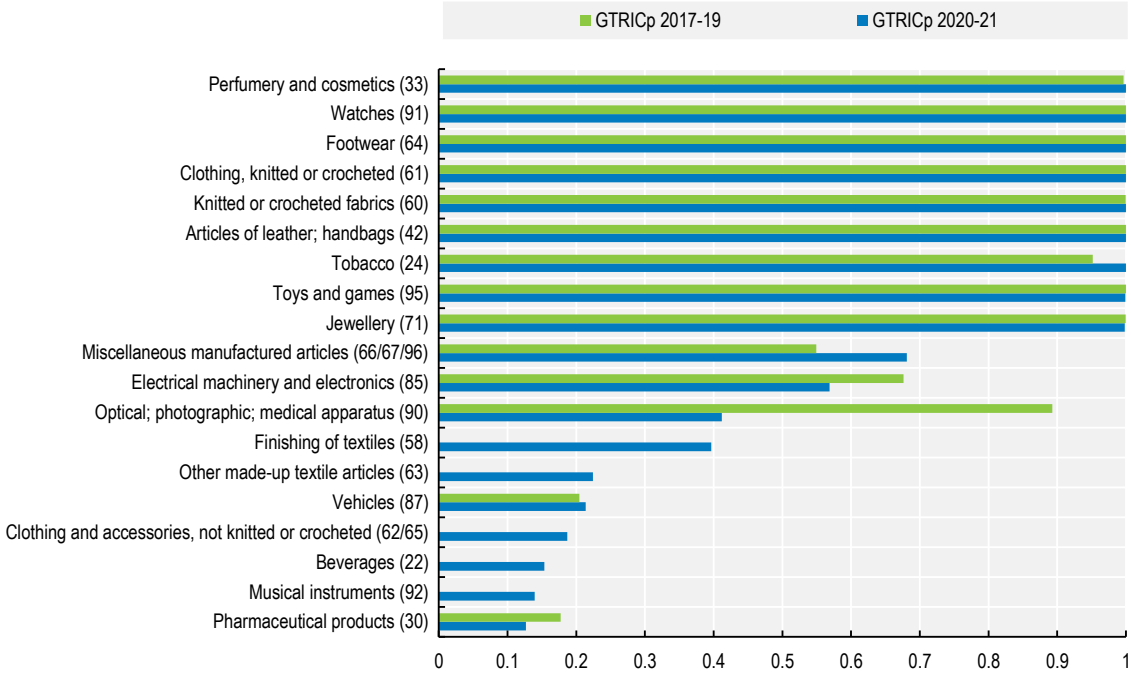
Source: OECD calculations.

As shown in Figure 4.4the main sectors likely to be subject to counterfeit imports in Europe are similar between 2020-21 and 2017-19. Common products such as clothing, electronics, toys and games, luxury goods (leather goods, jewellery, and watches) and cosmetics remain the products with a high probability of being counterfeited.

This figure also reveals that the probability associated with category 63, which includes personal protective equipment (such as face masks), was nearly zero between 2017 and 2019 but increased to 0.2 in 2020-21. This rise indicates how counterfeiters adapted to the specific circumstances of the pandemic and related consumer demand.

Figure 4.4. Changes in propensities for products categories in EU imports to be targeted for counterfeiting

GTRIC-p for the European Union, averages 2017-19 and 2020-21



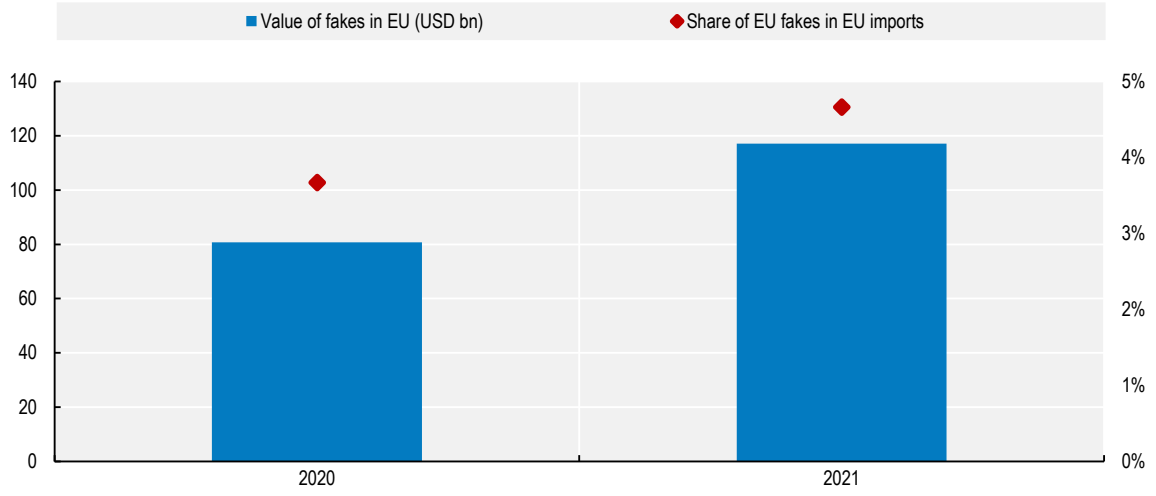
Source: OECD calculations.

