

3 Industry analysis

This chapter explores the trade in counterfeit goods infringing Swiss IPR in-depth for four affected Swiss sectors: watchmaking; mechanical, electrical engineering and metalworking industry; the FMCG sector; and the pharmaceutical industry. It provides an analysis at the industry level highlighting the most affected products, the provenance and destination as well as modes of transport used to send counterfeit goods infringing Swiss IPR. For each sector it also assesses the value of trade in fake Swiss goods and the detrimental impacts in terms of lost sales, lost jobs and tax revenues.

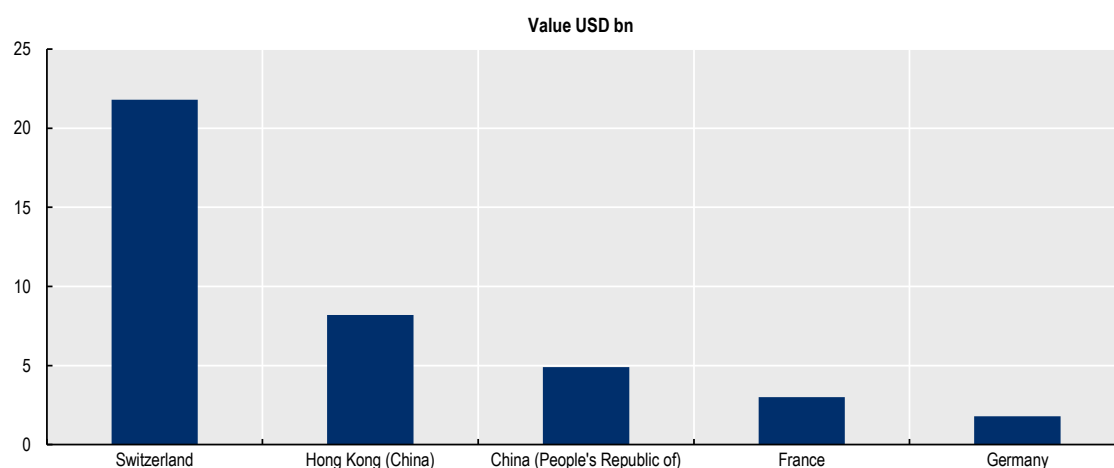
The watch industry

This section will focus exclusively on counterfeit watches (Harmonised System [HS] code 91). Importantly, watches are a vast majority of fakes in this category. Customs rarely report seizures of jewellery or watch parts (usually watch straps).

In 2016, the exports of the watchmaking industry represented 6.5% of total Swiss exports at CHF 19.5 billion (USD 19.8 billion) while they amounted to almost CHF 21.7 billion (USD 21.8 billion) in 2019, according to the United Nations (UN) trade database. In terms of value, Switzerland is the leading exporter of watches, far ahead of Hong Kong (China).

Asia accounted for more than half of Swiss watch exports (53%), followed by Europe (30%). The watch industry is particularly internationalised since exports represented 95% of total sales.

Figure 3.1. Main exporters of watches, USD billion, 2019



Source: *Fédération de l'industrie horlogère suisse FH*

Scope and volume of counterfeit Swiss watches

Globally, Switzerland suffers most from watch counterfeiting, since 55% of customs seizures of counterfeit watches concerned Swiss rights holders, well ahead of France, Italy, Japan, Luxembourg and the United States (US).

Box 3.1. The market for fake Swiss watches

The Swiss watch industry comprises a huge variety of famous and internationally known watch brands and has a unique tradition in watchmaking dating back centuries. Counterfeiting is a very big issue for the watchmaking industry due to the attractive quality and design of Swiss watches. The production of counterfeit watches and the intentional use of misleading geographical indications led Switzerland to protect its rights owners in 1971 by establishing an ordinance regulating the use of the word “Swiss” for watches.

The market for Swiss counterfeit watches is demand-driven. Counterfeiters react very quickly to changes in the demand for fake watches and have the capacity to adapt their offers on an industrial scale. The market for fakes seems to be segmented, with prices and quality varying from one country to another, correlated with the economic situation and income levels.

Fake watches are distributed all over the world, often in small parcels via certain national postal services or private delivery companies. The role and responsibility of such intermediaries in the supply chain are sometimes questionable, according to experts at the Federation of the Swiss Watch Industry (FH). Counterfeiters also use specific and strategically situated storage and transit hubs, for example the United Arab Emirates (UAE), to ship the watches to end consumers.

The use of the Internet for selling fake watches is not a new phenomenon and is increasing. Many online platforms (Alibaba, Bukalapak and others) and social media (such as Facebook Marketplace and WhatsApp) are used as distribution channels. Even YouTube is involved, since there are videos explaining how to buy fake watches, with links to sales websites. However, some Internet sales channels have taken active measures to prevent counterfeiters from easily posting fake products on their platforms.

The FH gathers more than 450 members from the watchmaking industry. Under the umbrella of its anti-counterfeiting group, the FH organises seizure operations and awareness-raising campaigns all over the world. As a result, the FH and its partners seize millions of fake watches every year and train hundreds of police and customs officers in the fight against the illegal phenomenon of fake watches. Together with its partners, the FH also intervenes in consultation procedures in order to improve the protection of its members’ intellectual property rights (IPRs) and works to raise consumer awareness about both blatant counterfeiting and its hidden labyrinths.

The interviews with representatives of Swiss industries (see also Box 3.3 for an interview with the Swiss mechanical and electrical engineering [MEM] industries) have been designed to gather qualitative expertise about counterfeiting that we are not able to spot with our dataset. It is also important to note that customs authorities are not the sole data source for counterfeiting. As a result, the more global approach taken by the industries may highlight certain findings that are different from those based on our dataset on customs seizures.

Source: Interview with representatives from the Federation of the Swiss Watch Industry (FH).

The best estimates using the data provided by customs authorities and the General Trade-Related Index of Counterfeiting (GTRIC) methodology indicate that, in 2018, the global trade in counterfeit and pirated Swiss watches amounted to as much as CHF 3.35 billion (USD 3.37 billion) (Table 3.1.).

Table 3.1. Estimated value of global trade in counterfeit Swiss watches, 2018

	Value of fakes (USD billion)	Share of Swiss watches exports (%)
Ceiling value 20%	3.37	15.6
Ceiling value 15%	2.52	11.6
Ceiling value 10%	1.68	7.8

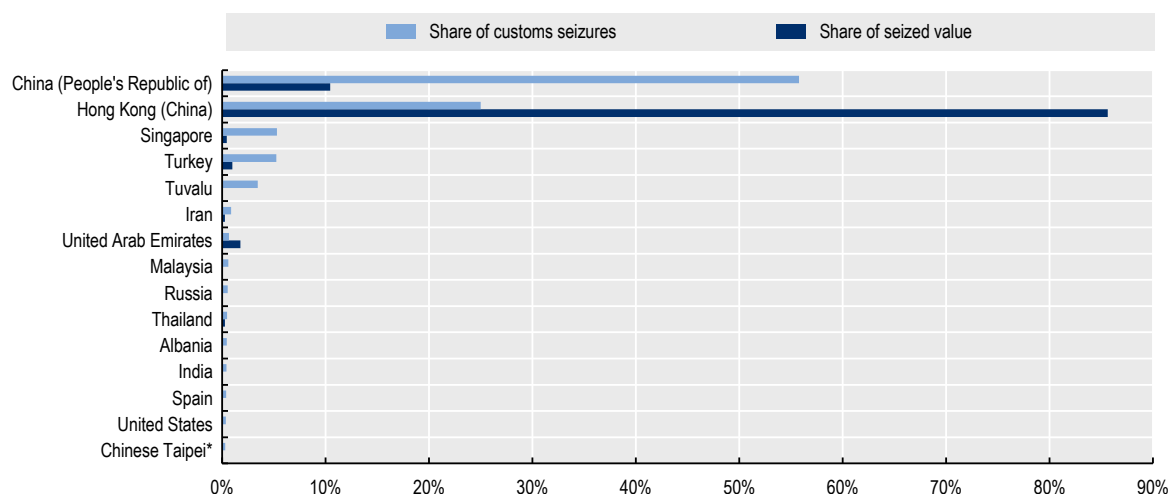
Trade routes

Over the 2011-16 period, the seized fake Swiss watches mainly came from Asia (China 53.3%, Hong Kong (China) 25.4%, Singapore 9.2% and Turkey 2.2%).

China and Hong Kong (China) were also the 2 main provenance countries in terms of seized value, respectively representing 67% and 22.4% of the value of seized counterfeit Swiss watches. They were followed by Malaysia (2.3%) and Morocco (1.6%).

Over the 2017-19 period, China and Hong Kong (China) remained the 2 main provenance economies for fake Swiss watches, representing respectively 53% and 24% of customs seizures (Figure 3.2). They were followed by Singapore, Turkey and Tuvalu.

Hong Kong (China) was the first provenance economy for fake Swiss watches whose share of seized value amounted to 84% (+59 percentage points compared to the previous period).

Figure 3.2. Top 15 provenance economies of counterfeit Swiss watches, 2017-19

Note: The data from US customs are not included in this figure.

Tuvalu is a seasonal transit point, misused by traffickers in their operations.

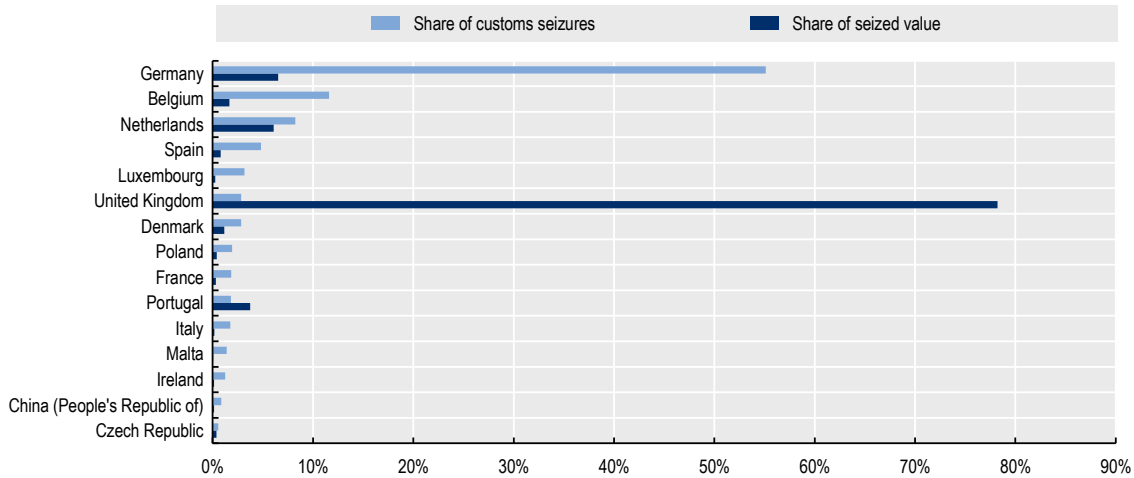
Source: OECD customs seizures database

European countries were almost the only destination for counterfeit Swiss watches in terms of shares of customs seizures over the 2011-16 period. Together Belgium, Denmark, Germany, Italy and the United Kingdom (UK) represent more than 80% of customs seizures. In terms of seized value, however, the picture is quite different, with Spain, Germany, the United Kingdom, France and Argentina being the main destination countries for fake Swiss watches. The non-European countries appearing on the list of destination countries for seized value include Argentina, , Brazil, Nigeria, Uruguay and the US and Morocco. Together they represent around 13% of the total seized value.

Over 2017-2019, European countries were the main destination countries for fake Swiss watches. Germany, Belgium, the Netherlands and Spain being on the top of the destination countries' list (Figure 3.3).

In terms of seized value, United Kingdom is by far the first destination for fake Swiss watches (77% of seized value) followed by Germany, the Netherlands and Portugal.

Figure 3.3. Main destination economies for counterfeit Swiss watches, 2017-2019

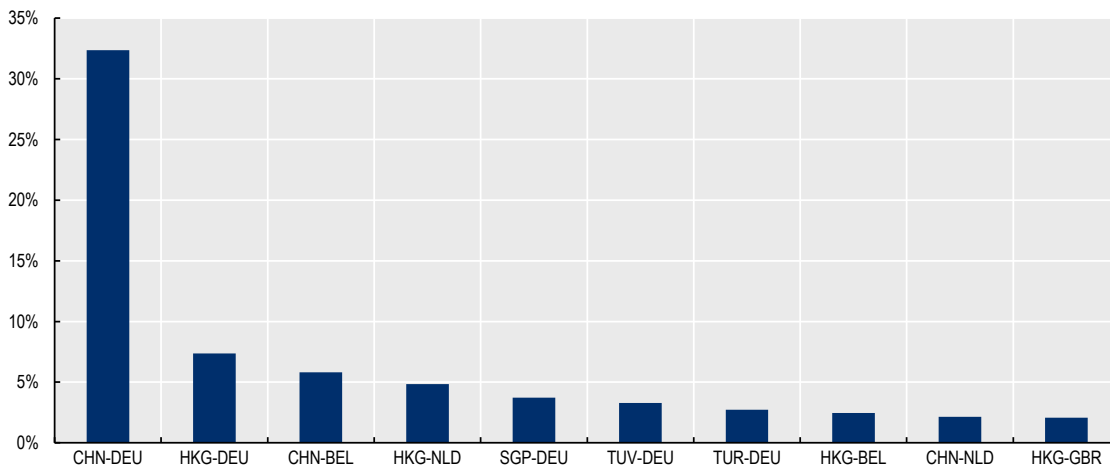


Note: The data from US customs are not included in this figure

Source: OECD customs seizures database

Descriptive statistics on the most intensive trade routes presented in Figure 3.4. indicate that the largest share of counterfeit Swiss watches are exported from China and Hong Kong (China) to European countries (e.g. Germany, the Netherlands and the UK).

Figure 3.4. Top provenance-destination economies for fake Swiss watches, 2017-19



Note: These data come primarily from customs seizures data of the European Commission Directorate-General for Taxation and Customs Union (DG TAXUD) database, complemented by World Customs Organization (WCO) statistics. Consequently, the information for non-European destinations might be under-represented.

Source: OECD customs seizures database

Data on seizures also allow us to identify four countries that could potentially be transit points for counterfeit Swiss watches since they are both provenance and destination economies. These countries are Morocco, Kuwait, the United Arab Emirates and Greece. Greece appears to be a transit point for counterfeit Swiss watches. It receives fake watches from China, Turkey and Singapore and re-exports them to European countries (Germany, Italy and Malta). The transit status of the other three countries cannot be confirmed as data on production are not available.

Table 3.2. Potential key transit points for counterfeit watches, 2017-19

Provenance economy	Transit point	Destination	Transport mode from transit to destination
China (People's Republic of)		Senegal, Spain	Air
	Senegal**	Belgium	Postal
Senegal			
China (People's Republic of)		Germany, Portugal	Air
	United Arab Emirates**	Czech Republic, Germany	Express courier
United Arab Emirates (transit point)		Belgium, Ireland	Postal
China (People's Republic of)	Qatar**	Cyprus*, Denmark	Air
Hong Kong (China)		Germany	Postal

Note: *The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the UN, Turkey shall preserve its position concerning the "Cyprus issue".

The Republic of Cyprus is recognised by all members of the UN with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

** Of course, it is highly possible that several transit points are misused on one trade route and that fake watches transit through Qatar and the United Arab Emirates on their way to the final destination. However, due to a shortage of data on production, it is very difficult to conclude with a high degree of robustness whether some of these economies (Qatar, Senegal and the United Arab Emirates) are producers or transit point.

