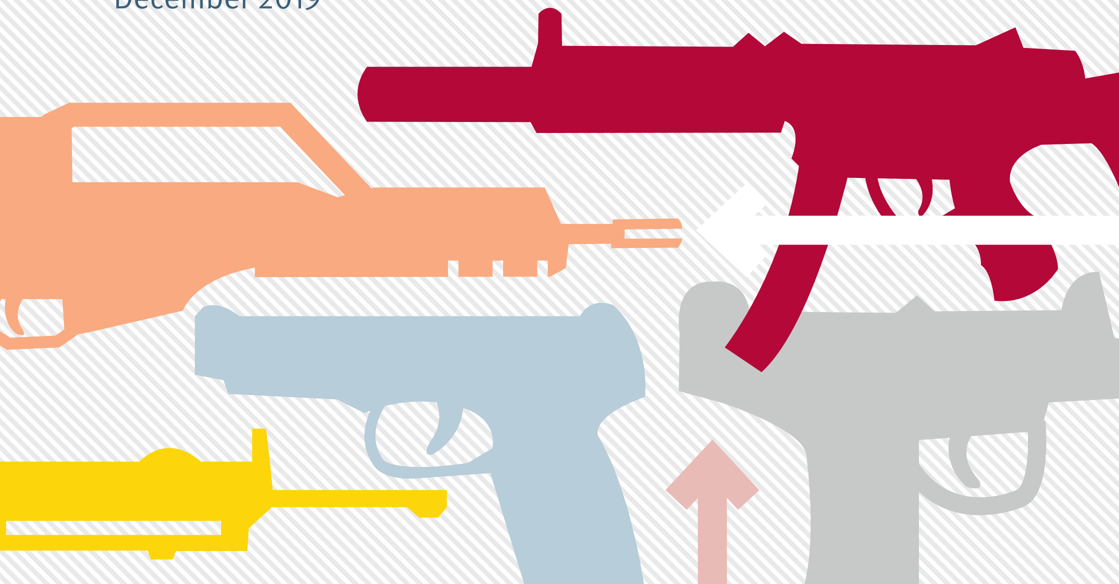
Report

December 2019



TRADE UPDATE 2019

Transfers, Transparency, and South-east Asia Spotlight

Michael Picard, Paul Holtom, and Fiona Mangan

small arms survey

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Australian Government
Department of Foreign Affairs and Trade

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A publication of the Small Arms Survey, with support from the Department of Foreign Affairs and Trade of Australia

Credits

Published in Switzerland by the Small Arms Survey

First published in December 2019

Small Arms Survey
Graduate Institute of International and Development Studies
Maison de la Paix, Chemin Eugène-Rigot 2E, 1202 Geneva, Switzerland

Editors: Fiona Mangan with Glenn McDonald
Production coordinator: Olivia Denonville
Communications coordinator: Emilia Dungel
Fact-checker: François Fabry (francois_fabry@hotmail.com)
Copy-editor: Alex Potter (alex.potter@mweb.co.za)
Design and layout: Rick Jones (rick@studioexile.com)
Infographics designer: Daly Design (studio@dalydesign.co.uk)
Cartographer: Jillian Luff (www.mapgrafix.com)
Proofreader: Stephanie Huitson (readstephanie@ymail.com)

Printed by Gonnet in France

ISBN 978-2-940548-75-0

About the authors

Michael Picard is a firearms researcher currently studying arms control and armed violence in South-east Asia. He focuses on firearm laws, firearm mortality rates, and the official and illicit manufacture and trade of small arms in the region. He has worked with the Small Arms Survey on arms control and proliferation issues since 2013. He is also the research director for GunPolicy.org of the University of Sydney's School of Public Health, and supports the Centre for Armed Violence Reduction, which provides assistance to states seeking accession to the Arms Trade Treaty and other arms control initiatives.

Paul Holtom is a senior researcher for the Small Arms Survey. His research focuses on efforts to strengthen regulation and increase transparency in the international arms trade, as well as measures to address arms trafficking and diversion. He was the director of the Stockholm International Peace Research Institute's Arms Transfers Programme (2009–13) and served as adviser to the Group of Governmental Experts on the UN Register of Conventional Arms in 2013, 2016, and 2019.

Fiona Mangan is a consultant with the Small Arms Survey, research director at Justice + Security in Transitions, and fellow of the University of South Carolina's Rule of Law Collaborative. She previously served as senior programme officer at the United States Institute of Peace, in addition to prior roles with the Stimson Center, Independent Diplomat, and Irish government.

Acknowledgements

The authors are particularly grateful to Mathieu Morelato for his significant contribution to the scoring and drafting of the 2019 Transparency Barometer, and to Zoe Stanley-Lockman and Miles Vinning for preparing background research papers on South-east Asia's small arms industry, and procurement trends and small arms production in Myanmar, respectively. Philip Alpers of GunPolicy.org/CAVR; James Gomez, Robin Ramcharan, and Patcharee Rattanarong of the Asia Centre; Chutimas Suksai; and Nikki de la Rosa and her team at International Alert provided crucial support in conducting field research in South-east Asia. The authors would like to thank Glenn McDonald, Irene Pavesi, Nicholas Marsh, Robert Perkins, and Mitzi Austero and Fred Lubang of Nonviolence International Southeast Asia for providing valuable comments on a draft of this report, and Olivia Denonville and Emilia Dungel for their crucial assistance in preparing the draft for publication. Thanks are also due to the Small Arms Survey production team for their support in finalizing the study.

The authors wish to express their gratitude to the Department of Foreign Affairs and Trade of the Government of Australia for its generous financial support of this publication.

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List of abbreviations and acronyms

AFP	Armed Forces of the Philippines
ATT	Arms Trade Treaty
Barometer	Small Arms Trade Transparency Barometer
DDI	Directorate of Defence Industries
EU	European Union
FBI	Federal Bureau of Investigation
FEO	Firearms and Explosives Office
GA	Government Arsenal
HMG	Heavy machine gun
IDR	Indonesian rupiah
LMG	Light machine gun
MANPADS	Man-portable air defence system(s)
ML	(Common) Military List
NATO	North Atlantic Treaty Organization
NICS	National Instant Criminal Background Check System
NISAT	Norwegian Initiative on Small Arms Transfers
OSCE	Organization for Security and Co-operation in Europe
PNP	Philippines National Police
PoA	Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects
SIPRI	Stockholm International Peace Research Institute
SMG	Sub-machine gun
ST	Singapore Technologies

UAE	United Arab Emirates
UN Comtrade	United Nations Commodity Trade Statistics Database
UN Register	United Nations Register of Conventional Arms
US	United States
USD	United States dollar

Key findings

- According to the United Nations Commodity Trade Statistics Database (UN Comtrade) the international small arms trade was worth at least USD 6.5 billion in 2016, a 13 per cent increase compared to 2015. Small arms ammunition remains the largest category, with exports worth USD 2.6 billion in 2016.
- In 2016 the top exporters of small arms (with annual exports worth at least USD 100 million), in descending order, were the United States, Italy, Brazil, Germany, Austria, South Korea, Croatia, the Czech Republic, Turkey, the Russian Federation, Israel, Belgium, China, Spain, Canada, Japan, Switzerland, and the United Kingdom.
- In 2016 the top importers of small arms (with annual imports worth at least USD 100 million), in descending order, were the United States, Saudi Arabia, Indonesia, Canada, Germany, Australia, France, the United Arab Emirates (UAE), Iraq, and the United Kingdom.
- The 2019 edition of the Small Arms Trade Transparency Barometer (Barometer) identifies, in descending order, Switzerland, Germany, the Netherlands, Serbia, and the United Kingdom as the most transparent small arms exporters in 2016. The least transparent exporters in 2016 are, in ascending order, Iran, North Korea (both with scores of zero), Saudi Arabia, and Israel. The average score for the 2019 Barometer is 12.3 out of a possible 25 points—a lower score than for the 2018 Barometer.
- The Trade Update 2019 identifies at least seven South-east Asian countries that industrially produce small arms and/or ammunition, primarily for use by security forces in the country of production. Private sector small arms producers in the Philippines cater for the domestic civilian firearms market and export globally.
- The largest South-east Asian exporters of small arms during 2014–16 were the Philippines, Thailand, and Singapore. The combined value of exports from South-east Asia for 2014–16 amounted to USD 161 million, less than 1 per cent of the global value of exports for this period.
- Between 2014 and 2016 South-east Asia accounted for at least USD 1.3 billion worth of small arms imports—19 per cent of the global value. Indonesia was ranked as a top global importer during 2016, with imports worth at least USD 281 million.
- The largest transparent small arms exporters to South-east Asia for 2014–16, in descending order, were Brazil, the United States, and South Korea. China, Israel, and the Russian Federation also delivered small arms to the region in quantities that signal the importance of the arms trade with these countries for security forces and the development of the industrial production of small arms in the region.

“With few exceptions, the production and procurement of small arms by the 11 countries of South-east Asia receives limited coverage or analysis.”

Introduction

In early 2019 Small Arms Survey research revealed that a joint Thai–Chinese weapons maintenance and manufacturing facility in north-east Thailand was producing small arms ammunition for domestic use,[1] yet no open-source reporting could be found on the venture. This facility, and its under-the-radar production of arms, is symbolic of not only the region's shifting small arms trade and production trends, but also the opaque nature of small arms-related issues in South-east Asia.[2] With few exceptions, the 11 South-east Asian countries' production and procurement of small arms receive limited coverage or analysis.[3] A regional culture of state secrecy combined with a period of relative peace and stability has allowed the small arms trade to quietly evolve for some time without significant scrutiny. Yet the production of small arms in South-east Asia and the region's role in international trade are by no means insignificant. Since the Survey began collecting and analysing UN Comtrade data in 2001, the small arms trade has considerably expanded in the region, with regional imports increasing from USD 35 million in 2001 to USD 443 million in 2016 (see Figure 8). Since 2007 at least five South-east Asian countries have ranked as top or major importers of small arms every year. Indonesia has been one of the top five importers of small arms globally each year since 2014.

The 2019 edition of the Trade Update aims to address this knowledge gap by devoting its final section to an in-depth discussion of small arms production and transfer patterns in South-east Asia. Research for this Trade Update has identified some of the least transparent small arms exporters in the region and the ongoing development of small arms production capabilities.

More specifically, the 2019 Trade Update addresses the following key questions:

- Who were the top and major small arms exporters and importers throughout the world in 2016?
- Who are the most and least transparent top and major exporters of small arms?
- Which South-east Asian countries have small arms and ammunition production capabilities?
- Who are the largest exporters of small arms and ammunition in South-east Asia?
- Who are the largest importers of small arms and ammunition in South-east Asia?
- Who are the largest exporters of small arms and ammunition to countries in South-east Asia?

The 2019 edition of the Trade Update comprises three main sections. The first lists the top and major exporters and importers of small arms in 2016 throughout the world, using data from UN Comtrade (see Box 1). Section II presents the 2019 edition of the Small Arms Trade Transparency Barometer, which provides an annual assessment of reporting on small arms trade activities and identifies the most and least transparent

Box 1 UN Comtrade data

The figures on the international small arms trade in Sections I and III of this report are based on analysis of customs data that states contribute voluntarily to UN Comtrade. While UN Comtrade captures much international commercial activity, it does not capture all small arms transfers, because many states do not report them to UN Comtrade, or do so only partially. If both an exporter and importer of a specific transaction do not report details of a transfer to UN Comtrade, the transfer will not be reflected in the estimates of the global small arms trade contained in Sections I and III of this report. Moreover, transfers of some light weapons, light weapons ammunition, and accessories for small arms and light weapons are not discernible from transfers of other items recorded in the same categories, and therefore are not covered in this analysis. As a result, this Trade Update is skewed towards documenting more transparent countries and particular categories of items, and most certainly underestimates the total value and extent of the global trade in small arms.

To compensate for non-reporting and to help resolve discrepancies between exporter and importer data, the analysis uses the Norwegian Initiative on Small Arms Transfers (NISAT) Reliability Index (Marsh, 2005). This index assigns a 'reliability score' for each data point, which, in turn, determines whether the data that the exporter or importer provides to UN Comtrade is used when their figures diverge.

The analysis of the documented trade in 2016 reflects data entered in the UN Comtrade database as of 26 November 2018. This is in line with established practice whereby the Survey and NISAT give countries almost two full calendar years in which to make and revise their respective UN Comtrade submissions.

major exporters of small arms. The third section focuses on the industrial production of small arms and ammunition in South-east Asia and seeks to determine the most important exporters and importers of small arms in—as well as the largest exporters of small arms to—the region.

“Top and major exporters, as the Survey defines them, account for more than 98 per cent of the global authorized small arms trade (as documented by UN Comtrade).”

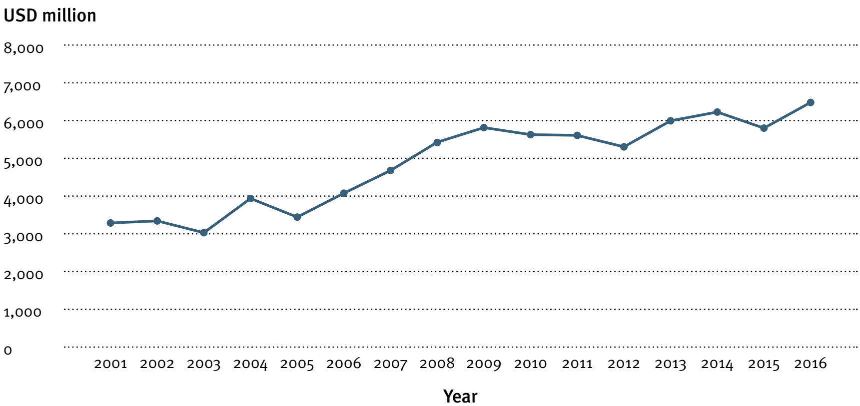
I. Authorized transfers

This section analyses authorized small arms transfers undertaken in 2016 and discusses trends during the 2014–16 period. It uses the financial value of small arms[4] imports and exports that states reported to UN Comtrade, as compiled by NISAT.[5] According to this data, top and major exporters, as the Survey defines them (see Box 2), account for more than 98 per cent of the global authorized small arms trade (as documented by UN Comtrade). UN Comtrade data for these states indicates that the financial value of the small arms trade in 2016 was at least USD 6.5 billion. This figure represents a 13 per cent increase compared to 2015, and surpasses 2014 as the record high for the global small arms trade since 2001, when the Small Arms Survey started collecting this form of data (see Figure 1).

Top and major exporters in 2016

In 2016, 38 states exported at least USD 10 million worth of small arms and light weapons, including their parts and accessories, and ammunition (see Table 2). The 18 top exporters—with small arms exports equal to or above USD 100 million—accounted for more than 84 per cent of the global trade that UN Comtrade captured (see Figure 3). The United States, Italy, and Brazil remain the three largest reported exporters, and together their small arms exports were worth USD 2.3 billion. The United States exported almost USD 1.1 billion worth of small arms, Italy USD 618 million, and Brazil USD 599 million. The value of exports for these three states in 2016 is USD 95 million higher than in 2015, accounting for about 13 per cent of the overall increase in the global trade. While the United States and Italy still exported below their 2014 thresholds by

Figure 1 Financial value of the global small arms trade (USD million), 2001–16



Note: All values are expressed in constant 2016 US dollars.

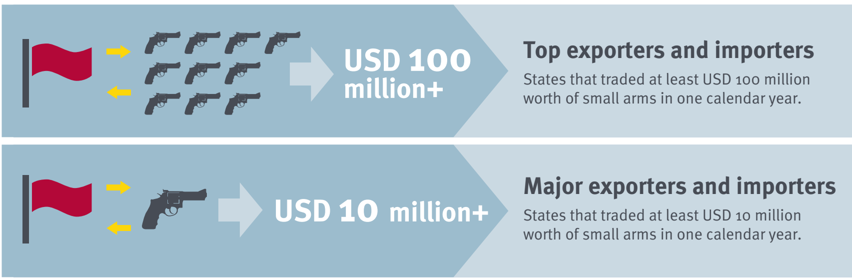
Source: NISAT (n.d.)

Box 2 Defining top and major small arms exporters and importers

The Small Arms Survey identifies top and major exporters and importers by assessing the financial value of their annual documented small arms exports and imports, based on UN Comtrade data as compiled by NISAT (Marsh, 2005). Top exporters and importers are those trading at least USD 100 million worth of small arms and light weapons, including their parts, accessories, and ammunition, in a calendar year (see Table 1). Major exporters and importers are those trading at least USD 10 million worth of small arms and light weapons, including their parts, accessories, and ammunition, in a calendar year. For the purposes of this analysis, top and major exporters and importers are classified according to a tier system (see Table 1).

Table 1 Tier classification of top and major exporters and importers of small arms

Category of exporter or importer		Value traded (USD)
Top	Tier 1	≥500 million
	Tier 2	100–499 million
Major	Tier 3	50–99 million
	Tier 4	10–49 million



about USD 41 million and USD 71 million, respectively, Brazil exceeded its 2014 level by USD 9 million (see Figure 2).[6]

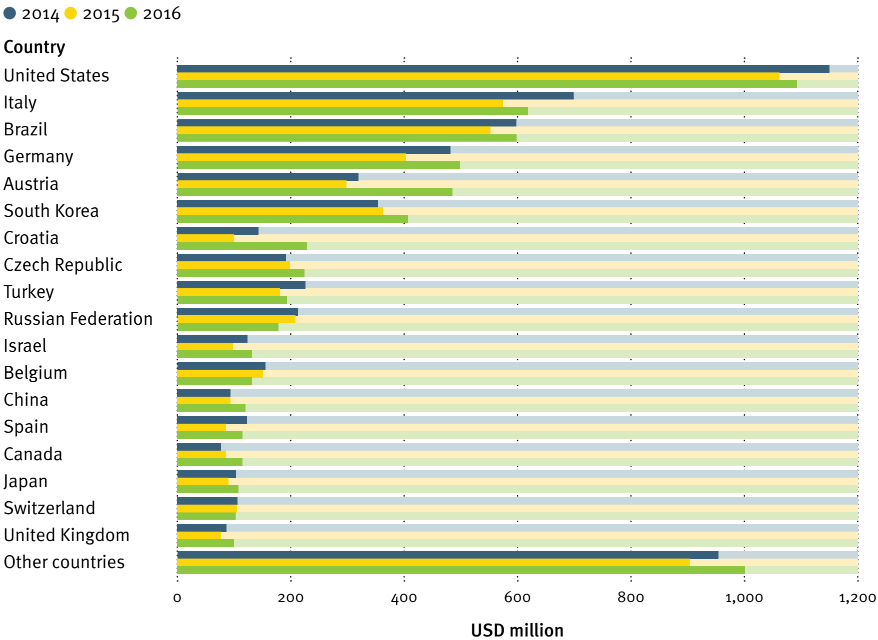
The number of top exporters grew from 14 to 18 between 2015 and 2016. Five countries became top exporters in 2016 (see below).[7] France was the only country to drop from this tier, having exported USD 103 million worth of small arms in 2015, but only USD 67 million worth in 2016. In order of the value of their 2016 exports, the five countries that became top exporters are:

Table 2 Top and major small arms exporters, as reported to UN Comtrade, 2016

Category		Value (USD)	Exporters (listed in descending order of value exported)
Top exporters	Tier 1	≥500 million	United States; Italy; Brazil
	Tier 2	100–499 million	Germany; Austria; South Korea; Croatia; Czech Republic; Turkey; Russian Federation; Israel; Belgium; China; Spain; Canada; Japan; Switzerland; United Kingdom
Major exporters	Tier 3	50–99 million	Finland; Mexico; Bulgaria; France; Sweden; Serbia; India; Slovakia; Poland
	Tier 4	10–49 million	Norway; Taiwan, China; Hungary; Philippines; Australia; Portugal; Bosnia and Herzegovina; Netherlands; Thailand; UAE; Argentina

Source: NISAT (n.d.)

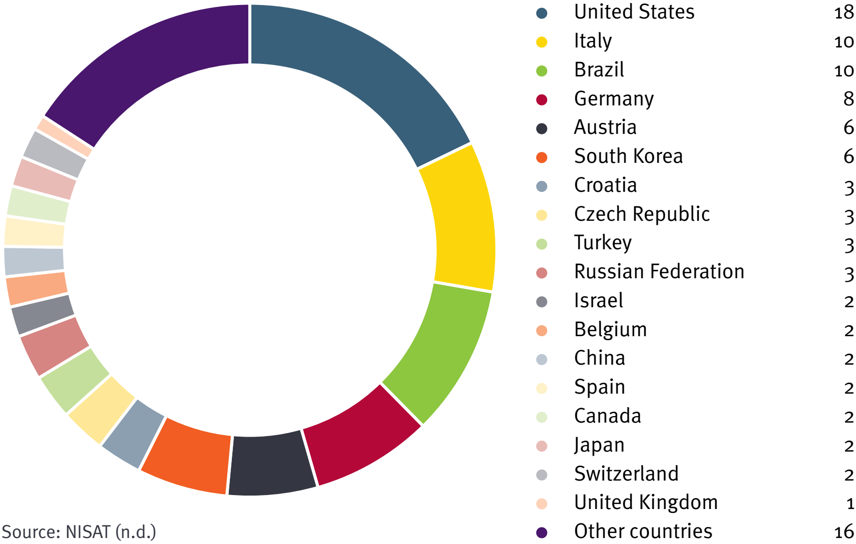
Figure 2 Financial value of small arms exports (USD million), by top exporter, 2014–16*



* The combined value of the small arms exports of all other countries that are not top exporters is included partly to indicate the total value of global small arms exports, and partly to indicate the extent to which the top exporters dominate global small arms exports. This also applies to Figure 3.

Source: NISAT (n.d.)

Figure 3 Share of total small arms exports (%), by top exporter, 2014–16



Source: NISAT (n.d.)

- China (USD 121 million, a 26 per cent increase);
- Spain (USD 116 million, a 32 per cent increase);
- Canada (USD 115 million, a 32 per cent increase);
- Japan (USD 108 million, a 19 per cent increase); and
- United Kingdom (USD 101 million, a 28 per cent increase).

Of the USD 751 million global increase in small arms exports between 2015 and 2016, almost 90 per cent can be attributed to the top exporters in 2016. Between 2015 and 2016 top exporters increased their share of the global small arms trade by USD 665 million. The most notable increases in exports came from Austria, Croatia, and Germany collectively exporting more than USD 400 million more small arms than in 2015. Belgium, the Russian Federation, and Switzerland were the only top exporters in 2016 to see a decline in the value of their exports, collectively exporting USD 57 million less in 2016 than in 2015.

This Trade Update identifies 20 major exporters in 2016 (Tiers 3–4), which collectively account for the export of USD 879 million worth of small arms.[8] Sixteen of these countries were also major exporters in 2015. As previously mentioned, France dropped a tier, becoming a major exporter following a 35 per cent decrease in the value of its exports between 2016 and 2015. On the other hand, three[9] additional countries crossed the USD 10 million threshold to become major exporters in 2016:

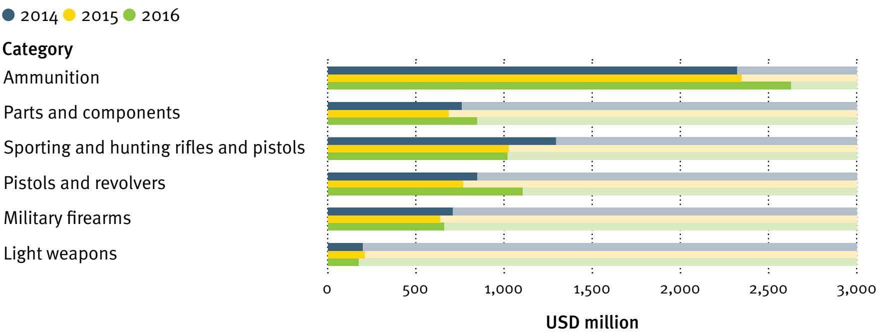
Box 3 The global small arms trade by category, 2014–16

Among the small arms-related categories that UN Comtrade identified, ammunition remains the most traded category. With exports worth more than USD 2.6 billion in 2016, the ammunition category accounted for 41 per cent of the documented small arms trade, which is consistent with the share for previous years. Between 2014 and 2016 ammunition exports increased by 13 per cent from USD 2.3 billion (see Figure 4). The main exporters of small arms ammunition in 2016 were, in descending order, the United States (accounting for 17 per cent of small arms ammunition exports), South Korea (13 per cent), Brazil (12 per cent), Germany (7 per cent), Italy, and the Russian Federation (both 6 per cent). The main recipients were the United States (accounting for 30 per cent of all small arms ammunition imports), followed by Saudi Arabia (9 per cent), Germany (5 per cent), and Canada (4 per cent). Ammunition is the only UN Comtrade-identified small arms-related category that has recorded year-on-year growth during the period 2014–16 (see Figure 4).