4.3. Estimates of value of trade in counterfeits into the European Union

In 2021, the value of imports of fakes into the European Union is estimated to be up to USD 117 billion (EUR 98.9 billion), accounting for 4.7% of EU imports (Figure 4.5). This value, both in absolute and relative terms, was lower than the values for the period prior to COVID-19. Indeed, as estimated in (OECD/EUIPO, 2021[6]), this trade amounted to USD 134 billion (EUR 119 billion) in 2019, which accounted for 5.8% of EU imports. Trade in 2020 reflected a temporary slowdown in EU imports of counterfeits, its value being 30% lower than in 2021.

Despite the decrease in the value of counterfeit trade destined for the European Union following the COVID-19 pandemic, it remains a significant threat to European economies. Counterfeiters have retained their agility in evading detection, particularly through the relocation of the production of fakes to the destination countries.

Figure 4.5. EU value of fakes by year, 2020-21



Source: OECD calculations.

5 Addressing the persistent and complex challenges of counterfeit trade

In today's interconnected global economy, intellectual property (IP) has become a critical asset and a key generator of value. Alongside the facilitation of international trade, IP-intensive production and supply chains have expanded across borders, linking diverse markets and regions. This global integration enables companies to innovate and distribute IP-rich products widely, fostering growth and competition. However, the international scope of production also exposes these supply chains to significant risks, particularly from counterfeit trade, which has grown in complexity and scale as global markets have expanded.

Unfortunately, counterfeiting risks not only persist but remain a significant concern, undermining the integrity of complex supply chains. These globalised networks, which span many countries, are becoming increasingly susceptible to IP infringement risks. Currently, illicit trade in counterfeit goods poses a threat to economic growth and innovation, while also threatening public health, safety, and the rule of law. Furthermore, counterfeit trade fuels corruption and organised crime, establishing a vicious cycle where innovation is stifled, consumer trust is eroded, and resources are diverted from legitimate businesses to illicit operations.

The challenges facing IP protection have been exacerbated by recent global crises, such as the COVID-19 pandemic and the Russian invasion of Ukraine. These crises have introduced additional complexities into supply chain operations, often leading to shifts in enforcement priorities and creating new barriers to effective risk management. The evolving nature of these crises complicates efforts to profile risks accurately, as enforcement resources are stretched and must adapt to rapidly changing realities, including geopolitical tensions, economic volatility, and the need for swift response to public health and security threats.

Consequently, illicit trade in counterfeits persists as an important threat to economies. It remains a destabilising force within the international trading system, which is built upon shared principles of fairness and compliance. The magnitude of the issue is underscored by the findings of this report, which estimate global trade in counterfeits at a staggering USD 467 billion—a sum comparable to the GDP of some OECD economies. This enormous value illustrates that counterfeit trade is not a minor problem but represents a major challenge to the integrity of global trade and the sustainability of IP-reliant economies.

Criminal networks engaged in illicit trade seek profit, making every IP-protected product a potential target. While there is high incidence of categories such as clothing, footwear, and electronics, it is evident across a diverse range of product categories, including pharmaceuticals, automotive components, spare parts, batteries, fertilisers, and food. The diversity of counterfeit goods demonstrates the scope of the problem, as well as the adaptability of illicit networks to target nearly any product with perceived value in global markets.

Counterfeit products frequently pose serious, even critical, risks to consumers, as counterfeiters often disregard health and safety standards. This issue is particularly serious in sectors like cosmetics, pharmaceuticals, and automotive parts. For instance, a recent increase in counterfeit airbags exemplifies the life-threatening risks associated with this issue. The substandard counterfeit airbags, often unknowingly installed by garages, led consumers to believe they were purchasing legitimate products, thus exposing consumers to severe safety hazards.

China remains the primary source of counterfeit goods, accounting for approximately 62% of the counterfeit items seized in global trade, either originating directly from China or routed through Hong Kong (China). China's prominence has remained constant through the years that the OECD and EUIPO have been studying the problem. China's vast manufacturing capacities, which have made it a dominant producer of legitimate goods, also facilitate the production and distribution of counterfeits, underscoring the scale and impact of counterfeit manufacturing hubs within global trade networks.

Counterfeiters exploit evolving distribution channels, often using small parcels and mail to transport fake goods. In fact, about 65% of counterfeit seizures occur in these channels, which are favoured for their speed and reach. However, in terms of value, counterfeit goods transported via containers are more substantial, with each container potentially holding hundreds or thousands of counterfeit items. As a result, approximately 18% of the value of counterfeit seizures is derived from shipments found in container ships, making container trade an essential focus for enforcement.

The enforcement of anti-counterfeiting measures has become increasingly challenging. The recent geopolitical climate and the lasting impact of the COVID-19 pandemic have made it difficult to identify and monitor consistent trade routes, which complicates risk profiling. Additionally, the surge in small parcel shipments has stretched screening capabilities, as high volumes and shorter processing times diminish the capacity of enforcement officers to conduct effective profiling and inspections.