Transport methods

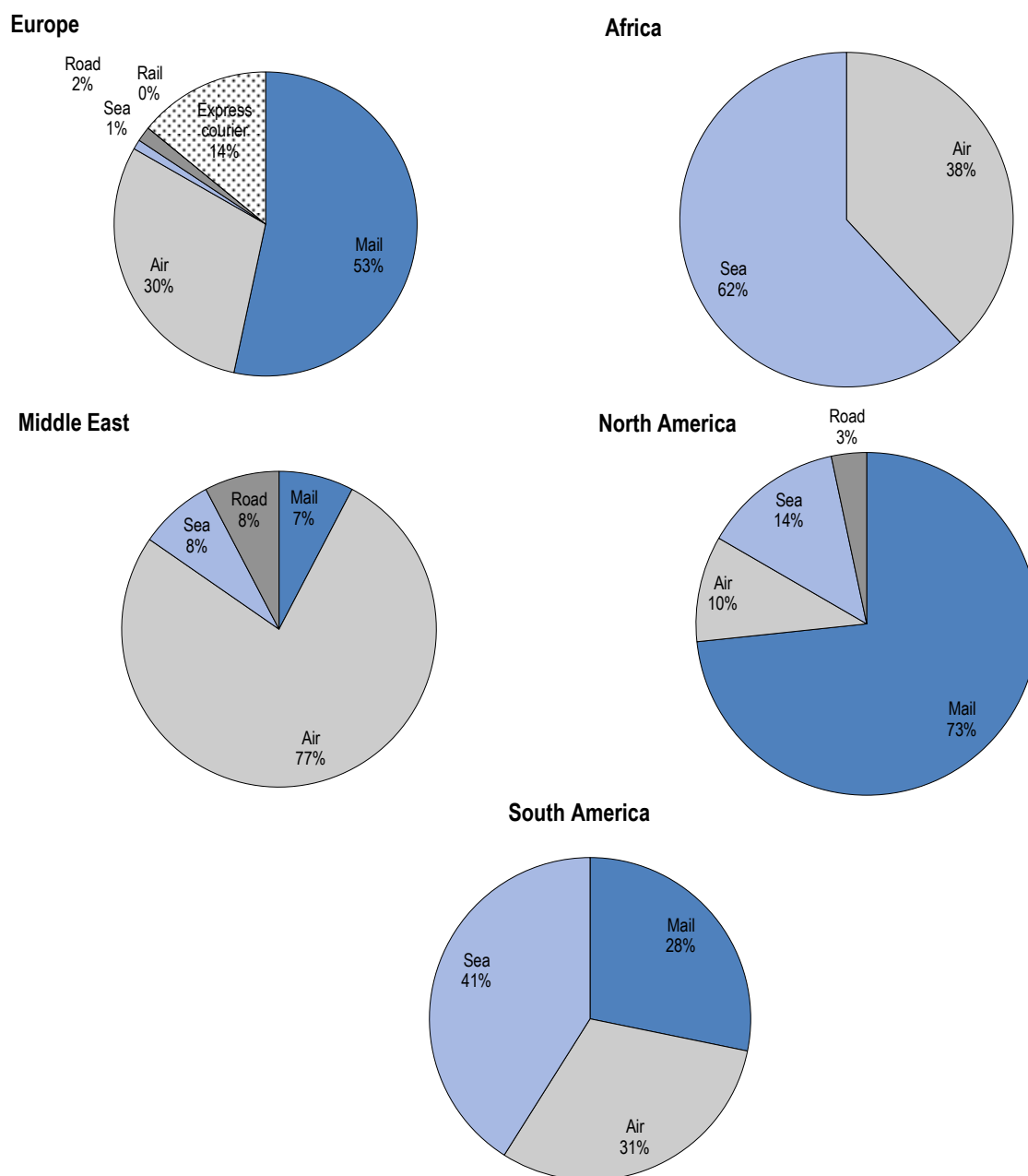
As can be seen in Figure 3.5, methods used to transport counterfeit Swiss watches differ from region to region. Mail is the most common method used in Europe (53%) and North America (73%), while sea transport is often used in South America (41%) and Africa (62%). In all regions, air transport is the usual transport mode.

Over the 2017-19 period, mail (73%) was the preferred transport mode for counterfeit Swiss watches, followed by air transport (14%) and express courier (12%) (see Figure 3.6).

As a percentage of seized value, express couriers were the most used transport mode to ship fake Swiss watches.

Figure 3.5. Conveyance methods for counterfeit Swiss watches, by region, 2011-16

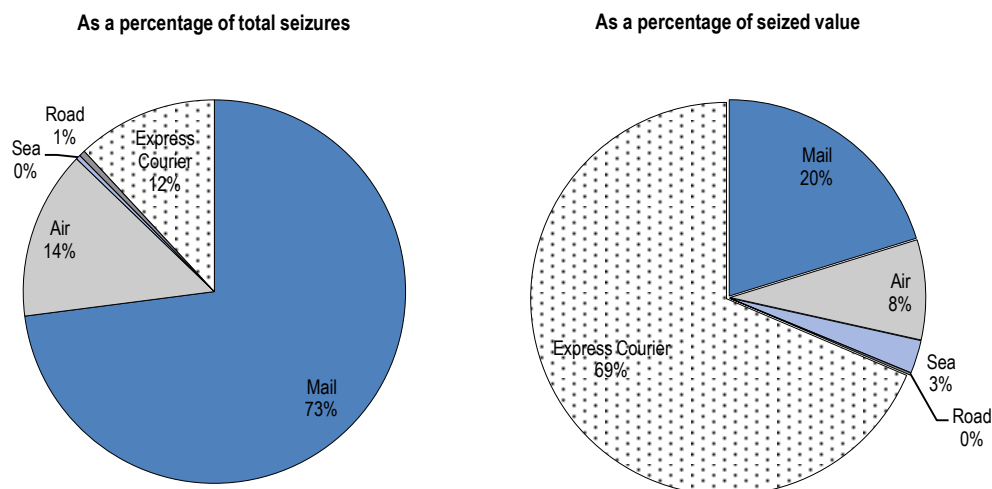
As a percentage of total seizures



Note: Due to a lack of available information for Asia, transport modes used to ship fake Swiss watches to this region are not presented.

Source: OECD customs seizures database

Figure 3.6. Conveyance methods for counterfeit Swiss watches, 2017-19



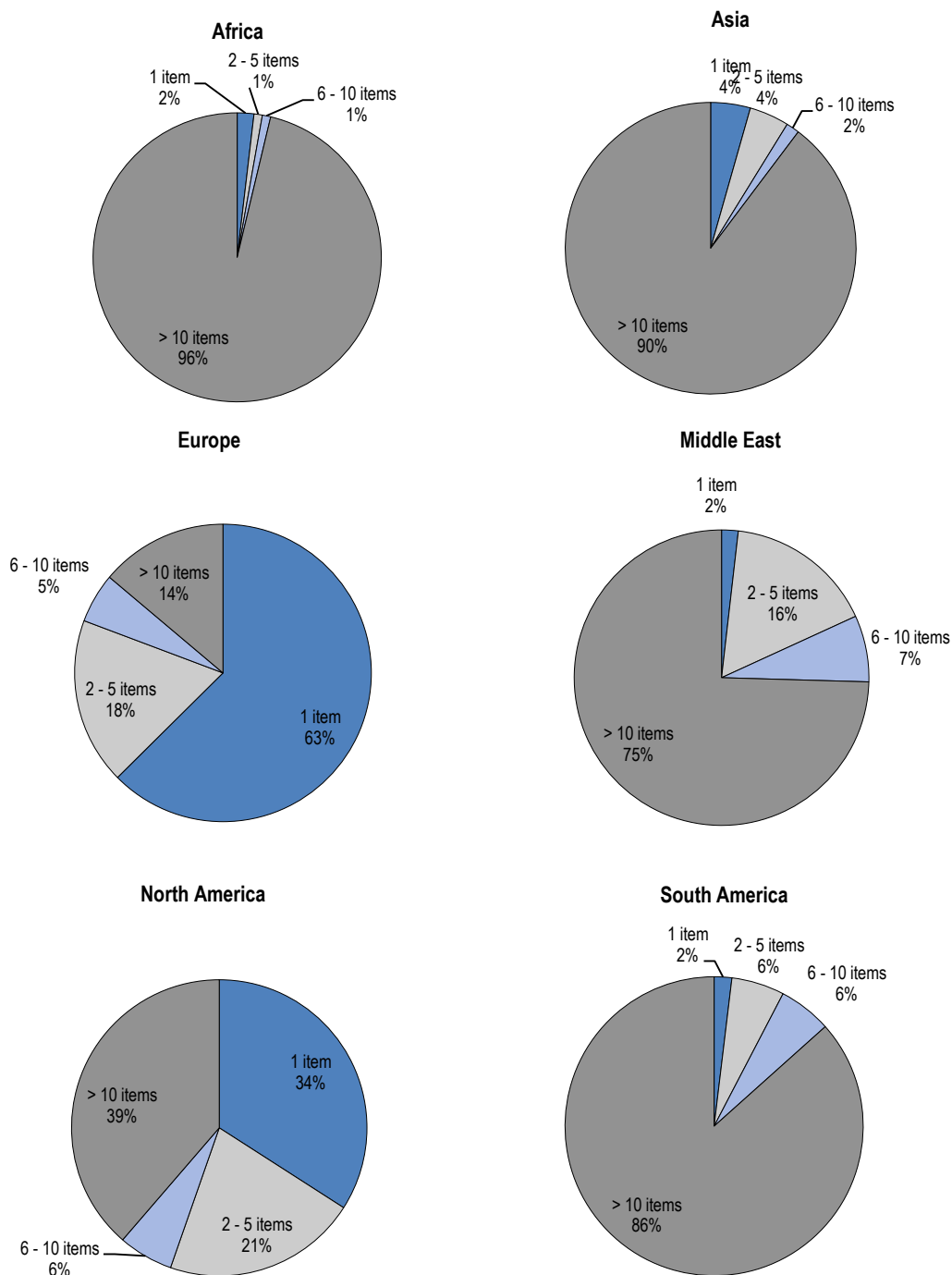
Source: OECD customs seizures database

Shipment sizes vary considerably depending on the region (Figure 3.7). Indeed, Swiss fake watches destined for the northern regions (Europe and North America) were mainly shipped in small parcels (i.e. fewer than six items), while those destined for southern regions (Africa, Asia, Middle East and South America) were shipped in big parcels (i.e. more than ten items).

Over the 2017-19 period, the size of shipment of fake Swiss watches tends to be smaller than in the previous period. Indeed, 94% of fake Swiss watches were sent in small shipments (i.e. less than 6 items) in 2017-19 (see Figure 3.8), while this share amounted to 91% over the previous period.

Figure 3.7. Shipment sizes for counterfeit Swiss watches by region, 2011-16

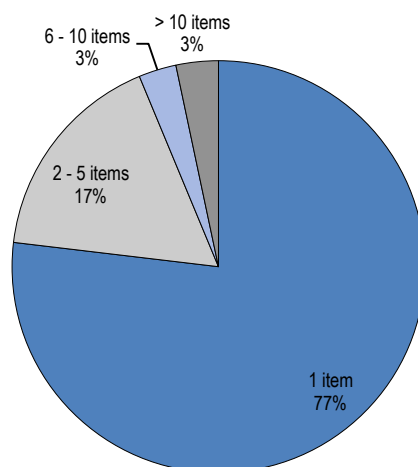
As a percentage of customs seizures



Source: OECD customs seizures database

Figure 3.8. Shipment sizes for counterfeit Swiss watches, 2017-19

As a percentage of customs seizures



Source: OECD customs seizures database

The losses incurred by counterfeited watches

In 2016, the total value of fake Swiss watches traded amounted to CHF 2.67 billion (USD 2.71 billion). This implies sales losses of almost CHF 1.67 billion (USD 1.7 billion) for Swiss rights holders, i.e. more than 8.4% of the sector's exports, implying 3 000 lost jobs. Swiss watch rights holders are particularly targeted by counterfeiters and the whole industry is heavily hit by counterfeiting.

In 2018, the total value of fake Swiss watches amounted to CHF 3.35 billion (USD 3.37 billion), when calculating with the upper limit of counterfeit trade. This implies sales losses of almost CHF 1.98 billion (USD 2 billion) equivalent to 9.3% of the sector's exports and more than 3 700 job losses for Swiss watchmaking rights holders.

This massive counterfeiting of Swiss watches also implies damages in terms of government revenues.

In 2018, trade in counterfeit Swiss watches led to foregone revenues (labour income tax and corporate income tax [CIT]) of almost CHF 66.2 million (USD 66.6 million) for the Swiss government. If the fake Swiss watches were bought in Switzerland, this could represent an additional loss of CHF 154.1 million (USD 155 million) of value-added tax (VAT).

The large share of the secondary market for fake watches, estimated at 55% (

Table 2.2), reveals the strong demand for fake versions of Swiss watches (Box 3.1.). This means that more than 55% of fake watches have been sold to people who knew they were fakes. As for the primary market, where people buy fakes unknowingly, we estimate the consumer detriment due to counterfeiting to be almost CHF 1.78 billion (USD 1.79 billion).

COVID-19 crisis and trade in counterfeit Swiss watches

The ongoing COVID-19 pandemic has triggered a crisis that has had and will continue to have a significant impact on illicit trade in counterfeit goods in many sectors, including watches. The situation is dynamic and it is too early to conclude about the final, overall effect that the pandemic has had on the illicit trade in fake Swiss watches. However, dialogue with the enforcement officials, the industry and from ongoing reports permit us to draw some early conclusions.

As for the short-term effects, several COVID-19-related factors have shaped the landscape of illicit trade for fake Swiss watches. These include: i) heavy restrictions imposed on global transport; and ii) disruption in distribution chains due to lockdowns and health concerns.

Criminal networks have reacted very quickly to the crisis and adapted their strategies to take advantage of the shifting landscape. Counterfeiters have continued to supply counterfeit Swiss watches during the lockdowns in Europe and the US. This shows that these well-organised criminal networks have foreseen the disruptions of some transport routes and managed their operations accordingly. Of course, these criminal groups also benefitted because different world regions were not all affected by the pandemics simultaneously. Consequently, they were able draw some lessons from those regions hit first (e.g. far East Asia).

At the same time, COVID-19 also resulted in changes in customs control priorities (e.g. focus on COVID-19-related products) and labour shortages among law enforcement officials. Unfortunately, these factors reduce enforcement efforts to counter illicit trade in many counterfeit products, including watches.

Another observed trend is a substantial shift towards further misuse of the online environment. There is robust observable growth in the supply of fake Swiss watches on all types of online platforms, including those that used to be relatively free from this risk. In 2020, the Federation of the Swiss Watch Industry (FH) Internet Enforcement Team closed more than 1.2 million offers for fake watches on numerous Internet sales platforms.

To counter this quickly evolving risk, the FH has organised a set of online training courses for police and customs authorities worldwide. Also, support programmes for brand owners were initiated to offset the negative impacts caused by the illicit trade during the pandemic.

The mechanical, electrical engineering and metalworking (MEM) industry

The MEM industry is Switzerland's largest manufacturing industry, with the highest share of value-added according to Swissmem statistics. This industry includes the following sectors:

- manufacturing of basic metals
- manufacturing of fabricated metal products, except machinery and equipment
- manufacturing of computer, electronic and optical products (except watches)
- manufacturing of electrical equipment, manufacturing of machinery and equipment not elsewhere classified
- manufacturing of motor vehicles, trailers and semi-trailers
- manufacturing of other transport equipment
- manufacturing of medical and dental instruments and supplies and repair and installation of machinery and equipment.¹

This industry is a pillar for the Swiss economy as it significantly contributes to Swiss sales, exports and employment. In 2016, the total sales of the MEM industry amounted to almost CHF 89.7 billion (USD 91 billion) in 2016 equivalent to almost 35% of all Swiss manufacturing sales.² In the same year, exports from the industry amounted to CHF 62.1 billion (USD 63 billion) which was 70% of the MEM industry's sales. The industry employed in 2016 around 317 000 people (full- and part-time), around 47% of all employment in Swiss manufacturing.

Despite the slowdown of sales of the MEM sector in 2019, it remained the first industrial sector in terms of value creation. Indeed, in 2019, this industry represented around 40% of the Swiss industrial added value according to the latest Swissmem statistics. In line with sales decline, the MEM sector's exports have decreased by 2.1% in 2019 amounting to CHF 68.3 billion (USD 68.7 billion). In 2019, the MEM industry remained the first employer of the Swiss manufacturing industry, employing 325 000 people (equivalent to 47% of Swiss manufacturing industry workers).

Scope and volume

Interviews with representatives from the MEM industry revealed that most counterfeit products are mass-produced items rather than large machinery (Box 3.3.). These products, such as pressure cookers, electricity meters, power switches and semiconductors, are relatively easy to reproduce in a way that could deceive potential consumers, without maintaining high quality standards.

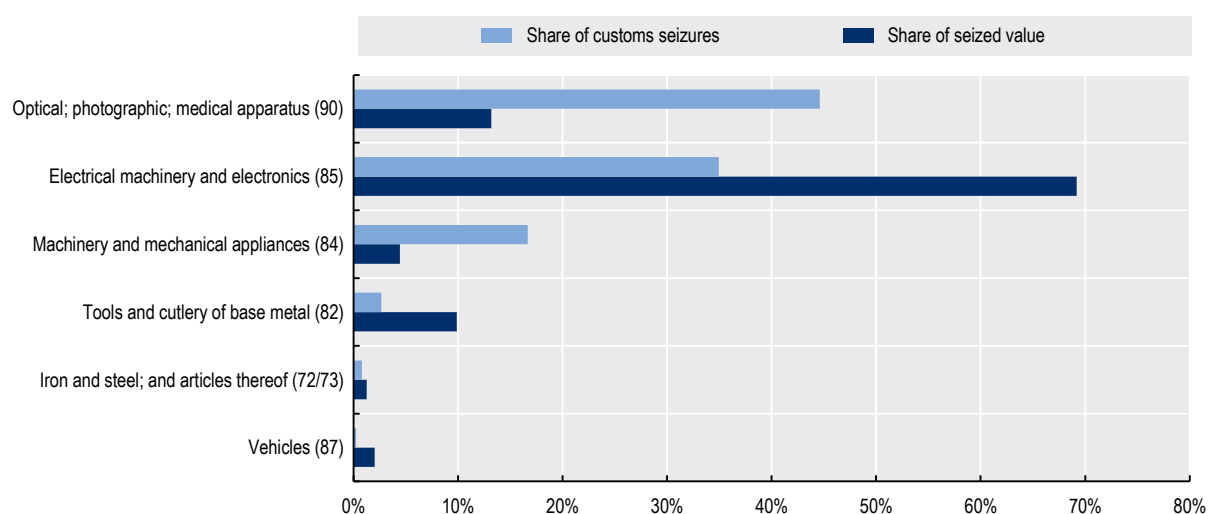
In addition, counterfeiting in this industry also concerns falsified maintenance and machine safety certificates. Such fake certificates are used to deceive final users and convince them to pay a higher price for a substandard, counterfeit product.