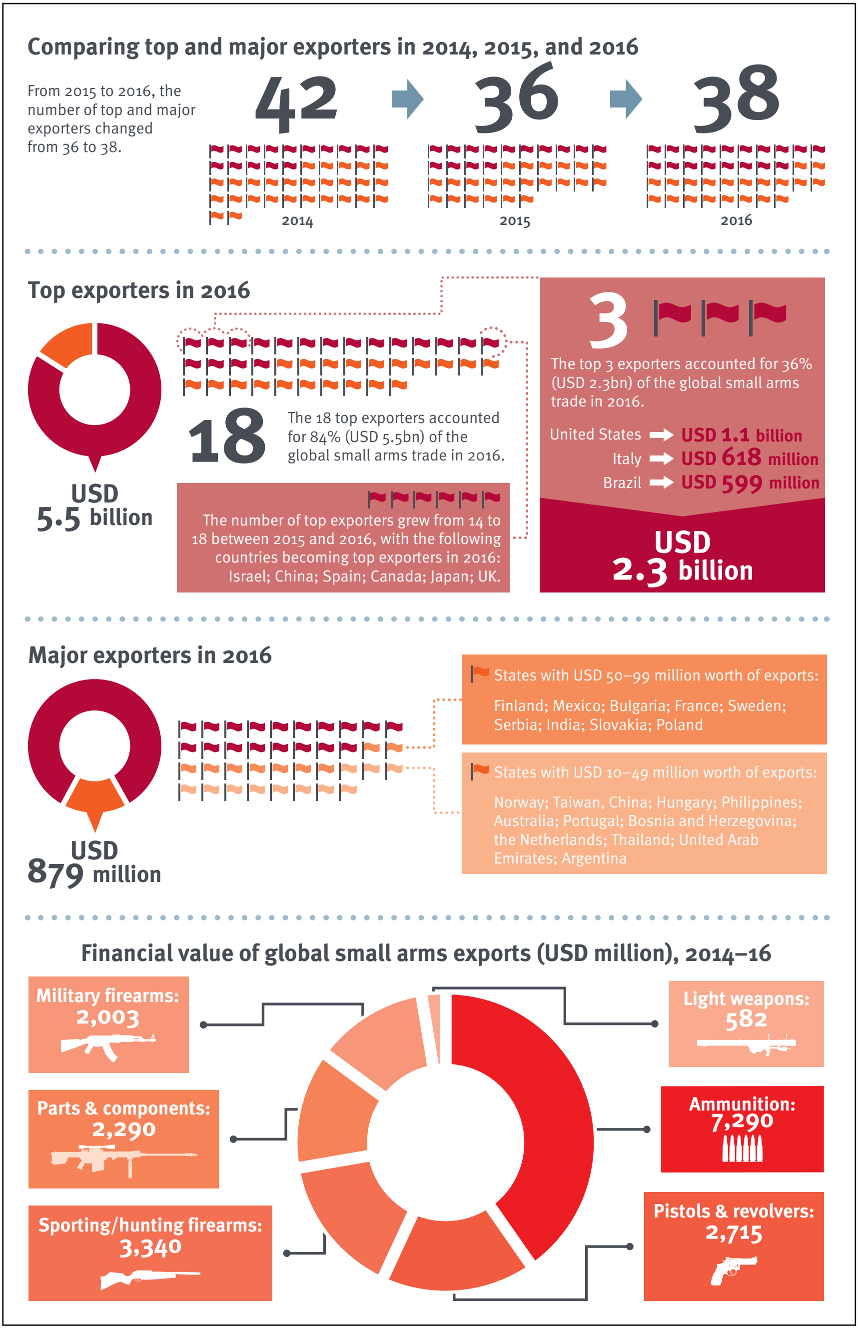
The value of pistol and revolver exports recorded the largest percentage increase for a UN Comtrade small arms category between 2014 and 2016, from USD 857 million in 2014 to USD 1,103 million in 2016. In 2016 Austria alone accounted for 33 per cent of global pistol and revolver exports, with 87 per cent of these exports delivered to the United States. This is indicative of the global pattern in which the United States accounted for 71 per cent of global pistol and revolver imports,[10] followed at some distance by Canada and Iraq (2 per cent each). Other prominent pistol and revolver exporters included Germany (13 per cent of all exports), Croatia (11 per cent), the United States (10 per cent), Brazil (9.5 per cent), and Italy (7.6 per cent).

The Annexe to this Trade Update contains information on the total value of exports, types of small arms exported, and main trading partners for each top and major exporter (see Table A1).

Figure 4 Financial values of global small arms exports (USD million), by category, 2014–16



Source: NISAT (n.d.)


Comparing top and major exporters in 2014, 2015, and 2016
From 2015 to 2016, the number of top and major exporters changed from 36 to 38.
42
36
38
2014
2015
2016
Top exporters in 2016
USD 5.5 billion
18
The 18 top exporters accounted for 84% (USD 5.5bn) of the global small arms trade in 2016.
The number of top exporters grew from 14 to 18 between 2015 and 2016, with the following countries becoming top exporters in 2016: Israel; China; Spain; Canada; Japan; UK.
3
The top 3 exporters accounted for 36% (USD 2.3bn) of the global small arms trade in 2016.
United States USD 1.1 billion
Italy USD 618 million
Brazil USD 599 million
USD 2.3 billion
Major exporters in 2016
USD 879 million
States with USD 50–99 million worth of exports:
Finland; Mexico; Bulgaria; France; Sweden; Serbia; India; Slovakia; Poland
States with USD 10–49 million worth of exports:
Norway; Taiwan, China; Hungary; Philippines; Australia; Portugal; Bosnia and Herzegovina; the Netherlands; Thailand; United Arab Emirates; Argentina
Financial value of global small arms exports (USD million), 2014–16
Military firearms: 2,003
Parts & components: 2,290
Sporting/hunting firearms: 3,340
Light weapons: 582
Ammunition: 7,290
Pistols & revolvers: 2,715

- the Netherlands (USD 16 million, a 508 per cent increase);
- Thailand (USD 15 million, a 482 per cent increase); and
- Argentina (USD 12 million, a 46 per cent increase).

As already discussed, five major exporters in 2015 went on to become top exporters in 2016. Only one major exporter in 2015, Cyprus, recorded exports worth less than USD 10 million in 2016.

Top and major importers in 2016

In 2016, 64 countries—three more than the previous year—qualified as top and major importers, having recorded at least USD 10 million worth of imports (see Table 3). The 11 top importers—countries that each imported at least USD 100 million worth of small arms in 2016—accounted for 67 per cent of the global small arms trade. The five largest importers in 2016 were also the largest importers for the period 2014–16 (see Table 4): the United States, Saudi Arabia, Indonesia, Canada, and Germany. All nine top importers from 2015 continued to be top importers in 2016.[11] Among top importers, the United States, Iraq, and Indonesia recorded the most significant changes in the value of their imports since 2015. Ghana also registered as a top importer in 2016, although the data indicating this is ambiguous, as discussed below.

UN Comtrade data indicates that 2016 saw the second highest financial value of small arms imported into the United States since the Survey began collecting data in 2001.

Table 3 Top and major small arms importers, as reported to UN Comtrade, 2016

Category		Value (USD)	Importers (listed in descending order of value imported)
Top importers	Tier 1	≥500 million	United States
	Tier 2	100–499 million	Saudi Arabia; Indonesia; Canada; Germany; Ghana; Australia; France; UAE; Iraq; United Kingdom
Major importers	Tier 3	50–99 million	Thailand; Belgium; Netherlands; Slovakia; Kuwait; Spain; South Korea; Israel; Austria; Mexico; Italy; Croatia; Jordan; Switzerland; Norway; Turkey; Sweden
	Tier 4	10–49 million	Poland; Philippines; Japan; Morocco; Denmark; Czech Republic; South Africa; Portugal; Oman; Lebanon; New Zealand; Bulgaria; Peru; Finland; Pakistan; Ukraine; Russian Federation; Tunisia; Qatar; Estonia; Argentina; Colombia; Kenya; Malaysia; Singapore; Mali; Luxembourg; China; Taiwan, China; Chile; Lithuania; Latvia; Brazil; Guatemala; Hungary; Bahrain

Source: NISAT (n.d.)

Table 4 Financial value of small arms imports (USD million) as reported to UN Comtrade, by top importer, 2014–16

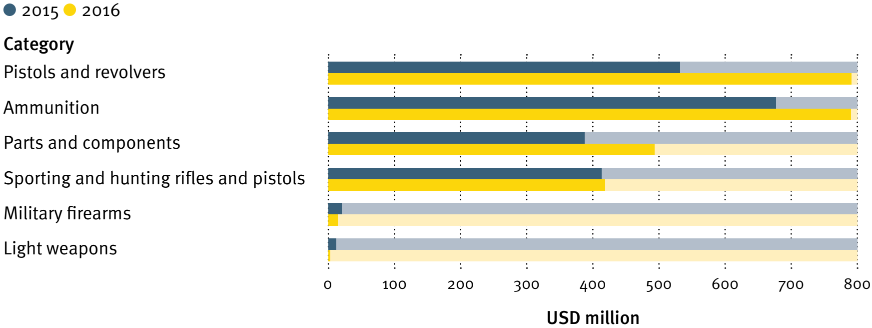
	2014	2015	2016	Total value of imports, 2014–16	Share of global imports, 2014–16
United States	2,214	2,041	2,510	6,765	36%
Canada	364	303	249	916	5%
Saudi Arabia	209	285	333	827	4%
Indonesia	331	173	281	785	4%
Germany	198	166	203	567	3%
Australia	156	172	174	502	3%
Iraq	139	207	121	467	3%
France	125	126	137	388	2%
UAE	75	134	136	345	2%
United Kingdom	109	96	120	324	2%
Ghana	5	6	197	209	1%
Other countries	2,343	2,156	2,300	6,798	37%

Source: NISAT (n.d.)

This increase occurred after a USD 450 million decline in US small arms imports between 2013 and 2015.[12] The financial value of such imports increased by USD 469 million, from USD 2.0 billion in 2015 to USD 2.5 billion in 2016 (see Table 4). Even with this increase, the US share of global small arms imports increased only incrementally, from 35 to 37.8 per cent, indicating a similar global trend. Much of the increase can be attributed to a nearly 50 per cent increase in pistol and revolver imports. Imports of ammunition, parts, and components also increased by more than USD 100 million each, while the import of military weaponry appeared to decline by about USD 15 million (see Figure 5). This corresponds to an increase in civilian gun sales in the United States, according to US Federal Bureau of Investigation (FBI) data. Between 2014 and 2016 the number of National Instant Criminal Background Check System (NICS) queries tied to individual civilian purchases increased from 21.0 million to 27.5 million (see Figure 6) (NISAT, n.d.; FBI, 2019).

Indonesia imported USD 281 million worth of small arms in 2016, an increase of USD 108 million from 2015. This once again makes Indonesia the third largest importer in the world after Saudi Arabia and the United States. This growth in Indonesian imports

Figure 5 Comparison of US small arms imports by category between 2015 and 2016

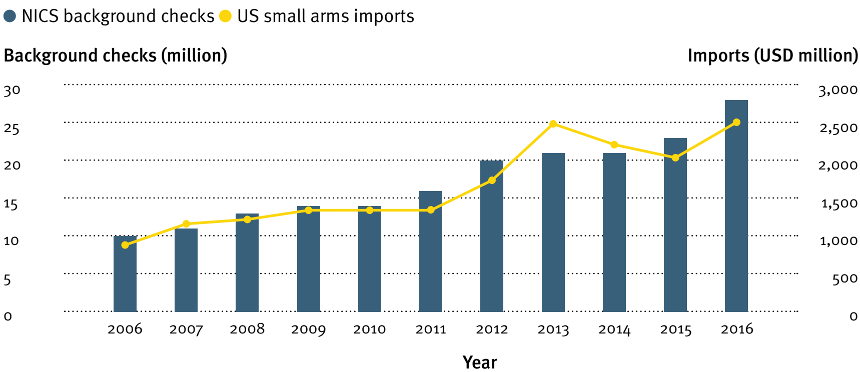


Source: NISAT (n.d.)

consisted almost entirely of military firearms, which increased in value by USD 101 million since 2015 and represents 85 per cent of Indonesia's 2016 imports. Sixty per cent of these imports came from Brazil, while Indonesia's next two largest suppliers, China and France, only provided 8 per cent each. Almost all of Indonesia's imports from Brazil were military firearms. Globally, Indonesia was the biggest importer of military firearms in 2016, which will be revisited in Section III of this report.

Ghana imported USD 197 million worth of small arms in 2016, yet only imported USD 6 million worth of small arms in 2015. This represents a 3,045 per cent increase. USD 177 million, or 90 per cent, of these imports were military firearms, making Ghana the second largest global importer of military firearms in 2016 after Indonesia. Seventy-three

Figure 6 Comparison of US imports and FBI background checks, 2006–16



Sources: NISAT (n.d.); FBI (2019)

per cent of these imports are from an 'Unspecified Country'. It is possible that these imports constitute weaponry returning from foreign peace operations or are associated with international military exercises. The former scenario is unlikely, however, because Ghana declared more than USD 30 million worth of military firearm imports (16 per cent of its total imports) from Liberia, where it contributed a battalion-size contingent of peacekeepers to the UN Mission in Liberia, which formally ended soon after. This is the only recent instance of a Ghanaian peacekeeping contingent being permanently repatriated, making it difficult to account for the remaining imports from an 'Unspecified Country' (UN DPKO, 2015; 2016; 2017). Furthermore, while Ghana did host an international military exercise in 2016, the nature of the exercise and the number of personnel involved do not seem to account for the unusual level of imports (AFRICOM, 2016).[13]

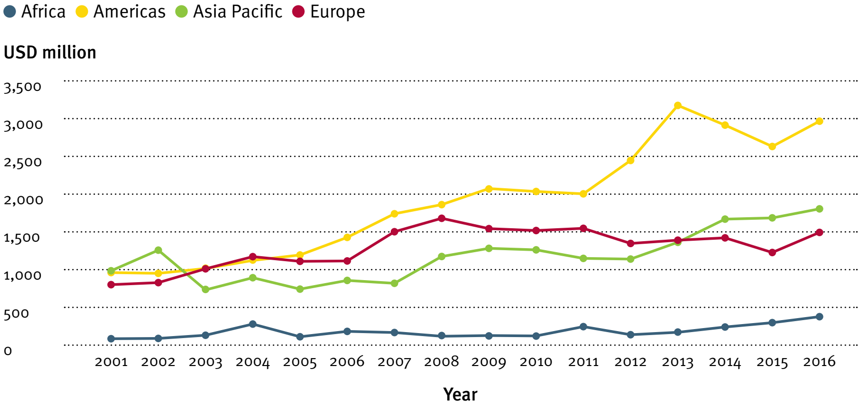
Iraq's small arms imports fell by USD 85 million between 2015 and 2016, the second largest recorded change. This drop was due to a USD 108 million decline in imports of military firearms, light weapons, and ammunition. However, Iraqi imports of pistols, revolvers, and sporting and hunting firearms increased by USD 20 million, making them the most imported categories after ammunition. This aligns with a USD 102 million decrease in imports from South Korea, the United States, and Croatia, as well as a USD 25 million increase in imports from Italy and the UAE. South Korea continues to be Iraq's main supplier of small arms, having supplied 72 per cent of declared imports. This is consistent with its proportion of trade with Iraq in 2015.

In 2016 the 53 major importers accounted for 30 per cent of the global small arms trade, which is more or less consistent with the previous year.[14] The composition of major importers changed significantly between 2016 and 2015, due in large part to fluctuations in the value of several African countries' imports. Four of the 11 countries that became major importers in 2016 were from Africa, while 5 of the 9 countries that were major importers in 2015 but not in 2016 were African.[15] Last year's Trade Update identified 2015 as an atypical year for sub-Saharan African countries' imports, but also discussed the shortcomings of UN Comtrade data for documenting the authorized trade involving these countries (Holtom and Pavesi, 2018, pp. 57–63).

Furthermore, Croatia, Mali, and Tunisia all became major importers for the first time since the Survey began documenting UN Comtrade trends. Croatia, Kuwait, and Jordan saw the largest increase of their small arms imports within this tier: each of their small arms imports increased by more than USD 50 million since 2015. On the other hand, Lebanon, Brazil, and Mexico saw the largest declines since 2015, with their declared imports decreasing by USD 41 million, USD 30 million, and USD 16 million, respectively.

Figure 7 presents regional patterns in the small arms trade between 2001 and 2016, based on UN Comtrade data. After a dip in 2015, small arms imports to North America and Europe rebounded, between them accounting for 75 per cent of the global increase in imports. Asia remained the second largest importer region of small arms, although it grew the least in relation to its 2015 level of imports—only 7 per cent. This was due

Figure 7 Regional trends in small arms imports, as reported to UN Comtrade (USD million), 2001–16



Note: All values are expressed in constant 2016 US dollars. See Table A3 for information on the regional breakdown of countries and territories used in this Trade Update.

Source: NISAT (n.d.)

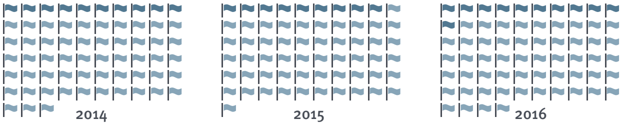
to a sizable decline in deliveries to South and Central Asia, a collective decrease of USD 78 million. East Asia saw moderate import growth of about USD 34 million, while West Asia saw a net increase of USD 41 million, largely driven by imports by Saudi Arabia, Kuwait, and Jordan, despite decreased imports for several countries. Deliveries to South-east Asia, however, increased by USD 144 million, accounting for more than a quarter of all Asian imports. Trade and production trends in South-east Asia are the subject of detailed analysis in Section III of this report.

The Annexe to this Trade Update contains information on the total value of imports, types of small arms imported, and main trading partners for each top and major importer (see Table A2).

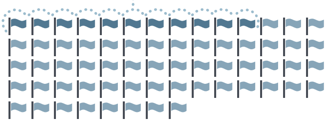
Comparing top and major importers in 2014, 2015, and 2016

From 2015 to 2016, the number of top and major importers changed from 61 to 64.

63 → 61 → 64



Top importers in 2016



The top 11 importers accounted for 67% (USD 4.5bn) of the global small arms trade in 2016.

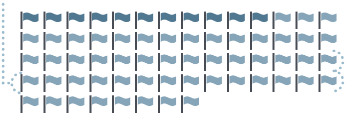
11

Ghana

Ghana recorded imports worth USD 6m in 2015, USD 197m in 2016–a 3,045% increase.

- United States → USD 2.51 billion
- Saudi Arabia → USD 333 million
- Indonesia → USD 281 million
- Canada → USD 249 million
- Germany (Federal Republic) → USD 203 million
- Ghana → USD 197 million
- Australia → USD 174 million
- France → USD 137 million
- UAE → USD 136 million
- Iraq → USD 121 million
- United Kingdom → USD 120 million

Major importers in 2016



The 53 major importers accounted for 30% (USD 2bn) of the global small arms trade in 2016.

53

Croatia, Mali, and Tunisia all became major importers for the first time since the Survey began documenting UN Comtrade trends.

Financial value of small arms imports by region, as reported to UN Comtrade, 2016

The Americas: USD 3bn
Asia and the Pacific: USD 1.8bn
Europe: USD 1.5bn
Africa: USD 377m

“This edition of the Barometer identifies the most and least transparent major exporters of small arms, based on their reporting of arms trade activities conducted in 2016.”

II. The Small Arms Trade Transparency Barometer

The Small Arms Trade Transparency Barometer presents an annual assessment of countries' reporting on small arms trade activities. This edition of the Barometer identifies the most and least transparent major exporters of small arms, based on their reporting of arms trade activities conducted in 2016. The score for each major exporter is based on an evaluation of information on arms transfer control systems and small arms exports made publicly available by countries through the following sources:

- national arms exports reports, including submissions to regional reports;
- submissions to the UN Register of Conventional Arms (UN Register), including submissions to the Organization for Security and Co-operation in Europe (OSCE);
- national reports on implementation of the UN Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects (PoA);
- UN Comtrade submissions;[16] and
- Arms Trade Treaty (ATT) initial and annual reports.[17]

The scoring system for the 2019 Barometer allows exporters to earn up to 25 points on the basis of standardized scoring guidelines used to assess 43 criteria across seven transparency parameters: *timeliness*, *access and consistency*, *clarity*, *comprehensiveness*, *deliveries*, *licences granted*, *and licences refused*. The more points a country receives, the higher its ranking in the Barometer. It is important to note that the Barometer does not verify the accuracy of the information that countries provide.

This edition of the Barometer assessed ATT and UN PoA reports for the second time, and can therefore be compared with the 2018 edition of the Barometer (see Table 5). In addition, this year the OSCE participating states decided to make their annual reports on international transfers of conventional arms publicly available. These reports are based on submissions to the UN Register (see Box 5).

The 2019 Barometer provides an assessment of the reporting practices of 49 major exporters—countries that are believed to have exported at least USD 10 million worth of small arms and light weapons during any calendar year from 2001 to 2016, including parts, accessories, and ammunition. It examines information that these 49 exporters made publicly available in national and international transparency instruments during the period 2016–17 regarding trade activities that were conducted during 2016 (see Table 5). Providing comprehensive reporting for all instruments increases a country's likelihood of receiving a high score. Detailed scoring guidelines are presented in the Annexe (see Table A6).