Small parcels, in particular, pose a unique challenge, as they often are not handled at enforcement facilities equipped for thorough inspections. Instead, these parcels move through regular cargo routes, bypassing the scrutiny necessary for identifying counterfeits. This logistical gap places additional pressure on enforcement agencies, which are struggling to adapt to the evolving dynamics of counterfeit trade while contending with limited resources and shifting priorities.

A critical obstacle to enforcement efforts is the generally low priority assigned to anti-counterfeiting initiatives by enforcement authorities. In many non-OECD countries, this issue is exacerbated by a lack of formal resources or political will to address counterfeiting. In some cases, enforcement is undermined when counterfeiters bribe or otherwise corrupt enforcement officials.

In OECD countries, resource constraints following the pandemic, combined with the geopolitical challenges of the present, have relegated anti-counterfeiting efforts to a lower priority, often behind pressing concerns such as narcotics, tax evasion, and national security. However, despite these challenges, a path forward exists, grounded in enhanced co-ordination among enforcement bodies and collaboration with the private sector.

Strengthening co-ordination among enforcement authorities, within and across borders, is essential, as effective anti-counterfeiting efforts require seamless information sharing among various agencies, including customs, financial intelligence units, local police and market surveillance officers. Presently, these agencies often operate independently, limiting the effectiveness of their actions against counterfeit trade. Greater collaboration and integration of real-time data could substantially improve detection and enforcement outcomes.

Collaboration with rights holders, the parties most knowledgeable about genuine products, is also vital. Rights holders can offer insights into the distinguishing features of authentic goods and the common channels through which genuine products are distributed, enabling more effective profiling and identification of counterfeit items. Real-time data and technological solutions can further enhance these

efforts, allowing for rapid responses to emerging threats. In this regard, the establishment of the EU Intellectual Property Enforcement Portal (IPEP), should be highlighted. The EU IP Enforcement Portal is an online platform developed by the European Union Intellectual Property Office (EUIPO) to support the enforcement of intellectual property rights across the European Union. It connects rights holders, such as companies and individuals, with enforcement authorities, including customs officials and police, to combat counterfeiting and piracy. The portal enables rights holders to share detailed information about their IP rights, facilitates communication with enforcement authorities for handling infringement cases, allows the management and submission of Customs Applications for Action (AFAs), and provides alerts and reports on suspected counterfeit activities, as well as tracking cases and actions taken.

Moreover, trade intermediaries, including postal services, express shipping operators, free trade zones, and container shipping companies, have a significant role in curbing counterfeit trade. Through best practice exchanges, the establishment of cooperative frameworks, and the implementation of incentive structures, these intermediaries can help prevent the abuse of their networks by counterfeiters. The EU IPEP has successfully expanded the range of actors accessing the platform, as trade intermediaries are now included. They can access the portal and share key information to support the detection of goods infringing intellectual property rights.

5.1. Next steps

This report highlights the grave challenges posed by counterfeit trade, while also pointing to avenues for further investigation and policy development. Continued monitoring is essential, as counterfeit trade remains a persistent pollutant in global supply chains, and regular assessments provide policymakers with crucial data to guide their efforts.

Given the considerable health and safety risks counterfeit goods pose to consumers, a deeper analysis of this aspect is warranted. Furthermore, counterfeit trade not only violates IP laws but also disregards environmental and labour regulations. Examining the scope and impact of these aspects could yield valuable insights into the broader impact of counterfeiting.

Large companies tend to play a proactive role in supporting enforcement efforts, often providing additional resources and valuable information that enhance detection and seizure of counterfeit goods infringing on their IP rights. This proactive engagement by large companies can inadvertently create an enforcement bias, potentially resulting in a lower rate of effectiveness in identifying counterfeits that infringe upon the IP of SMEs.

Understanding the challenges facing SMEs is essential, as they may lack the resources to engage with enforcement agencies to the same extent as larger firms. Consequently, SMEs could be disproportionately affected by counterfeiting, with their IP rights receiving comparatively less protection. Further analysis is required to thoroughly examine this phenomenon and to determine whether SMEs indeed experience this enforcement gap. If confirmed, additional research should identify the specific sectors and areas where this bias most significantly impacts SMEs, enabling tailored policy responses to ensure that all businesses, regardless of size, benefit from effective IP enforcement. The OECD and the EUIPO have already studied the trade in counterfeit goods and SMEs in a report (OECD/EUIPO, 2023[9]) which analyses the economic impact of illicit trade in counterfeit goods on small and medium-sized enterprises.

Finally, a focused analysis of trade routes and transit points abused by counterfeiters could provide insights into the most commonly exploited hubs and the types of goods most frequently trafficked. Such research could enhance the ability of enforcement bodies to pre-empt and disrupt counterfeit trade at its most vulnerable junctures, contributing to a more robust, rule-based international trading system.

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Annex A. Methodological notes

A.1. Constructing the General Trade-Related Index of Counterfeiting for products (GTRIC-p)

GTRIC-p is constructed through four steps:

1. For each reporting economy, the seizure percentages for sensitive goods are calculated.
2. For each product category, aggregate seizure percentages are calculated, taking the reporting economies' share of total sensitive imports as weights.
3. From these, a counterfeit source factor is established for each industry, based on the industries' weight in terms of total trade.
4. Based on these factors, the GTRIC-p is calculated.