As shown in Figure 3.9, during 2011-16, the sector of optical, photographic and medical apparatus and the sector of electrical engineering and electronics were the most impacted by counterfeiting in terms of both value and volume.

The targeted products of Swiss MEM counterfeits have changed compared to the previous period. Over the 2017-19 period, counterfeiters focused on electrical engineering and electronics, the most targeted products, followed by optical, photographic, medical apparatus and machinery and mechanical appliances (see Figure 3.10).

Electrical engineering and electronics products accounted for 96% of the seized value of counterfeit Swiss MEM products.

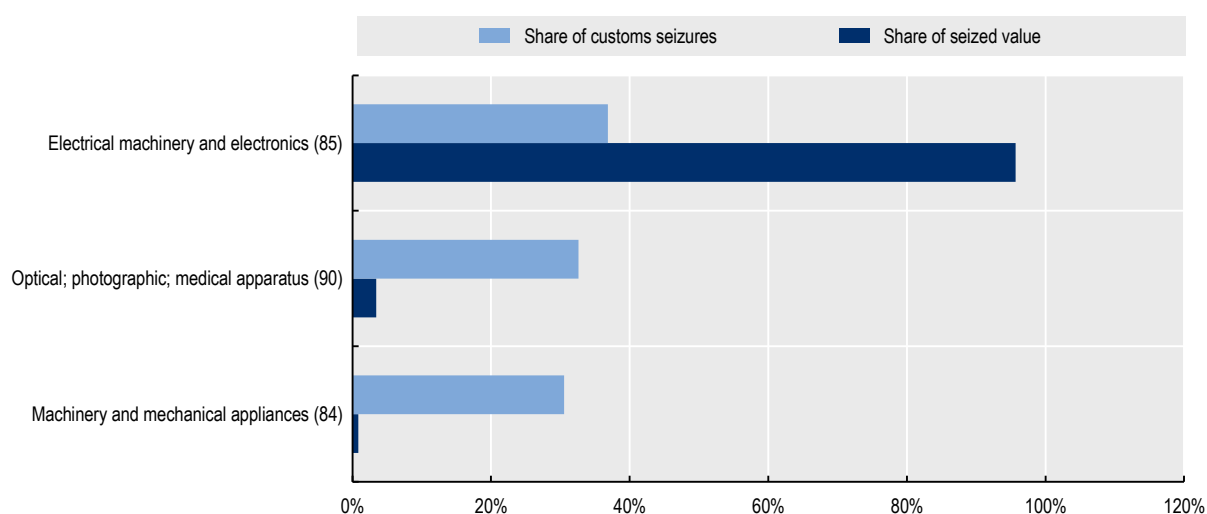
Figure 3.9. Seizures of counterfeit Swiss MEM products by HS codes, 2011-16



Note: The number in parenthesis refer to the HS codes corresponding to the selected sector.

Source: OECD customs seizures database

Figure 3.10. Seizures of counterfeit Swiss MEM products by HS codes, 2017-19



Note: The number in parenthesis refer to the HS codes corresponding to the selected sector.

Source: OECD customs seizures database

Box 3.2. Counterfeiting safety concerns and small- and medium-sized enterprise (SME) vulnerability in the MEM industry

The MEM industry is represented by the association Swissmem, which brings together around 1 200 companies. Most of these are SMEs and 90% of the business in this industry is based on business-to-business (B2B) relationships.

Industry delegates highlight that the range of counterfeits that hits the industry is very wide and includes such products as intellectual property (IP)-infringing escalators. However, in most cases, fake products that infringe the IP rights of Swiss MEM industry are mass-produced items that are relatively easy to reproduce and that could deceive potential consumers. This includes such products as electricity meters, power switches, semiconductors pressure cookers and kitchen appliances.

In fact, most customers of fakes are unaware they are buying fakes and are consequently deceived as they are paying genuine prices. This consumer deception is sometimes additionally reinforced by a counterfeit safety certificate.

The consumer deception raises health and safety concerns since the quality of counterfeit goods is lower than genuine items and could be dangerous.

The little or unstructured co-operation in this industry, as each company deals with this issue individually, leads to a two-tier system regarding the protection of IP infringement. While big companies have their own legal department or work with international law firms, SMEs face the cost barrier and cannot afford legal assistance to counter their IP rights infringement.

Source: Interview with a representative of the Swiss association of mechanical and electrical engineering industries, Swissmem.

The best estimates using the data provided by customs authorities and the GTRIC methodology indicate that in 2018, the estimated value of global trade in counterfeit Swiss MEM products amounted to CHF 1.89 billion (USD 1.9 billion).

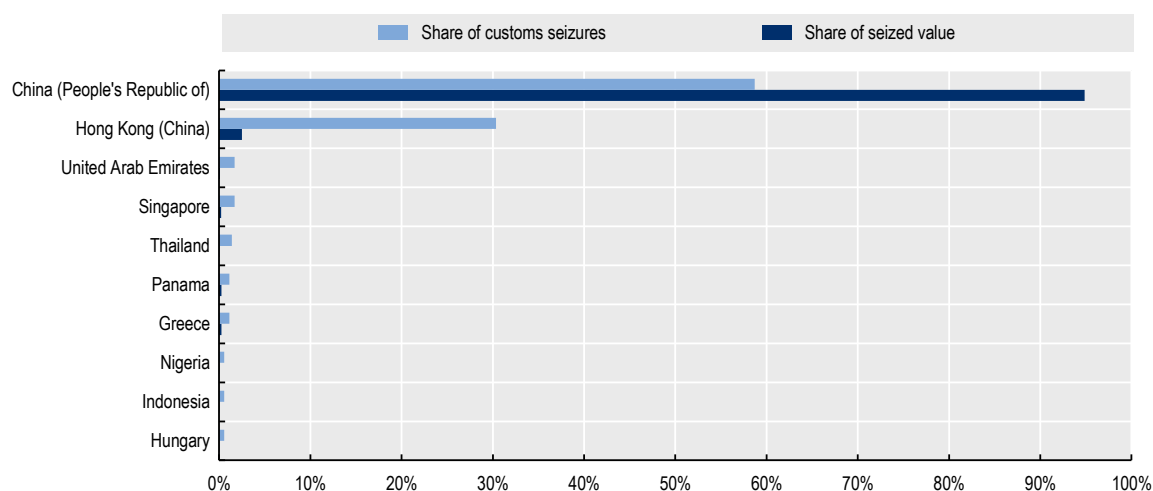
Trade routes

Over the 2011-16 period, China (59%), Hong Kong (China) (30%), the UAE (1.7%) and Singapore (1.7%) are the main provenance countries for fake MEM products (Figure 3.11). They were followed by Thailand and Panama.

In terms of seized value, China is by far the most important provenance country of counterfeit Swiss MEM products, gathering almost 95% of the total seized value.

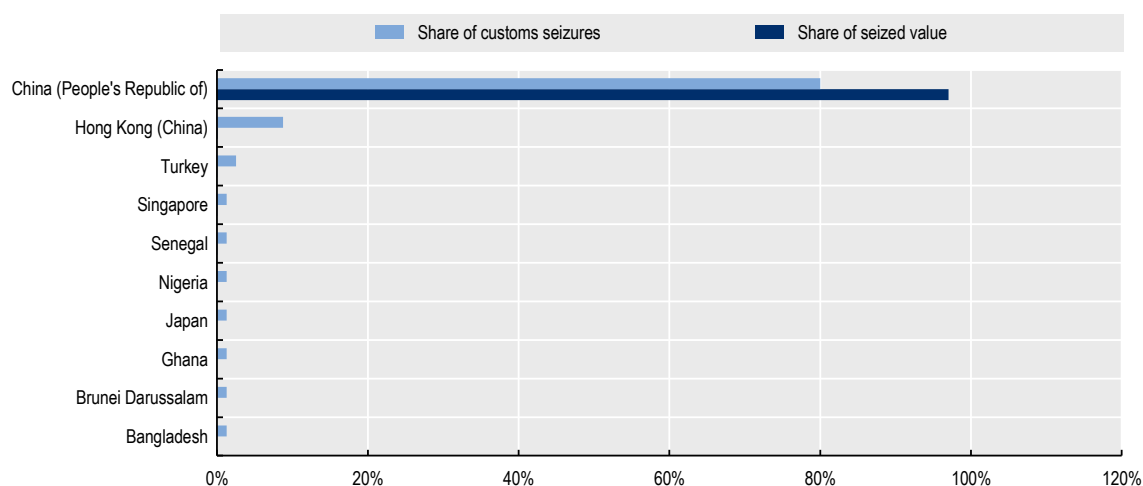
Over the 2017-19 period, fake Swiss MEM products originated from China and Hong Kong (China) (Figure 3.12). However, China has strengthened its position compared to the previous period accounting for 80% of total customs seizures and 96% of the total seized value.

Figure 3.11. Top provenance countries of counterfeit Swiss MEM products, 2011-16



Source: OECD customs seizures database

Figure 3.12. Top provenance countries of counterfeit Swiss MEM products, 2017-19

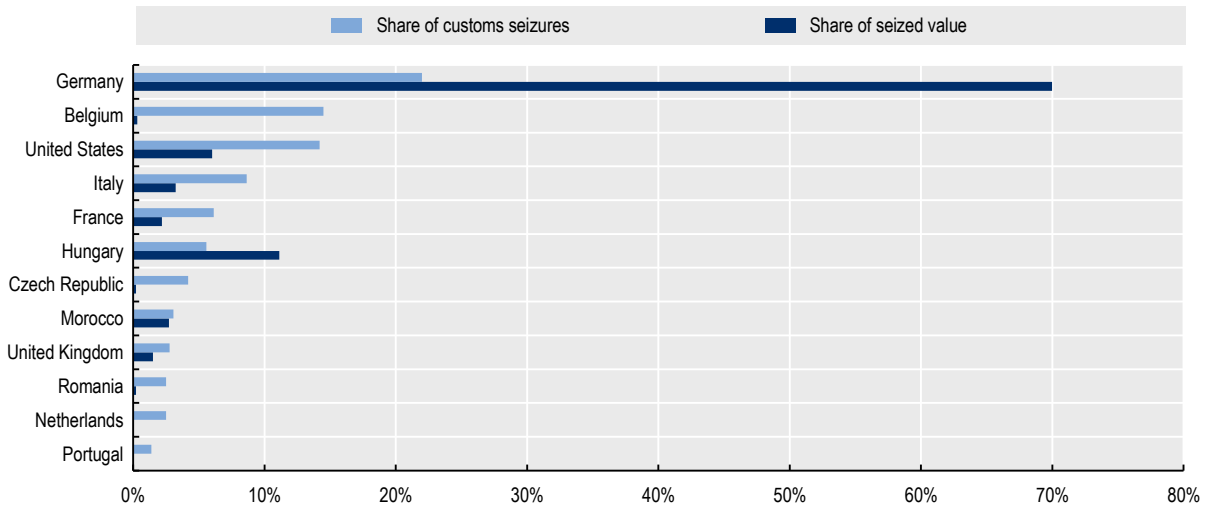


Source: OECD customs seizures database.

Figure 3.13 shows that Germany, Belgium, the US, Italy, France and Hungary (a provenance country as well) were the main destination countries for fake Swiss MEM products. Germany, Hungary and the US were the main destination countries in terms of seized value.

Over the 2017-19 period, counterfeit Swiss MEM products were mainly destined for Germany, which has strengthened its position in terms of both customs seizures and seized value compared to the previous period. It was followed by Belgium, Italy, the UK and Morocco (Figure 3.14).

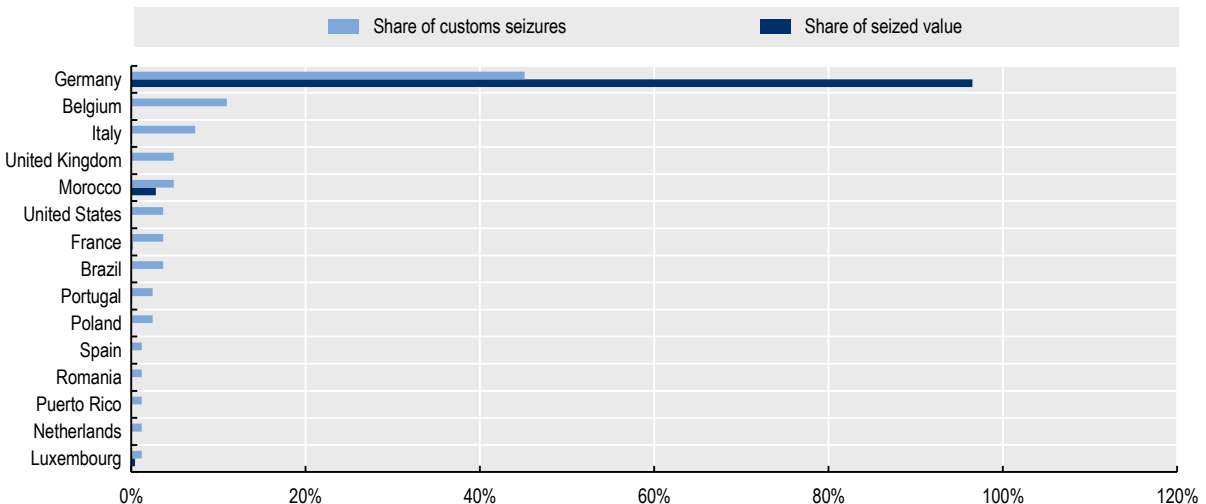
Figure 3.13. Top destination countries for counterfeit Swiss MEM products, 2011-16



Note: The data received from the US customs are not included in this figure. Data related to the US come from the WCO customs seizures database.

Source: OECD customs seizures database.

Figure 3.14. Top destination countries for counterfeit Swiss MEM products, 2017-19



Source: OECD customs seizures database.

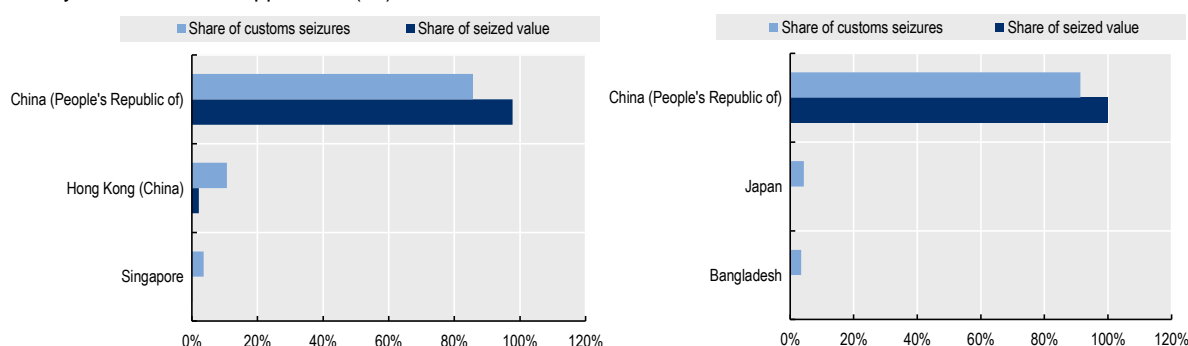
Figure 3.15 shows that regardless of the product category, China and Hong Kong (China) are always the top provenance economies. Apart from provenance countries that appear in other product categories (such as Singapore, Thailand and Turkey), Hungary and Uruguay are also on the list of main provenance countries for fake Swiss MEM products.

Importantly, for fake items from the sectors of “mechanical engineering” and “manufacture of basic metals and fabricated metal products”, China was the origin of almost all fake products in terms of their value.

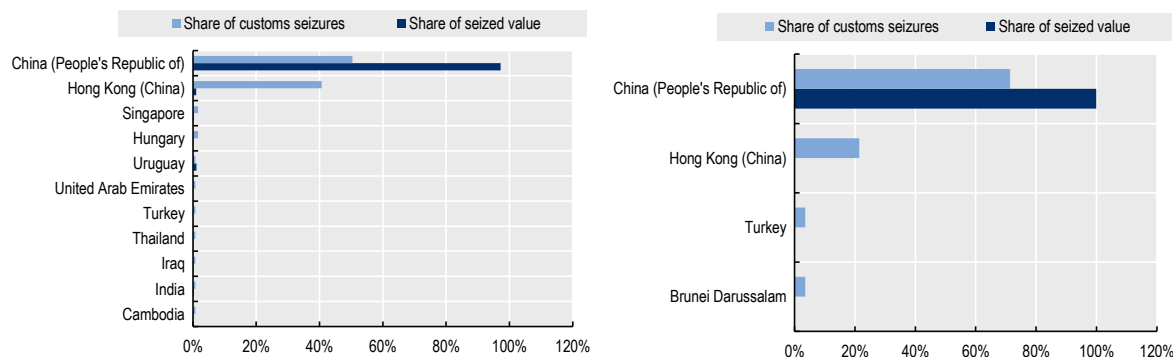
Over the 2017-19 period, China remained the main provenance country for all categories of fake Swiss MEM products. However, one can note the presence of unusual provenance countries like Japan being a source of counterfeit mechanical engineering.