Switzerland was the most transparent small arms exporter for the second year in a row. It scored 21.25 points out of a possible 25 points based on information provided on small arms trade activities in 2016. Switzerland is followed by Germany and the Netherlands, which tied in second place with 19.5 points. Serbia and the United Kingdom

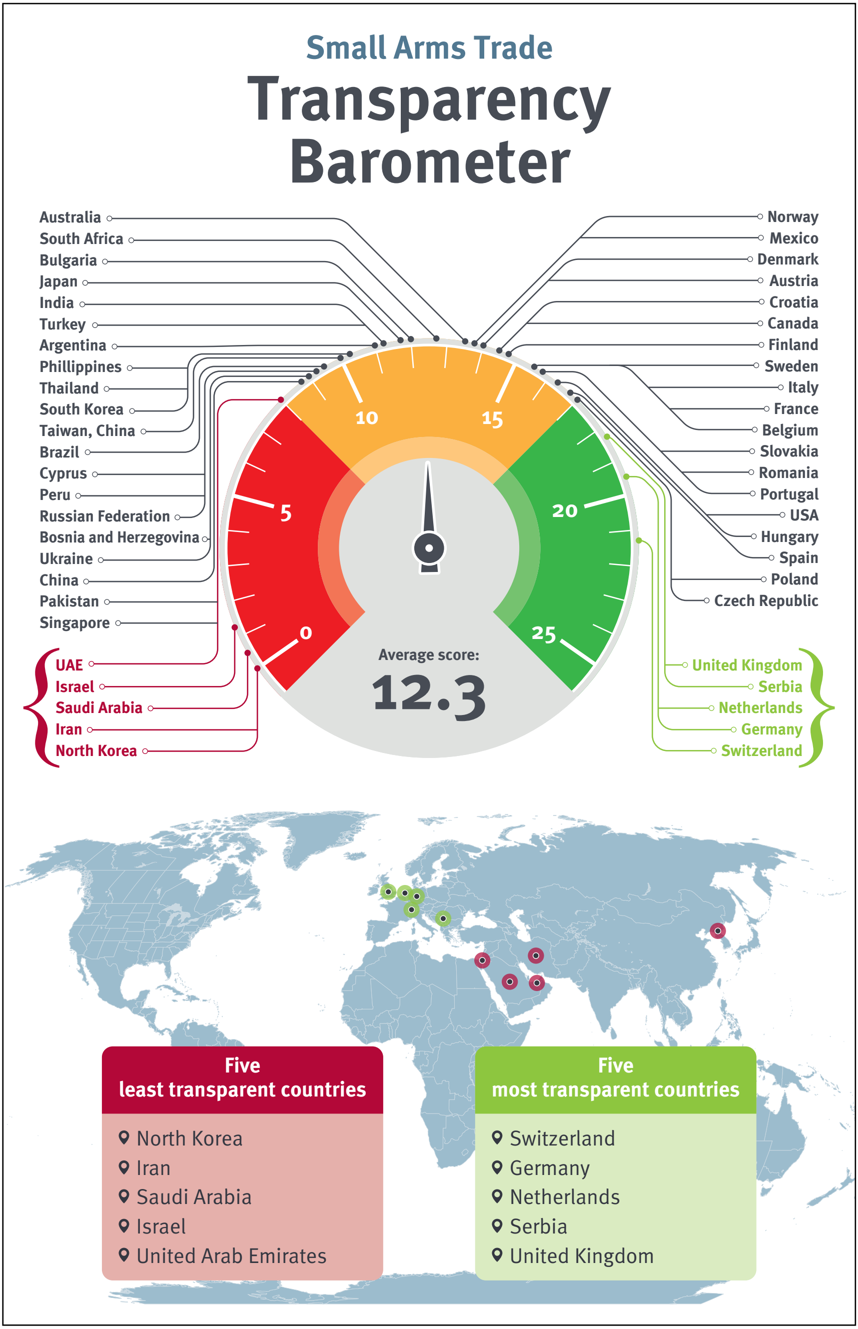

Small Arms Trade
Transparency Barometer
Australia
South Africa
Bulgaria
Japan
India
Turkey
Argentina
Phillippines
Thailand
South Korea
Taiwan, China
Brazil
Cyprus
Peru
Russian Federation
Bosnia and Herzegovina
Ukraine
China
Pakistan
Singapore
UAE
Israel
Saudi Arabia
Iran
North Korea
Norway
Mexico
Denmark
Austria
Croatia
Canada
Finland
Sweden
Italy
France
Belgium
Slovakia
Romania
Portugal
USA
Hungary
Spain
Poland
Czech Republic
United Kingdom
Serbia
Netherlands
Germany
Switzerland
0
5
10
15
20
25
Average score:
12.3
Five least transparent countries
North Korea
Iran
Saudi Arabia
Israel
United Arab Emirates
Five most transparent countries
Switzerland
Germany
Netherlands
Serbia
United Kingdom

Table 5 Small Arms Trade Transparency Barometer 2019, covering major exporter activities in 2016*

Exporter	Transparency Barometer 2019 score	Transparency Barometer 2018 score	National report **/ regional report ***	UN Comtrade**	UN Register**	OSCE**	ATT/PoA		
							ATT annual report	ATT initial report˚	PoA˚
Switzerland	21.25	21.75	x	x	x	o	x	x	x
Germany	19.50	18.50	x/EU	x	x	x	x	x	x
Netherlands	19.50	20.00	x/EU	x	x	o	x	x	x
Serbia	18.25	19.00	x/SEE	x	x	x	x	x	x
United Kingdom	18.25	20.00	x/EU	x	x	x	x	x	x
Czech Republic	17.00	15.25	x/EU	x	x	x	x	x	x
Poland	17.00	17.25	x/EU	x	x	x	x	x	x
Spain	16.75	17.50	x/EU	x	x	x	x	x	x
Hungary	16.25	15.00	x/EU	x	x	x	x	x	x
United States	16.25	15.75	x	x	x	x	o	o	x
Portugal	15.75	16.50	o/EU	x	x	x	x	x	x
Romania	15.75	18.00	x/EU	o	x	x	x	x	x
Slovakia	15.75	15.25	x/EU	x	x	x	x	x	x
Belgium	15.50	17.75	x/EU	x	x(15)	x	x	x	o
France	15.50	17.25	x/EU	x	x	x	x	x	x
Italy	15.50	19.50	x/EU	x	x	x	x	x	x
Sweden	15.50	17.25	x/EU	x	x	x	x	x	x
Finland	14.75	14.50	x/EU	x	x	o	x	x	x
Canada	14.50	13.50	x	x	x	x	o	o	x
Croatia	14.50	13.25	x/EU	x	o	o	x	x	x
Austria	14.00	16.00	o/EU	x	x	o	x	x	o
Denmark	14.00	13.50	x/EU	x	o	x	x	x	o
Mexico	13.75	11.75	o	x	x(15)	o	x	x	o
Norway	13.75	15.25	x	x	o	x	x	x	x

Total timeliness (1.50 max)	Total access and consistency (2.00 max)	Total clarity (5.00 max)	Total comprehensiveness (6.50 max)	Total deliveries (4.00 max)	Total licences granted (4.00 max)	Total licences refused (2.00 max)
1.50	1.50	4.50	5.75	3.00	4.00	1.00
1.50	2.00	4.00	3.75	3.00	3.50	1.75
1.50	2.00	4.50	6.00	3.00	1.50	1.00
1.50	1.50	3.25	5.00	3.50	2.00	1.50
1.50	2.00	4.50	4.00	2.50	3.00	0.75
1.50	1.50	3.00	4.50	3.00	1.50	2.00
1.50	1.50	3.50	4.00	3.00	1.50	2.00
1.50	1.50	3.25	4.50	3.50	1.50	1.00
1.50	1.50	2.75	4.00	2.50	2.00	2.00
1.50	2.00	3.75	4.00	3.00	2.00	0.00
1.50	1.50	3.00	3.75	3.50	2.50	0.00
1.50	1.50	2.75	4.00	3.00	3.00	0.00
1.50	1.50	3.50	4.75	3.00	1.50	0.00
1.50	2.00	3.00	2.50	3.00	1.50	2.00
1.50	1.50	4.00	3.75	3.00	1.50	0.25
1.50	1.50	3.50	4.50	2.50	2.00	0.00
1.50	1.50	3.75	4.50	2.50	1.50	0.25
1.50	1.50	2.75	3.75	3.00	2.00	0.25
1.50	1.50	3.00	4.00	4.00	0.00	0.50
1.50	1.50	3.25	3.00	3.00	2.00	0.25
1.50	1.50	2.75	3.00	3.00	2.00	0.25
1.50	1.50	2.75	3.50	3.00	1.50	0.25
1.50	1.00	2.50	4.75	4.00	0.00	0.00
1.50	1.50	3.75	3.25	3.00	0.00	0.75

Exporter	Transparency Barometer 2019 score	Transparency Barometer 2018 score	National report **/ regional report ***	UN Comtrade**	UN Register**	OSCE**	ATT/PoA ATT annual report	ATT initial report◆	PoA◆
Australia	13.50	12.50	x	x	o	o	x	x	x
South Africa	12.75	11.50	x	o	o	o	x	x	o
Bulgaria	12.00	13.00	x/EU	o	x	o	x	x	x
Japan	11.75	12.00	o	x	x	o	x	x	x
India	11.25	10.25	o	x	x	o	o	o	x
Turkey	11.25	9.75	o	x	x	x	o	o	x
Argentina	11.00	11.00	o	x	x	o	x	x	x
Philippines	10.25	9.00	o	x	o	o	o	o	x
Thailand	10.25	10.25	o	x	o	o	o	o	x
South Korea	10.25	11.75	x	x	o	o	o	o❖	o
Taiwan, China	10.00	10.00	x	o^	o	o	o	o	o
Brazil	9.50	8.75	o	x	x	o	o	o❖	x
Cyprus	9.25	11.00	o/EU	x	x	x	o	x°	o
Peru	9.25	9.50	o	x	o	o	o+	x	x
Russian Federation	9.25	9.50	o	x(15)	x	x	o	o	x
Bosnia and Herzegovina	9.00	10.25	o/SEE	o	x	x	x	x	x
Ukraine	9.00	9.25	x	o	x	o	o	o	x
China	8.75	8.25	o	x	x	o	o	o	x
Pakistan	8.00	7.75	o	x	x(15)	o	o	o	x
Singapore	8.00	9.25	o	x	x	o	o	o	x
UAE~	8.00	8.00	o	x	o	o	o	o	o
Israel	1.25	0.75	o	o	x	o	o	o	o
Saudi Arabia	0.50	0.50	o	o	o	o	o	o	x
Iran	0.00	0.00	o	o	o	o	o	o	x
North Korea	0.00	0.00	o	o	o	o	o	o	o

Total timeliness (1.50 max)	Total access and consistency (2.00 max)	Total clarity (5.00 max)	Total comprehensiveness (6.50 max)	Total deliveries (4.00 max)	Total licences granted (4.00 max)	Total licences refused (2.00 max)
1.50	1.50	2.75	3.25	3.00	1.50	0.00
1.50	1.00	3.00	3.25	1.00	3.00	0.00
1.50	1.50	2.50	2.25	2.50	1.50	0.25
1.50	1.50	2.50	3.75	2.50	0.00	0.00
1.50	1.00	2.50	3.25	3.00	0.00	0.00
1.50	0.50	2.50	3.75	3.00	0.00	0.00
1.50	1.00	2.50	3.00	3.00	0.00	0.00
1.50	0.50	2.50	2.75	3.00	0.00	0.00
1.50	0.50	2.50	2.75	3.00	0.00	0.00
1.50	1.00	1.50	3.25	2.50	0.50	0.00
1.50	1.50	1.50	2.50	3.00	0.00	0.00
1.50	1.00	2.00	2.50	2.50	0.00	0.00
1.50	1.00	1.50	2.75	2.50	0.00	0.00
1.50	0.50	2.50	2.25	2.50	0.00	0.00
1.50	1.00	2.25	2.00	2.50	0.00	0.00
1.50	0.50	2.50	1.50	1.50	1.50	0.00
1.50	1.50	2.00	2.00	2.00	0.00	0.00
1.50	1.00	1.50	1.75	3.00	0.00	0.00
1.50	0.50	1.75	2.25	2.00	0.00	0.00
1.50	1.00	2.00	1.50	2.00	0.00	0.00
1.50	0.00	1.50	2.50	2.50	0.00	0.00
0.00	0.50	0.25	0.50	0.00	0.00	0.00
0.00	0.00	0.50	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes: The online version of the Transparency Barometer incorporates corrections that may affect country scores and rankings. For this reason, the online version, rather than the printed one, should be considered definitive. See Small Arms Survey (n.d.).

* Major exporters are countries that export—or are believed to export—at least USD 10 million worth of small arms, light weapons, their parts and accessories, and ammunition in a given year. The 2018 Barometer includes any country that qualified as a major exporter at least once during the 2001–16 calendar years; it assesses arms trade activities for 2016.

** 'x' indicates that a report was issued or submitted by the cut-off date—that is, 13 months after the year in which the trade activities took place. 'x(year)' indicates that, because a report was not issued or submitted by the cut-off date, the country was evaluated on the basis of its most recent submission, which covered activities for the year reported in brackets. 'o' indicates that no report was submitted.

*** The Barometer assesses information provided in the following regional reporting instruments: (1) the EU's *Nineteenth Annual Report* (CoEU, 2018), which reflects exports of military equipment carried out by EU member states in 2016 and appears as 'EU' in the Barometer; and (2) the regional report compiled by SEESAC (SEESAC, 2018), which covers data on transfers completed in 2015 by exporters from South-eastern and Eastern Europe and appears as 'SEE' in the Barometer. The SEESAC Regional Report for arms transfers in 2016 was not available when the 2019 Barometer was finalized.

♦ 'x' indicates that an initial ATT report was submitted during 2015–18; that a PoA national report was submitted during 2015–17.

º Cyprus has requested that its initial ATT report be posted only on the area of the website accessible to ATT states parties.

❖ South Korea submitted its initial ATT report in 2018. Brazil is due to submit its initial report later in 2019. It will be assessed for the first time in the 2020 Barometer.

^ Customs data provided by Taiwan, China has been categorized as a national report, rather than as a submission to UN Comtrade.

\+ Peru will have its first ATT annual report assessed next year.

~ For an explanation of the situation regarding the UAE, see Box 4.

Scoring system

The 2019 Barometer's scoring system allows exporters to earn up to 25 points on the basis of 42 criteria in 7 parameters: timeliness; access and consistency; clarity; comprehensiveness; and the level of detail provided on actual deliveries, licences granted, and licences refused. For detailed scoring guidelines, see Table A6 in the Annexe.

Explanatory notes

The 2019 Barometer assesses national arms export reports that were made publicly available between 1 January 2016 and 31 January 2018. It also reflects information submitted by states to regional reporting mechanisms that were published after 31 January 2018 and before the Barometer was finalized (1 March 2019), although the submission of this data does not receive points for timeliness.

The 2019 Barometer takes account of national submissions to the UN Register from 1 January 2016 to 31 January 2018, as well as information submitted to UN Comtrade on 2016 exports.

The fact that the Barometer is based on multiple reporting mechanisms—international, regional, and national—works to the advantage of exporters that submit data to all of these mechanisms. While Barometer scores acknowledge the provision of information to any of the reporting mechanisms, the same information is not credited twice.

State-specific notes

In addition to the national report issued by the Belgian federal government, each Belgian region (Brussels, Flanders, and Wallonia) reports separately on its arms exports.

For the purposes of the Barometer, the US national report refers to the State Department report issued pursuant to Section 655 of the Foreign Assistance Act on direct commercial sales, as well as the report on foreign military sales, which is prepared by the US Department of Defense. For the second time, the 2019 Barometer assesses information on foreign trade provided via USA Trade Online (US CB, n.d.).

In the evaluation of South Africa's national report, the term 'conveyance' is interpreted to mean transit in accordance with the definition provided in the National Conventional Arms Control Act (South Africa, 2002, art. 1(vii)).

Data on Taiwan, China was retrieved from the Directorate General of its Customs Administration (Taiwan, China, MoF, n.d.).

The 2019 Barometer assesses South Korea's national arms exports through their webpage, which is not technically a report but does provide information on arms exports. The data is produced by the Defense Acquisition Program Administration and provides information on export authorizations (DAPA, n.d.).

tied for fourth place with 18.25 points. All five countries published a national report, provided information to the UN Register, the PoA, and UN Comtrade, and also submitted an ATT annual report and initial report with information on their transfer control systems and small arms exports occurring in 2016.

Switzerland releases an annual national report on small arms exports, with information on export authorizations (Switzerland, n.d.). In its national report for its 2015 activities Switzerland noted that it did not refuse any export licence applications for small arms. The national report for 2016 activities did not contain information on licences refused, resulting in a one-point drop in this category compared to the previous edition of the Barometer. Switzerland, however, gained 0.5 points in the comprehensiveness parameter due to information it provided on re-exports. To further increase its score, Switzerland could include reporting on temporary exports and intangible transfers (that is, transfers of technology, blueprints, and know-how).

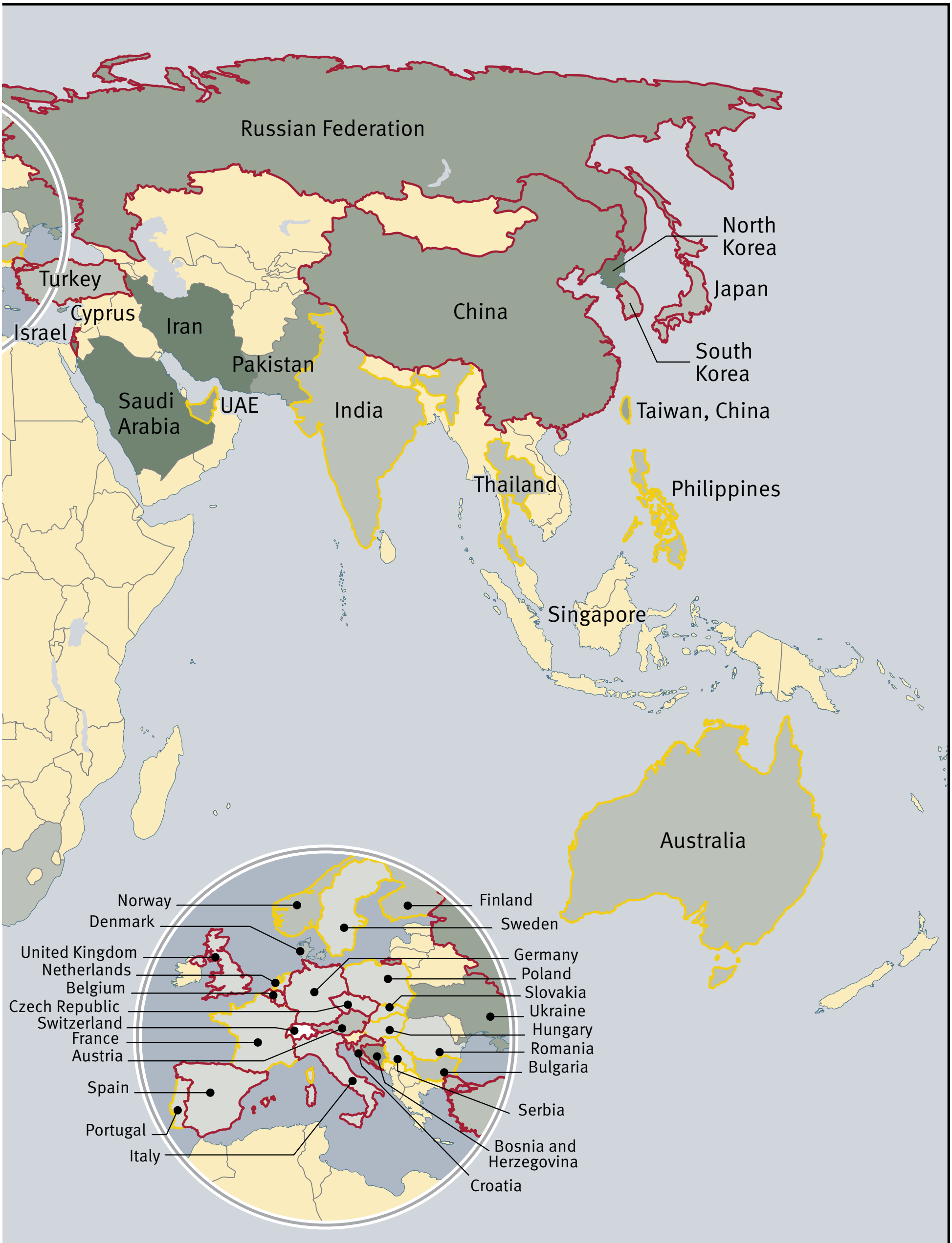
Germany increased its Barometer score by one point compared to the 2018 edition, which contributed to its returning to the top five most transparent countries. This can be attributed to its provision to UN Comtrade of information on the quantity and value of deliveries. Similar to the United Kingdom, Germany does not report on deliveries in its national report, providing only data on licences issued for small arms exports. Germany could increase its score further by reporting on temporary exports, intangible transfers, re-exports, transits/transhipments, and brokering authorizations.

The Netherlands remains in second place, holding its position from last year, but now sharing it with Germany. It releases detailed monthly national reports on arms exports, transits, and brokering licences (The Netherlands, 2016). These reports include descriptions of exports and distinguish between permanent and temporary exports, making the Netherlands one of the states providing the most comprehensive information. However, the Netherlands lost 0.5 points compared to last year, because its monthly reports did not indicate intended destination countries nor the value and type of small arms in each transaction. The Netherlands could increase its Barometer score by providing information on the intended end users of its exports and details of the quantity and value of small arms in question when an export licence is refused.

Although Serbia's overall score decreased by 0.75 points compared to last year, it gained one point for clearly indicating in its national report that it did not refuse any licences in 2016. The Czech Republic, Hungary, and Serbia were the only countries providing such information for 2016. Overall, however, Serbia lost points compared to the 2018 edition of the Barometer. It failed to provide information on the intended destination countries and end users for licences that were granted, nor did it provide information on transits/transhipments. Serbia could increase its score by reporting on temporary exports, brokering authorizations, and intangible transfers.

The United Kingdom makes data available on export licences issued and refused through quarterly reports and its 'Strategic Export Controls: Reports and Statistics'

Map 1 Small Arms Trade Transparency Barometer 2019, based on 2016 trade



Russian Federation
North Korea
Japan
South Korea
China
Turkey
Cyprus
Israel
Iran
Pakistan
Saudi Arabia
UAE
India
Taiwan, China
Thailand
Philippines
Singapore
Australia
Norway
Denmark
United Kingdom
Netherlands
Belgium
Czech Republic
Switzerland
France
Austria
Spain
Portugal
Italy
Finland
Sweden
Germany
Poland
Slovakia
Ukraine
Hungary
Romania
Bulgaria
Serbia
Bosnia and Herzegovina
Croatia

website (UK DIT, n.d.). This website provides an online tool for creating reports on various types of export licences, disaggregated by British national control list category and destination. The United Kingdom provides information on licences issued and refused, and their value and quantity, and describes the items to be exported. The country remains one of the five most transparent countries, but lost 1.75 points compared to last year. In the first instance, it lost 0.25 points because of the limited information it provided under the transit/transhipment parameter, using only the aggregated categories of the EU Common Military List (ML). It also lost one point under the delivery parameter, because its report to the OSCE specifies that the data submitted to the UN Register refers to licences only, and not deliveries. It did not provide information on deliveries under any reporting mechanism.

According to the 2019 Barometer, the least transparent major exporters were North Korea (0 points), Iran (0 points), Saudi Arabia (0.5 points), and Israel (1.25 points). North Korea did not report to any of the transparency mechanisms used to compile the Barometer. Iran submitted a PoA report, but it did not contain information on its transfer control system. Saudi Arabia scored 0.5 points for providing information on its transfer controls and regional and international commitments in its PoA report. Israel increased its score by 0.5 points in this edition of the Barometer as a result of reporting consistently to the UN Register for the past three years.

The major small arms exporters with the largest point decreases in this edition of the Barometer compared to the previous one are Italy, Belgium, Austria, Sweden, and France:

- Italy scored 15.5 points in this edition of the Barometer, four points lower than in 2018. This sharp decline is because it neither reported data to the UN Register nor provided any information on licence refusals.
- Belgium's score in the 2019 Barometer was 2.25 points lower than in the last edition of the Barometer. This is because it did not provide information on its exports of pistols and revolvers, military firearms, or ammunition, or on intangible transfers and re-exports.[18]
- Austria's score in 2019 was 14.00, two points fewer than in 2018. This drop resulted from its provision of only partial information on its export of guided and unguided light weapons, pistols and revolvers, and small arms disaggregated by destination country and weapon type. In contrast to previous years, it also failed to provide information on military firearms exports in its UN Comtrade submission.
- Sweden dropped 1.75 points compared with the last edition of the Barometer. It lost points because its submissions did not include information on the origin of re-exports, the values and quantities of exports of specific types of weapons, or temporary exports and brokering authorizations.
- France dropped 1.75 points in the 2019 Barometer compared to last year for not providing any information on re-exports and only partial information on transits/transhipments. It also did not clearly identify the countries that were refused licences.