Step 1: Measuring reporter-specific product seizure intensities

$\tilde{v}_i^k$ and $\tilde{m}_i^k$ are, respectively, the seizure and import values of product type *k* (as registered according to the HS on the two-digit level) in economy *i* from *any* provenance economy in a given year. Economy *i*'s relative seizure intensity (seizure percentages) of good *k,* denoted below as γ_i^k is then defined as:

$$\gamma_i^k = \frac{\tilde{v}_i^k}{\sum_{k=1}^{\bar{K}} \tilde{v}_i^k}, \text{ such that } \sum_{k=1}^{\bar{K}} \gamma_i^k = 1 \; \forall \; i \; \in \{1, \dots, \bar{N}\}$$

$k = \{1, \dots, \bar{K}\}$ is the range of sensitive goods (the total number of goods is given by *K*) and $i = \{1, \dots, \bar{N}\}$ is the range of reporting economies (the total number of economies is given by *N*).

Step 2: Measuring general product seizure intensities

The general seizure intensity for product *k*, denoted $\boldsymbol{\Gamma^k}$, is then determined by averaging seizure intensities, γ_i^k, weighted by the reporting economies' share of total sensitive imports in a given product category, *k*. Hence:

$$\Gamma^k = \sum_{i=1}^{\bar{N}} \omega_i \, \gamma_i^k \; , \forall \; k \; \in \{1, \dots, \bar{K}\}$$

The weight of reporting economy *i* is given by:

$$\omega_i = \frac{\tilde{m}_i^k}{\sum_{i=1}^{\bar{N}} \tilde{m}_i^k}$$

where $\tilde{m}_i$ is *i*'s total registered import value of sensitive goods ($\sum_{i=1}^{\bar{n}} \omega_i = 1$)

Step 3: Measuring product-specific counterfeiting factors

$\widetilde{M}_i^k = \sum_{i=1}^{N} \widetilde{m}_i^k$ is defined as the total registered imports of sensitive good *k* for *all* economies and $\widetilde{M} = \sum_{k=1}^{\bar{K}} \widetilde{M}^k$ is defined as the total registered world imports of *all* sensitive goods.

The world import share of good *k,* denoted s^k, is therefore given by:

$$s^k = \frac{\widetilde{M}^k}{\widetilde{M}}, \text{ such that } \sum_{k=1}^{\bar{K}} s^k = 1$$

The general counterfeiting factor of product category *k*, denoted CP^k*,* is then determined as the following:

$$CP^k = \frac{\Gamma^k}{s^k}$$

The counterfeiting factor reflects the sensitivity of product infringements occurring in a particular product category, relative to its share in international trade. These are based on the seizure percentages calculated for each reporting economy and constitute the foundation of the formation of GTRIC-p.

Step 4: Establishing GTRIC-p

GTRIC-p is constructed from a transformation of the general counterfeiting factor and measures the relative likelihood that different product categories will be subject to counterfeiting and piracy in international trade. The transformation of the counterfeiting factor is based on two main assumptions:

- Assumption (A1): The counterfeiting factor of a particular product category is positively correlated with the actual intensity of international trade in counterfeit and pirated goods covered by that chapter. The counterfeiting factors must thus reflect the real intensity of actual counterfeit trade in the given product categories.
- Assumption (A2): This acknowledges that the assumption A1 may not be entirely correct. For instance, the fact that infringing goods are detected more frequently in certain categories could imply that differences in counterfeiting factors across products merely reflect that some goods are easier to detect than others or that some goods, for one reason or another, have been specially targeted for inspection. The counterfeiting factors of product categories with lower counterfeiting factors could, therefore, underestimate actual counterfeiting and piracy intensities in these cases.

In accordance with assumption A1 (positive correlation between counterfeiting factors and actual infringement activities) and assumption A2 (lower counterfeiting factors may underestimate actual activities), GTRIC-p is established by applying a positive monotonic transformation of the counterfeiting factor index using natural logarithms. This standard technique of linearisation of a non-linear relationship (in the case of this study between counterfeiting factors and actual infringement activities) allows the index to be flattened and gives a higher relative weight to lower counterfeiting factors (Verbeek, 2000[10]).

In order to address the possibility of outliers at both ends of the counterfeiting factor index (i.e. some categories may be measured as particularly susceptible to infringement even though they are not, whereas others may be measured as insusceptible although they are), it is assumed that GTRIC-p follows a left-truncated normal distribution, with GTRIC-p only taking values of zero or above.