Figure 3.15. Provenance economies of counterfeit Swiss MEM products, by product category, 2011-16 and 2017-19

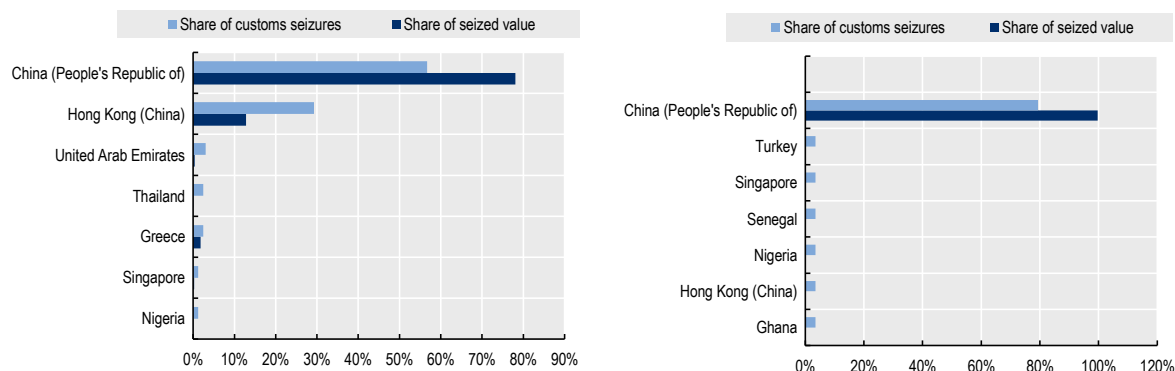
Machinery and mechanical appliances (84)



Electrical machinery and electronics (85)



Optical; photographic; medical apparatus (90)



Source: OECD customs seizures database.

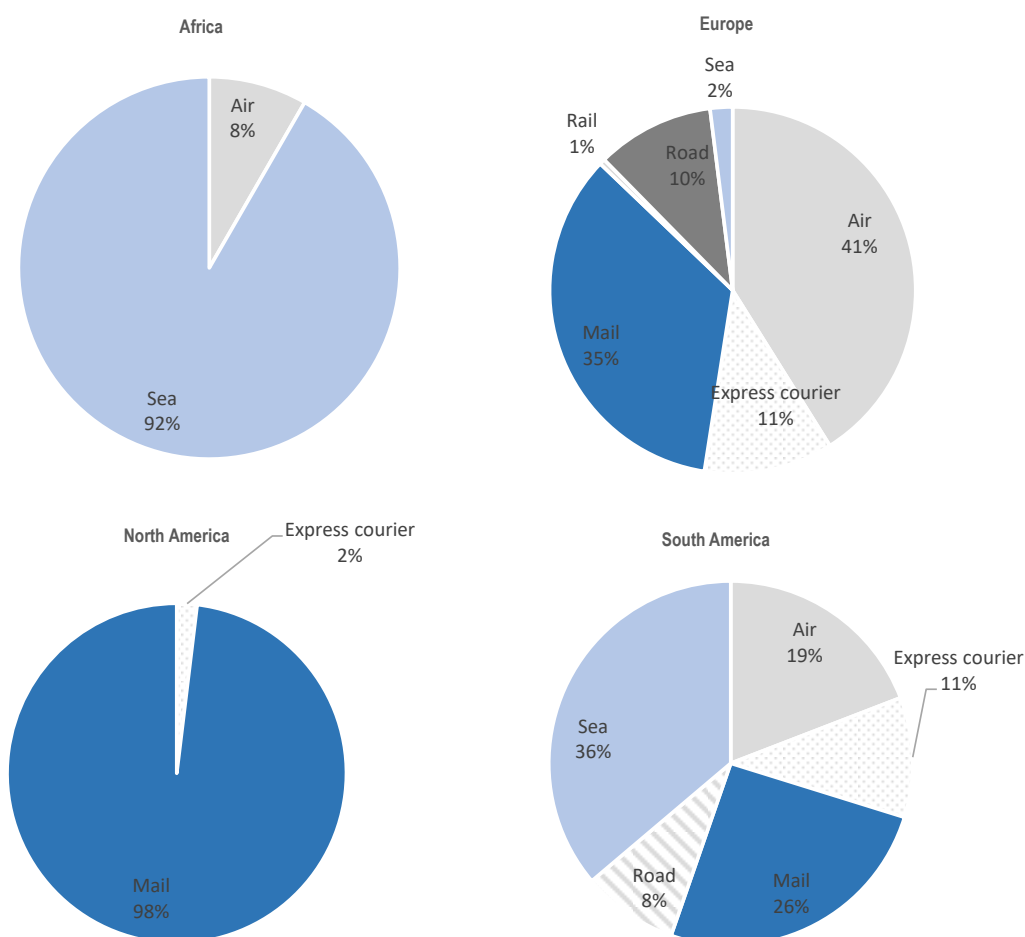
Transport methods

Over the 2011-16 period, air transport was the most popular way of transporting counterfeit Swiss MEM products to Europe, while sea transport is the most common route for products heading to South America. In both cases, mail was the second most popular method. These findings are quite in line with those highlighted in the watch industry section.

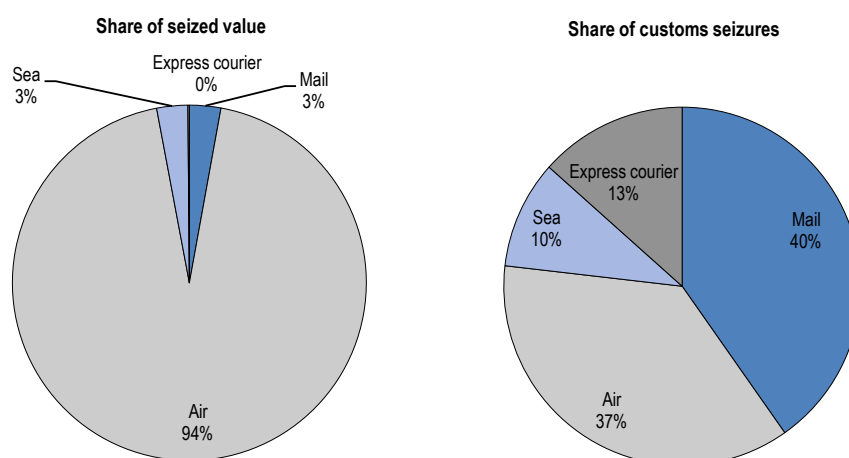
Over the 2017-19 period, air transport was again by far the preferred transport mode of counterfeit Swiss MEM products (representing 94% of customs seizures). In terms of seized value, fake Swiss MEM products were mostly shipped by mail and air transport.

Figure 3.16. Conveyance methods for counterfeit Swiss MEM products, by region, 2011-16

As a percentage of customs seizures



Source: OECD customs seizures database.

Figure 3.17. Conveyance methods for counterfeit Swiss MEM products, 2017-19

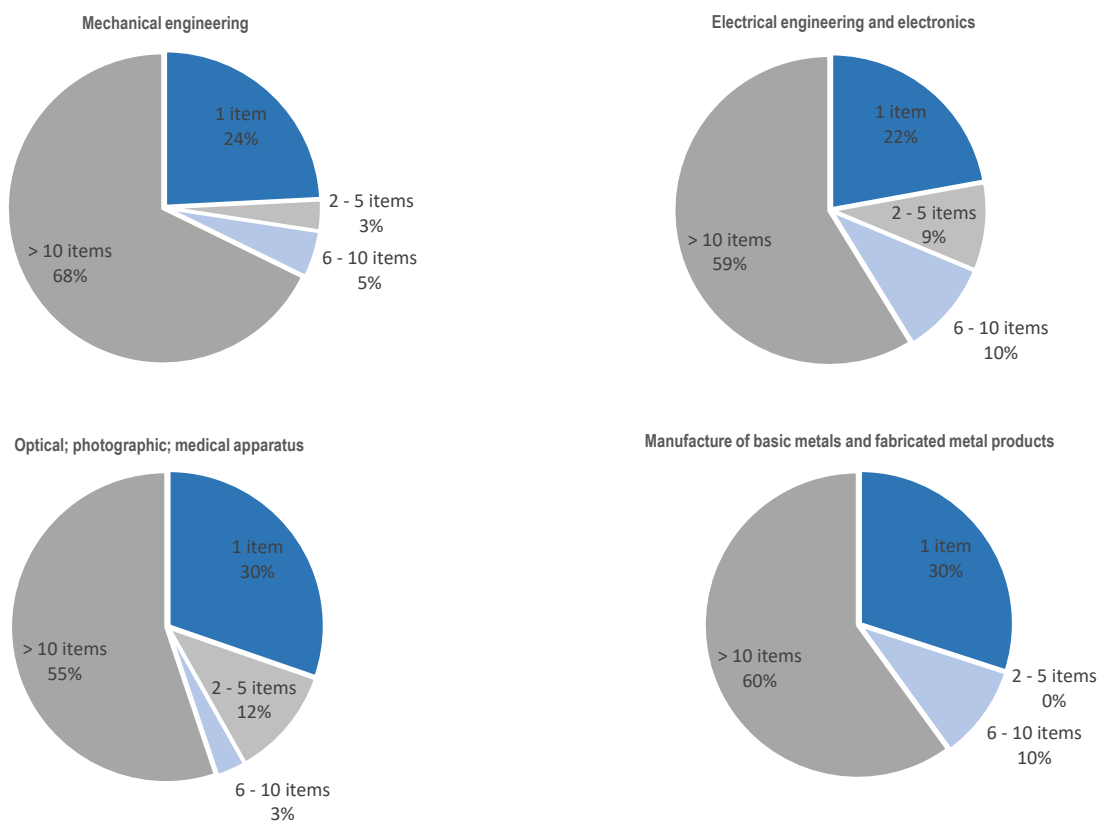
Source: OECD customs seizures database.

Regarding the sizes of shipment of counterfeit, MEM products, most of them were shipped in large quantities, with one shipment containing more than ten items. In the cases of the “mechanical engineering” and the “manufacture of basic metals and fabricated metal products” sectors, the share of large shipments, with more than 10 products in 1 shipment exceeded 60%, which suggest a particularly large commercial scale of counterfeiting in these sectors.

Over the 2017-19 period, large shipments (i.e. more than ten items) still dominated the trade in counterfeit MEM products. One should note that the shipment size of counterfeit Swiss optical, photographic and medical apparatus has varied over time. Indeed, in the recent period, small packages (i.e. 1 item) have increased, representing more than 40% of the customs seizures of this category.

Figure 3.18. Shipment sizes for counterfeit Swiss MEM products, 2011-16

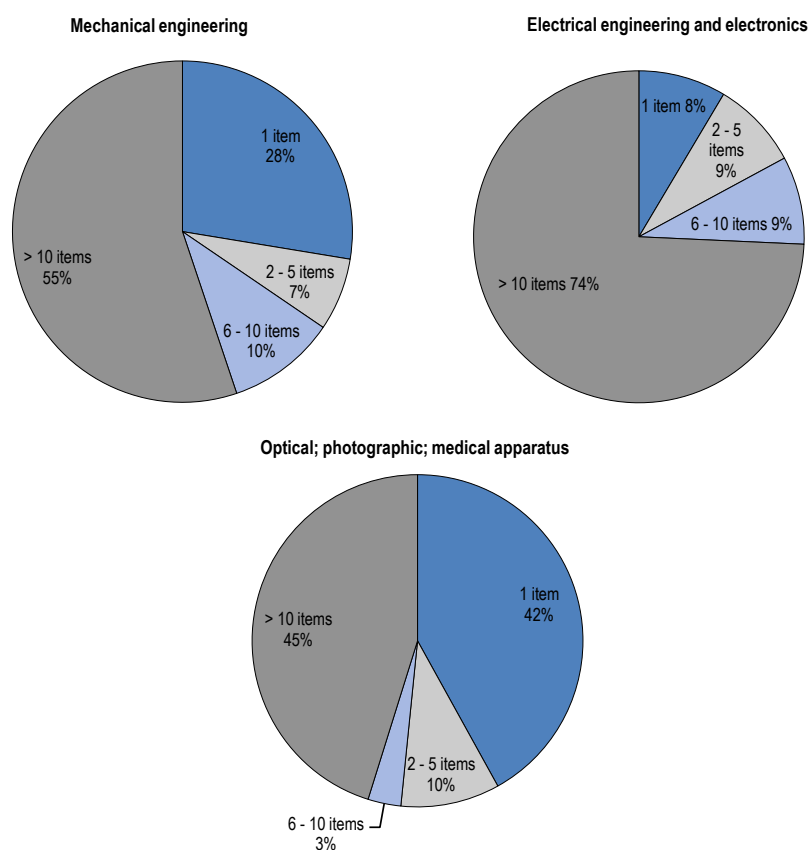
As a share of customs seizures



Source: OECD customs seizures database.

Figure 3.19. Shipment sizes for counterfeit Swiss MEM, 2017-19

As a share of customs seizures



Source: OECD customs seizures database.

The losses incurred by counterfeiting electrical and mechanical engineering products

The sales losses in 2018 due to counterfeiting Swiss MEM products are estimated at CHF 1.16 billion (USD 1.17 billion) when calculating with the upper limit of counterfeit trade. In terms of employment, around 2 700 jobs are estimated to have been lost due to counterfeiting – about 0.8% of employment in the sector (Table 3.5).

In 2018, the Swiss government lost CHF 43.1 million (USD 43.4 million) of tax revenue due to trade in Swiss counterfeit MEM goods. Main tax losses came from foregone taxes on labour income.

Table 3.3. Estimated losses experienced by the Swiss MEM industry, in USD million, 2016-18

	2016	2018
Sales losses	364.6	1 168.7
Share of exports (%)	0.6	1.7
Job losses	1 002	2 687
Share of employees (%)	0.3	0.8
Tax losses	21.2	43.4

The losses experienced by this sector have considerably increased between 2016 and 2018. This trend may be explained by a change in customs profiling practices and the rise of the sector's exports between the two periods. Indeed, the exports of the Swiss MEM industry increased by 10.4% between 2016 and 2018 while the global Swiss exports rose by 2.9% during the period.

COVID-19 crisis and trade in counterfeit Swiss electrical and mechanical engineering products

The pandemic has reshaped and intensified the dynamics of counterfeiting the mechanical, electrical engineering and metalworking (MEM) industry sector. Criminal networks have reacted very quickly to the crisis and adapted their strategies to take advantage of the shifting landscape. Dialogues with enforcement officials and the industry delegates identified some key COVID-19-related elements, including: i) intensified misuse of the online environment because of lockdowns and broken supply chains; ii) change in the structure of trade in fakes; and iii) change in enforcement priorities.

There has been very intense use of the online environment, as under confinement consumers turn to online markets to fulfil their needs. For example, in the US, e-commerce activity has grown by 146% compared with the previous year. This resulted in a massive growth in the supply of all sorts of counterfeits on line.³ For the MEM industry sector, an increase in the collection of fakes in all products was reported, including power switches and kitchen appliances.

The online boom also resulted in a considerable growth of new online marketplace and online platforms – created during the COVID crisis. The number of websites offering fake products of the MEM industry keeps growing. Apart from websites, criminals also begin to misuse new online channels of communication, such as WhatsApp or Facebook Messenger.

The industry continues to combat this scourge actively, using modern techniques, e.g. artificial intelligence. After detection, websites tend to reappear almost instantly, however. The effective prosecution of criminals behind these websites seems to be extremely difficult. Enforcement is also impacted by the pandemic and suffers from labour shortages. Besides, priorities have been shifting and anti-counterfeiting is no longer a prime concern. Also, changing trade routes in fake goods that infringe Swiss MEM industries also impede effective counteraction. According to the industry delegates' interviews, while production of fakes continues to centre in China, these goods are now transported with no logos to places closer to the destination markets, where the final assembly and counterfeiting act take place.

Finally, due to the pandemic, demand for personal protective equipment (PPE) grew sharply. This demand (for example masks, safety glasses, protective clothing) was sometimes not met due to closures of borders, distortions in supply chains or insufficient production capacities. Criminals entered this niche, not only offering fake PPE but also counterfeit Swiss equipment to produce PPE or spare machine parts. Such fakes cannot guarantee good quality PPE and could lead to significant health and safety risks.