Box 4 The UAE's score in the 2018 and 2019 Transparency Barometers

Until 2008 the UAE provided information on its small arms exports in submissions to UN Comtrade, after which it stopped reporting. As a result, it has scored zero points in each edition of the Transparency Barometer since 2012, because it had not reported on its small arms exports under any instrument. Although the 2018 print edition of the Barometer again recorded a zero score for the UAE, the Small Arms Survey later gained access to data that the UAE submitted to UN Comtrade for 2015 (the period under analysis in last year's Barometer). As a result, the online edition of the 2018 Barometer has been retroactively updated to give the UAE a score of eight points. In the present edition the UAE maintained its eight-point score due to its submission of UN Comtrade data for 2016.

The Czech Republic and Mexico recorded the largest increases in scores for this year's Barometer. Mexico increased its score by two points in comparison to the last edition of the Barometer by providing information on re-exports and deliveries. The Czech Republic increased its score by 1.75 points by indicating that it refused no export licences.

On average, the major small arms exporters reviewed for the 2019 Barometer scored 12.3 points out of a maximum of 25 points. Twenty-six of the 49 exporters under review achieved a score above or equal to this average, while two exporters scored zero points. Overall, the Barometer recorded a slightly lower average than last year's average of 12.51 points, because 23 countries recorded lower scores in 2019 compared to 2018.

Box 5 UN Register submissions provided to the OSCE

Since 1998 the 57 OSCE participating states have exchanged in confidence annual reports on their major conventional arms imports and exports using UN Register descriptions and reporting templates for the seven original categories of conventional arms, which exclude small arms (OSCE, 1997). In September 2016 OSCE participating states agreed to make information exchanged via the OSCE on major conventional arms transfers publicly available (OSCE, 2016). As a result of this decision 34 OSCE participating states made their UN Register submissions, which contained information on the seven conventional arms categories, publicly available on the OSCE website, together with information on national legislation and export policies for small arms. Information on small arms transfers exchanged between OSCE participating states has not to date been made publicly available. However, the United States and United Kingdom included such information in their publicly available submissions on the seven conventional arms categories. Twenty of the 34 submissions included information on small arms transfers, allowing the 2019 edition of the Barometer to include this in its analysis.

“Several South-east Asian countries have expressed an interest in expanding their domestic small arms and ammunition production capabilities. These intentions are intertwined with military modernization efforts and procurement plans.”

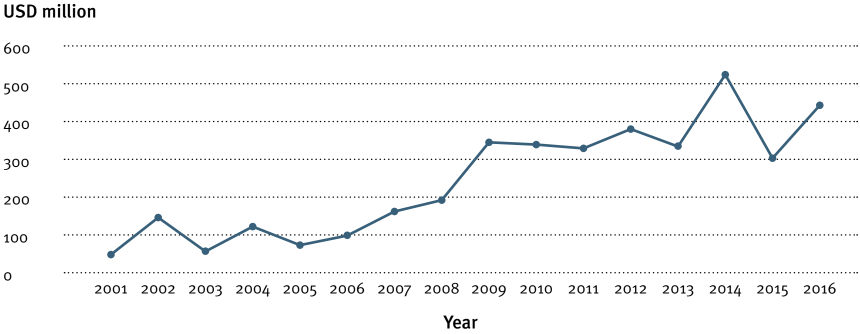
III. South-east Asian small arms production, exports, and imports

This section analyses data that countries released through various reporting mechanisms, open-source material, and commissioned original research. It aims to provide an overview of small arms trade and production trends in the 11 countries of South-east Asia.[19] The analysis is broken down into four subsections, providing a summary and examination of the region's largest small arms producers, exporters, importers, and suppliers. The first subsection looks at the seven South-east Asian countries where industrial production of small arms, light weapons, and ammunition verifiably takes place. The second subsection identifies the most prominent South-east Asian exporters of small arms in the 2014–16 period. It also examines misleading cases arising from UN Comtrade data. The third subsection looks at the main small arms importers in South-east Asia between 2014 and 2016 using UN Comtrade data compared with other official and independent sources. Finally, the fourth subsection summarizes the key external suppliers of small arms to South-east Asia with an eye to emergent suppliers and shifting procurement allegiances in the region. Underlying these subsections, this in-depth region-specific section provides commentary on the transforming defence industrial and modernization ambitions of several South-east Asian countries.

Readers should note that, as with past editions of the Trade Update, this report will not examine the illicit craft production and trafficking of small arms in South-east Asia. Although significant and in need of new research, these matters fall outside the scope of small arms production and transfers that South-east Asian countries authorized. Finally, this section uses trade partners' data declared to UN Comtrade regarding their small arms trade with South-east Asian countries as the main foundation of its analysis. While this section seeks to triangulate, verify, and compare UN Comtrade figures with other data and reports, it should be borne in mind that inconsistencies are common, because exporting and importing countries provide differing accounts and figures, and often only report a partial selection of commodity codes in a given year, if at all.

The Survey was able to obtain UN Comtrade data on all 11 South-east Asian countries, although the level of coverage varies greatly. Only Indonesia, Malaysia, the Philippines, Singapore, and Timor-Leste reported to UN Comtrade, and this tended to exclude data on exports. Data for the remaining six countries could be gleaned from trade partners, although this is limited. In terms of Harmonized System codes[20] that South-east Asian countries and their trade partners presented, UN Comtrade data pertaining to the Philippines was the most comprehensive, followed by that pertaining to Singapore, Malaysia, and Indonesia. Data on Brunei, Cambodia, Laos, and Myanmar was particularly limited. The most comprehensively reported categories were, in descending order, ammunition, pistols and revolvers, and sporting and hunting firearms. Reporting on military firearms and parts and components was not particularly transparent. These differences in Comtrade coverage are discussed below.

Figure 8 South-east Asian regional trend in small arms imports, as reported to UN Comtrade (USD million), 2001–16



Note: All values are expressed in constant 2016 US dollars.

Source: NISAT (n.d.)

South-east Asian industrial production of small arms

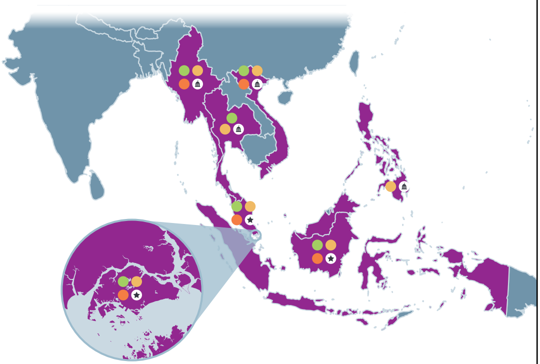
State-owned production facilities

The research for this Trade Update identified seven South-east Asian countries in which small arms are produced: Indonesia, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam (see Table 6). In all of these countries either a manufacturing body that is directly part of the government or armed forces, or a company owned by the state exclusively leads this production. The only exception is the Philippines, which has a verifiable private industry (see below). State producers appear to have been set up to equip national military and security agencies while minimizing imports. Production in Indonesia, Malaysia, the Philippines, Thailand, and Vietnam focuses on the licensed production of small arms or indigenized variants of weapons produced in other countries (for example, PT Pindad's SS2 assault rifle, which is based on FN Herstal's FNC). These producers are still largely reliant on imports, although Indonesia, the Philippines, Thailand, and Vietnam have all articulated and developed national plans to expand their domestic industries and attain greater self-sufficiency (Stanley-Lockman, 2019).

Only Myanmar and Singapore have observably attained a degree of self-sufficiency in meeting the small arms needs of their security forces. Yet their state industries are profoundly different. Myanmar's industry is an entirely state-run affair: the Directorate of Defence Industries (DDI) is firmly incorporated into the Burmese military's command structure and was largely developed to circumvent the effects of sanctions and international isolation (Vinning, 2019; for more information, see Box 6). In Singapore small arms production is the domain of Singapore Technologies (ST) Land Systems (formerly Kinetics), which is a subsidiary of ST Engineering. ST Engineering is owned,

Known state small arms and/or ammunition producers in South-east Asia

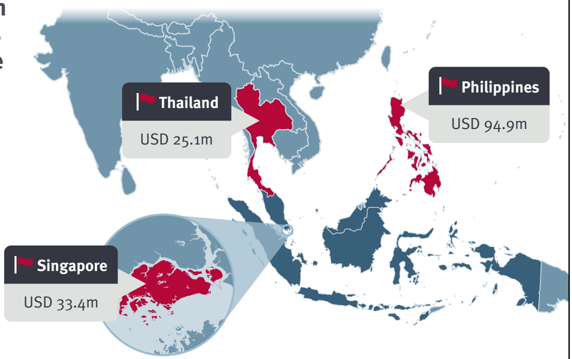
- Small arms production
- Light weapons production
- Ammunition production
- ★ State-owned enterprise
- Government agency



Largest South-east Asian small arms exporters, as reported to UN Comtrade (USD million), 2014–16*

Exporter	Total value
Philippines	USD 94.9m
Singapore	USD 33.4m
Thailand	USD 25.1m
Other South-east Asian countries	USD 7.3m

*Note: All values are expressed in constant 2016 US dollars.



Largest South-east Asian small arms importers, as reported to UN Comtrade (USD million), 2014–16*

Importer	Total value
Indonesia	USD 791.8m
Thailand	USD 216.1m
Philippines	USD 153.8m
Singapore	USD 47.5m
Malaysia	USD 44.5m
Other South-east Asian countries	USD 15.8m

*Note: All values are expressed in constant 2016 US dollars.

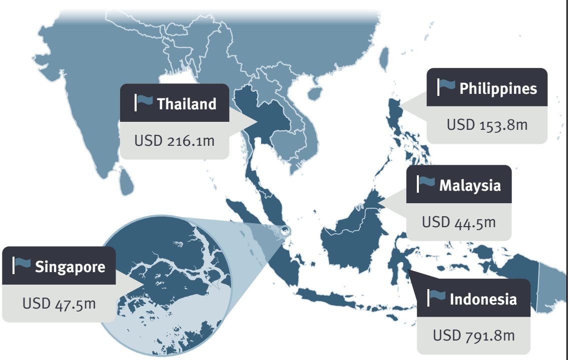


Table 6 Known state small arms and ammunition producers in South-east Asia

Country	Manufacturer	Small arms	Light weapons	Ammunition	Governance*
Indonesia	PT Pindad	X	X	X	I
Malaysia	SME Ordnance	X	X	X	I
Myanmar	Defence Industries Organization	X	X	X	II
Philippines	Government Arsenal			X	II
Singapore	ST Land Systems	X	X	X	I
Thailand	Royal Thai Armed Forces	X		X	II
Vietnam	Vietnam Defence Industries	X	X	X	II

* I – state-owned enterprise; II – government agency.

Sources: Stanley-Lockman (2019); PT Pindad (n.d.); ST Engineering (n.d.); Soha (2017)

but not run, by the Singaporean government. The small arms that ST Land Systems produces not only supply the Singapore Armed Forces, but are also exported globally (see Table 7). ST Land Systems claims to be the world's largest producer of 40 mm low-velocity airburst ammunition (in other words, barrel-fired grenades), and has licensed the production of this ammunition overseas (ST Engineering, 2016). It has been reported that ST Land Systems is seeking to outsource production as a means of reducing production costs, because virtually all raw materials must be imported to Singapore (Chng, 2015).

Indonesia, the Philippines, Thailand, and Vietnam have all expressed an interest in expanding their domestic small arms and ammunition production capabilities. These intentions are intertwined with military modernization efforts and procurement plans. Large defence purchases of both small arms and larger conventional systems are seen as a means of acquiring production technology and expertise for these developing defence industries. Thailand has clearly articulated this strategy,[21] while other countries are demonstrating it in practice (Stanley-Lockman, 2019; Nanuam, 2017; Apisitniran and Praiwan, 2018).

Indonesia and the Philippines are using their domestic arms industries as vehicles for economic development and for attaining self-reliance in defence procurement. In Indonesia the state-owned PT Pindad, which already supplies the Indonesian military and security sectors with small arms, has been reinvigorated with state investments in new production facilities[22] and international co-production partnerships (Stanley-Lockman, 2019).[23] PT Pindad produces a wide range of small arms, light weapons, and ammunition. Although its main customer is the Indonesian government, it has declared

Table 7 Small arms currently produced and exported by ST Land Systems

Type	Designation	Users	Notes
Assault rifle	SAR-21	Botswana, Brunei, Indonesia, Morocco, Peru, Singapore, Sri Lanka	This is the Singapore Armed Forces' standard infantry weapon, replacing the licence-produced M16.
Assault rifle	BR-18	None	This was developed as a potential replacement for the SAR-21 and is being marketed for export.
Light machine gun (LMG)	Ultimax 100	Bosnia and Herzegovina, Brunei, Chile, Croatia, Fiji, Indonesia, Morocco, Papua New Guinea, Peru, Philippines, Serbia, Singapore, Slovenia, Thailand, Zimbabwe	The Karen National Liberation Army, an ethnic insurgent group in Myanmar, is known to possess an unknown number of these LMGs. Several have also been found in non-state stockpiles in the Philippines.
LMG	7.62 mm GPMG (general-purpose machine gun)	Singapore	This is a licence-produced variant of the FN MAG.
Sub-machine gun (SMG)	CPW (compact personal weapon)	Bangladesh	Use appears to be limited to special police units.
Heavy machine gun (HMG)	50MG	Bangladesh, Indonesia, Myanmar, Nigeria, Singapore	This is possibly licence-produced by Indonesia and Myanmar.
Grenade launcher	40GL	Chile, Czech Republic, Poland, Singapore	This is a single-shot launcher configured as either a stand-alone or under-barrel launcher.
Grenade launcher	40AGL	Chile, Georgia, Indonesia, Italy, Mexico, Morocco, Peru, Philippines, Singapore, Sri Lanka, Thailand, Uruguay	This is licence-produced by PT Pindad as the SPG-3 and is commonly used as a vehicle-mounted weapon.

Sources: Stanley-Lockman (2019); ST Engineering (n.d.; 2016); Vinning (2019); UNROCA (n.d.); Binnie and de Cherisey (2017, pp. 3–4); BICC (n.d.); Army Recognition (2010); Brunei Ministry of Defence (2007); *InfoDefensa* (2013); Capie (2003, p. 63); Indomiliter (2016); Farmorocco (2014); Eger (2018); Pelayo (2018); Specijalne-jedinice (n.d.); Bitzinger (2016, pp. 111–31)

Box 6 Myanmar state production of small arms, light weapons, and ammunition[24]

Upon independence in 1948, the Burmese military (or Tatmadaw) was armed with mostly surplus Second World War equipment inherited from Britain and Japan. In seeking to develop domestic arms production, the DDI (abbreviated Ka-Pa-Sa in Burmese) was established as the state's armament organization. Burmese manufacturing began with the licensed production of the Italian TZ45 sub-machine gun, which entered service with the Tatmadaw as the BA52, and eventually included the licence-produced HKG3 and Rheinmetall MG3 by the 1960s. Indigenized variants of these weapons remain in service today with distinct Burmese designations.

Following the government's violent crackdown on civilian protests in August 1988, the European Union (EU) and the United States severed defence industry ties with the junta and imposed sanctions, including arms embargoes (CoEU, 1996). With the withdrawal of partnerships with the United States and EU countries, Israeli and Singaporean expertise and input significantly influenced the development of the DDI's capabilities. By the early 1990s the DDI was producing the BA93 SMG (currently the MA13), a variant of the Uzi. More significantly, Israeli engineers assisted the DDI in the development of a new family of self-loading rifles to replace the MA11 and MA12—rifles that used the patterns for HK33 rifles seized from rebel groups. In 2002 production of the Galil ARM-inspired MA1, MA2, MA3, and MA4 self-loading rifles and light machine guns began, which continues to this day. These rifles are currently the Tatmadaw's standard infantry weapons.

Currently the DDI produces more small arms and in more variants than ever before. The past decade alone has seen the indigenous production of a Glock-patterned handgun, a Steyr TMP-patterned sub-machine gun (MA13 MK II),[25] upgraded versions of the standard MA1-4 series, precision rifles in both 7.62 × 51 mm and 12.7 × 99 mm, a bullpup contestant to the current service rifle (MA1 MK III), a stand-alone grenade launcher, and a range of ammunition for these systems. Actual defence production takes place at more than two dozen locations throughout government-controlled portions of Myanmar.

The primary end user of all DDI materiel is the Tatmadaw, although the Myanmar Police Force is also occasionally supplied with such materiel—typically surplus. A third (and very rare) group of end users have been civilian defence units, which comprise local villagers in conflict areas. No known significant exports of DDI-produced small arms have taken place to a foreign country. Diversion occurs via battlefield captures while the Tatmadaw is fighting the various ethnic groups in the border regions, although these anti-government groups do not favour the use of DDI weapons due to reliability issues and limited access to spare parts. Less commonly observed, but still practised, is corrupt Tatmadaw soldiers' illicit sale of arms and ammunition in the conflict areas.

In conclusion, the DDI has an extremely robust small arms production capacity that can meet the Tatmadaw's operational needs. It is also able to experiment with and modify existing production designs as issues arise or as the armed forces identify new requirements. Despite the changes in government leadership and political stances in the last decade, the DDI has continued to increase production variants and innovate with different platforms. This trend is likely to remain the norm for the foreseeable future.

Source: Vinning (2019)

its intention to increase its exports and establish itself as a prominent supplier (PT Pindad, n.d.). The Philippines' state-run manufacturer, Government Arsenal (GA), so far only produces ammunition for the government, although it is looking to establish a rifle programme to meet government procurement needs and has produced several prototypes (MaxDefense, 2015). It redesignated its industrial estate in Limay as a 'special economic zone' as a means of co-locating international and domestic defence manufacturers and keeping GA at the centre of industrial expansion efforts (Stanley-Lockman, 2019; Mateo, 2018). The government has also awarded several procurement and upgrade contracts to local private manufacturers (Stanley-Lockman, 2019).

Thailand and Vietnam are also developing their respective arms and defence industries, with significant input from Israel (see final subsection below). The Thai and Vietnamese governments both run their own conventional arms industries that engage essentially in licensed production. In the past Thailand, for example, has manufactured German HK33 rifles (known locally as the Type 11) (Stanley-Lockman, 2019). Discussions have been held regarding the licensed production of Israeli assault rifles in Thailand, which the Thai military widely uses. Thailand is also producing ammunition at a joint Thai–Chinese production facility as part of the process of the two countries increasing military ties.[26] These developments are in line with the Thailand's Defence Industry Master Plan of 2015, which looks to advance the country's domestic defence production capabilities through bilateral agreements and technology transfers (IHS Markit, 2017).[27]

Vietnam has also articulated a strategy to boost domestic arms production and self-reliance while it modernizes its military. The Military Weapons Institute, under the Ministry of National Defence, leads small arms production in Vietnam. The main production facility is the Z111 Factory, which produces a range of Soviet/Russian Federation and now Israeli weaponry under licence, including handguns, assault rifles, anti-materiel sniper rifles, sub-machine guns, light machine guns, heavy machine guns, and automatic grenade launchers. In 2013 the government initiated the KCNQ-06 Programme, which aims to increase domestic small arms production for the country's armed forces (Stanley-Lockman, 2019; Báo Đất Viêt, 2017). Local news reports indicate that Vietnam has recently expanded its production capabilities to include a wider range of light weapons and related munitions (Stanley-Lockman, 2019; Soha, 2017).

Privately owned small arms producers in South-east Asia

Most small arms production in South-east Asia caters to state needs. The notable exception to this is the Philippines, which has a sizable civilian industry and market.[28] There are 15 licensed private manufacturers in the Philippines, whose production mostly consists of handguns and ammunition (see Table 8). Several of these 15 producers are primarily subcontractors for larger local firms. The largest civilian producer is Armscor, which is also known as Rock Island Armory.[29] Armscor is a prominent manufacturer

Table 8 Privately owned small arms producers in the Philippines

Producer	Small arms	Light weapons	Ammunition	Notes
Armscor	Handguns Rifles	None	Yes	Operates production facilities in the United States; exports to more than 50 countries
Danao Arms Manufacturing Corp.	Handguns SMGs	None	No	Organized cooperative of independent gunsmiths; current status of manufacturing licence is unknown
FERFRANS	Rifles	Grenade launchers	No	Based in the United States, although Filipino-owned; manufactures for state clients
Floro International	Handguns Rifles SMGs	Grenade launchers	Yes	Producer of the MK-3, a locally designed SMG; presumably for state clientele
Jethro International	Handguns	None	Yes	Small-scale producer making mostly handgun parts
Metrillo	Handguns	None	No	Small-scale producer; manufactures no more than ten firearms per month
Metro Arms	Handguns	None	No	Civilian clientele; exports to at least the United States
Shooters Arms Manufacturing Inc.	Handguns Rifles SMGs	None	Yes	Exports to the civilian market in at least six countries
Stronghand Inc.	None	None	Yes	Ammunition only
True Weight Inc.	None	None	Yes	Ammunition only
United Defence Manufacturing Corp.	Handguns Rifles	None	No	Manufactures for civilian and state clientele; exports to at least three countries
Workers' League of Danao Multi-purpose Coop.	Handguns SMGs	None	No	Organized cooperative of independent gunsmiths; current status of manufacturing licence is unknown

Note: The information presented in this table reflects the data that the author was able to document and likely does not account for all licensed civilian manufacturers in the Philippines.

Sources: Stanley-Lockman (2019); AFAD (n.d.); Talusan (2014); Quitoriano (2014, pp. 79–81) of M1911 pistols, although it also produces ammunition, shotguns, and .22 rifles.[30] Company officials claim that the company can produce 200,000 firearms and 420 million rounds of ammunition per year (Cana, 2017). In late 2018 the Philippine Department of National Defence contracted Armscor to produce 50,000 pistols for the country's military and police (Andolong, 2018; Andrade, 2018b). Notably, several private Filipino producers, including Armscor, also export their products, which will be examined in the following subsection.[31]

Aside from the Philippines, private small arms-producing enterprises have attempted to establish themselves as manufacturers in Malaysia and Indonesia, although with little observable success. Aegis Malinnov is a Malaysian firm that attempted to design and market to state clientele an indigenous pistol, the Malinnov M1P, as well as mortars and rocket-propelled grenades (Joibi, 2016). These attempts do not appear to have been effective. Malaysian observers report that the firm was unable to successfully market its product, and Aegis Malinnov has since dropped the pistol from its website.[32] A firm named Komodo Armament claims to be the only licensed civilian producer of small arms in Indonesia. According to its website, it can produce rifles, pistols, heavy machine guns, and ammunition intended for state users (Komodo Armament, n.d.).[33] Indonesian media reports reveal little information aside from the firm's initial launch, although reports indicate some limited government acquisition of its small arms, as well as a potential export to the UAE (Hariyanto, 2018; Marboen, 2018). The prospect of success for such firms seems unlikely, because they operate in countries where state-run small arms industries are already embedded and where civilian markets are small.

South-east Asian exporters of small arms

According to UN Comtrade data, South-east Asia is a minor small arms exporter (see Table 9). Between 2014 and 2016 South-east Asian countries exported USD 161 million worth of small arms, which is less than 1 per cent of the USD 18 billion worth of small arms exported by all countries during the same period. In 2016, 99 per cent of declared exports from the region were from the Philippines (USD 28 million worth), Thailand (USD 15 million; but refer to Box 7), and Singapore (USD 5 million) collectively. While Indonesia's exports were negligible in 2016, its export ambitions also merit discussion. Overall, South-east Asian countries exported small arms to 78 different countries, including those in the region, between 2014 and 2016. While UN Comtrade data provides a valuable glimpse into the global small arms trade, it is not without nuances and issues. These are apparent when one analyses trade trends in South-east Asia—especially in Thailand (see Box 7).