The transformed counterfeiting factor is defined as:

$$cp^k = \ln(CP^k + 1)$$

Assuming that the transformed counterfeiting factor can be described by a left-truncated normal distribution with $cp^k \geq 0$, then, following Hald (Hald, 1952[11]), the density function of GTRIC-p is given by:

$$f_{LTN}(cp^k) = \begin{Bmatrix} 0 & if\ cp^k \leq 0 \\ \frac{f(cp^k)}{\int_0^\infty f(cp^k) dcp^k} & if\ cp^k \geq 0 \end{Bmatrix}$$

where $f(cp^k)$ is the non-truncated normal distribution for cp^k specified as:

$$f(cp^k) = \frac{1}{\sqrt{2\pi\sigma_{cp}^2}}\ exp\left(-\frac{1}{2}\left(\frac{(cp^k) - \mu_{cp}}{\sigma_{cp}}\right)^2\right)$$

The mean and variance of the normal distribution, here denoted μ_{cp} and σ_{cp}^2, are estimated over the transformed counterfeiting factor index, cp^k, and given by $\hat{\mu}_{cp}^2$ and σ_{cp}^2. This enables the calculation of the counterfeit import propensity index (GTRIC-p) across HS codes, corresponding to the cumulative distribution function of cp^k.

A.2. Constructing the general trade-related index of counterfeiting economies (GTRIC-e)

GTRIC-e is also constructed through four steps:

1. For each reporting economy, the seizure percentages for provenance economies are calculated.
2. For each provenance economy, aggregate seizure percentages are calculated, taking the reporting economies' share of total sensitive imports as weights.
3. From these, each economy's counterfeit source factor is established, based on the provenance economies' weight in terms of total trade.
4. Based on these factors, the GTRIC-e is calculated.

Step 1: Measuring reporter-specific seizure intensities from each provenance economy

$\tilde{v}_i^j$ is economy i's registered seizures of all types of infringing goods (i.e. all *k*) originating from economy *j* in a given year in terms of their value. γ_i^j is economy *i*'s relative seizure intensity (seizure percentage) of all infringing items that originate from economy *j*, in a given year:

$$\gamma_i^j = \frac{\tilde{v}_i^j}{\sum_{j=1}^{\bar{J}} \tilde{v}_i^j} \text{ such that } \sum_{j=1}^{\bar{J}} \gamma_i^j = 1\ \forall\ i\ \in \{1, \dots, \bar{N}\}$$

Where $j = \{1, \dots, \bar{J}\}$ is the range of identified provenance economies (the total number of exporters is given by *J*) and $i = \{1, \dots, \bar{N}\}$ is the range of reporting economies (the total number of economies is given by *N*).

Step 2: Measuring general seizure intensities of each provenance economy

The general seizure intensity for economy *j*, denoted Γ^j, is then determined by averaging seizure intensities, γ_i^j, weighted by the reporting economy's share of total imports from known counterfeit and pirate origins[2]. Hence:

$$\Gamma^j = \sum_{i=1}^{\bar{N}} \omega_i \gamma_i^j \,, \forall\, j \in \{1, \dots, \bar{J}\}$$

The weight of reporting economy *i* is given by:

$$\omega_i = \frac{\tilde{m}_i^j}{\sum_{i=1}^{\bar{N}} \tilde{m}_i^j}, \text{ such that } \sum_{i=1}^{\bar{N}} \omega_i = 1$$

Step 3: Measuring partner-specific counterfeiting factors

$\bar{M}_i^j = \sum_{i=1}^{N} \bar{m}_i^j$ is defined as the total registered world imports of all sensitive products from *j*,[3] and $\bar{M} = \sum_{j=1}^{\bar{J}} \bar{M}^j$ is the total world import of sensitive goods from all provenance economies.

The share of imports from provenance economy *j* in total world imports of sensitive goods, denoted s^j, is then given by:

$$s^j = \frac{\bar{M}^j}{\bar{M}}, \text{ such that } \sum_{j=1}^{\bar{J}} s^j = 1$$

From this, the economy-specific counterfeiting factor is established by dividing the general seizure intensity for economy *j* by the share of total imports of sensitive goods from *j*.

$$CE^j = \frac{\Gamma^j}{s^j}$$

Step 4: Establishing GTRIC-e

Gauging the magnitude of counterfeiting and piracy from a provenance economy perspective can be done in a similar fashion as for sensitive goods. Hence, a General Trade-Related Index of Counterfeiting for economies (GTRIC-e) is established along similar lines and assumptions:

- Assumption (A3): The intensity by which any counterfeit or pirated article from a particular economy is detected and seized by customs is positively correlated with the actual amount of counterfeit and pirate articles imported from that location.
- Assumption (A4): This acknowledges that assumption A3 may not be entirely correct. For instance, a high seizure intensity of counterfeit or pirated articles from a particular provenance economy could be an indication that the provenance economy is part of a customs profiling scheme or that it is specially targeted for investigation by customs. The importance that provenance economies with low seizure intensities play regarding actual counterfeiting and piracy activity could, therefore, be under-represented by the index and lead to an underestimation of the scale of counterfeiting and piracy.

As with the product-specific index, GTRIC-e is established by applying a positive monotonic transformation of the counterfeiting factor index for provenance economies using natural logarithms. This follows from assumption A3 (positive correlation between seizure intensities and actual infringement activities) and assumption A4 (lower intensities tend to underestimate actual activities). Considering the possibilities of outliers at both ends of the GTRIC e-distribution (i.e. some economies may be wrongly measured as being

[2] This is different to the economy's share of total imports of sensitive goods used to calculate GTRIC-p.

[3] This is different to the total imports of sensitive goods as used in calculation of GTRIC-p

particularly susceptible sources of counterfeit and pirated imports, and vice versa), GTRIC-e is approximated by a left-truncated normal distribution as it does not take values below zero.