The fast-moving consumer goods (FMCG) industry

The FMCG industry refers to HS codes 02/21 (foodstuffs), 22 (beverages) and 33 (perfumery and cosmetics). According to the UN trade database, the exports from this industry amounted to almost CHF 10.9 billion (USD 11.1 billion) in 2016, representing 3.6% of total Swiss exports. Sales from these 3 sectors represented around 14% of total sales by the Swiss manufacturing sector.⁴ According to the Swiss Federal Statistical Office, this industry employed almost 94 000 people in 2016 (i.e. 11.5% of total employment of the Swiss manufacturing sector).⁵

Swiss FMCG industry exports have increased by 12.6% between 2016 and 2019. The value of these exports amounted to CHF 12.4 billion (USD 12.5 billion) in 2019 according to UN trade data. They represented 4% of total Swiss exports.

Scope and volume

Within the FMCG industry, the perfumery and cosmetics category is the most targeted by counterfeiters, representing 87% of fake Swiss FMCG customs seizures. This was followed by foodstuffs (10%). Counterfeiting of Swiss printed articles and beverages is quite anecdotal in terms of both customs seizures and seized value.

The counterfeit products in this industry that infringe Swiss IP are varied and include coffee, stock cubes, chocolate, soda, perfume, body care items and deodorants.

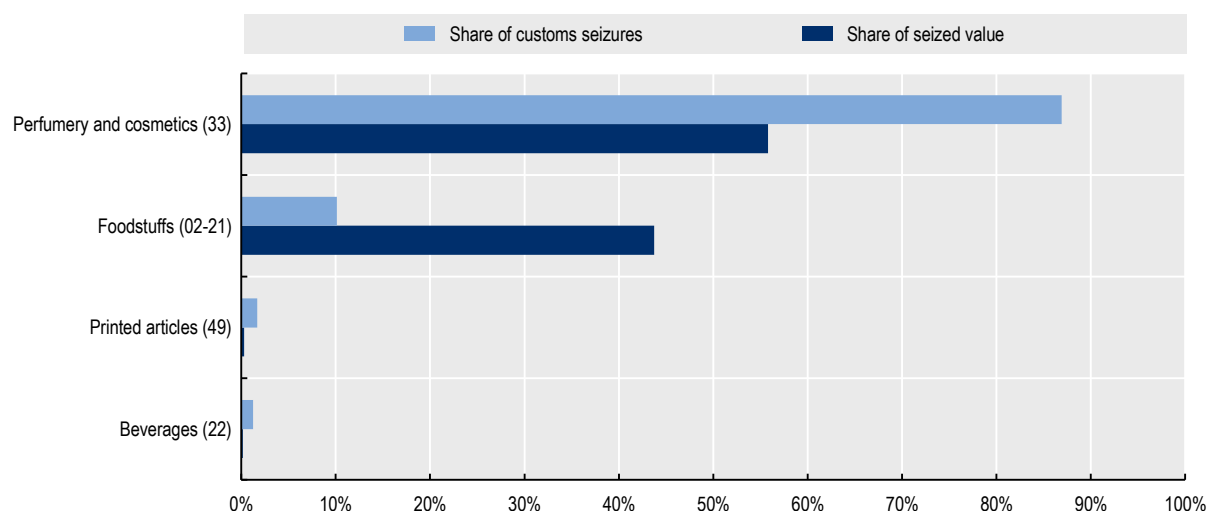
Box 3.3. Fake fast-moving consumer goods (FMCG)

Fake FMCG that infringe Swiss IP rights are mostly common consumer products such as foodstuffs (coffee, chocolate, powdered milk), perfumes and cosmetics (body care items and deodorants). For all these products, legitimate suppliers must comply with strict health, safety or environmental regulations to make sure their products will cause no harm or damage. In addition, transport and storage of legitimate products must also observe certain quality standards in order to preserve the high quality of these goods.

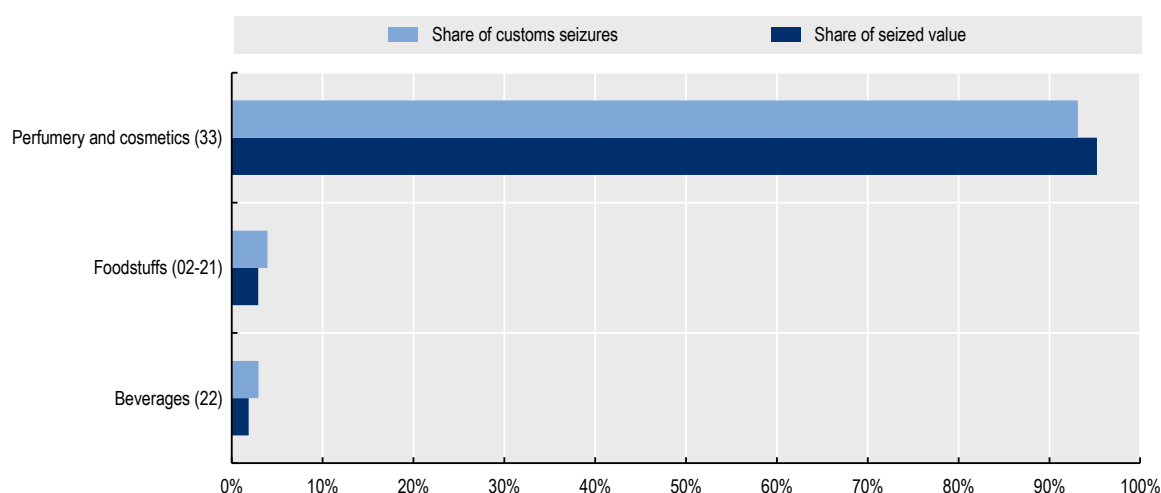
Counterfeiters do not observe any of these norms, neither for production nor for transport and storage. Consequently, fake FMCG are often of very low quality and can pose significant health and safety risks to consumers. Importantly, these health and safety risks also result in additional reputational risks for the industry, as well as the direct damaging effect of counterfeiting due to reduced demand for legitimate goods.

To counter these risks, the Swiss FMCG industry has been engaged in a number of awareness-raising and educational campaigns, highlighting the problem with consumers and pointing at easy ways of telling the difference between genuine and counterfeit products. Many of these campaigns and actions have been carried out regionally, to respond to local cases of influx of counterfeit goods on local markets.

Figure 3.20. Product category of fake Swiss FMCG, 2011-16



Source: OECD customs seizures database.

Figure 3.21. Product category of fake Swiss FMCG, 2017-19

Source: OECD customs seizures database.

The best estimates using the data provided by customs authorities and the GTRIC methodology indicate that the global trade in counterfeit and pirated FMCG that infringe Swiss IP amounted to as much as CHF 198.8 million (USD 201.8 million) in 2016 (Table 3.4). In 2018, the value of fake FMCG was similar to the 2016 one, amounting to CHF 229.7 million (USD 231.1 million).

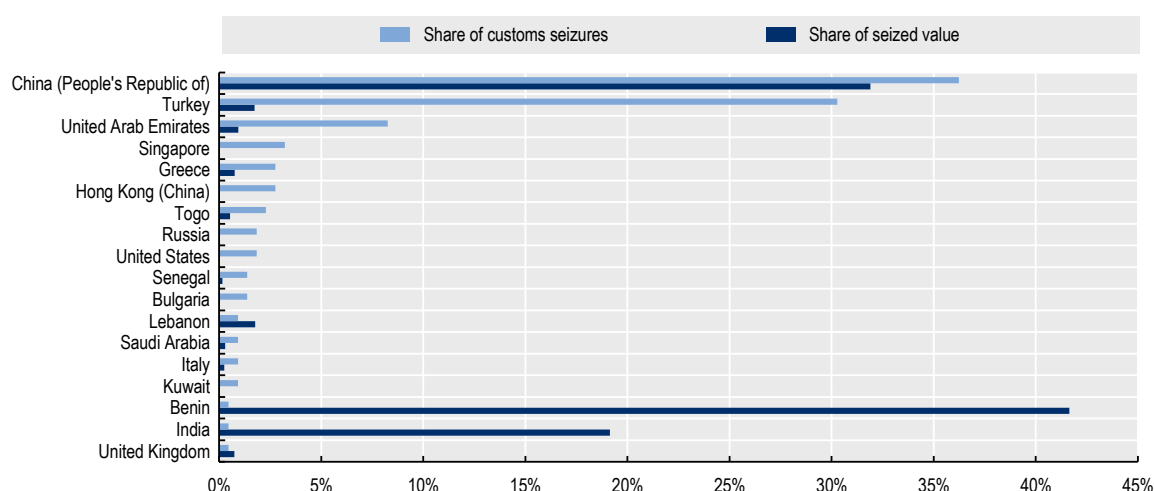
Table 3.4. Estimated value of fake Swiss FMCG, 2016 and 2018

	2016		2018	
	Value in USD million	Share of exports (%)	Value in USD million	Share of exports (%)
Ceiling value 20%	201.8	1.8	231.1	1.8
Ceiling value 15%	151.4	1.3	173.33	1.4
Ceiling value 10%	100.9	0.9	115.55	0.9

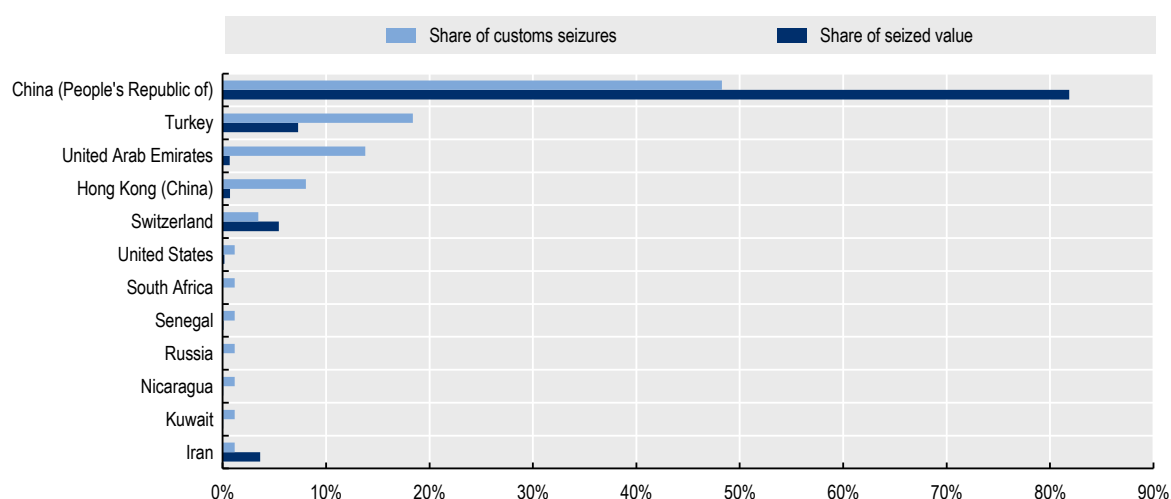
Trade routes

Figure 3.22 indicates that China and Turkey are the main provenance economies for counterfeit Swiss FMCG, representing respectively 36% and 30% of customs seizures over the period 2011-16. They were followed by the UAE, Singapore, Greece and Hong Kong (China).

Over the 2017-19 period, China, Turkey and the UAE remained the main provenance economies for counterfeit Swiss FMCG (Figure 3.23). However, one can note that China has strengthened its position. It is also important to highlight the presence of Switzerland on the list of the top provenance of fake Swiss goods while Switzerland is not a usual provenance country for these products. This specific trend is related to one seizure containing a large quantity of fake Swiss foodstuffs products coming from Switzerland and destined for Lithuania.

Figure 3.22. Top provenance economies for counterfeit Swiss FMCG, 2011-16

Source: OECD customs seizures database.

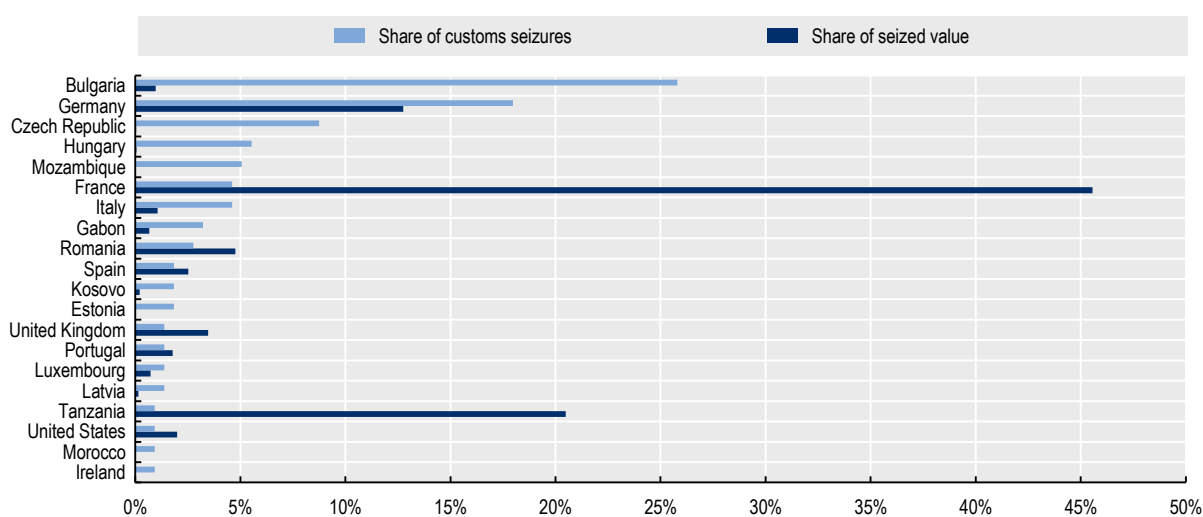
Figure 3.23. Top provenance economies for counterfeit Swiss FMCG, 2017-19

Source: OECD customs seizures database.

Over the 2011-16 period, the main destination economies for fake Swiss FMCG were European countries, led by Bulgaria (25.8% of customs seizures), Germany (18%) and the Czech Republic (8.8%) (Figure 3.24). They were also destined for African countries (Mozambique, Gabon, Tanzania and Morocco). Over the 2017-19 period, the fake Swiss FMCG were mainly destined for Germany (39%), Mozambique (13%), Belgium (10%) and Bulgaria (9%).

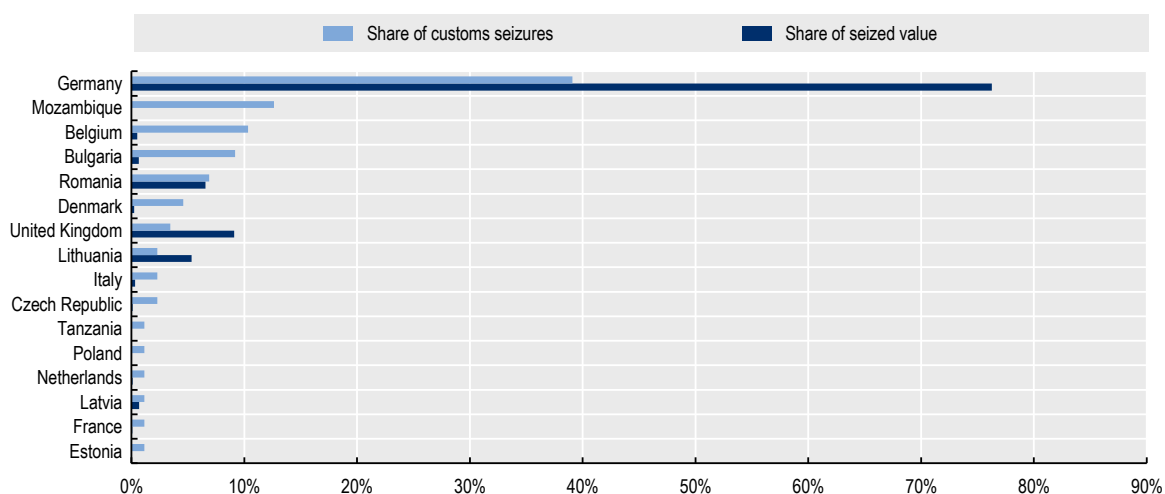
The main destinations of fake Swiss FMCG remained quite stable over the recent period compared to the previous one (Germany, Bulgaria and Mozambique being part of the five main destination economies for both periods). However, it should be noted that Germany has strengthened its position in terms of seized value. Over the former period, Germany gathered 13% of the seized value of fake FMCG while, in 2017-19, it accounted for almost 80% of the total seized value. It was followed by the UK (9%), Romania (7%) and Lithuania (2%).

Figure 3.24. Top destination economies for counterfeit Swiss FMCG, 2011-16



Source: OECD customs seizures database.