The Philippines is consistently the largest small arms exporter in South-east Asia, in terms of both value and number of trade partners (see Table 9). This, however, is likely

Table 9 Largest South-east Asian small arms exporters, as reported to UN Comtrade (USD million), 2014–16

Exporter	2014	2015	2016	Total	Number of trade partners
Philippines	43.5	23.4	28.0	94.9	46
Singapore	21.0	7.4	4.9	33.4	43
Thailand	6.6	3.2	15.3	25.1	27
Other South-east Asian countries	4.0	2.5	0.7	7.3	42

Note: All values are expressed in constant 2016 US dollars.

Source: NISAT (n.d.)

due to the disparities in data coverage of UN Comtrade. Nevertheless, exports from the Philippines are driven by its strong domestic industry for handguns and ammunition.[34] Each year pistols and revolvers make up about half of the country's small arms exports. In 2016 handguns from the Philippines constituted 99 per cent of South-east Asia's handgun exports and 29 per cent of South-east Asia's overall small arms exports. Ninety-five per cent of these pistols and revolvers went to the United States—a figure that aligns with the global pattern identified in Section I of this report. Data from Armscor supports this: the firm exports about 80 per cent of its products, 60 per cent of which go to the United States (Cana, 2017). Other export destinations include both state and civilian consumers in South-east Asia, Africa, and Latin America (Quitoriano, 2016).[35] In addition to pistols and revolvers, the Philippines also leads the region in exports of parts and components (USD 7 million worth exported in 2016), as well as sporting and hunting firearms (USD 1.7 million exported in that year).

Ammunition from the Philippines is the most widely exported category from South-east Asia. Since 2014 the Philippines has exported USD 22 million worth of ammunition to 32 countries. The United States, Thailand, and Germany were the largest importers of ammunition (USD 17 million worth collectively). The Philippines also exported ammunition to Latin America—a region that otherwise imports very little from South-east Asia. Costa Rica, Ecuador, El Salvador, Guatemala, and Honduras have collectively imported USD 2.2 million worth of ammunition from the Philippines since 2014. The only other South-east Asian country to have exported significantly to Latin America is Singapore.

According to UN Comtrade data, Singapore's 2016 exports continue in a downward trend, from USD 21 million worth in 2014 to USD 5 million in 2016. This may seem surprising, given that Singapore is the region's most established defence manufacturer and exporter. Several factors may account for this reported downturn. Firstly, it must be noted that ST Land Systems focuses on supplying state end users. It is therefore likely that Singaporean small arms exports are characterized by occasional high-value procurement deals with foreign governments, so low-export years can thus be expected. Further, Singapore maintains a large degree of secrecy surrounding its state-to-state transfers.

That said, several transfers reported to UN Comtrade reflect documented procurement deals. In 2015 and 2016 Singapore exported USD 639,043 worth of small arms to Botswana, whose armed forces are reportedly introducing the SAR-21 assault rifle as their new standard infantry weapon (Stanley-Lockman, 2019; Binnie and de Cherisey, 2017). In 2016 ST Engineering reported ammunition sales to new clients in the Middle East and Latin America (ST Engineering, 2016). UN Comtrade data shows ammunition transfers worth roughly USD 10,000 to Turkey and USD 1.2 million to Mexico in 2016. Finally, UN Comtrade data further shows that in 2014 and 2015 Singapore exported USD 6.9 million worth of ammunition to Canada (out of USD 8.7 million worth of ammunition exports in total). ST Engineering noted in its 2016 annual report that it had licensed the production of its '40mm Air Burst ammunition' to General Dynamics Ordnance in Canada for use by the Canadian Armed Forces (ST Engineering, 2016; General Dynamics, n.d.; Stanley-Lockman, 2019). Subsequently, no Singaporean ammunition exports to Canada were reported in 2016. Outsourced production, therefore, may be diminishing exports.

As mentioned, Indonesia is seeking to become an important global defence supplier. It is already an exporter of small arms to several states in the region and globally. In 2018 PT Pindad exported USD 32.6 million worth of products to 'South-east Asia, Africa, the UAE, South Korea, Nigeria and Timor Leste' (Army Recognition, 2018c). Yet UN Comtrade data does not reflect this, because Indonesia makes very little export data available. UN Comtrade data shows a downward export trend between 2014 and 2016, with total small arms exports falling from USD 3.8 million in 2014[36] to USD 43,872 in 2016.

During this period PT Pindad extensively overhauled its production facilities with considerable support from the government and foreign manufacturers (Dipa, 2015).[37] One of the goals of this overhaul was to boost its exports, since in 2015 'only around five percent of the company's products [were] being absorbed by the international market' (Stanley-Lockman, 2019).[38] By 2017, as construction began on a new ammunition production facility, it was reported that PT Pindad's exports had increased to 10–15 per cent of its output (Boediwardhana, 2017). Yet even as Indonesia sought to promote economic growth by expanding PT Pindad and other state-owned industries, PT Pindad pursued opportunities to outsource production abroad with the hope of inserting itself more directly into the international arms trade and acquiring better technological capacity. In 2015 it was reported that PT Pindad planned to build a plant in the UAE with the Emirati firm Continental Aviation Services. This plant, which was planned for 2017, would produce SS2 assault rifles and ammunition (Stanley-Lockman, 2019; Afrida, 2015). While little is known about the current status of this joint venture, UN Comtrade data indicates that a limited transfer of military firearms from Indonesia to the UAE did take place in 2015.

Finally, it is worth noting that UN Comtrade data shows that intra-regional exports are significant in South-east Asia. Between 2014 and 2016 South-east Asian countries exported USD 39 million worth of small arms to other countries in the region (out of USD 159 million worth of total exports). Second to the United States, South-east Asia is the most prominent destination for its own exports. Military firearms (USD 25 million worth) and ammunition (USD 11 million) make up most of these exports (92 per cent). Singapore is the largest supplier in the region, with exports worth USD 21 million, mostly to Thailand—although this is likely due to Singapore's military presence there. Along with the Philippines (USD 6.5 million worth), Thailand (USD 5.9 million), and Indonesia (USD 4.1 million), these four exporters account for 97 per cent of intra-regional exports.

Box 7 UN Comtrade data issues regarding small arms exports from Thailand

According to UN Comtrade data, Thailand consistently emerges as a significant regional small arms exporter. This is likely due to either technical necessities (such as reservicing ageing stockpiles) or external state needs (such as the transfer of foreign contingent-owned equipment) rather than official trade transactions. Thai law essentially forbids the export of arms for purposes other than national security and the promotion of peace. Yet in 2016 Thailand ranked as a major exporter of small arms largely due to an ammunition export valued at USD 14 million. This made up 91 per cent of its exports for that year, and 68 per cent of South-east Asia's ammunition exports overall. Almost all of this ammunition—99 per cent—was exported to Sweden. This made up more than half of Thailand's exports between 2014 and 2016. Interviews with observers familiar with both Thai and Swedish small arms transfers concurred independently of each other that an ammunition sale from Thailand to Sweden is highly unlikely.[39] Indeed, UN Comtrade data shows that in the same year Thailand also imported a similar amount of ammunition from Sweden, suggesting any transfer between the two countries was done on a temporary basis. Furthermore, Swedish and EU annual reports on arms exports indicate ammunition flows to Thailand of a similar value in 2015. Thailand uses the Carl Gustav recoilless rifle and the Saab RBS 70 man-portable air defence system (MANPADS). During this period Sweden did refurbish Thailand's MANPADS stockpile, although few details have been provided.[40]

UN Comtrade data also shows that Thailand exported USD 5.2 million worth of military firearms to Singapore between 2014 and 2016, although this is most likely a transfer of equipment from a Singaporean military base in Thailand.[41] UN Comtrade data indicates that Thailand imported USD 15 million worth of small arms from Singapore during this period, almost all of which were military firearms. Thailand does not use Singaporean small arms widely in its armed forces, and thus it is likely that these transfers relate to Singapore's military presence in Thailand (Parameswaran, 2018).

South-east Asian importers of small arms

While South-east Asia is not a particularly prominent small arms exporter, the opposite is true for imports. In 2016 the region imported at least USD 443 million worth of small arms—a 48 per cent increase from 2015. Since 2014 the region has imported at least USD 1.3 billion worth of small arms (see Table 10). The largest importer in 2016 was Indonesia (which was a top importer globally), with an import value of at least USD 281 million, followed by Thailand (USD 85 million), the Philippines (USD 41 million), and Singapore and Malaysia (USD 15 million each). According to UN Comtrade these five countries account for 99 per cent of the region's small arms imports. Sixty-two per cent of the region's imports since 2014 went to Indonesia alone, making it the fourth largest importer of small arms in the world during this period, after the United States, Canada, and Saudi Arabia.

Although generally secretive, several South-east Asian states are somewhat transparent in declaring their non-military import data to UN Comtrade. This allows for some comparison with annual reports on arms exports that transparent states provided through other reporting mechanisms, such as the UN Register, ATT annual reports, and regional reports on arms exports. Triangulating UN Comtrade data with these reports, as well as with media coverage, allows for more precise and tangible estimates in a region that otherwise offers a very limited glimpse at its official transfers.

Military and law enforcement imports

The top three importers in South-east Asia have some of the region's largest militaries (see Table 11). Military small arms and ammunition make up the vast majority of imports into South-east Asia. In 2016, 89 per cent of all small arms imports into the region corresponded to these categories, which is an increase from 2014, when the proportion was 81 per cent.

This is likely an indication of the procurement programmes that several South-east Asian militaries are currently undergoing. Ninety-five per cent of Indonesia's declared imports—USD 268 million worth—were military small arms and ammunition. Indonesia is currently implementing a long-running military modernization endeavour known as the Minimum Essential Force programme (RSIS, 2011). Started in 2008, the programme intends to establish the Indonesian military as a fully modernized force by 2024 (Stanley-Lockman, 2019). While the most publicized aspect of this overhaul is the procurement of larger systems such as combat aircraft and naval vessels, the extensive procurement of small arms is clear from several reporting mechanisms. The EU annual export report for 2015 indicated that roughly USD 124 million worth of items categorized as ML categories one and three—considered to cover small arms and ammunition for the purposes of this study—were exported or approved for export from EU member states

Table 10 Largest South-east Asian small arms importers, as reported to UN Comtrade (USD million), 2014–16

Importer	2014	2015	2016	Total	Number of trade partners
Indonesia	335.7	175.0	281.1	791.8	37
Thailand	71.8	58.9	85.5	216.1	46
Philippines	76.6	36.0	41.2	153.8	32
Singapore	22.2	9.8	15.4	47.5	26
Malaysia	10.4	18.7	15.5	44.5	42
Other South-east Asian countries	7.0	4.3	4.5	15.8	26

Note: All values are expressed in constant 2016 US dollars.

Source: NISAT (n.d.)

to Indonesia in that year (CoEU, 2016). UN Comtrade reported that USD 168 million worth of small arms and ammunition were imported to Indonesia in total in the same year. UN Register and ATT reports submitted by trade partners show that the majority of declared exports to Indonesia were assault rifles and anti-tank missile systems.

Thailand is also implementing a military modernization programme that appears to be contributing to an increase in small arms imports. In 2017 the government articulated the Ten-year Modernization Plan: Vision 2026, and an intertwined Defence Industry Master Plan in 2015 (Stanley-Lockman, 2019; Nanuam, 2017; Apisitniran and Praiwan, 2018). While small arms procurement is overshadowed by the acquisition of larger systems, it is nevertheless apparent and representative of broader procurement trends. Thailand, for example, has been noted for its diverse array of defence suppliers (IHS Markit, 2017).[42] UN Comtrade data reveals that Thailand imported small arms from 46 different countries between 2014 and 2016, more than any other country in South-east Asia. Furthermore, the composition of importers reveals a balanced sourcing in that no single region or country dominates. The top exporters to Thailand were the United States, South Korea, the Czech Republic, Singapore, Sweden, and Bulgaria, yet these countries only accounted for 66 per cent of Thailand's reported imports. UN Comtrade data shows that Ukraine has become a significant small arms supplier to Thailand. Between 2014 and 2016 Ukraine exported USD 7.5 million worth of small arms to Thailand, almost all of which were military in nature. These transfers may be linked to larger arms deals that Thailand and Ukraine have recently entered into (IHS Markit, 2017). Another notable trend in UN Comtrade data is the decline of small arms imports from the United States and the emergence of South Korean exports to the region, which

Table 11 Largest armed forces in South-east Asia, in descending order, and estimates of military and law enforcement firearms holdings, 2018

Country	Number of active troops	Estimate of military firearms holdings	Estimate of law enforcement firearms holdings	Estimate of total government firearms holdings
Vietnam	482,000 (5,000,000 reserves; 40,000 paramilitary)	3,829,200	285,000	4,114,200
Myanmar	406,000 (107,250 paramilitary)	788,900	76,000	864,900
Indonesia	395,500 (400,000 reserves)	1,711,450	429,000	2,140,450
Thailand	360,850 (200,000 reserves; 93,700 paramilitary)	1,052,815	230,000	1,282,815
Philippines	125,000 (131,000 reserves; 40,500 paramilitary)	454,700	139,043	593,743

Sources: IISS (2018); Karp (2018a; 2018b; 2018c)

will be discussed in the final subsection. Also, military small arms imports from China, Israel, and the Russian Federation are excluded from this summary, because they will be discussed in the final subsection.

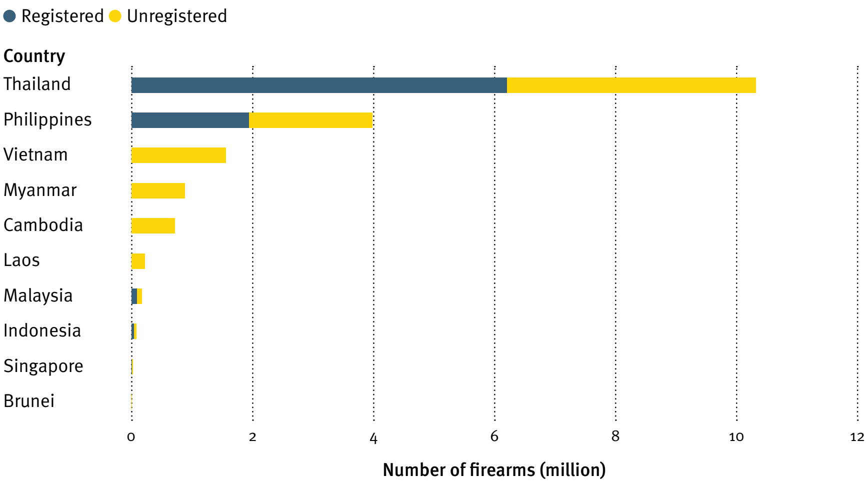
In addition to military procurement, several countries in South-east Asia are procuring small arms—primarily handguns—for their law enforcement and internal security services. In 2017 the Indonesian National Police announced their intention to procure 15,000 pistols, with the goal of providing every officer with a firearm. While PT Pindad would produce some of these firearms, most would be sourced internationally (Soeriaatmadja, 2017). Furthermore, the Royal Thai Police acquired more than 55,000 handguns in 2017 so that every police officer could have access to a reliable side arm. These guns were reportedly distributed to ensure that every police station would be equipped with 60 handguns. Prior to this, Thai police officers were required to purchase their own firearms from the civilian market. A separate 'welfare gun' project in 2017 aimed to procure 15,000 good-quality handguns to sell on to police at a submarket price (*The Nation*, 2017). Finally, the Philippines National Police (PNP) have also pursued similar programmes. In 2013 the PNP imported about 75,000 Glock pistols, with another 26,000 reportedly targeted for procurement in 2016 (Calonzo, 2013; PhilStar Global, 2016).

Civilian firearm imports

Transfers intended for civilian end users in South-east Asia are generally limited, because most countries in the region severely restrict or completely ban civilian gun ownership.[43] The notable exceptions to this are Thailand and the Philippines, where civilian gun ownership is high (see Figure 9). Although both countries have strict firearms laws in place, robust gun cultures and the relatively easy availability of firearms support large civilian markets (Alpers and Picard, 2019).

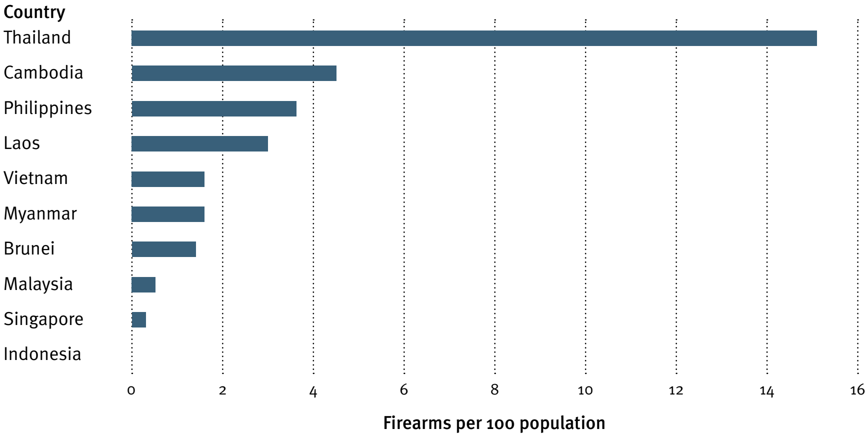
Thailand has the largest rate of civilian gun ownership in South-east Asia, where there are believed to be at least 6.1 million licensed civilian firearms and an estimated 4.1 million unregistered firearms (Alpers and Picard, 2019; Karp, 2018a; see Figure 10). With a valid licence from the Ministry of the Interior civilians are permitted to possess handguns, shotguns, and .22 calibre rifles. Government officials can acquire a licence to possess high-powered rifles.[44] UN Comtrade data shows that between 2014 and 2016

Figure 9 Total registered and unregistered civilian-held firearms in South-east Asia



Sources: Karp (2018a); Alpers and Picard (2019)

Figure 10 Rate per 100 population of civilian-held firearms in South-east Asia



Sources: Karp (2018a); Alpers and Picard (2019)

Thailand imported USD 74 million worth of pistols, revolvers, and sporting and hunting rifles and pistols—about 34 per cent of its total declared imports for the period. A survey of gun shops in Bangkok's principal firearms market district, Wang Burapha, reveals the widespread availability of US-made .22 rifles; US, Italian, and Turkish shotguns; and handguns from Austria, the Czech Republic, Israel, Italy, Switzerland, the United States, and other (generally Western) countries.[45]

This aligns with UN Comtrade data, which indicates that 95 per cent of imports relating to the aforementioned categories came from North America, Europe, and the Middle East between 2014 and 2016. During this period Thailand's top suppliers of these categories were the United States, the Czech Republic, Turkey, Austria, and Italy. Selective UN Register, ATT, and EU export reports provide a glimpse into the numerical volume of these transfers. According to UN Register and ATT reports, the Czech Republic declared that it had exported 7,629 handguns to Thailand, while UN Comtrade values show USD 6.6 million worth of Czech pistol and revolver transfers to Thailand for the same period. Furthermore, in 2016 the United States declared in its UN Register report that it had exported 10,010 handguns to Thailand; UN Comtrade data values US pistol and revolver exports to Thailand that year at USD 7.8 million.

The Philippines is the only other country in South-east Asia where civilian gun ownership is widespread. There are 1,940,237 registered firearms owned by 296,906 licensed individuals and civilian enterprises in the Philippines. Estimates for the number of illicit firearms vary greatly, from 726,181 to more than 2.2 million (International Alert Philippines, 2017; Karp, 2018a).[46] As with Thailand, the PNP's Firearms and Explosives Office (FEO) must license each firearm that a civilian wishes to acquire; ownership is limited to shotguns, .22 rifles, and handguns.[47] While this report does not examine the issue of craft production and illicit firearm ownership, the Philippines is known for its unlicensed firearms industries (mainly in Danao City, Cebu), as well as the illicit circulation of unlicensed firearms by a variety of criminal, political, and armed groups (Hays and Jenzen-Jones, 2018).

A survey of gun shops throughout Manila undertaken by the Small Arms Survey for this report revealed handguns, rifles, and ammunition for sale from a diverse array of suppliers. Unlike in Thailand, most shops offer firearms and ammunition manufactured

Box 8 Diversions of small arms at import in the Philippines

Data and testimonies that International Alert collected on the illicit economies linked to conflict in Mindanao have illuminated how legal firearms are illicitly diverted at import in the Philippines. Weapons smugglers often exploit loopholes in the importation process to divert firearms out of the nominally strict firearms management regime that the PNP FEO enforces. International Alert found that, based on UN Comtrade data, at least USD 54 million worth of small arms—about 27,000 individual firearms—were under-declared at ports of entry between 2000 and 2010, which is possibly an indicator of diversion. This was based on discrepancies between what exporters declared and what imports the Philippines declared. On average, this discrepancy was about 2,500 firearms per year (Quitoriano, 2016, pp. 92–93).

Importing agents in the Philippines are frequently private firearms traders and retailers. These actors use a number of techniques to facilitate the diversion of imported firearms. Specifically, small arms importers exploit a specific loophole to avoid import quotas and limitations that the PNP FEO imposes. The PNP FEO does not directly coordinate its activities with customs authorities. When an importer receives PNP authorization to import a certain number of small arms, the importer will present this authorization to the exporting partner, but will demand a small additional number of weapons as a contingency on the grounds that some will be damaged and rendered inoperable while in transit. Upon import, customs agents who verify the import permit generally will not control the precise quantity of the shipment (Quitoriano, 2016, p. 92). The officially authorized number of firearms will then be sent on to a PNP FEO facility, while the firearms constituting the unauthorized contingency weapons can then be sold on the black market.[48]

Other techniques include ‘technical smuggling’ or ‘masking’. This involves a process by which small arms or their components are falsely declared to customs agents as an unrestricted consignment (for example, industrial machine parts). Alternatively, small arms may be concealed in a larger consignment with other items (Quitoriano, 2016, p. 92). Coercion also appears to be a technique used to divert small arms imports. In 2014 an armed communist group active in the Philippines—the New People’s Army—reportedly forced a businessman to order a shipment of more than 1,000 Kalashnikov rifles through legal channels. On paper, these rifles were destined for mining and private security companies that the businessman owned, but ended up in the hands of the militants (Cupin, 2014).

locally. As such, between 2014 and 2016 handguns and sporting and hunting firearms constituted only 9 per cent (USD 14 million) of the Philippines' overall small arms imports (USD 154 million). Nevertheless, small arms from Argentina, Austria, Brazil, the Czech Republic, Israel, Italy, Turkey, the United States, and elsewhere were available for purchase in local gun shops. UN Comtrade data shows that between 2014 and 2016 the largest suppliers of pistols, revolvers, and sporting and hunting firearms were from the United States (USD 8.2 million worth), Brazil (USD 2.6 million), Italy (USD 1.1 million), the Czech Republic (USD 512,000), and Israel (USD 134,000). These five countries supplied 99 per cent of such transfers to the Philippines. In terms of actual numbers, the United States declared that it had exported 6,736 handguns to the Philippines in its 2016 UN Register report; UN Comtrade valued pistol and revolver imports from the United States to the Philippines at USD 2.7 million for the same year.

Identifying the largest exporters of small arms to South-east Asia

This final subsection identifies prominent small arms suppliers to South-east Asia, taking into account the previously mentioned shortcomings of UN Comtrade data (see Boxes 1 and 7; see also Box 9). This section will compare UN Comtrade data for the 2014–16 period with data from other reporting mechanisms, open-source research, and expert and key informant interviews to account for transfers relating to non-transparent suppliers (that is, suppliers that scored less than 12.5 points in the Barometer). This subsection identifies salient issues in the region, primarily shifting loyalties among South-east Asian countries seeking alternative suppliers, and emergent suppliers who have arguably found an opening in this fluid environment.