The transformed general counterfeiting factor across provenance economies on which GTRIC-e is based is therefore given by applying logarithms onto economy-specific general counterfeit factors (see, for example, Verbeek (2000[10]):

$$ce^j = ln(CE^j + 1)$$

In addition, following GTRIC-p, it is assumed that GTRIC-e follows a truncated normal distribution with $ce^j \geq 0$ for all *j*. Following Hald (1952[11]), the density function of the left-truncated normal distribution for ce^j is given by:

$$g_{LTN}(ce^j) = \begin{cases} 0 & if\ ce^j \leq 0 \\ \dfrac{g(ce^j)}{\int_0^\infty g(ce^j)dce} & if\ ce^j \geq 0 \end{cases}$$

where $g(ce^j)$ is the non-truncated normal distribution for ce^j specified as:

$$g(ce^j) = \frac{1}{\sqrt{2\pi\sigma_{ce}^2}} exp\left(-\frac{1}{2}\left(\frac{ce^j - \mu_{ce}}{\sigma_{ce}}\right)^2\right)$$

The mean and variance of the normal distribution, here denoted μ_{ce} and σ_{ce}^2, are estimated over the transformed counterfeiting factor index, ce^j, and given by $\hat{\mu}_{ce}$ and $\hat{\sigma}_{ce}^2$. This enables the calculation of the counterfeit import propensity index (GTRIC-e) across provenance economies, corresponding to the cumulative distribution function of ce^j.

A.3. Constructing the General Trade-Related Index of Counterfeiting (GTRIC)

In two OECD/EUIPO (2016[4]) (2019[5]) studies, propensities to import infringing goods from different trading partners were developed using seizure data as a basis. The use of data is maximised by applying a generalised approach in which the propensities for products to be counterfeit and for economies to be sources of counterfeit goods were analysed separately. This increased the data coverage of both products and provenance economies significantly, which increases the robustness of the overall estimation results. Unfortunately, it also reduced the detail of the analysis, meaning that counterfeit trade patterns specific to individual reporting economies, for both product types and trading partners, were not simultaneously accounted for; this introduced bias into the results. On balance, however, given the large scope of the analysis, the advantages of increasing data coverage can be viewed as outweighing the biases.

This approach combines the two indices: GTRIC-p and GTRIC-e. In this regard, it is important to emphasise that the index resulting from this combination does not account for differences in infringement intensities across different types of goods that may exist between economies. For instance, imports of certain counterfeit and pirated goods could be particularly large from some trading partners and small from others. An index taking such “infringement specialisation”, or concentration, into account is desirable and possible to construct; but it would require detailed seizure data. The combined index, denoted GTRIC, is, therefore, a generalised index that approximates the relative likelihoods that particular product types, imported from specific trading partners, are counterfeit and/or pirated.

Establishing likelihoods for product and provenance economy

In this step, for each trade flow from a given provenance economy and for a given product category the likelihoods of containing counterfeit and pirated products will be established.

The general propensity for an economy to export infringed items of HS category *k* is denoted P^k, and given by GTRIC-p, so that:

$$P^k = F_{LTN}(cp^k)$$

where $F_{LTN}(cp^k)$ is the cumulative probability function of $f_{LTN}(cp^k)$.

Furthermore, the general likelihood of importing any type of infringing goods from economy *j* is denoted as P^j , and given by GTRIC-e, so that:

$$P^j = G_{LTN}(ce^j)$$

where $G_{LTN}(ce^j)$ is the cumulative probability function of $f_{LTN}(ce^j)$.

The general probability of importing counterfeit or pirated items of type *k* originating from economy *j* is then denoted P^{jk} and approximated by:

$$P^{jk} = P^k P^j$$

Therefore, $P^{jk} \in [\varepsilon_p \varepsilon_e; 1)$, $\forall j, k$, with $\varepsilon_p \varepsilon_e$ denoting the minimum average counterfeit export rate for each sensitive product category and each provenance economy,[4] it is assumed that $\varepsilon_p = \varepsilon_e = 0.05$.

A.4. Calculating the absolute value

α is the fixed point, i.e. the maximum average counterfeit import rate of a given type of infringing good, *k*, originating from a given trading partner, *j*.

α can be applied to propensities for importing infringing goods of type *j* from trading partner *k* (αP^{jk}). As a result, a matrix of counterfeit import propensities **C** is obtained**.**

$$\boldsymbol{C} = \begin{pmatrix} \boldsymbol{\alpha P^{11}} & \boldsymbol{\alpha P^{21}} & & \boldsymbol{\alpha P^{1K}} \\ \boldsymbol{\alpha P^{12}} & \ddots & & \\ \vdots & & \boldsymbol{\alpha P^{jk}} & \vdots \\ & & \ddots & \\ \boldsymbol{\alpha P^{J1}} & & & \boldsymbol{\alpha P^{JK}} \end{pmatrix}$$ with dimension *J x K*

The matrix of world imports is denoted by **M.** Applying **C** on **M** yields the absolute volume of trade in counterfeit and pirated goods.