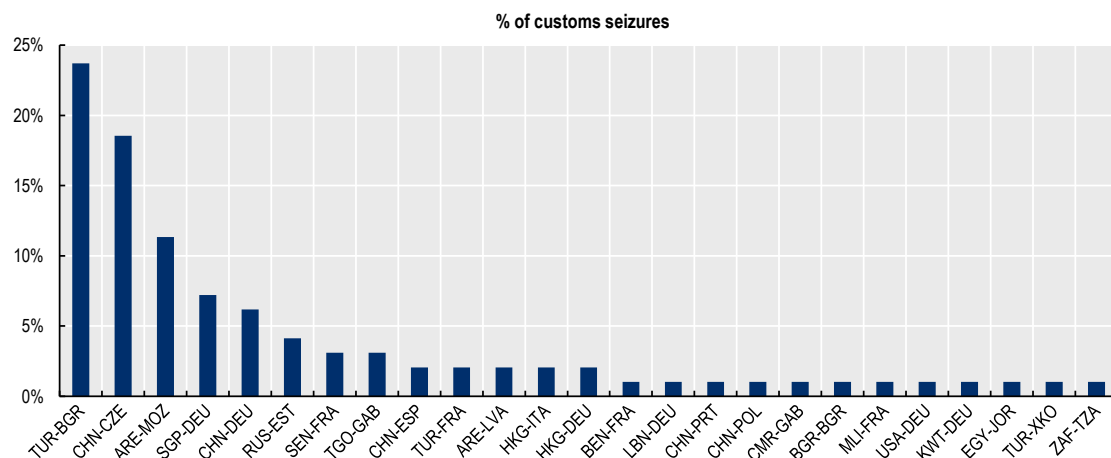
Figure 3.25. Top destination economies for counterfeit Swiss FMCG, 2017-19



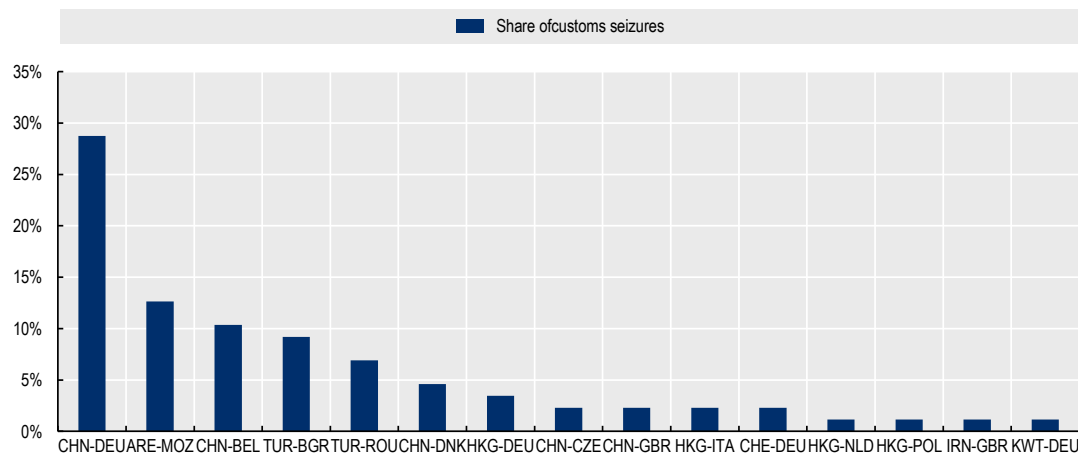
Source: OECD customs seizures database.

Figure 3.26 gives us a clearer picture of the trading routes for fake Swiss FMCG, notably showing the wide range of countries engaged in this counterfeiting trade. One can see: i) “traditional” flows, with fake products coming from Asia or Turkey and going to European countries; ii) the importance of African countries as both provenance and destination countries; and iii) “atypical” intra-African flows (fake products coming from Cameroon or Togo and going to Gabon).

Over the 2017-19 period, one can see that flows from Asia to European countries and from the UAE to Africa dominated the trade in counterfeit Swiss FMCG.

Figure 3.26. Top provenance-destination economies for fake Swiss FMCG, 2011-16

Source: OECD customs seizures database.

Figure 3.27. Top provenance-destination economies for fake Swiss FMCG, 2017-19

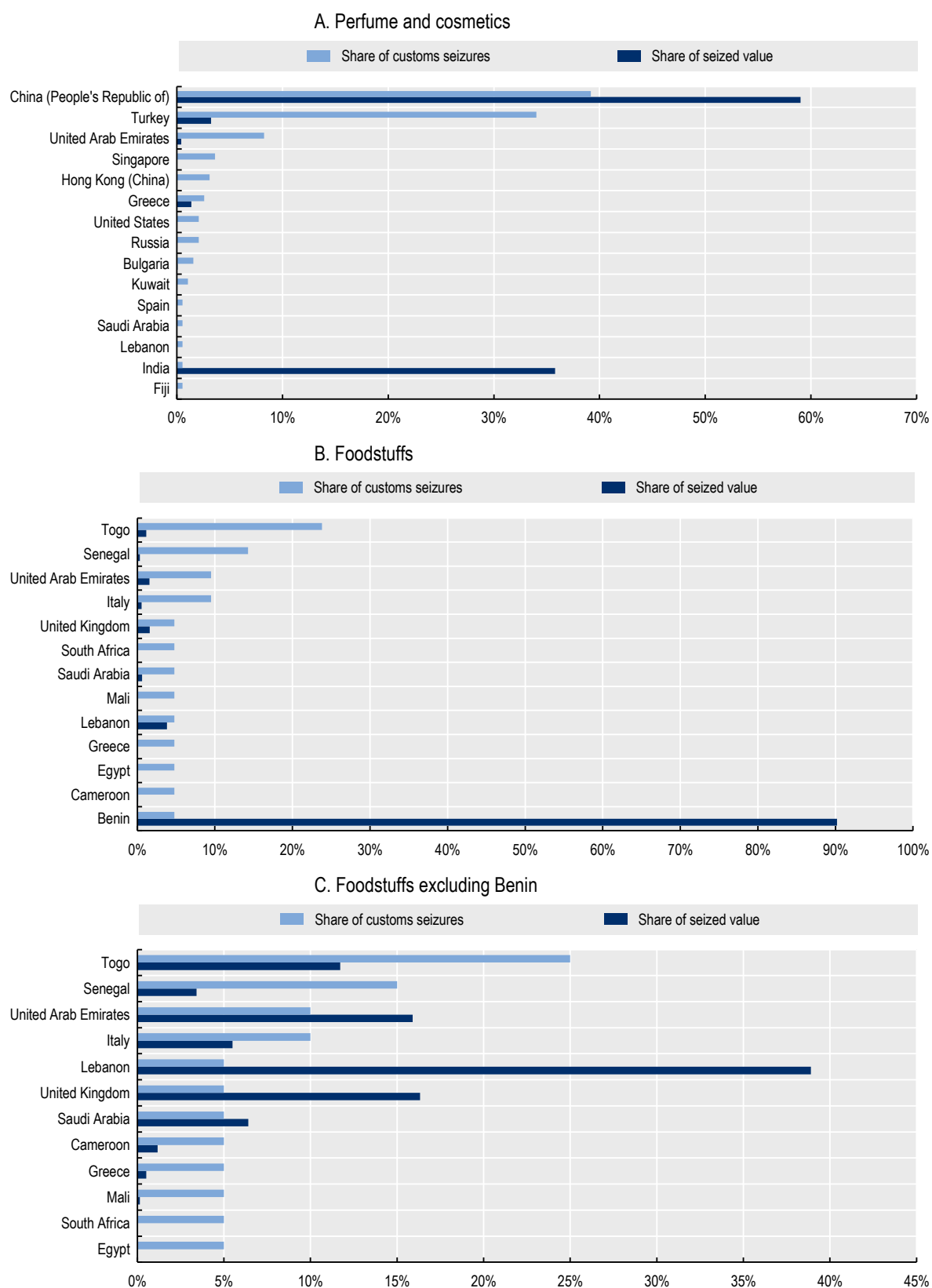
Source: OECD customs seizures database.

As shown in Figure 3.28, counterfeit Swiss perfume and cosmetics come mainly from China (39%), Turkey (34%), the UAE (8%), Singapore (4%) and Hong Kong (China) (3%). In terms of seized value, the main provenance countries are China, Greece, India and Turkey.

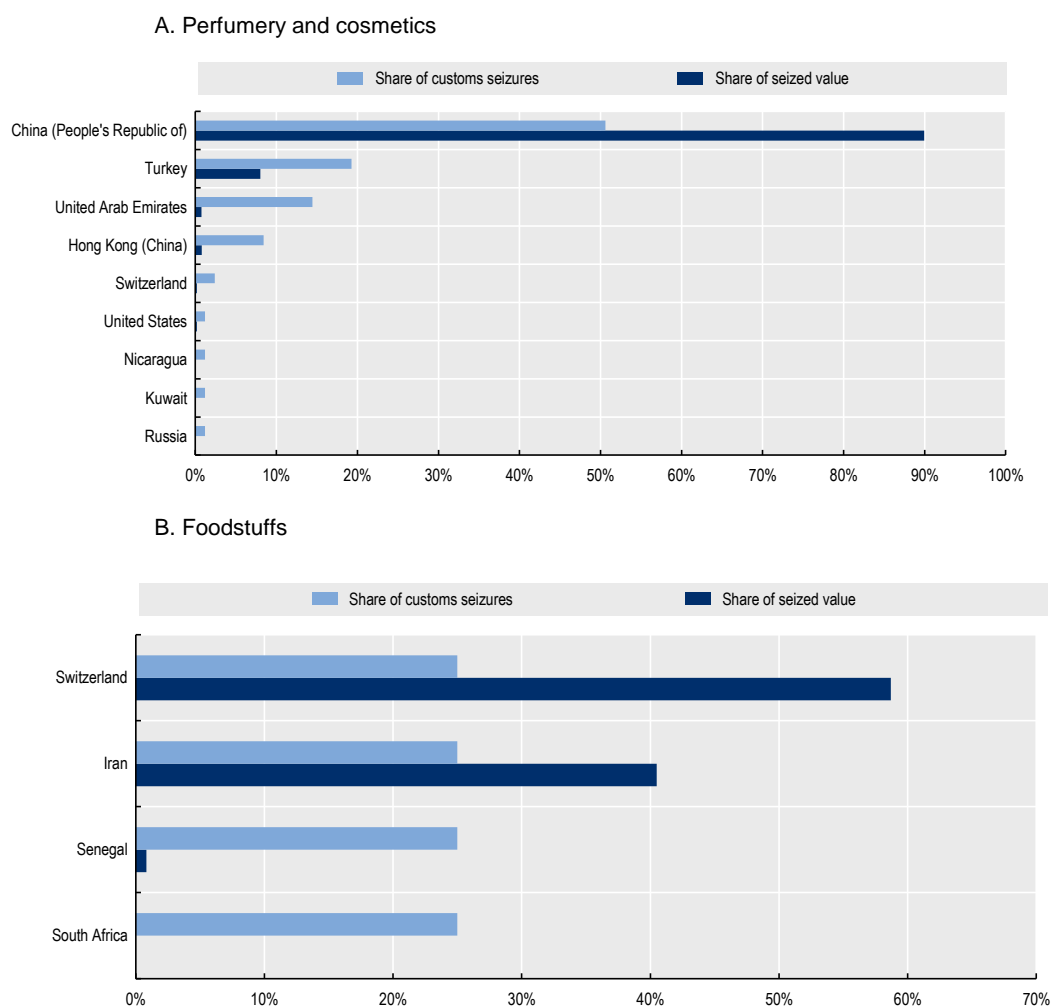
Counterfeit Swiss foodstuffs, unlike other product categories, do not come from Asian countries. Instead, they mainly came from African countries (e.g. Togo, Senegal, South Africa, Mali and Cameroon) which represented 55% of customs seizures. Fake Swiss foodstuffs also come from the UAE and European countries (e.g. Greece, Italy and the UK).

Regarding the printed articles (e.g. calendars, booklets, notebooks) and beverages categories, the number of seizures is very limited (respectively four and three). The provenance economies for Swiss counterfeit beverages are unknown, while China is the exclusive provenance country for fake Swiss printed articles.

Over the recent period, China, Hong Kong (China), Singapore and Turkey remained the main sources of counterfeit Swiss FMCG. Provenance countries of fake Swiss foodstuffs have changed compared to 2011-16 since Switzerland is the main source of this product category. As mentioned previously, this is related to one big seizure of fake foodstuffs coming from Switzerland and destined for Lithuania. It was followed by Iran and African countries such as Senegal and South Africa.

Figure 3.28. Provenance country by product category, 2011-16

Source: OECD customs seizures database.

Figure 3.29. Provenance country by product category, 2017-19

Source: OECD customs seizures database.

China and Turkey are indicated as the most important producing economies of counterfeit Swiss FMCG. While China targets many regions (Europe, the US as well as Africa and the Middle East), exporting fakes mainly by sea, Turkey solely targets Europe, exporting fakes mainly by road (Table 3.5).

Table 3.5. Main destinations for counterfeit Swiss FMCG from China and Turkey, 2011-16

Producing economy	Destinations	Transport mode
China (People's Republic of)	Europe (i.e. Austria, Croatia, Czech Republic, Germany, Hungary, Ireland, Italy, Kosovo, Luxembourg, Poland, Portugal, Romania, Spain, United Kingdom)	Mail - road - sea
	Morocco	Sea
	Saudi Arabia	Sea
	United Arab Emirates	Sea
	United States	Sea
Turkey	Bulgaria	Road
	Denmark	Air
	France	n.a.
	Germany	Air - mail
	Kosovo	Road
	Romania	Road

Table 3.6. Key transit points for counterfeit Swiss FMCG, 2011-16

Provenance economy	Transit point	Destination	Transport mode from transit to destination
China (People's Republic of)	Saudi Arabia	Hungary	Road
		Kuwait	
China (People's Republic of)	United Arab Emirates	Djibouti	Sea
		Guinea	
		Latvia	
		Luxembourg	
		Mozambique	
Bulgaria	Bulgaria	Bulgaria	Express courier
Greece		Italy	Road
Turkey			
Saudi Arabia	Kuwait*	Czech Republic	Air
		Germany	Mail
?	Russia*	Estonia	Road

Note: *In the dataset on customs seizures, Kuwait and Russia appear as both provenance and destination economies but their status as transit points is undetermined due to lack of data on production.

Source: UNIDO.

For both periods, the large majority of counterfeit Swiss FMCG has been purchased unknowingly (see Table 3.7). The secondary market shares of Swiss FMCG were lower in 2017-19 than in 2011-16, respectively 33% (45.8% in 2011-16) for the perfumery and cosmetics sector and 27% (37.4% in 2011-16) for the foodstuffs sector. It means that a lower share of these product types has been bought knowingly during the recent period. These relatively low shares of the secondary market are logical since fake FMCG could damage consumers' health.

Table 3.7. Share of secondary market of counterfeit Swiss FMCG

Product category	2011-16	2017-19
Foodstuffs (%)	45.8	33
Perfumery and cosmetics (%)	37.4	27

Note: Due to so few observations for beverages and printed articles, their share of the secondary market could not be determined.

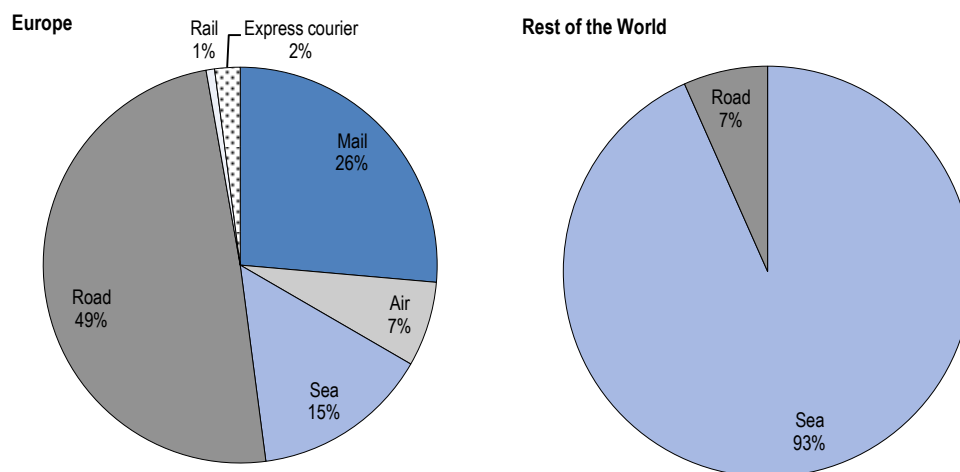
Transport methods

Over the 2011-16 period, the counterfeit Swiss FMCG destined for European countries are mainly shipped by road and mail, while sea transport was mainly used for the rest of the world (Figure 3.30).

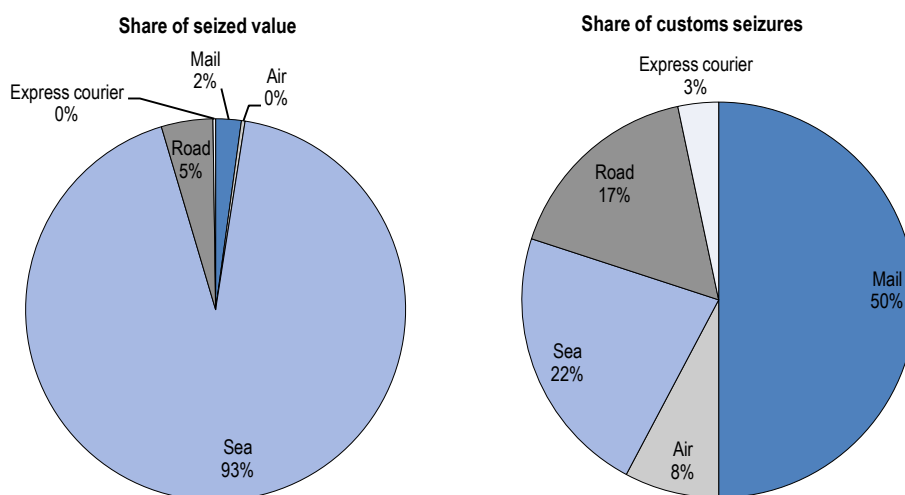
Over the 2017-19 period, counterfeit Swiss goods were mainly shipped by mail (50%), sea (22%) and road (17%). In terms of seized value, sea transport was the main transport mode accounting for 93% of the total seized value (Figure 3.31).