UN Comtrade data shows that at least 17 countries exported more than USD 10 million worth of small arms to South-east Asia during 2014–16. Chief among these, in descending order of export values, are Brazil, the United States, South Korea, France, Switzerland, China, Germany, and the Czech Republic, who collectively account for 80 per cent of all small arms exports to South-east Asia (see Table 12). Brazil consistently emerges as the main exporter to the region each year. Almost all of its exports—95 per cent (or USD 550 million worth)—went to Indonesia, while 81 per cent of Brazil's exports to the region (USD 467 million) were military firearms, all of which were destined for Indonesia (see below). The United States is the next most prominent exporter to the region, because it is the main supplier of weapons and military equipment to several South-east Asian militaries. It has, however, curtailed some of its regional exports to traditionally close military allies in recent years in response to human rights concerns, as outlined below. Finally, UN Comtrade data attests the rising influence of South Korea and, to a lesser extent, China as regional small arms suppliers.

Table 12 Largest small arms exporters to South-east Asia, as reported to UN Comtrade (USD million), 2014–16

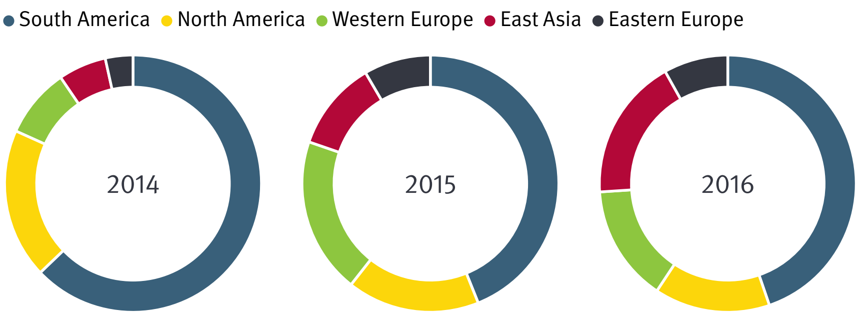
Exporter	2014	2015	2016	Total
Brazil	288.8	110.2	178.0	576.9
United States	86.3	41.6	57.2	185.2
South Korea	22.4	20.8	39.1	82.3
France	15.6	13.8	22.8	52.2
Switzerland	10.2	15.2	9.4	34.8
China	1.9	5.2	25.8	33.0
Germany	8.4	12.5	11.9	32.9
Czech Republic	9.0	8.5	8.7	26.2

Note: All values are expressed in constant 2016 US dollars.

Source: NISAT (n.d.)

Unfortunately, UN Comtrade data does not systematically include data on military transfers from several major suppliers, including China, Israel, and the Russian Federation. Despite well-publicized and significant procurement deals between Thailand and these suppliers, Comtrade data shows that these countries only supplied 6 per cent of Thailand's small arms imports between 2014 and 2016. None of these countries declared any military firearms exports in 2016—including to Thailand, despite such transfers being publicized elsewhere (Stanley-Lockman, 2019; Army Recognition, 2018a).

Figure 11 Regional sources of small arms exports to South-east Asia, as reported to UN Comtrade (USD million), 2014–16



Source: NISAT (n.d.)

China, Israel, and the Russian Federation are also prominent suppliers to Cambodia, Laos, and Vietnam (Paviour, 2016; Vinning, 2019; Ningthoujam, 2016). Without trade data from these three prominent suppliers and others, UN Comtrade data fails to capture a major dynamic of regional arms trade trends.

Shifting loyalties

Apart from Brazil's outsized influence in UN Comtrade data, which is discussed below, Western states remain South-east Asia's largest suppliers of small arms (see Figure 11). Collectively, North America, Europe (excluding the Russian Federation), Australia, and New Zealand exported USD 481 million worth of small arms to South-east Asia between 2014 and 2016. Nonetheless, the overall share of exports from these states to the region is declining, dropping from 73 per cent of all small arms exports to South-east Asia in 2014 to 66 per cent in 2016. While the raw value of exports from Western states to South-east Asia has not necessarily decreased, these states' share of exports declined during a period when the rest of the world's exports to South-east Asia were increasing. A sudden drop in US exports in 2015 was the main cause of this decline. UN Comtrade data reveals that US exports to the Philippines and Thailand collectively decreased by USD 52 million between 2014 and 2016. This almost certainly relates to the partial suspension of US arms sales following political turmoil and reported human rights abuses in both countries. In the case of the Philippines, the United States withheld small arms exports in response to President Duterte's promotion of extra-judicial killing of drug users (Stanley-Lockman, 2019),[49] while in Thailand a military coup in 2014 prompted the United States to freeze funding assistance for arms sales (AFP, 2014). While the United States has effectively resumed transfers to both countries,[50] the initial freeze on transfers led both countries to express an interest in seeking alternative arms suppliers, namely China and the Russian Federation (Lourdes Viray, 2019; Woncha-um, 2017).

Neither China nor the Russian Federation is a new supplier of small arms to the region. Both have been exporting arms and production capabilities to the communist states of South-east Asia (Laos and Vietnam) since the end of the cold war (Army Recognition, 2019; Stanley-Lockman, 2019). Additionally, South-east Asian countries' procurement of Chinese or Russian Federation light weapons is common, because they are often a cheaper alternative to Western systems.[51] Yet the US response to political violence in Thailand and the Philippines created an opening for the Russian Federation and China that all parties were seemingly eager to exploit.

In 2018 Thailand agreed to procure at least 1,600 AK-100 series rifles from the Russian Federation for use by paramilitary forces typically tasked with border patrol duties (Nakpum, 2018). Furthermore, Thai defence officials have expressed interest in Chinese 'expertise in producing small arms and other security-related equipment like drones'

(Satrusayang, 2016). This illustrates how Thailand is simultaneously promoting arms procurement and arms industry development, while China offers cheap arms deals with few strings attached to local militaries that are weary of the prices and conditions associated with systems from Europe and North America (Suorsa and Koh, 2018).

The Philippines has also explored Chinese and Russian Federation arms deals to compensate for US restrictions. Following the US suspension of small arms exports in 2016, the Philippines indicated its intention to diversify its arms suppliers. The Russian Federation moved quickly to meet this intention by offering a range of weapons systems and bilateral military exchanges (Lema, 2017). Yet despite the initial fanfare, no substantial transfer ever materialized. The Armed Forces of the Philippines (AFP) ultimately decided that the integration challenges of incorporating Russian Federation weaponry into a US-equipped military would be too great (Balana, 2017). Nevertheless, the Russian Federation donated 5,000 rifles to the Philippines in 2017, and both countries continue to hint at the possibility of larger arms deals (Mogato, 2017; TASS, 2018). China has also supplied the Philippines with small arms on favourable terms (Balana and Ramos, 2016), and since 2016 at least USD 22 million worth of small arms have been transferred to the Philippines from China (Zheng, 2017), including at least 6,000 assault rifles, hundreds of sniper rifles, 30 rocket-propelled grenade launchers, ammunition, and other unspecified small arms. Despite these overtures the AFP rejected these weapons and they were passed to the police (Fonbuena, 2017; Mogato, 2018).

These cases illustrate the obstacles China and the Russian Federation face in their attempts to replace traditional arms suppliers to the region. Integrating weapons from non-NATO suppliers into armed forces built on NATO standards is a serious challenge to South-east Asian countries interested in such weaponry, especially as they attempt to simultaneously develop industries whose production still adheres to NATO standards. In this regard, emergent suppliers with NATO-compatible industries—namely South Korea and Israel—have had greater export success in South-east Asia.

Emergent and untransparent suppliers

Israel has long used arms sales and technological assistance to industrial development programmes as a means of building favourable relations with foreign governments. It played a pivotal role in the early development of the defence industries in Myanmar and Singapore (Vinning, 2019; Cohen, 2015). As Israel increasingly looks eastward for new trade opportunities and international relationships, it has become a prominent supplier of small arms and a source of production expertise throughout the South-east Asian region (see Table 13). This is clearly apparent in Thailand and Vietnam, where Israel has played a central role in expanding local state industries to produce Israeli small arms under licence. Israel has also established itself in Thai and Filipino civilian markets.

Table 13 Small arms produced and exported by Israel to South-east Asian state users

Type	Designation	Users	Notes
Assault rifle	IWI Tavor (TAR-21)	Thailand (military)	Potential licence-production arrangement in Thailand; standard assault rifle in Thai military
Assault rifle/ SMG	IWI Tavor X95 (Micro-Tavor)	Philippines (police), Thailand (military)	
Assault rifle	IWI Galil ACE	Philippines (police), Thailand (military), Vietnam (military)	Licence-produced in Vietnam; standard assault rifle in Thai and Vietnamese militaries
Assault rifle	IMI Galil	Myanmar (military), Vietnam (military)	Adapted as the Myanmar MA rifle series with Singaporean and Israeli assistance; sniper variant known as Galatz used in Vietnam
Assault rifle	Emtan MZ-4	Philippines (police)	AR-15 platform; unveiled at a Bangkok trade show
LMG	IWI Negev	Philippines (military/police), Thailand (military), Vietnam (military)	
SMG	IMI Uzi	Cambodia (military), Indonesia (military), Myanmar (military/police), Philippines (military), Thailand (military), Vietnam (military)	Produced locally in Myanmar as the MA13
Handgun	IWI Masada	Philippines (police)	
Anti-tank guided missile	Rafael Spike	Philippines (military), Singapore (military)	

Sources: Vinning (2019); BICC (n.d.); Boguslavsky (2018); Rojkes Dombe (2017); Wong (2017); Defense Update (2016); AAG_th Daily Memos (2018)

Thailand has imported Israeli small arms since 2007, when it procured at least 43,900 Tavor assault rifles and 1,550 Negev light machine guns (Wilk, 2010). Currently the Thai military is believed to possess more than 100,000 Tavor assault rifles.[52] Licensed production arrangements have been discussed, although so far Thailand has not decided whether to produce Israeli small arms.[53] Israeli arms manufacturers have used trade shows and defence exhibitions in Bangkok to launch new small arms with an eye to attracting state customers from the region (Boguslavsky, 2017; Army Recognition, 2017).

Vietnam has also recently incorporated Israeli small arms as military standards. In 2011 construction began in Vietnam on a USD 100 million production facility for Galil ACE 31 and 32 assault rifles, which have become a standard infantry weapon. The facility was completed in 2014 and the new assault rifles are gradually being phased in.[54] The Galil ACE—which is based on AK rifle patterns—strongly appeals to the Vietnamese military, because the country relies on Soviet 7.62 × 39 mm calibre ammunition, and much of its stockpile is outdated (21AAR, 2018; Army Recognition, 2014).

In the Philippines Israeli manufacturer Emtan Karmiel has partnered with Armscor to locally produce the MZ-4 assault rifle for the PNP's use. In 2017 Emtan Karmiel won a bid to supply the PNP with about 5,500 assault rifles by 2018. During the same year another Israeli manufacturer, Israel Weapon Industries, won a PNP contract to supply the force with 8,170 Galil ACE assault rifles (Boguslavsky, 2018; Rojkes Dombe, 2017). Finally, Israel supplied the PNP with 11,920 Masada pistols, Tavor X95 assault rifles, and about 551 Negev machine guns of various calibres in 2018 (Stanley-Lockman, 2019; Pulta, 2018; Rojkes Dombe, 2017).

UN Comtrade data provides limited insight into these transfers. No small arms transfers were reported between Israel and Vietnam during the 2014–16 period, because neither country declares such data to UN Comtrade. The Philippines, however, declared USD 6.8 million worth of imports from Israel, 66 per cent of which were military firearms. Finally, Thailand declared USD 4.7 million in imports from Israel, largely consisting of ammunition. USD 274,000 of these imports were pistols and revolvers, presumably for the civilian market. These figures offer only a small glimpse into Israel's activities in the region, which are better captured in open-source media.

South Korea has also emerged as a prominent supplier in the region, because it offers NATO-compatible systems that are a cheap alternative to traditional suppliers from Europe and North America. It has also pursued co-production arrangements with local manufacturers as a means of attracting regional interest (Stanley-Lockman, 2019). Between 2014 and 2016 South Korea exported USD 82 million worth of small arms to South-east Asia. From 2015 to 2016 alone the value of its exports almost doubled from USD 21 million to USD 39 million, respectively. Most exports since 2014 were ammunition, comprising about 94 per cent. The largest recipients of South Korean small arms were Thailand (USD 32 million worth) and Indonesia (USD 30 million), although Malaysia, the Philippines, and Singapore collectively imported USD 20 million worth of South Korean small arms. USD 4.1 million of South Korea's declared exports were military firearms, of which USD 3.9 million worth went to Indonesia. UN Register reports provide a limited picture of South Korean small arms exports to South-east Asia. Between 2006 and 2018 the country exported the following small arms to South-east Asia:

- 128 K2 assault rifles, 137 K1-A sub-machine guns, and 100 9 mm pistols to Cambodia;[55]
- 855 K1-A sub-machine guns, 197 K3 light machine guns, and 17 K4 automatic grenade launchers[56] to Singapore;
- 6,540 K3 light machine guns,[57] 1 M203 grenade launcher, and 34 K2 assault rifles to the Philippines;
- 806 K2 assault rifles, 110 K3 light machine guns, 1,786 K7 sub-machine guns, and 2 KP-SAM 'Chiron' MANPADS to Indonesia; and
- 2 K3 light machine guns, 403 K2 assault rifles, 2 K7 sub-machine guns, 200 K5 pistols, and 396 12-gauge shotguns to Thailand (UNROCA, n.d.).

According to UN Comtrade data all five of the states listed above were importers of South Korean weapons between 2014 and 2016, although more detailed information about small arms trade relationships can only be gauged through the media.

While there is little indication that Thailand is planning to adopt South Korean small arms for its security forces, it has recently looked to South Korea for expertise in developing its arms industry as part of the Defence Industry Master Plan, as discussed above. In 2017 Thai officials visited the production facilities of Poongsan, an ammunition manufacturer, and S&T Motiv (previously known as Daewoo), which is South Korea's main small arms producer. The delegation also visited South Korea's Defence Agency for Technology and Quality to learn about standardizing quality controls, and expressed interest in buying Korean rifles (Defence Blog, 2017). At present Thailand imports a large volume of ammunition from South Korea,[58] which is reflected in UN Comtrade data. Almost all of South Korea's declared exports to Thailand between 2014 and 2016 were ammunition.

South Korea's exports to Indonesia have grown steadily each year between 2014 and 2016, from USD 5 million in 2014 to USD 13 million in 2016. Eighty-six per cent of these exports were ammunition, while the remainder were military firearms. The Indonesian military appears to be a limited user of the K2 assault rifle and K7 sub-machine gun, most likely in special forces units (BICC, n.d.; Indomiliter, 2015; 2017b). Indonesia is also the only foreign consumer of the LIG Nex1 KP-SAM Chiron MANPADS, which it began to procure in 2014, with more potentially in future years (Army Recognition, 2018b). While no co-production arrangement for small arms is currently known to exist between the two countries, South Korean and Indonesian defence manufacturers are co-producing larger weapons systems (Chairil, 2018).

South Korean manufacturers have also found opportunities in the Philippines. In 2018 S&T Motiv partnered with the Filipino civilian manufacturer United Defense Manufacturing

Corporation to supply the government with modern rifles. In the past S&T Motiv has supplied the AFP with 7,000 K3 light machine guns, and the two manufacturers have submitted a bid to supply the government with K2 assault rifles. Furthermore, it has been reported that S&T Motiv is in talks with the Government of the Philippines to establish a manufacturing facility collocated with Government Arsenal in Bataan (Andrade, 2018a). Nevertheless, the bulk of South Korean exports to the Philippines is also ammunition, which made up 96 per cent of the USD 9.5 million worth of materiel that South Korea exported to the Philippines between 2014 and 2016.

Brazil is another emerging supplier to the region. UN Comtrade data indicates that Brazil exported USD 577 million worth of small arms to South-east Asia between 2014 and 2016. Much of this data should be viewed circumspectly, however, due to an unusually and unaccountably high value for transfers of military firearms that is possibly erroneous (see Box 9). Aside from these transfers, Brazil exported USD 110 million worth of non-military firearms to South-east Asia. Seventy-five per cent of these exports were either ammunition or hunting and sporting firearms destined for Indonesia. Indonesia does not yet have the capacity to meet its own ammunition needs, so ammunition imports are unsurprising (Stanley-Lockman, 2019). Furthermore, civilian markets in Thailand and the Philippines are also sourcing from Brazil. A survey of local gun stores in Thailand[59] and the Philippines[60] found that Brazilian handguns, rifles, and ammunition

Box 9 Data issues regarding the transfer of military firearms from Brazil to Indonesia

UN Comtrade data indicates that a huge number of military firearms have been exported to Indonesia, yet there is essentially no coverage of this in the media. Of Brazil's USD 577 million worth of small arms exports to South-east Asia between 2014 and 2016, USD 467 million worth were classified as military firearms destined for Indonesia. This represents 99.9 per cent of Brazil's total military firearms exports for that period. Brazil does not yet report small arms transfers to the UN Register or the ATT, and so UN Comtrade data cannot be cross-referenced with these mechanisms. Nevertheless, Brazil and Indonesia do maintain bilateral defence ties, and the Indonesian Armed Forces operate several major Brazilian conventional systems, for example the Avibras Astros II multiple rocket launcher system (Parameswaran, 2017). Indonesia signed a deal to procure two batteries of this system in 2012 (about 36 launchers, plus support vehicles), with deliveries beginning in 2014, the same year that UN Comtrade first registered the large transfer of military firearms to Indonesia (CAWAT, 2012). Furthermore, the two countries recently established a unique agreement in which PT Pindad would assemble rockets for this system (Defense Studies, 2018). Apart from this, Brazil is not a systematic exporter of military firearms, and the fact that the Indonesian security forces do not use Brazilian small arms suggests that an error—possibly the miscategorization of larger military systems—may underly UN Comtrade statistics.

were commonly available. Between 2014 and 2016 the Philippines imported USD 18 million worth of ammunition from Brazil, as well as USD 2.6 million worth of sporting and hunting firearms, pistols, and revolvers. Thailand imported USD 2.8 million worth of the same categories.

"According to UN Comtrade data the financial value of the small arms trade in 2016 was at least USD 6.5 billion, a 13 per cent increase compared to 2015."

Conclusion

According to UN Comtrade data the financial value of the small arms trade in 2016 was at least USD 6.5 billion, a 13 per cent increase compared to 2015. Therefore, 2016 set a new record high for the value of the global small arms trade since 2001, the starting point of the Small Arms Survey's collection of trade data. The value of the exports of the three largest exporters—the United States, Brazil, and Italy—increased between 2015 and 2016, although the totals for the United States and Italy are below their 2015 levels. Other top exporters are thus contributing to the increase in the value of global small arms exports, as reflected by the fact that the number of top exporters grew from 13 in 2015 to 18 in 2016.

The overall trend for imports at the global level continues to closely mirror the trend for US imports. The value of US imports declined from USD 2.5 billion in 2013 to USD 2 billion in 2015, before returning to the level of USD 2.5 billion in 2016. The recent increase is largely attributable to an increase in the flow of pistols, revolvers, and ammunition. It also tallies with domestic US data on background checks for civilian purchases. The five largest importers in 2016 were also the largest importers for the period 2014–16: the United States, Saudi Arabia, Indonesia, Canada, and Germany. Deliveries to the Middle East/West Asia region increased between 2015 and 2016, with South-east Asia also continuing to show growth. South-east Asia accounts for approximately a quarter of all deliveries to Asia.

The 2019 Small Arms Trade Transparency Barometer identifies Switzerland, Germany, the Netherlands, Serbia, and the United Kingdom as the most transparent small arms exporters, based on reports on activities carried out in the calendar year 2016. Conversely, North Korea, Iran, Saudi Arabia, and Israel are the least transparent countries. The Barometer shows that, overall, major small arms-exporting countries are becoming more transparent in reporting on their small arms transfers. In several cases one can identify improvements in reporting practices relating to licence denials and more comprehensive reporting. This is in large part due to the increase in reporting mechanisms following the inclusion of ATT and PoA reports in the scope of the Barometer's scoring system, together with the inclusion in the 2019 Barometer of submissions to the OSCE. It should also be noted that a core of exporting countries represents most of the reporting countries for both the ATT and UN Register. Many other countries are not providing information on their international transfers of small arms—which is to say that the modest steps that major exporting countries have taken to increase transparency in the international small arms trade are taking place against a backdrop of low levels of reporting worldwide.

This edition of the Trade Update provides in-depth analysis of the small arms trade in South-east Asia. It identifies seven countries in the region that have small arms and/or ammunition industrial production capabilities. With the exception of the Philippines, entities with strong links to government authorities undertake small arms production in these countries, which is primarily directed towards meeting the needs of national armed forces, law enforcement organizations, and other security agencies. Such production continues to rely on licensed production arrangements and technology transfers. Increasingly, producers in these countries are also seeking to export small arms and ammunition. UN Comtrade data does not currently indicate that they have been very successful in this regard, because the recorded exports of these countries represent less than 1 per cent of global small arms exports for 2014–16. Singapore, however, enjoys a niche market for 40 mm grenade launchers and ammunition, while private Filipino small arms producers have established themselves as a source of supply for the US civilian pistol and ammunition market.

The 11 countries of South-east Asia are well represented among the top and major small arms importers for the period 2014–16. Since 2014 the region has imported at least USD 1.3 billion worth of small arms, according to UN Comtrade. Indonesia has established itself as a top importer, with Malaysia, the Philippines, Singapore, and Thailand frequently among the major importers in the world according to Comtrade data. A significant share of these imports appears to be destined for the military and law enforcement agencies in the region. This aligns with modernization drives for armed forces in these countries and changes in policy for the equipping of law enforcement personnel.

The period under consideration also points to an expansion of sources of supply for government forces. Brazil is identified as a major supplier of military firearms to the region, in particular to Indonesia, although there are questions regarding the scale of these exports due to a lack of reliable data. Meanwhile, open sources indicate that China, Israel, the Russian Federation, and South Korea are increasingly competing with traditional US and European suppliers for South-east Asian customers, seeking to undercut established suppliers who have imposed arms restrictions on some countries in the region due to human rights concerns. Integrating equipment that is different to existing military inventory is, however, challenging. This is clear in the case of the Philippines, where a switch from traditional, NATO-aligned suppliers has been explored, but has not yet taken place.

Israel and South Korea are also notable for not only delivering small arms to the region in increasing quantities, but also contributing to the development of indigenous production capabilities via licensed production and technology transfer arrangements. Major South-east Asian importing countries' acquisitions of small arms are connected to their desire to be able to meet their national defence and security needs from domestic producers. Indonesia, the Philippines, and Singapore have all displayed a desire to become major exporters of small arms in the future, specifically through the development of national small arms producers. Time will tell whether such ambitions can be realized in practice.