In particular, the import matrix **M** is given by:

$$\boldsymbol{M} = \begin{pmatrix} \boldsymbol{M_1} \\ \vdots \\ \boldsymbol{M_i} \\ \vdots \\ \boldsymbol{M_n} \end{pmatrix}$$ with dimension n x J x K

[4] In the OECD methodology, these factors were applied to all provenance economies and all HS modules in order to account for counterfeit and pirated exports of products and/or from provenance economies that were not identified. This assumption is relaxed in this study, given the overall good data quality.

Each element is defined by economy *i*'s unique import matrix of good *k* from trading partner *j*.

$$\boldsymbol{M_i} = \begin{pmatrix} \boldsymbol{m_{i1}^1} & \boldsymbol{m_{i1}^2} & & \boldsymbol{m_{i1}^K} \\ \boldsymbol{m_{i2}^1} & \ddots & & \\ \vdots & & \boldsymbol{m_{ij}^k} & \vdots \\ & & \ddots & \\ \boldsymbol{m_{ij}^1} & & & \boldsymbol{m^{JK}} \end{pmatrix}$$ with dimension *J* x *K*

Hence, the element m_{ij}^k denotes *i*'s imports of product category *k* from trading partner *j*, where $i = \{1, \ldots, n\}$, $j = \{1, \ldots, J\}$, and $k = \{1, \ldots, K\}$.

Denoted by Ψ, the product-by-economy percentage of counterfeit and pirated imports can be determined as the following:

$$\Psi = \boldsymbol{C'M} \div \boldsymbol{M}$$

Total trade in counterfeit and pirated goods, denoted by the scalar **TC**, is then given by:

$$\boldsymbol{TC} = \boldsymbol{i}_1{}'\Psi\boldsymbol{i}_2$$

where $\boldsymbol{i}_1$ is a vector of one with dimension *nJ* x 1, and $\boldsymbol{i}_2$ is a vector of one with dimension *K* x 1. Then, by denoting total world trade by the scalar $\boldsymbol{TM} = \boldsymbol{i}_1{}'\boldsymbol{M}\boldsymbol{i}_2$, the value of counterfeiting and piracy in world trade, s_{TC}, is determined by:

$$s_{TC} = \frac{\boldsymbol{TC}}{\boldsymbol{TM}}$$

Annex B. Additional tables

Table A B.1. GTRIC-e for clothing

Average 2020-21

Provenance	GTRICe
Afghanistan	0.95
Albania	0.08
Algeria	0.07
Angola	0.06
Argentina	0.11
Armenia	0.07
Australia	0.06
Austria	0.07
Azerbaijan	0.48
Bahrain	1.00
Bangladesh	0.06
Belarus	0.76
Benin	0.08
Bosnia and Herzegovina	0.08
Brazil	0.95
Bulgaria	0.33
Cambodia	0.20
Canada	0.07
Cayman Islands	0.11
China	0.85
Colombia	0.22
Côte d'Ivoire	0.10
Czech Republic	0.06
Denmark	0.07
Dominican Republic	0.07
Ecuador	0.07
Egypt	0.26
Estonia	0.06
Republic of North Macedonia	0.08
Gabon	0.07
Georgia	0.85
Germany	0.07
Ghana	0.07
Guatemala	0.16
Guinea	0.06
Hong Kong (China)	1.00
India	0.09
Indonesia	0.07
Iran	0.41

Provenance	GTRICe
Iraq	0.06
Israel	0.07
Japan	0.06
Kazakhstan	0.07
Kenya	0.31
Korea	0.07
Kuwait	0.06
Lebanon	1.00
Macau (China)	0.06
Malaysia	0.09
Mexico	0.06
Mongolia	0.06
Morocco	0.21
Netherlands	0.08
Nigeria	0.70
Norway	0.07
Oman	0.29
Pakistan	0.24
Peru	0.07
Philippines	0.15
Poland	0.07
Qatar	0.07
Türkiye	1.00
Russia	0.09
Rwanda	0.20
Saudi Arabia	0.13
Senegal	0.86
Serbia	0.07
Singapore	0.10
Spain	0.07
Sri Lanka	0.11
Sudan	0.17
Suriname	0.08
Switzerland	0.07
Syrian Arab Republic	1.00
Tajikistan	0.15
Tanzania	0.82
Thailand	0.15
Togo	0.09
Tunisia	0.41
Turkmenistan	0.07
Uganda	0.07
Ukraine	0.08
United Arab Emirates	0.31
United Kingdom	0.31
United States	0.07
Venezuela	0.65
Viet Nam	0.20

Table A B.2. GTRIC-e for footwear

Average 2020-21

Provenance	GTRICe
Afghanistan	0.068
Albania	0.566
Algeria	0.058
Angola	0.055
Argentina	0.051
Armenia	0.083
Australia	0.051
Austria	0.051
Bahrain	0.493
Bangladesh	0.073
Belarus	0.061
Belgium	0.052
Benin	0.304
Bermuda	0.110
Bosnia and Herzegovina	0.051
Brazil	0.056
Bulgaria	0.076
Cambodia	0.057
Cameroon	0.232
Canada	0.052
Chile	0.051
China	1
Colombia	0.483
Côte d'Ivoire	0.205
Croatia	0.060
Czech Republic	0.051
Denmark	0.057
Dominican Republic	0.069
Ecuador	0.052
Egypt	0.144
Republic of North Macedonia	0.062
France	0.051
Georgia	0.662
Germany	0.052
Ghana	0.141
Guatemala	0.051
Guinea	0.126
Guyana	0.474
Hong Kong (China)	1
India	0.098
Indonesia	0.053
Iran	0.474
Iraq	0.053
Israel	0.052
Italy	0.051
Japan	0.052
Kazakhstan	0.052
Kenya	0.123
Korea	0.189