Figure 3.30. Transport methods for counterfeit Swiss FMCG, by region, 2011-16

As a percentage of customs seizures



Source: OECD customs seizures database.

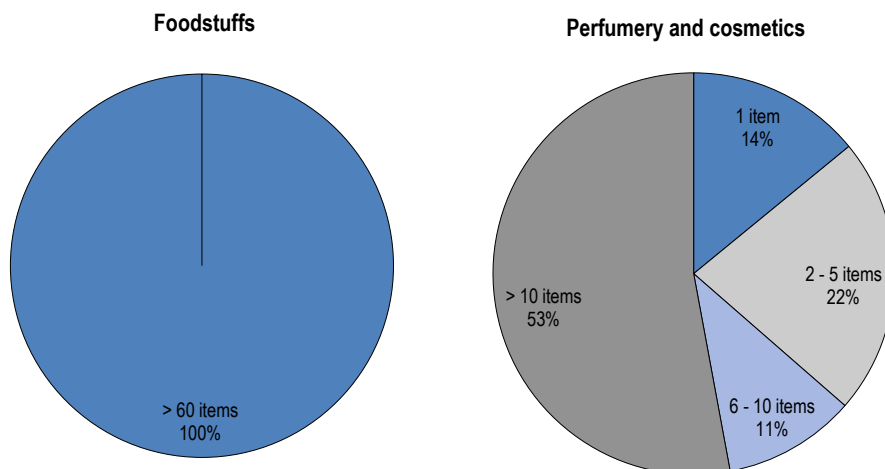
Figure 3.31. Transport methods for counterfeit Swiss FMC goods, 2017-19

Source: OECD customs seizures database.

As indicated in Figure 3.32 and Figure 3.33, over the 2 periods, the counterfeit foodstuffs were shipped in big parcels: 100% of counterfeit foodstuffs were shipped in a parcel containing at least 60 items in 2011-16 (300 items for the 2017-19 period). Fifty-three percent of counterfeit perfumery and cosmetics was dispatched in big parcels (i.e. more than 10 items) in 2011-16 while this share amounted to 31% over the more recent period.

Figure 3.32. Shipment sizes of counterfeit Swiss FMCG, 2011-16

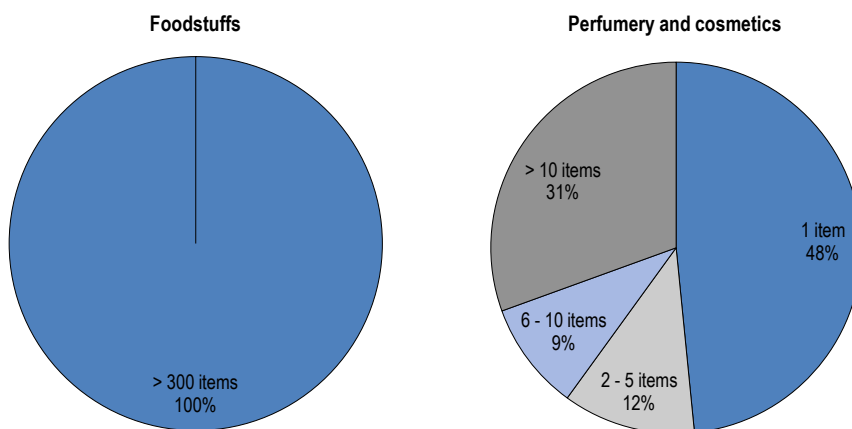
As a percentage of customs seizures



Source: OECD customs seizures database.

Figure 3.33. Shipment sizes of counterfeit Swiss FMCG, 2017-19

As a percentage of customs seizures



Source: OECD customs seizures database.

The losses incurred by counterfeiting fast-moving consumer goods

The sales losses due to counterfeiting of Swiss FMCG amounted to CHF 159.6 million (USD 160.6 million) in 2016, representing almost 1.5% of exports by the industry. It also led to job losses of almost 325 people or less than 0.4% of employment in the sector. Lost labour and corporate income tax revenues due to trade in counterfeit FMCG represented CHF 4.93 million (USD 5 million).

In 2018, the sales losses experienced by the Swiss FMCG industry amounted to CHF 189.6 million (USD 190.7 million), a level slightly higher compared to 2016. The job losses for the Swiss FMCG industry amounted to 250 jobs. The same year, the Swiss government lost almost USD 4 million (CHF 3.98 million) of labour and CIT revenue due to trade in counterfeit FMCG.

Table 3.8. Estimated losses experienced by the FMCG industry, 2016-18

	2016	2018
Sales losses (USD million)	160.6	190.7
Share of exports (%)	1.45	1.53
Job losses	324	242
Share of sector's employment (%)	<0.4	<0.3
Tax losses (USD million)	5	4

COVID-19 crisis and trade in fake Swiss fast-moving consumer goods

During the COVID-19 pandemic, additional fake fast-moving consumer goods, including those infringing Swiss IP rights, have been entering the markets. Closures of some businesses and disruptions in transport methods have led to significant distortions in supply chains. In all these cases, criminals leveraged these opportunities for illicit profits.

Due to the lockdowns in many countries, the online environment has become more intensely used, as the overall rate of digitisation has skyrocketed. It also resulted in a massive growth of trade of fake FMCG that abuse Swiss IP. The intensity of misuse of the online environment keeps growing and fakes tend to be found to a growing extent on new online sites and platforms, including social media platforms. In addition, enforcement authorities reported a significant growth in seizures of illicit food products (including illicit FMCG with Swiss brands) that had expired or where the expiry dates had been altered.

Furthermore, the dramatic growth in demand for PPE such as gloves or sanitisers resulted in a sharp increase in the supply of counterfeits in this area. To enhance their attractiveness, criminals tend to misuse existing trademarks of trusted companies, including Swiss FMCG producers. Counterfeits tend to put their brands on fake PPE, even when the right holder does not supply the PPE of this particular kind. This clearly illustrates the free-riding of counterfeiters on the goodwill established by Swiss FMCG companies and the trust that consumers associate with their brands.

The pharmaceutical industry

The pharmaceutical industry develops, produces and markets all kinds of medicine for therapeutic or prophylactic uses, vaccines, medicine for veterinary use, gauze, bandages, etc. and waste pharmaceuticals. This includes medicine whether or not in measured doses or packed for retail sale. However, this category does not include medical equipment, food supplements, dietetic or diabetic foods, mineral waters, etc. In international trade, pharmaceuticals come under the HS 30 product category.

Pharmaceutical industry – A particular context

There are at least four aspects that make the pharmaceutical industry particular in the context of counterfeiting:

- high IP intensity
- broad spectrum and notions of illicit medicines, including counterfeit, falsified, etc.
- particularly high health and safety risks related to counterfeit pharmaceuticals, in addition to socio-economic threats
- data-related challenges.

The high IP intensity

The pharmaceutical industry is particularly IP intensive. According to data provided by the World Intellectual Property Organization (WIPO), the pharmaceutical industry was the fourth most intensive in terms of trademark application, representing 7% of all world trademark applications.

This high IP intensity makes the pharmaceutical industry particularly vulnerable to the counterfeiting threat. This is confirmed by the available data. Between 2014 and 2016, the 2019 OECD/EUIPO report indicates that, based on customs seizures, of 97 recorded product categories, pharmaceuticals were the 10th most counterfeited type of product (2019_[11]).

Switzerland being the second-largest world pharmaceuticals exporter,⁶ is clearly a target for counterfeiters. Moreover, F. Hoffmann-La Roche and Novartis, two Swiss pharmaceutical firms ranked respectively 5th and 10th out of 21 pharmaceutical firms in terms of share of R&D expenditures to sales.⁷

Scope of infringements

There are many types of illicit pharmaceuticals and it is important to clarify what is exactly meant by the term “counterfeit pharmaceuticals” (see Box 3.4.).

As in previous OECD studies on trade in counterfeit goods, including the OECD/EUIPO study on illicit trade in counterfeit medicines (OECD/EUIPO, 2020_[15]) this study generally uses the term counterfeit (or fake) pharmaceuticals or medicines referring to traded medicines that infringe trademarks. In this context, it stays in line with the definition used by the World Trade Organization’s Agreement on Trade-Related Aspects of Intellectual Property Rights (WTO TRIPS). It also parallels the approach taken by the World Health Organization (WHO), in which counterfeit pharmaceuticals are described as “[...] deliberately and fraudulently mislabelled with respect to identity and/or source” (1999).

In addition to these discussions, many existing reports also include stolen and diverted pharmaceuticals (Box 3.4.). The existing datasets rely on largely incompatible and different methodologies and taxonomies and, in some cases, they also include stolen and diverted goods. Importantly, stolen and diverted goods enter the market without the consent of IP right owners and, in many instances, they also deceive final consumers. Hence, in many aspects, they closely resemble those counterfeit goods, produced without the consent of the IP right owner.

In addition, due to data limitations, this study does not look at potential or actual patent infringements.

Last, it should be also reiterated that this study is not intended to constitute any sort of new definition of counterfeit pharmaceuticals.

Box 3.4. Illicit, falsified, substandard, diverted or counterfeit pharmaceuticals

There are many, often overlapping notions of illicit, falsified, substandard or counterfeit pharmaceuticals that has been debated many times at several international fora. In particular, these issues have been closely addressed at the WTO and WHO.

At the WTO, the TRIPS Council took the IPR-perspective. The council discussed the negative economic impact that **counterfeiting** (i.e. trademark infringement) could have on economies, as well as the threats that counterfeit products could pose to health and safety. During the discussions, countries noted the distinction between IPR infringement and substandard products, as IP enforcement alone could not guarantee quality products.

In 2017, citing the confusion surrounding substandard and falsified products and the protection of IPRs, the WHO adopted new definitions (2017a and b) that are used in parallel to the notion of counterfeit (trademark-infringing) medicines. The new definitions refer to products which are either:

- **Substandard** (“out of specification”): Authorised medical products that fail to meet either their quality standards or specifications, or both.
- **Unregistered/unlicensed**: Medical products that have not undergone evaluation and/or approval by the national or regional regulatory authority for the market in which they are marketed/distributed or used, subject to permitted conditions under national or regional regulation and legislation.
- **Falsified**: Medical products that deliberately/fraudulently misrepresent their identity, composition or source.

Another category of illicit pharmaceuticals that is often present in the debate is **diverted** pharmaceuticals. According to the Pharmaceutical Security Institute (PSI, 2019^[16]), such illegal diversion occurs when a genuine pharmaceutical product is approved and intended for sale in one country but is then illegally intercepted and sold in another. At times, drug regulators in the second country have not approved the use of the diverted drug.

A similar phenomenon is pharmaceutical theft, defined as the illegal taking of medicines (PSI, 2019^[16]). **Stolen** pharmaceuticals can enter illicit markets through burglary, robbery or the embezzlement of goods, anywhere in the distribution chain such as at the site of manufacture, freight forwarder, distribution centres, warehouses, pharmacies or hospitals.

Importantly, as with classical cases of counterfeiting, diverted and stolen pharmaceuticals escape the control of the IP right owner. Moreover, these medicines are unlawfully supplied to the public, often without observing prescription conditions. Consequently, diverted and stolen drugs in most cases can potentially be damaging to consumers’ health.

Consumer health risks

The pharmaceutical sector is a sensitive and important one, as the risk of counterfeit medicines implies for this sector not only possible economic damages but can also lead to significant health threats. This is because fake medicines are often not properly formulated and may contain dangerous ingredients; consumers are not very aware of the problem of counterfeiting and can be easily deceived into thinking that the products that they are purchasing are genuine.

This is confirmed by the existing evidence which stresses that fake medicines actually do create significant damage to consumer health (OECD/EUIPO, 2020^[15]).

If all regions seem to be impacted by counterfeit medicines, it is important to note that Africa is particularly hit by this phenomenon, notably due to its distribution chain and the potential lack of pharmaceutical supply. Some studies highlight the scope and the negative effects of fake pharmaceuticals on patients' health in this region. According to a PricewaterhouseCoopers report, up to 70% of medicine in circulation across Africa may be fake. The Brazzaville Foundation also revealed that, every year, 120 000 children under the age of 5 die in Africa because of antimalarial medicine.⁸

The data challenge

From the data perspective, trade in counterfeit pharmaceuticals poses some additional challenges.

While customs data provide valuable information on the global trade of counterfeit pharmaceuticals, in the case of counterfeit pharmaceuticals they need to be complemented by other data sources. It is because a large share of this threat often falls outside the customs' scope. This is due to several factors, such as difficult identification of counterfeit medicines or new trends in trade in counterfeit medicines such as smuggling of raw ingredients and manufacturing of counterfeit medicines closer to the destination markets.

To address this issue, the following statistical analysis would benefit from other data sources to establish a more reliable and robust analysis on fake medicines.

An additional dataset used in this study is derived directly from the Swiss Pharmaceutical company Novartis. This database presents "incidents" that refer to fraudulent manufacture, mislabelling of drugs and fraudulent packaging. These incidents data have been established with the help of all kinds of enforcement agencies, such as police, health inspection service, customs, etc.

Both data sources are complementary and allow getting information on the infringement of Swiss pharmaceuticals brands from two different perspectives. For example, information derived from customs seizures on fake pharmaceuticals refer mostly to "common" pharmaceutical products (e.g. painkillers or erectile dysfunction treatment) while the broader data show that more medicine categories (such as cardiovascular, oncology treatment, etc.) are targeted by counterfeiters (OECD/EUIPO, 2020).

The trade in fake pharmaceuticals infringing Swiss IP rights holders

Illicit markets for counterfeit pharmaceuticals are attractive for counterfeiters, given their high profit margins, low risks of detection and prosecution, weak penalties and the ease with which consumers can be deceived into believing that the counterfeit products are genuine. According to recent estimates, in 2016, international trade in counterfeit pharmaceuticals reached USD 4.4 billion, threatening public health and safety, while enriching criminals and organised crime (OECD/EUIPO, 2020^[15]). This does not include a very large volume of domestically produced and consumed illicit pharmaceuticals.

The impacts of counterfeit medicines are felt on many levels. The main area of impact is the damage to the health of patients and failure to treat their diseases properly. Another area is lost revenue for governments and economies.

A very important impact area of trade in fake medicines are losses of sales and damage to the reputations of legitimate producers. The OECD/EUIPO database (2019) on customs seizures indicates that US brands were largely the most affected by the trade in counterfeit pharmaceutical goods over the 2014-16 period, followed by European economies, including Austria, France, Germany, Switzerland and the UK (OECD/EUIPO, 2020^[15]).

According to the (OECD/EUIPO, 2020^[15]) study, the value of global trade in counterfeit pharmaceuticals was up to USD 4.4 billion in 2016. This represents 0.84% of total worldwide imports in pharmaceutical products. China, India and some East Asian economies, including Indonesia, Pakistan, the Philippines and Viet Nam, appear to be the main producers of counterfeit pharmaceuticals traded worldwide (Table 3.9).

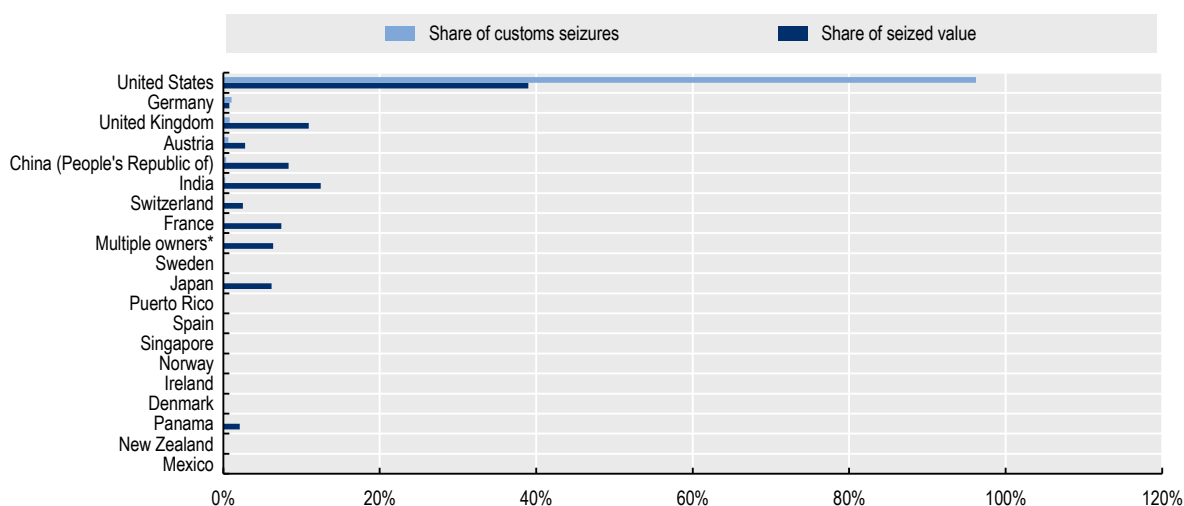
Table 3.9. Main producing economies and transit points for counterfeit pharmaceutical products and medicines traded worldwide, 2014-16

Producing economy	Transit point
India	Hong Kong (China)
China (People's Republic of)	United Arab Emirates
Philippines	Egypt
Viet Nam	Cameroon
Indonesia	Turkey
Pakistan	Singapore

Note: Economies are listed in order of importance, indicating a greater likelihood that the economy in question is a producer or a transit point of counterfeit medicines in world trade.