Annexe

Table A1 Major exporters' annual authorized small arms exports worth at least USD 10 million, 2015

[available at ‹http://www.smallarmssurvey.org/fileadmin/docs/S-Trade-Update/SAS-Trade-Update-2019-Tables-A1-A2.pdf›]

Table A2 Major importers' annual authorized small arms imports worth at least USD 10 million, 2015

[available at ‹http://www.smallarmssurvey.org/fileadmin/docs/S-Trade-Update/SAS-Trade-Update-2019-Tables-A1-A2.pdf›]

Table A3 Regional breakdown of countries and territories

Region	Subregion	Country or territory
Africa	Eastern Africa	Burundi; Comoros; Djibouti; Eritrea; Ethiopia; Kenya; Madagascar; Malawi; Mauritius; Mayotte; Mozambique; Réunion; Rwanda; Seychelles; Somalia; Tanzania; Uganda; Zambia; Zimbabwe
	Middle Africa	Angola; Cameroon; Central African Republic; Chad; Democratic Republic of the Congo; Equatorial Guinea; Gabon; Republic of the Congo; São Tomé and Príncipe
	Northern Africa	Algeria; Egypt; Libya; Morocco; Sudan; Tunisia
	Southern Africa	Botswana; Lesotho; Namibia; South Africa; Swaziland
	Western Africa	Benin; Burkina Faso; Cape Verde; Côte d'Ivoire; Gambia; Ghana; Guinea; Guinea-Bissau; Liberia; Mali; Mauritania; Niger; Nigeria; Saint Helena; Senegal; Sierra Leone; Togo
Americas	Caribbean	Antigua and Barbuda; Aruba; Bahamas; Barbados; British Virgin Islands; Cayman Islands; Cuba; Curaçao; Dominica; Dominican Republic; Grenada; Guadeloupe; Haiti; Jamaica; Martinique; Montserrat; Saint Kitts and Nevis; Saint Lucia; Saint Pierre and Miquelon; Saint Vincent and the Grenadines; Sint Maarten; Trinidad and Tobago; Turks and Caicos
	Central America	Belize; Costa Rica; El Salvador; Guatemala; Honduras; Mexico; Nicaragua; Panama

Region	Subregion	Country or territory
	Northern America	Bermuda; Canada; Greenland; United States
	South America	Argentina; Bolivia; Brazil; Chile; Colombia; Ecuador; Falkland Islands; French Guyana; Guyana; Paraguay; Peru; Suriname; Uruguay; Venezuela
Asia and the Pacific	Central Asia	Kazakhstan; Kyrgyzstan; Tajikistan; Turkmenistan; Uzbekistan
	Eastern Asia	Hong Kong, China; Japan; Macao, China; Mongolia; North Korea; South Korea; Taiwan, China
	Oceania	Australia; Cook Islands; Fiji; French Polynesia; Guam; Kiribati; Micronesia; Nauru; New Caledonia; New Zealand; Niue; Norfolk Island; Palau; Papua New Guinea; Samoa; Solomon Islands; Tokelau; Tonga Islands; Tuvalu; Vanuatu; Wallis and Futuna
	South-eastern Asia	Brunei; Cambodia; Indonesia; Laos; Malaysia; Myanmar; Philippines; Singapore; Thailand; Timor-Leste; Vietnam
	Southern Asia	Afghanistan; Bangladesh; Bhutan; India; Iran; Maldives; Nepal; Pakistan; Sri Lanka
	Western Asia	Armenia; Azerbaijan; Bahrain; Cyprus; Georgia; Iraq; Israel; Jordan; Kuwait; Lebanon; Oman; Palestinian Territories; Qatar; Saudi Arabia; Syria; Turkey; United Arab Emirates; Yemen
Europe	Eastern Europe	Belarus; Bulgaria; Czech Republic; Hungary; Moldova; Poland; Romania; Russian Federation; Slovakia; Ukraine
	Northern Europe	Denmark; Estonia; Faroe Islands; Finland; Iceland; Ireland; Latvia; Lithuania; Norway; Sweden; United Kingdom
	Southern Europe	Albania; Andorra; Bosnia and Herzegovina; Croatia; Gibraltar; Greece; Holy See; Italy; Malta; Montenegro; Portugal; San Marino; Serbia; Slovenia; Spain; the former Yugoslav Republic of Macedonia[61]
	Western Europe	Austria; Belgium; France; Germany; Luxembourg; Netherlands; Switzerland

Table A4 Detailed information on major exporters' ATT annual report submissions

State party	2015	2016	2017	No. of reports	No. of missing reports	Private reports	Year of private report
Argentina	1	1	1	3	0	1	2017
Australia	1	1	1	3	0	0	
Austria	1	1	1	3	0	0	
Belgium	1	1	1	3	0	0	
Bosnia and Herzegovina	1	1	1	3	0	0	
Bulgaria	1	1	1	3	0	0	
Croatia	1	1	1	3	0	0	
Cyprus	n/a	n/a	1	1	0	1	2017
Czech Republic	1	1	1	3	0	0	
Denmark	1	1	1	3	0	0	
Finland	1	1	1	3	0	0	
France	1	1	1	3	0	0	
Germany	1	1	1	3	0	0	
Hungary	1	1	1	3	0	0	
Italy	1	1	1	3	0	0	
Japan	1	1	1	3	0	0	

State party	2015	2016	2017	No. of reports	No. of missing reports	Private reports	Year of private report
Mexico	1	1	1	3	0	0	
Netherlands	1	1	1	3	0	0	
Norway	1	1	1	3	0	0	
Peru	n/a	n/a	1	1	0	0	
Poland	1	1	1	3	0	0	
Portugal	1	1	1	3	0	0	
Romania	1	1	1	3	0	0	
Serbia	1	1	1	3	0	0	
Slovakia	1	1	1	3	0	1	2015
South Africa	1	1	1	3	0	0	
Spain	1	1	1	3	0	0	
Sweden	1	1	1	3	0	0	
Switzerland	1	1	1	3	0	0	
United Kingdom	1	1	1	3	0	0	
Total reports submitted	**28**	**28**	**30**	**86**	**0**	**3**	

Note: South Korea is not included in the table because it had to submit its initial report on 25 February 2018 (after the cut-off date for the Barometer), and will submit its first annual report on 31 May 2019.

Table A5 Details of all instruments used for calculating major exporters' Barometer scores*

Country	National and regional arms export reports		ATT initial report	ATT annual reports	PoA reports	UN Register				UN Comtrade submissions
	National report	Regional report				SG[a]	UNROCA[b]	un-register.org[c]	OSCE[d]	
Argentina	o	o	X	X	X	X	X	o	o	X
Australia	X	o	X	X	X	o	o	o	o	X
Austria	o	X	X	X	o	o	o	X	o	X
Belgium	X	X	X	X	X	o	X(15)	o	X	X
Bosnia and Herzegovina	o	X	X	X	X	X	X	o	o	o
Brazil	o	o	n/a[e]	o	X	o	X	o	o	X
Bulgaria	X	X	X	X	X	X	X	o	o	o
Canada	X	o	n/a	n/a	o	o	X	o	X	X
China	o	o	n/a	n/a	X	o	X	o	o	X
Croatia	X	X	X	X	X	o	o	o	o	X
Cyprus	o	X	X	n/a	o	o	X	X	X	X
Czech Republic	X	X	X	X	X	X	o	X	X	X
Denmark	X	X	X	X	o	o	o	o	X	X
Finland	X	X	X	X	X	X	X	o	o	X

Country	National and regional arms export reports		ATT initial report	ATT annual reports	PoA reports	UN Register				UN Comtrade submissions
	National report	Regional report				SG[a]	UNROCA[b]	un-register.org[c]	OSCE[d]	
France	X	X	X	X	X	o	o	o	o	X
Germany	X	X	X	X	X	X	X	o	X	X
Hungary	X	X	X	X	X	X	X	o	X	X
India	o	o	n/a	n/a	X	o	X	o	o	X
Iran	o	o	n/a	n/a	X	o	o	o	o	o
Israel	o	o	n/a	n/a	o	o	X	o	o	o
Italy	X	X	X	X	X	X	o	o	o	X
Japan	o	o	X	X	X	X	X	o	o	X
Mexico	o	o	X	X	o	o	X(15)	o	o	X
Netherlands	X	X	X	X	X	X	X	o	o	X
North Korea	o	o	n/a	n/a	o	o	o	o	o	o
Norway	X	o	X	X	X	o	o	o	X	X
Pakistan	o	o	n/a	n/a	X	o	X(15)	o	o	X
Peru	o	o	X	n/a	X	o	o	o	o	X
Philippines	o	o	n/a	n/a	X	o	o	o	o	X

Country	National and regional arms export reports		ATT initial report	ATT annual reports	PoA reports	UN Register				UN Comtrade submissions
	National report	Regional report				SG[a]	UNROCA[b]	un-register.org[c]	OSCE[d]	
Poland	X	X	X	X	X	o	X	o	X	X
Portugal	o	X	X	X	X	X	X	o	X	X
Romania	X	X	X	X	X	X	o	o	X	o
Russian Federation	o	o	n/a	n/a	X	X	X	o	X	X(15)
Saudi Arabia	o	o	n/a	n/a	X	o	o	o	o	o
Serbia	X	X	X	X	X	X	o	X	X	X
Singapore	o	o	n/a	n/a	X	X	X	o	o	X
Slovakia	X	X	X	X	X	X	X	o	X	X
South Africa	X	o	X	X	o	o	X	o	o	o
South Korea	X	o	X[f]	n/a	o	o	o	o	o	X
Spain	X	X	X	X	X	X	X	o	X	X
Sweden	X	X	X	X	X	X	X	X	X	X
Switzerland	X	o	X	X	X	X	X	o	o	X
Taiwan, China	X	o	n/a	n/a	o	o	o	o	o	o
Thailand	o	o	n/a	n/a	X	o	o	o	o	X

Country	National and regional arms export reports		ATT initial report	ATT annual reports	PoA reports	UN Register				UN Comtrade submissions
	National report	Regional report				SG[a]	UNROCA[b]	un-register.org[c]	OSCE[d]	
Turkey	o	o	n/a	n/a	X	X	X	o	X	X
UAE	o	o	n/a	n/a	o	o	o	o	o	X
Ukraine	X	o	n/a	n/a	X	X	X	o	X	o
United Kingdom	X	X	X	X	X	X	X	o	X	X
United States	X	o	n/a	n/a	X	X	X	o	X	X
Total	**27**	**22**	**31**	**28**	**38**	**23**	**27**	**5**	**20**	**38**
Joint total per instrument	**31**		**31**	**28**	**38**	**23**	**35**			**38**

Notes:

* 'X' indicates that a report was issued or submitted by the cut-off date—that is, 13 months after the year in which the trade activities took place. 'X(year)' indicates that, because a report was not issued or submitted by the cut-off date, the country was evaluated on the basis of its most recent submission, which covered activities for the year reported in brackets. 'o' indicates that no report was submitted.

a See UNGA (2017).

b See UNROCA (n.d.).

c Until 2019 the UN Office for Disarmament Affairs maintained two websites to which countries could submit their reports: UNROCA (n.d.) and un-register.org. The latter website is no longer maintained.

d See Box 5 in this Trade Update.

e Brazil became an ATT state party on 12 November 2018 and is therefore only obliged to submit an initial report to the ATT Secretariat by November 2019 and its first annual report by 31 May 2020.

f South Korea submitted its initial report on 25 February 2018 (after the cut-off date for the Barometer), and will submit its first annual report on 31 May 2019.

Table A6 The Transparency Barometer scoring guidelines

Parameter (max. points)	Criteria (points)*	National report (NR)/ regional report (RR)		ATT/PoA			UN Register	UN Comtrade
		NR	RR	ATT annual report	ATT initial report	PoA		
Timeliness (1.50)	1.1 Did the exporter submit data in 2015 or 2016? (0.5)	✓	✓	✓			✓	✓
	1.2 Did the exporter submit data in 2016? (0.5)	✓	✓	✓			✓	✓
	1.3 Did the exporter submit data in 2016 that concerned activities in 2015 or 2016? (0.5)	✓	✓	✓			✓	✓
Access and consistency (2.00)	2.1 Did the exporter make its national report available online free of charge? (0.5)	✓		✓			✓	✓
	2.2 Did the exporter provide interim information —such as biannual or quarterly reports—in addition to a consolidated annual report? (0.5)	✓						
	2.3 Did the exporter use the same tool to report on activities in 2013, 2014, and 2015? (0.5)	✓		✓			✓	✓
	2.4 Did the exporter use a single additional tool to report on activities in 2013, 2014, and 2015? (0.5)	✓		✓			✓	✓
Clarity (5.00)	3.1 Did the exporter distinguish between government- and private industry-supplied transactions? (1/0.5)	✓		✓			✓	

	3.2 Did the exporter distinguish small arms and light weapons from other types of conventional weapons? (0.5/0.25)	✓	✓	✓			✓	✓
	3.3 Did the exporter distinguish small arms and light weapons ammunition from ammunition for other types of conventional weapons? (0.5/0.25)	✓	✓					✓
	3.4 Did the exporter provide information on temporary exports? Examples would include transfers to trade shows that must be returned, transfers to troops participating in peace operations, and materiel sent to be repaired and returned. (0.5/0.25)	✓		✓			✓	
	3.5 Did the exporter provide information on its small arms-related laws, regulations, and administrative procedures, as well as its multilateral commitments?							
	3.5.1 Did the country provide information on its transfer control system, including brokering control, to any reporting mechanism? (0.5/0.25)	✓			✓	✓		
	3.5.2 Did the exporter provide information on the measures it uses to prevent and detect the diversion of international small arms and light weapons transfers? (0.25)	✓			✓	✓		
	3.5.3 Did the exporter provide information on its subregional, regional, and international commitments relating to the control of international small arms and light weapons transfers, including brokering? (0.25)	✓			✓	✓		

Parameter (max. points)	Criteria (points)*	National report (NR)/ regional report (RR)		ATT/PoA			UN Register	UN Comtrade
		NR	RR	ATT annual report	ATT initial report	PoA		
	3.6 Did the exporter provide information on deliveries? (0.5/0.25)	✓	✓	✓			✓	✓
	3.7 Did the exporter provide information on licences granted? (0.5/0.25)	✓	✓	✓			✓	
	3.8 Did the exporter provide information on small arms brokering authorizations? (0.5)	✓		✓			✓	
Comprehen-siveness (6.50)	4.1 Did the exporter provide information on its exports of guided light weapons, such as MANPADS and anti-tank guided weapons? (0.5/0.25)	✓	✓	✓			✓	✓
	4.2 Did the exporter provide information on its exports of unguided light weapons apart from heavy machine guns and anti-materiel rifles—that is, rocket launchers such as RPGs and anti-tank weapons, grenade launchers, mortars, and recoilless rifles and guns? (0.5/0.25)	✓	✓	✓			✓	✓
	4.3 Did the exporter provide information on exports of sporting and hunting guns or rifles? (0.5/0.25)	✓		✓			✓	✓
	4.4 Did the exporter provide information on exports of pistols and revolvers? (0.5/0.25)	✓	✓	✓			✓	✓

	4.5 Did the exporter provide information on exports of military firearms—automatic rifles; light, medium, and heavy machine guns; sub-machine guns; anti-materiel rifles; and military shotguns—apart from pistols and revolvers? (0.5/0.25)	✓	✓	✓			✓	✓
	4.6 Did the exporter provide information on exports of ammunition of 12.7 mm calibre and below, as well as shotgun shells? (0.5/0.25)	✓	✓					✓
	4.7 Did the exporter provide information on exports of ammunition larger than 12.7 mm calibre that is used in light weapons? Single-use light weapons systems that contain both the launcher and the projectile are treated as light weapon in either 4.1 or 4.2, above, and are not considered as 'ammunition' here. (0.5/0.25)	✓	✓					✓
	4.8 Did the exporter provide information on exports of parts and accessories for small arms and light weapons? (0.5/0.25)	✓	✓					✓
	4.9 Did the exporter provide information on 'intangible transfers' concerning small arms and light weapons, their ammunition, or their parts and accessories? Intangible transfers include the provision of technical plants, blueprints, know-how, schematics, and software for the production of small arms, light weapons, their ammunition, or their parts and accessories. (0.5/0.25)	✓						

Parameter (max. points)	Criteria (points)*	National report (NR)/ regional report (RR)		ATT/PoA			UN Register	UN Comtrade
		NR	RR	ATT annual report	ATT initial report	PoA		
	4.10 Did the exporter provide information on permanent re-exports of small arms and light weapons, and/or their ammunition, not including temporary exports covered in 3.4? (0.5/0.25)	✓		✓			✓	
	4.11 Did the exporter identify the origin and destination of permanent re-exports of small arms and light weapons and/or their ammunition? (0.5/0.25)	✓		✓			✓	
	4.12 Did the exporter provide information on transit or transhipment of small arms and light weapons, and/or their ammunition? (0.5/0.25)	✓		✓			✓	
	4.13 Did the exporter identify the origin and destination of the transit or transhipment of small arms and light weapons and/or their ammunition? (0.5/0.25)	✓		✓			✓	
Deliveries (4.00)	5.1 Did the exporter provide information on delivery recipients? (1/0.5)	✓	✓	✓			✓	✓
	5.2 Did the exporter provide information on the state of import AND specific end user—such as riot control police, air force, museum, or private dealer? (1/0.5)	✓	✓	✓			✓	
	5.3 Did the exporter provide information on the state of import AND the types AND quantities of weapons and/or ammunition delivered? (1/0.5)	✓	✓	✓			✓	✓

	5.4 Did the exporter provide information on the state of import AND the types AND values of weapons and/or ammunition delivered? (1/0.5)	✓	✓	✓			✓	✓
Licences granted (4.00)	6.1 Did the exporter provide information on licence recipients? (1/0.5)	✓	✓	✓			✓	
	6.2 Did the exporter provide information on the state of import AND the types AND quantities of weapons and/or ammunition delivered? (1/0.5)	✓	✓	✓			✓	
	6.3 Did the exporter provide information on the state of import AND the types AND quantities of weapons and/or ammunition delivered? (1/0.5)	✓	✓	✓			✓	
	6.4 Did the exporter provide information on the state of import AND the types AND values of weapons and/or ammunition delivered? (1/0.5)	✓	✓	✓			✓	
Licences refused (2.00)	7.1 Did the exporter identify the countries of prospective import that were refused licences? (0.5/0.25)	✓	✓					
	7.2 Did the exporter provide a reason or explanation for its refusal to grant a licence to the applicant or state of prospective import? (0.5/0.25)	✓	✓					
	7.3 Did the exporter provide information on the types AND quantities of weapons and/or ammunition that were the subject of a licence refusal? (0.5/0.25)	✓						
	7.4 Did the exporter provide information on the types AND values of weapons and/or ammunition that were the subject of a licence refusal? (0.5/0.25)	✓						

Notes:

* For some criteria only full points are awarded, while for others both partial and full points can be awarded, depending on the comprehensiveness of the information provided by the exporters. In the latter case, two possible scores are given, for example (1/0.5).

● Grey background: not applicable.

✓ Voluntary information.

Endnotes

1 Author interview with a former small arms broker for the Thai government and member of the Defence Industry Association Thailand, Bangkok, Thailand, 13 March 2019.
2 The term 'small arms' is used in this publication to refer to small arms, light weapons, and their ammunition (as in 'the small arms trade'), unless the context indicates otherwise, whereas the terms 'light weapons' and 'ammunition' refer specifically to those items.
3 The last body of work to extensively cover the authorized small arms trade in South-east Asia was Capie (2003).
4 The UN Comtrade commodity categories used in the analysis of the small arms trade are the following: 930120, 930190, 930200, 930320, 930330, 930510, 930520, 930521, 930529, 930621, and 930630. This list is identical to the list of categories used in Trade Update 2018. See Box 1 for more information on Comtrade data use in the Trade Update 2019.
5 NISAT uses countries' self-reported exports and mirror data—that is, imports reported by destination countries—to generate a single value by transaction; see Marsh (2005).
6 The top five importers of US small arms in 2016 were Canada, Saudi Arabia, Australia, Kuwait, and the UAE. For Italy, the top five importers were the United States, the United Kingdom, Germany, France, and Iraq. For Brazil, the top five importers were the United States, Indonesia, Saudi Arabia, the UAE, and the Netherlands. Brazilian exports to Indonesia will be revisited in Section III due to the opaque nature of these transfers.
7 Three of these countries—Israel, Spain, and Japan—were top exporters in 2014, but not in 2015.
8 Ghana reported the import of more than USD 30 million worth of military firearms from Liberia, which would make Liberia a major exporter of small arms for 2016. Liberia is not included as a major exporter of small arms in that year, however, because the delivery to Ghana is considered to cover the return of peacekeeping equipment and was not an export from Liberia. This issue is discussed in more detail in the subsection on importers.
9 The Netherlands was a major exporter in 2014, but not in 2015. The subject of Thai small arms exports will be revisited in Section III.
10 Estimates place between 111 million and 114 million civilian handguns in the United States (Azrael et al., 2017, p. 42; Krouse, 2012, p. 8). This would account for anywhere between 29 and 42 per cent of global civilian firearm holdings (Krouse, 2012, p. 8; Karp, 2018a), by far the largest for any one country.
11 New additions to the list of top importers were the United Kingdom, which was a top importer in 2014, and Ghana.

12 The record year for small arms imports into the United States, valued at USD 2,565 million (adjusted for inflation in 2016), is 2013.

13 Epic Guardian was a multinational exercise hosted in Ghana on 26 April 2016. It involved security forces primarily from Ghana, the United States, and Cape Verde. Approximately 900 US personnel participated in the training programme, which focused on 'staff crisis action planning, deployment of forces, completion of field exercises, and redeployment of forces' (AFRICOM, 2016).

14 In 2015, 52 major importers accounted for 33 per cent of global small arms imports.

15 These countries are Côte d'Ivoire, Egypt, Malawi, Namibia, and Niger. Despite these losses, Kenya, Mali, Morocco, and Tunisia became major importers in 2016, while South Africa maintained its position from 2015.

16 The Barometer assesses UN Comtrade data as elaborated by NISAT (see Marsh, 2005).

17 See ATT Secretariat (2019a; 2019b). See also the Annexe (Table A4) for detailed information on major exporters' ATT annual report submissions.

18 In addition to the national report that the Belgian Federal Government issues, each Belgian region (Brussels, Flanders, and Wallonia) reports separately on its arms exports. Only the Flanders report provides disaggregated information on exports of pistols, revolvers, military firearms, and ammunition. Therefore Belgium does not receive points for this information in the Barometer.

19 The definition of South-east Asia follows that of the UN Statistics Division and includes Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste, and Vietnam (UNSD, n.d.).

20 The Harmonized Commodity Description and Coding System, also known as the Harmonized System (HS), is an internationally standardized system of names and number codes used to classify globally traded products, which came into effect in 1988 and which the World Customs Organization has since developed and maintained.

21 The Thai government developed the Ten-year Modernization Plan: Vision 2026 in 2017 and the Defence Industry Master Plan in 2015. The former calls for a thorough restructuring of the Royal Thai Armed Forces with an eye to enhancing human capital, resource use, and modi operandi, while the latter aims to advance industrial production capacity through bilateral defence transfers and agreements.

22 In 2017 PT Pindad received a state allocation of IDR 700 billion (USD 55 million) to fund the construction of a new factory in East Java and to procure advanced manufacturing equipment (Berita, 2017).

23 Agreements have been signed with both South African and UAE partners, while potential arrangements with Canada, China, and the Czech Republic were being considered as of 2017 (Boediwardhana, 2017).

24 Prior to 1989 the Republic of the Union of Myanmar was known as Burma.

25 Models influenced by Western designs either pre-date Western sanctions or are unauthorized copies.

26 Author interview with a former small arms broker for the Thai government and member of the Defence Industry Association Thailand, Bangkok, Thailand, 13 March 2019.

27 The stated purpose of this joint Thai–Chinese facility in north-east Thailand is for the 'assembly, production and maintenance of Chinese land weapon systems for the Thai army' (Stanley-Lockman 2019; Woncha-um, 2017).

28 Civilian firearm possession is widespread in both the Philippines and Thailand. In the Philippines there are 1.9 million registered firearms (Alpers and Picard, 2019), with an estimated 2 million unregistered firearms believed to be in circulation (Karp, 2018a). In Thailand there are believed to be 6.2 million registered and 4.1 million unregistered firearms (Karp, 2018a). Unlike the Philippines, Thailand does not allow private production, so all civilian firearms are imported.

29 Author interview with Filipino government official, Manila, the Philippines, 21 February 2019.

30 Gun-shop survey and author interviews with Manila gun dealers, Manila, the Philippines, 20–21 February 2019.

31 Author interview with Filipino government official, Manila, the Philippines, 21 February 2019.

32 Author interviews with Malaysian firearm researcher and dealers, Kuala Lumpur, Malaysia, 28 February 2019.

33 The assault rifles and sniper rifle appear to be based on an AR-15 configuration, the machine gun appears to be a variant of the M134 Minigun, while the pistol is possibly of original design.