Provenance	GTRICe
Kuwait	0.052
Lao People's Democratic Republic	0.109
Lebanon	0.999
Luxembourg	0.053
Malaysia	0.099
Mauritius	0.073
Mexico	0.058
Moldova	0.055
Mongolia	0.069
Morocco	0.175
Mozambique	0.611
Netherlands	0.065
Niger	0.245
Nigeria	0.554
Oman	0.071
Pakistan	0.087
Palestinian Authority	0.145
Panama	0.082
Peru	0.051
Philippines	0.205
Poland	0.062
Qatar	0.067
Türkiye	1
Romania	0.052
Russia	0.069
Rwanda	0.119
Saudi Arabia	0.164
Senegal	0.274
Serbia	0.060
Sierra Leone	0.072
Singapore	0.124
Slovak Republic	0.051
South Africa	0.053
Spain	0.052
Sudan	0.105
Suriname	0.066
Sweden	0.053
Switzerland	0.053
Syrian Arab Republic	1
Tajikistan	0.338
Tanzania	1
Thailand	0.065
Togo	0.140
Tunisia	0.053
Uganda	0.675
Ukraine	0.088
United Arab Emirates	0.159
United Kingdom	0.069
United States	0.059
Viet Nam	0.222

Table A B.3. GTRIC-e for perfume and cosmetics

Average 2020-21

Provenance	GTRICe
Armenia	0.12
Belarus	0.32
Brazil	0.14
Cambodia	0.12
Canada	0.14
China	1.00
Colombia	0.12
Dominican Republic	0.14
France	0.12
Georgia	0.40
Germany	0.12
Greece	0.13
Hong Kong (China)	1.00
India	0.13
Israel	0.14
Korea	0.12
Kuwait	0.38
Lebanon	0.21
Malaysia	0.13
Mexico	0.14
Mozambique	1.00
Netherlands	0.21
Nicaragua	0.14
Nigeria	0.91
Pakistan	0.13
Philippines	0.12
Türkiye	1.00
Russia	0.14
Saudi Arabia	0.13
Singapore	0.14
South Africa	0.13
Spain	0.12
Switzerland	0.12
Syrian Arab Republic	0.99
Tanzania	0.68
Thailand	0.14
Ukraine	0.14
United Arab Emirates	0.99
United Kingdom	0.15
United States	0.14
Viet Nam	0.14

Table A B.4. GTRIC-e for electronics

Average 2020-21

Provenance	GTRICe
Afghanistan	0.76
Armenia	0.06
Australia	0.04
Bahrain	0.05
Belarus	0.04
Belgium	0.04
Cambodia	0.53
Canada	0.04
Chile	0.04
China	1.00
Colombia	0.05
Czech Republic	0.04
Democratic Republic of the Congo	0.06
Egypt	0.06
France	0.04
Georgia	0.52
Germany	0.04
Greece	0.05
Haiti	0.09
Honduras	0.07
Hong Kong (China)	1.00
India	0.04
Indonesia	0.04
Iran	0.05
Japan	0.05
Kazakhstan	0.04
Korea	0.08
Lao People's Democratic Republic	0.06
Lebanon	0.04
Malaysia	0.07
Mexico	0.05
Netherlands	0.05
Pakistan	0.04
Philippines	0.05
Poland	0.04
Republic of Türkiye	0.48
Russia	0.05
Saudi Arabia	0.05
Singapore	0.10
Slovak Republic	0.04
Spain	0.06
Switzerland	0.04
Syrian Arab Republic	0.81
Thailand	0.08
Ukraine	0.06
United Arab Emirates	0.26
United Kingdom	0.21

Provenance	GTRICe
United States	0.06
Uzbekistan	0.04
Viet Nam	0.05

Illicit Trade

Mapping Global Trade in Fakes 2025

Global Trends and Enforcement Challenges

The increasing interconnectedness of global economies has created new opportunities for trade and innovation, yet it has also become more challenging to protect intellectual property and enforce trade regulations. Expanding supply chains and the rise of e-commerce have facilitated illicit trade, particularly in the trade of counterfeit goods; these pose risks to public safety, disrupt legitimate businesses, and impact economic stability. This report provides an analysis of global trade in counterfeit and pirated goods, using the latest (2021) customs seizure data. It offers an overview of the scope, scale, and key characteristics of such illicit trade, with a focus on the European Union. The findings are concerning: in 2021, counterfeit and pirated goods accounted for up to 2.3% of global trade and up to 4.7% of EU imports. This report also examines emerging trends and highlights the need for co-ordinated international efforts to secure supply chains.

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