The same report, by taking customs perspective and looking at the location of pharmaceutical companies that suffer from counterfeiting, concluded that Switzerland is the 7th country in the world (equally placed with France), after the US, Germany, the UK, Austria, China and India (see Figure 3.34). Globally, seized fakes that infringe Swiss IP represented 2.5% of the total seized value of fake pharmaceuticals in 2016.

Figure 3.34. Top economies of origin of pharmaceuticals right holders whose IP rights are infringed, 2011-16



Source: OECD customs seizures database

Unfortunately, the data limitations for counterfeit pharmaceuticals do not allow a more robust, general analysis to be carried out. However, a more detailed dataset that permits a thorough analysis of one important right holder is possible. This is presented in the following section.

In addition, one can also present the available seizures customs data that infringed Swiss IP rights holders through some simple descriptive statistics analysis. Due to the limited datasets, this analysis was to a certain extent complemented with interviews with customs and industry experts. However, it still does not claim to provide a complete overview of trade in counterfeit pharmaceutical products that infringed Swiss IP. Rather, it provides general intuitive illustrations.

Counterfeit pharmaceutical products that infringed Swiss IP included antiepileptic drugs, psychotropic products, colipitis treatment, anaemia treatment and anxiolytic.

In terms of the economies of origin of fake medicines that infringe Swiss IP, during 2011-16, they mainly came from China (44% of customs seizures) followed by the UK, India and Egypt. China represented almost 100% of the seized value of fake Swiss pharmaceuticals during that period.

Over the 2017-19 period, most fake Swiss drugs originated mainly from China and India. In addition, Germany, Singapore and Hong Kong (China) were very important transit points. In addition, enforcement and industry experts highlight the point that a growing volume of infringement of Swiss IP in pharmaceuticals tends to occur close to the destination markets, for example in European Union countries. Criminals smuggle unbranded medicines and packaging (e.g. blisters and boxes) separately to minimise risks of seizures and reduce potential losses.

The COVID-19 crisis and trade in fake Swiss pharmaceuticals

The COVID-19 pandemic opens new opportunities for profits for criminals running illicit trade networks. Because of the pandemic, people, industry and governments require medicines and protective equipment and this demand often cannot be met in a timely fashion. Notably, the sharp market growth of illicit trade in pharmaceuticals refers not only to COVID-19-related medicines. Consequently, the COVID-19 pandemic creates additional opportunities for criminals that run networks for trade in illicit pharmaceuticals.

Due to lockdown, e-commerce is becoming one of the leading platforms for fake and substandard medicines that infringe the IP of Swiss pharmaceutical companies. Enforcement officials also highlight that those counterfeit medical products related to COVID-19 are often bought on line and shipped by air cargo in small parcels. Most of these products are produced in China and India, while Hong Kong (China) and Singapore remain the main transit hubs.

Concerning border enforcement, customs and police continue their efforts during the crisis. However, the pandemic poses additional challenges, particularly to customs, as with the high dynamism of changes in illicit networks, informative risk profiling becomes very difficult. This is reflected in available data; the rates of enforcement in 2020 dropped by 16% compared with 2019. This also calls for further dedicated awareness-raising efforts targeted at enforcement officials.

Illicit trade in fake medicines infringing Swiss IP rights keeps growing. Interviews with industry experts from Novartis point at the overall growth of 5% of average seizure value in 2020 compared with 2019. Considering the overall drop in enforcement, this suggests that trade in illicit medicines infringing Swiss IP rights has grown by 25% from 2019. Out of all these illicit medicines, 45% are counterfeits, while the remaining 55% came from either theft or diversion.

Infiltration of substandard or counterfeit products into the legitimate supply chain poses grave threats to public health and safety and the efforts to combat the spread of COVID-19. This collateral damage might grow in the future, as the pandemic's economic damages are likely to reduce the patients' purchasing power worldwide.

Focus on infringements of Novartis' IP

The additional dataset used in this section comes directly from Novartis, one of the main Swiss pharmaceutical companies. The data comprise cases on fraudulent manufacture, mislabelling of drugs and fraudulent packaging. This database originally refers to enforcement actions carried out by many kinds of enforcement agencies, such as police, health inspection services, customs, etc.

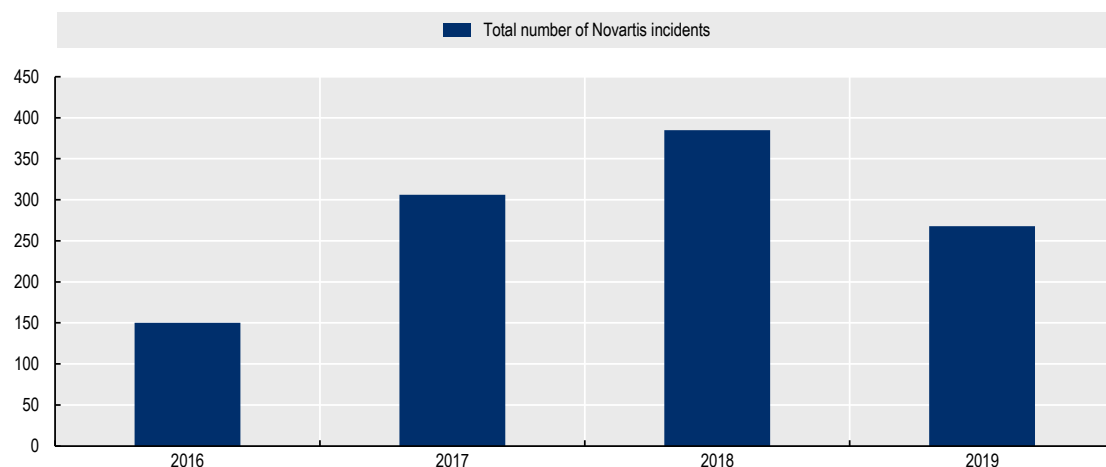
The data provided is organised into incidents. An incident is a discrete event triggered by the discovery of counterfeit, illegally diverted or stolen pharmaceuticals. An incident is a unique occurrence, with an assigned date, time, place and type of pharmaceutical product involved.

The OECD database on global customs seizures of counterfeit pharmaceuticals and the other enforcement database on incidents counterfeiting, theft and illegal diversion of pharmaceutical products worldwide are

based on two completely different types of data collection. However, they can bring together a lot of information on the value and scope of the global market of illicit pharmaceuticals.

As can be seen in Figure 3.35, the number of incidents involving a Novartis product has grown steadily between 2016 and 2018 to 368. Data for 2019 show a decrease in the number of incidents, probably due to the fact that, in 2019, Novartis had separated from its ophthalmic branch, Alcon.

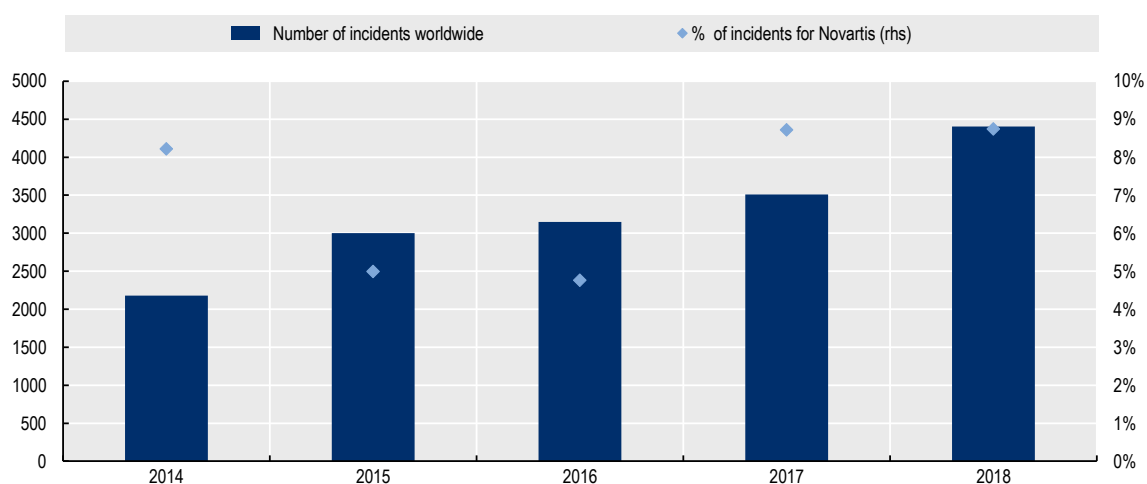
Figure 3.35. Total number of Novartis incidents, 2016-19



Note: The downward trend for 2019 may partly be explained by the fact that 2019 data excludes Alcon, as it is no longer one of Novartis' divisions.

In 2018, the share of incidents involving Novartis among worldwide incidents rose to almost 9%, a level similar to 2014 and 2018 but higher relative to 2015 and 2016 (around 5%). This means that, in 2018, almost 10% of incidents reported worldwide by pharmaceuticals companies were incidents involving the Swiss pharmaceuticals company.

Figure 3.36. Share of Novartis incidents among worldwide incidents



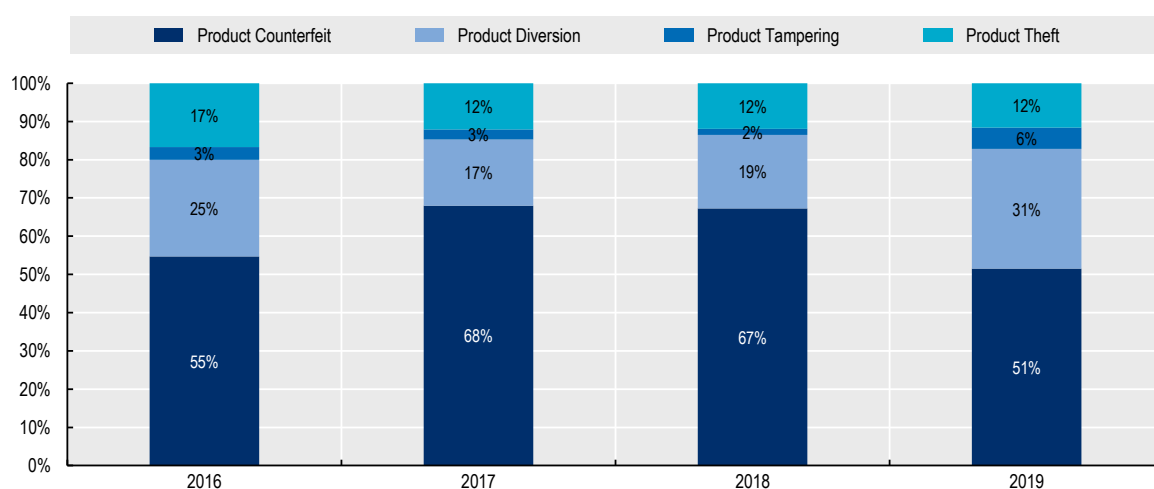
The infringement of Novartis IPR involved a large number of products since 64 Novartis pharmaceuticals have been counterfeited (see Table 3.10) in 2019. Overall, almost 120 Novartis pharmaceuticals have been subject to incidents in 2019, all types combined.

Table 3.10. Number of pharmaceuticals involved in Novartis incidents

Year	No. of pharmaceuticals involved in all incidents	No. of pharmaceuticals involved in counterfeiting incidents
2017	95	65
2018	148	58
2019	118	64

Note: In 2017, 95 Novartis pharmaceuticals have been involved in incidents, all types combined.

The data provided by the brand also specify the nature of the incidents, including product counterfeit, product diversion, product tampering and product theft. This means that these data cover a larger scope of incidents than data from customs that focus on counterfeit goods. Figure 3.37 displays the incidents involving Novartis products by incident types. This shows that product counterfeit and product diversion are the most frequent incidents while products tampering and theft are rarer. Indeed, in 2019 more than half of Novartis incidents involved counterfeiting and 31% involved product diversion.

Figure 3.37. Type of incidents involving Novartis products, 2016-19

Note: In 2019, 51% of incidents involving Novartis pharmaceuticals were counterfeit product while the diversion represented 31%.

Of all counterfeit incidents, ophthalmology products were the therapeutic category the most targeted by counterfeiters (see Table 3.11.). In 2018, it represented 45% of Novartis counterfeit incidents, followed by cardiovascular treatment (10%), hormone growth medication (7%), anti-inflammatory medicines (3%) and oncology treatment (3%).

Table 3.11. Number of counterfeit incidents by therapeutic categories (top five), 2018

Therapeutic categories	Number of incidents	Share of total counterfeit incidents
Ophthalmology	117	45%
Cardiovascular	26	10%
Hormone growth	17	7%
Anti-inflammatory	8	3%
Oncology	7	3%

Note: Counterfeit Novartis ophthalmology products were the most targeted by counterfeiters in 2018, representing 45% of total counterfeit incidents involving Novartis products.

Table 3.12 displays the top ten countries reporting incidents. One can see that the US was the country linked to the highest number of incidents, reporting 88 incidents involving Novartis pharmaceuticals, followed by China (43 incidents reported) and India (16).

It is important to note that the frequency in reporting incidents is partly linked to rigorous government monitoring and active enforcement programmes. Consequently, countries reporting few (or no) incidents may probably be less involved in monitoring the pharmaceutical market.

Table 3.12. Top ten ranked reported incidents by country and incident type, 2018

Country	Incident type				Total
	Product counterfeit	Product diversion	Product tampering	Product theft	
United States	82	1	1	4	88
China (People's Republic of)	40		1	2	43
India	16	3			19
Colombia	12	2	1	2	17
Egypt	10	8			18
Germany	10	1	1	1	13
United Kingdom	6	2			8
Peru	5				5
Poland	5	1			6
Chile	3	1		2	6
Total	189	19	4	11	223

Note: With 88 reported incidents, the US was the 1st country reporting incidents that involved Novartis pharmaceuticals.

Box 3.5. Novartis' fight against falsified and counterfeit medicines

A brief overview of Novartis' actions to counter illicit fake products

The Swiss pharmaceuticals company which is involved in countering falsified and counterfeit medicines investigated 268 incidents of suspected falsified medicines in 2019. It led to 61 successful enforcement actions and the seizure of over 2 million falsified unit dosage medicines by law enforcement and health authorities and the dismantling of 11 illegal pharmaceutical manufacturing facilities. Among these dismantlements, a broad-scale assembly line in China was producing counterfeit cardiovascular treatments.

Novartis is also monitoring the most targeted Novartis products on online pharmacies, social media and commercial platforms which are an important distribution channel for fake pharmaceuticals. This monitoring led to 102 online investigations and the removal of 13 891 illegal listings in 2019.

The Swiss pharmaceuticals firms have also developed a tool to detect falsified medicines by performing non-invasive testing of a suspect sample to compare it to the library of genuine Novartis products.

References

- OECD/EUIPO (2020), *Trade in Counterfeit Pharmaceutical Products*, Illicit Trade, OECD Publishing, Paris, <https://dx.doi.org/10.1787/a7c7e054-en>. [15]
- OECD/EUIPO (2019), *Trends in Trade in Counterfeit and Pirated Goods*, Illicit Trade, OECD Publishing, Paris, <https://doi.org/10.1787/g2g9f533-en>. [11]
- PSI (2019), “*Definition of counterfeiting, theft and illegal diversion*”, webpage, Pharmaceutical Security Institute, Vienna, VA, <https://www.psi-inc.org/pharma-crime>. [16]

Notes

¹ These industries correspond to the following categories classified by the Swiss Federal statistical office General Classification of Economic Activities (NOGA): 24, 25, 26 (except 2652), 27, 28, 29, 30, 325 and 33. These NOGA codes correspond to HS codes 72-90. See <https://www.bfs.admin.ch/bfs/en/home/statistics/industry-services/nomenclatures/noga.html>.

² Source: Eurostat.

³ So far there are no structured statistics that could illustrate whether the growth of online counterfeiting has been proportional to the growth of e-commerce in general.

⁴ Source: United Nations Comtrade database.

⁵ BFS data for NACE R2 codes C10, C11, C2042 and C2053.

⁶ Source: UN Comtrade database, 2014-16.

⁷ For more information on the IP intensity of the pharmaceutical industry, see (OECD/EUIPO, 2020^[15])

⁸ For more information on the negative health effects of fake pharmaceuticals, see (OECD/EUIPO, 2020^[15])



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