34 Gun-shop survey and author interviews with Manila gun dealers, Manila, the Philippines, 20–21 February 2019.

35 Author interview with Filipino government official, Manila, the Philippines, 21 February 2019; gun-shop survey and author interviews with Manila gun dealers, Manila, the Philippines, 20–21 February 2019.

36 Almost all of this was made up of ammunition exports to Singapore worth USD 3.6 million.

37 PT Pindad and PT Dahana—a sister company—have signed deals with Rheinmetall Denel Munition (Germany/South Africa), Roxel (France), and Eurenco (France) in order to boost domestic ammunition and propellent production (Stanley-Lockman, 2019; *Jakarta Post*, 2014a; 2014b).

38 It was reported that only 5 per cent of PT Pindad's production was being sold internationally. In 2013 PT Pindad made IDR 1.88 trillion in revenue (roughly USD 162,419). By this account, the company exported just over USD 8,000 worth of weaponry in 2013 (Dipa, 2015).

39 Author interview with a former small arms broker for the Thai government and member of the Defence Industry Association Thailand, Bangkok, Thailand, 13 March 2019.

40 Email correspondence with the Siemon Wezeman of SIPRI regarding Swedish ammunition transfers to Thailand, 13 March 2019.

41 Author interview with a former small arms broker for the Thai government and member of the Defence Industry Association Thailand, Bangkok, Thailand, 13 March 2019.

42 A 2017 IHS Jane's report identified China, France, Germany, Israel, Italy, the Russian Federation, Singapore, South Korea, Sweden, Ukraine, the United Kingdom, and the United States as Thailand's top military suppliers (IHS Markit, 2017). According to UN Comtrade data, these countries accounted for 64 per cent of Thailand's small arms imports between 2014 and 2016.

43 Indonesia, Malaysia, and Singapore allow for restricted civilian ownership, and thus have very low rates of licensed civilian ownership. Brunei, Cambodia, Laos, Myanmar, and Vietnam all ban the civilian ownership of firearms, except in the rarest of cases (such as for competitive shooters). Only authorized government officials may possess a personal firearm. The Philippines and Thailand are the only countries in South-east Asia where civilian gun ownership is widespread (Alpers and Picard, 2019).

44 Gun-shop survey and author interviews with Bangkok gun dealers, Bangkok, Thailand, 19 January 2019.

45 Gun-shop survey and author interviews with Bangkok gun dealers, Bangkok, Thailand, 19 January 2019.

46 Author interview with Filipino government official, Manila, the Philippines, 21 February 2019. The former estimate is the government's official figure. Officials acknowledge, however, that this is a limited estimate in that it only considers registered firearms that have not been renewed with the PNP FEO. The latter estimate was developed by local researchers who made special efforts to quantify illicit firearms in the restive south of the country (International Alert Philippines, 2017).

47 As with Thailand, certain government officials may be licensed to personally possess high-powered firearms (gun-shop survey and author interviews with Manila gun dealers, Manila, the Philippines, 20–21 February 2019).

48 Author interview with staff at International Alert, Quezon City, the Philippines, 21 February 2019.

49 In 2016 the United States froze a shipment of 26,000 assault rifles destined for the PNP (Mogato, 2016).

50 The United States resumed funding assistance to Thailand in 2017 and proceeded with the transfer of larger weapons systems whose export had been suspended (Prachathai, 2017). In the Philippines the United States reportedly expressed support for the military's modernization efforts by offering military equipment (Placido, 2018).

51 The Mobile Brigade Corps of the Indonesian National Police, for example, is reported to possess 17,000 Russian Federation AK-101 and AK-102 assault rifles, which serve as the militarized unit's standard assault rifles (Indomiliter, 2017a). Indonesia has also acquired Russian Federation Metis-M and Chinese PF-98 anti-tank guided missiles (Saragih, 2012), while Malaysia also uses the Metis-M system (Azhar, 2015; Saragih, 2012).

52 Author interview with a former small arms broker for the Thai government and member of the Defence Industry Association Thailand, Bangkok, Thailand, 13 March 2019.

53 Author interview with a former small arms broker for the Thai government and member of the Defence Industry Association Thailand, Bangkok, Thailand, 13 March 2019.

54 Micro-Uzi sub-machine guns are also reportedly produced as part of the same expansion (21AAR, 2018).

55 These weapons have been photographed in use by Cambodian special forces (Bemil, 2017).

56 In the same year (2008) Indonesia declared an identical import of sub-machine guns and automatic grenade launchers from South Korea (UNROCA, n.d.).

57 This transfer is mentioned in Filipino news reports, although the number of K3 light machine guns is put at 7,000 (Andrade, 2018a).

58 Author interview with a former small arms broker for the Thai government and member of the Defence Industry Association Thailand, Bangkok, Thailand, 13 March 2019.

59 Gun-shop survey and author interviews with Bangkok gun dealers, Bangkok, Thailand, 19 January 2019.

60 Gun-shop survey and author interviews with Manila gun dealers, Manila, the Philippines, 20–21 February 2019.

61 Now known as 'North Macedonia', but the previous name is retained here to reflect 2016 data.

References

21AAR (21st Century Asian Arms Race). 2018. 'Vietnamese Soldiers Are Now Issued the Galil ACE.' 8 August.

AAG_th Daily Memos. 2018. 'The Progress of the Thai Army Armament Procurement Project in the Year 2018' [in Thai]. Blog. 1 February.

AFAD (Association of Firearms and Ammunition Dealers of the Philippines). n.d. 'AFAD Members Roster.' Accessed February 2019.

AFP (Agence France-Presse). 2014. 'Thailand Coup: US Suspends $4.4 Million in Military Aid.' *Straits Times* (Singapore). 24 May.

AFRICOM (United States Africa Command). 2016. 'Epic Guardian 2016 to Promote Cooperation, Interoperability.' Press release. 26 April.

Afrida, Nani. 2015. 'More Countries Purchase Weapons from PT Pindad.' *Jakarta Post*. 8 October.

Alpers, Philip and Michael Picard. 2019. GunPolicy.org. Sydney School of Public Health, University of Sydney.

Andolong, Arsenio R. 2018. 'DND–ARMSCOR Global Defense Partnership Sealed.' Department of National Defence press release. Quezon City, Philippines, 21 November.

Andrade, Jeannette I. 2018a. 'South Korean Dealer to Set up Firearms Production in PH.' *Philippine Daily Inquirer* (Manila). 28 September.

—. 2018b. 'DND Signs Deal for Supply of 50,000 Pistols.' *Philippine Daily Inquirer* (Manila). 22 November.

Apisitniran, Lamonphet and Yuthana Praiwan. 2018. 'Defence Footprint Grows in Corridor.' *Bangkok Post*. 1 August.

Army Recognition. 2010. 'Bosnia Herzegovina Land Forces Military Equipment, Armament and Vehicles Army.' 1 June.

—. 2014. 'Israeli IWI Galil ACE 31 ACE 32 Assault Rifles to Replace Russian AK-47 in Vietnamese Army.' 2 February.

—. 2017. 'IWI from Israel Launches TAVOR 7 7.62mm Caliber Bullpup Rifle in Asia.' 6 November.

—. 2018a. 'Russia to Supply AK-100 Series Assault Rifles to Thailand.' 19 February.

—. 2018b. 'Indonesia Might Buy More Chiron MANPADS Systems from South Korea.' 13 November.

—. 2018c. 'Indonesia's Exports of Defense Industrial Products Reach USD 284.1 Million.' 22 November.

—. 2019. 'Laos Displays Chinese-made Yitian, or Tianlong 6, Air Defense Missile System.' 2 January.

ATT (Arms Trade Treaty) Secretariat. 2019a. ‘Initial Reports. Status: as of 18 February 2019.’
—. 2019b. ‘Annual Reports. Status: as of 18 February 2019.’
Azhar, Ibrahim. 2015. ‘Zon Kenali Senjata ATM: Metis-M.’ Bertiwi. Blog. 25 August.
Azrael, Deborah et al. 2017. ‘The Stock and Flow of U.S. Firearms: Results from the 2015 National Firearms Survey.’ *Journal of the Social Sciences*. Boston, MA: Russell Sage Foundation. 5 October.
Balana, Cynthia D. 2017. ‘PH Won’t Buy Russian Rifles, after All.’ *Philippine Daily Inquirer* (Manila). 27 January.
— and Marlon Ramos. 2016. ‘China to Supply PH with Guns on Easy Terms.’ *Philippine Daily Inquirer* (Manila). 13 December.
Báo Đất Viêt. 2017. ‘Viêt Nam tư chế tao thép sản xuất vũ khí.’ 23 October.
Bemil. 2017. ‘Korean Army Equipment Introduced by Cambodian Army’ [in Korean]. 14 January.
Berita. 2017. ‘Government Disburses Rp 700 Billion for PT Pindad Factory Expansion.’ 10 October.
BICC (Bonn International Center for Conversion). n.d. *Interactive Guide on Small Arms and Light Weapons*. Website. Accessed 1 March 2019.
Binnie, Jeremy and Erwan de Cherisey. 2017. *New-model African Armies*. IHS Markit.
Bitzinger, Richard. 2016. ‘Other Asian Arms Producers: Southeast Asia and Taiwan.’ In *Arming Asia: Technonationalism and Its Impact on Local Defense Industries*. London: Routledge.
Boediwardhana, Wahyoe. 2017. ‘Pindad Breaks Ground on New Weapons Factory.’ *Jakarta Post*. 11 October.
Boguslavsky, Eyal. 2017. ‘EMTAN Launches Three New Assault Rifles.’ IsraelDefense. 2 November.
—. 2018. ‘Philippine Police Takes Delivery of Israeli Assault Rifles.’ IsraelDefense. 4 May.
Brunei Ministry of Defence. 2007. ‘Ministry of Defence Signs Contract for the Ultimax-100 Light Machine Gun.’ *News*. 7 June.
Calonzo, Andreo. 2013. ‘PNoy Distributes Brand New Pistols to PNP Officers.’ GMA News Network. 2 July.
Cana, Paul John. 2017. ‘PH’s Biggest Arms Maker Now a Defense Company.’ Entrepeneur Philippines. 23 July.
Capie, David. 2003. ‘Royal Fijian Military.’ In *Under the Gun: The Small Arms Challenge in the Pacific*. Wellington: Victoria University Press.
CAWAT (Centre for Analysis of World Arms Trade). 2012. ‘The Main Point’ [in Russian]. Blog. 9 November.
Chairil, Tangguh. 2018. ‘A Self-reliant Defence Industry: A Mission Impossible for Indonesia?’ The Conversation. 3 July.
Chng, Grace. 2015. ‘Singapore-made Arms to Be Produced Overseas.’ *Straits Times* (Singapore). 1 October.
CoEU (Council of the European Union). 1996. Common Position 96/635/CFSP of 28 October 1996 Defined by the Council on the Basis of Article J.2 of the Treaty on European Union, on Burma/Myanmar. *Official Journal of the European Union*, L287 of 28 October.
—. 2016. *Seventeenth Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment*. In *Official Journal of the European Union*, 2016/C163/01. 4 May.
—. 2018. *Nineteenth Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment*. In *Official Journal of the European Union*, 2018/C397/01. 31 October.
Cohen, Gili. 2015. ‘The Clandestine Role Israel Played in Establishing Singapore’s Army.’ *Haaretz* (Tel Aviv). 24 March.

Cupin, Bea. 2014. 'PNP Eyes Cases vs Generals over Missing AK-47s.' Rappler. 5 June.
DAPA (Defense Acquisition Program Administration). n.d. Homepage.
Defence Blog. 2017. 'Thailand Interested in Buying Assault Rifles from South Korea.' 3 July.
Defense Studies. 2018. 'Avibras Ijinkan Pindad Merakit Roket Astros dan Kendaraan Peluncurnya.' Blog. 5 May.
Defense Update. 2016. 'Israeli Missiles, RWS to Equip Philippine Navy Combat Boats.' Defense Innovation Review. 27 February.
Dipa, Arya. 2015. 'Pindad Spends Rp 700b to Improve Production Capacity.' *Jakarta Post*. 29 January.
Eger, Chris. 2018. 'Check out the 246 Weapons Recovered by Philippine Marines.' Guns.com. 27 March.
Farmorocco. 2014. 'Infantry Weapons.' Blog. 2 September.
FBI (Federal Bureau of Investigation). 2019. *NICS Firearm Background Checks*. Washington, DC: FBI.
Fonbuena, Carmela. 2017. 'PH Gets 3,000 More Assault Rifles from China.' Rappler. 5 October.
General Dynamics. n.d. 'Medium Caliber Ammunition—40mm × 53 Ammunition.' Website.
Hariyanto. 2018. 'Komodo Armament Indonesia Siap Dukung Pemerintah Dalam Penyediaan Alutsista TNI.' Industrycoid. 22 February.
Hays, G. and N. R. Jenzen-Jones. 2018. *Beyond State Control: Improvised and Craft-produced Small Arms and Light Weapons*. Report. Geneva: Small Arms Survey.
Holtom, Paul and Irene Pavesi. 2018. *Trade Update: Sub-Saharan Africa in Focus.* Geneva: Small Arms Survey.
IHS Markit. 2017. 'Moving up the Value Chain: Thai Military Modernisation.' 14 November.
IISS (International Institute for Strategic Studies). 2018. 'Chapter Six: Asia.' *The Military Balance*, Vol. 118, No. 1, pp. 429–98.
Indomiliter. 2015. 'Daewoo K7: Sub Machine Gun Berperedam Terintegrasi, Andalan Pasukan Khusus.' 2 April.
—. 2016. 'SAR21: Senapan Serbu Bullpup Paskhas Dengan Desain Modular.' 21 November.
—. 2017a. 'AK-101/102: Senapan Serbu Dari Rusia Bercita Rasa NATO, Ikon Brimob Di Awal Reformasi.' 17 January.
—. 2017b. 'Daewoo K2: Didatangkan Terbatas, Senapan Serbu Ini Dipakai Satuan Elite.' 30 January.
InfoDefensa. 2013. 'Chile concreta la compra de fusiles SCAR-L y SCAR-H de FN HERSTAL para Infantería de Marina.' 25 July.
International Alert Philippines. 2017. 'It's Time to Bite the Bullet: 7 Facts to Know about Illicit Weapons in the Philippines.'
Jakarta Post. 2014a. 'New Propellant Factory to Be Built in West Java.' 11 October.
—. 2014b. 'Pindad, RDM Sign MoU on Ammunition.' 8 August.
Joibi, Natasha. 2016. 'After Pistol, Firm Aims for More Locally-made firearms.' *The Star* (Kuala Lumpur). 21 April.
Karp, Aaron. 2018a. 'Civilian Firearms Holdings, 2017.' In *Estimating Global Civilian-held Firearms Numbers*. Briefing Paper. Annexe. Geneva: Small Arms Survey.
—. 2018b. 'Law Enforcement Firearms Holdings, 2017.' In *Estimating Global Law Enforcement Firearms Numbers*. Briefing Paper. Annexe. Geneva: Small Arms Survey.
—. 2018c. 'Military Firearms Holdings, 2017.' In *Estimating Global Military-owned Firearms Numbers*. Briefing Paper. Annexe. Geneva: Small Arms Survey.
Komodo Armament. n.d. 'Products.' Website.
Krouse, William J. 2012. 'How Many Guns Are in the United States?' In *Gun Control Legislation*. Washington, DC: United States Congressional Research Service. 14 November.

Lema, Karen. 2017. 'Russia Offers Philippines Arms and Close Friendship.' Reuters. 4 January.

Lourdes Viray, Patricia. 2019. 'Duterte: Philippines Will not Buy Weapons from US.' PhilStarGlobal. 11 January.

Marboen, Ade P. 2018. 'Ini pistol dan senapan produk Komodo Armament Indonesia asli "Made in Bekasi".' Antara News. 21 February.

Marsh, Nicholas. 2005. *Accounting Guns: The Methodology Used in Developing Data Tables for the Small Arms Survey*. Unpublished background paper. Oslo: Norwegian Initiative on Small Arms Transfers and Peace Research Institute Oslo.

Mateo, Janvic. 2018. 'DND Eyes Defense Industry Zone in Bataan.' *Philippine Star* (Manila). 8 July.

MaxDefense Philippines. 2015. 'The Government Arsenal's Pursuit of a Rifle Manufacturing Program—Is the DND up to Support It?' 1 October.

Mogato, Manuel. 2016. 'Philippines' Duterte Rails at U.S. "Monkeys" for Halting Gun Sale.' Reuters. 2 November.

—. 2017. 'Philippines, Russia Sign Two Military Deals.' Reuters. 25 October.

—. 2018. 'China Donates Four Small Boats and Grenade Launchers to Philippines.' Reuters. 29 July.

Nakpum, Ekphon. 2018. 'Thailand Signed a Supply Contract for Kalashnikov Long Guns, the Russian AK-100 Family' [in Thai]. AAG_th Daily Memos blog. 9 February.

Nanuam, Wassana. 2017. 'Modern Military Plan Gets Nod.' *Bangkok Post*. 28 February.

The Nation (Bangkok). 2017. 'New, Modern Handguns Being Handed out Free to Police.' 29 December.

The Netherlands. 2016. *Maandelijkse Rapportage Uitover Militaire Goederen*. 19 February 2019.

Ningthoujam, Alvite. 2016. 'Southeast Asia Can't Get Enough of Israel's Weapons.' National Interest. 12 June.

NISAT (Norwegian Initiative on Small Arms Transfers). n.d. Small Arms Trade Database.

OSCE (Organization for Security and Co-operation in Europe). 1997 Decision No. 13/97: Further Transparency in Arms Transfers. FSC.DEC/13/97 of 16 July.

—. 2016. Decision No. 4/16: Enabling the Publication of Information Exchanges in the Field of Small Arms and Light Weapons, Conventional Arms Transfers and Anti-personnel Mines. FSC.DEC/4/16/Corr.1 of 21 September.

Parameswaran, Prashanth. 2017. 'Indonesia, Brazil Ink New Defense Pact.' *The Diplomat*. 11 April.

—. 2018. 'Singapore–Thailand Defense Ties in the Spotlight with Military Exercise.' *The Diplomat*. 12 May.

Paviour, Ben. 2016. 'In Peacetime, Cambodia's Military Spending Soars.' *Cambodia Daily* (Phnom Penh). 24 November.

Pelayo, Marje. 2018. 'High-powered Firearms Seized from Iloilo Town Mayor's House.' *UNTV News & Rescue*. 18 October.

PhilStar Global. 2016. 'PNP: Only One Gun Supplier.' 27 December.

Placido, Dharel. 2018. 'Duterte Says US Courting Him with Military Hardware.' ABS–CBN News. 23 August.

Prachathai. 2017. 'US to Resume Arms Sales to Thailand: Deputy Prime Minister.' 4 October.

PT Pindad. n.d. 'Weapon.' Website.

Pulta, Benjamin. 2018. 'PNP Bares Guns, Big Bikes in P2-B Capability Enhancement Program.' Philippines News Agency. 29 August.

Quitoriano, Eddie L. 2014. *Getting Rid of Illegal Guns*. Policy Brief. London: International Alert. April.

—. 2016. 'Shadow Economy or Shadow State? The Illicit Gun Trade in Conflict-affected Mindanao.' In Francisco J. Lara and Steven Schoofs, eds. *Out of the Shadows: Violent Conflict and the Real Economy of Mindanao*, 2nd edn. Quezon City: Ateneo de Manila University.

Rojkes Dombe, Ami. 2017. ‘Israeli Companies to Supply Weapons to the Philippines.’ IsraelDefense. 12 December.
RSIS (S. Rajaratnam School of International Studies). 2011. *Transforming the Indonesian Armed Forces: Challenges and Perspectives*. Conference Report. Singapore: S. Rajaratnam School of International Studies. November.
Saragih, Rojes. 2012. ‘Leopard 2A6 Versus Baktar Shikan.’ JakartaGreater. 23 May.
Satrusayang, Thanarith. 2016. ‘Thailand Seeks to Develop Military Production Facilities with China.’ Reuters. 21 December.
SEESAC (South Eastern and Eastern Europe Regional Clearinghouse for the Control of Small Arms and Light Weapons). 2018. *Regional Report on Arms Export in 2016*. Belgrade: SEESAC.
Small Arms Survey. n.d. ‘Small Arms Trade Transparency Barometer: Online Interactive Tool.’
Soeriaatmadja, Wahyudi. 2017. ‘Indonesia Cops to Get More Guns to Fend off Terrorist Threat.’ *Straits Times* (Singapore). 19 September.
Soha. 2017. ‘Viết Nam chế tao thành công súng phòng không 12,7 mm điều khiển từ xa.’ 18 January.
South Africa. 2002. National Conventional Arms Control Act, No. 41 of 2002. *Government Gazette,* Vol. 452, No. 2457. 20 February 2003.
Specijalne-jedinice. n.d. ‘Specijalna Antiteroristicka Jedinica (SAJ).’
Stanley-Lockman, Zoe. 2019. *SALW Procurement and Industry Expansion Trends in South-east Asia*. Unpublished background paper. Geneva: Small Arms Survey. March.
ST Engineering. n.d. ‘Weapons and Ammunition.’ Website.
—. 2016. *Annual Report 2016: Engineering with Passion*.
Suorsa, Olli and Collin Swee Lean Koh. 2018. ‘Thailand Takes Advantage of China’s Arms Market.’ National Interest. 4 October.
Switzerland. n.d. 2016 *Chiffres et statistiques 2016*. Secrétariat d’Etat à l’économie.
Taiwan, China. n.d. ‘Trade Statistics Search.’ Taipei: Customs Administration, Ministry of Finance. Accessed 19 February 2019.
Talusan, Ernest. 2014. *True Weight: Custom Guns & Ammo*. Vimeo. 15 November.
TASS. 2018. ‘Philippines Eyeing Russian Helicopters and Small Arms.’ 21 August.
UK DIT (United Kingdom Department for International Trade). n.d. ‘Reports and Statistics Home.’ Website. Accessed December 2018.
UN Comtrade (United Nations Commodity Trade Statistics Database). n.d. UN Comtrade Database. Accessed 19 February 2019.
UN DPKO (United Nations Department of Peacekeeping Operations). 2015. *UN Mission’s Summary Detailed by Country*. Report. New York: UN DPKO. 31 December.
—. 2016. *UN Mission’s Summary Detailed by Country*. Report. New York: UN DPKO. 31 December.
—. 2017. *Monthly Summary of Military and Police Contribution to United Nations Operations*. New York: UN DPKO. 31 December.
UNGA (United Nations General Assembly). 2017. *United Nations Register of Conventional Arms: Report of the Secretary-General*. A/72/331 of 14 August.
UNROCA (United Nations Register of Conventional Arms). n.d. Website. Accessed 19 February 2019.
UNSD (United Nations Statistics Division). n.d. UNSD Statistical Databases. Accessed 19 February 2019.
US CB (United States Census Bureau). n.d. ‘(UTO) USA Trade Online.’ Accessed 19 February 2019.
Vinning, Miles. 2019. *State SALW Production and Transfers in Myanmar*. Unpublished background paper. Geneva: Small Arms Survey. March.

Wilk, Remigiusz. 2010. 'Infantry Weapons: The Future Beckons for Asia.' *Asian Military Review*. March.
Woncha-um, Panu. 2017. 'Thailand Plans Joint Arms Factory with China.' Reuters. 16 November.
Wong, Kelvin. 2017. 'Singapore Army Reveals Rafael Spike SR Anti-armour Missile System.' *Jane's 360*. 30 May.
Zheng, Sarah. 2017. 'China Arms Philippine Police for Counterterrorism Mission.' *South China Morning Post* (Hong Kong, China). 5 October.

Small Arms Survey
Maison de la Paix
Chemin Eugène-Rigot 2E
1202 Geneva
Switzerland

t +41 22 908 5777

f +41 22 732 2738

e info@smallarmssurvey.org

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Australian Government
Department of Foreign Affairs and Trade

A publication of the Small Arms Survey, with support from
the Department of Foreign Affairs and Trade of Australia