I. Developments among the suppliers of major arms, 2015–19

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SIPRI has identified 68 states as exporters of major arms in the five-year period 2015–19.[1] The five largest suppliers of arms during that period—the United States, Russia, France, Germany and China—accounted for 76 per cent of all arms exports (see table 9.1). The top five in 2015–19 were the same as in 2010–14 but the combined total of their exports of major arms was 9.5 per cent higher. The exports of four of these five increased—those of France at the greatest rate (72 per cent)—while Russia's arms exports fell.

The top 25 arms exporters accounted for 99 per cent of the world's major arms exports in 2015–19. Of these 25 states, 16 are in North America and Europe, 4 are in Asia and Oceania, 3 are in the Middle East, 1 is in Africa and 1 is in South America (see table 9.2). States in North America and Europe (including Russia) accounted for 87 per cent of all arms exports. This concentration of suppliers in the Euro-Atlantic region has been a feature of the entire period covered by the SIPRI Arms Transfers Database (1950–2019). Many of the states listed in the top 25 for 2015–19 have also appeared in this list in previous periods. However, for the first time in two decades a state that has never previously appeared in the top 10 entered this group in 2015–19: the Republic of Korea (South Korea) was the 10th-largest supplier over the period.

This section reviews the arms exports and arms export policies of the world's main arms suppliers in 2015–19. It starts with the two largest suppliers, the USA and Russia, which together have long dominated the international supply of arms. It then looks at the arms supplies of members of the European Union (EU), in particular France, Germany and the United Kingdom. It ends by looking at the three largest suppliers outside Europe and North America: China, which is by far the largest, Israel and South Korea.

The United States

The USA was the largest exporter of major arms in the five-year period 2015–19, a position that it has occupied since the end of the cold war. The volume of US arms exports grew by 23 per cent between 2010–14 and 2015–19

[1] Except where indicated, the information on the arms deliveries and orders referred to in this section is taken from the SIPRI Arms Transfers Database. For a definition of 'major arms' and a description of how the volume of transfers is measured see box 9.1 in this section. The sources and methods used to produce the data discussed here are also presented on the SIPRI website. The figures here may differ from those in previous editions of the SIPRI Yearbook because the Arms Transfers Database is updated annually.

Box 9.1. Definitions and methodology for SIPRI data on international arms transfers

The SIPRI Arms Transfers Database contains information on deliveries of major arms to states, international organizations and non-state armed (i.e. rebel) groups from 1950 to 2019. A new set of data is published annually, replacing the data in earlier editions of the SIPRI Yearbook or other SIPRI publications.

Definitions

SIPRI's definition of 'transfer' includes sales, manufacturing licences, aid, gifts, and most loans or leases. The item must have a military purpose: the recipient must be the armed forces or paramilitary forces or intelligence agency of another country, a non-state armed group, or an international organization.

The SIPRI Arms Transfers Database only includes 'major arms', which are defined as (*a*) most aircraft, including unmanned aerial vehicles; (*b*) air defence missile systems and larger air defence guns; (*c*) air refuelling systems; (*d*) most armoured vehicles; (*e*) artillery over 100 millimetres in calibre; (*f*) engines for combat-capable aircraft and other larger aircraft, for combat ships and larger support ships, and for armoured vehicles; (*g*) guided missiles, torpedoes, bombs and shells; (*h*) sensors (radars, sonars and many passive electronic sensors); (*i*) most ships; (*j*) ship-borne weapons (naval guns, missile launch systems and anti-submarine weapons); (*k*) reconnaissance satellites; and (*l*) most gun or missile-armed turrets for armoured vehicles.

In cases where an air refuelling system, engine, sensor, naval gun or other ship-borne system, or turret (items c, f, h, j and l) is fitted on a platform (vehicle, aircraft or ship), the transfer only appears as a separate entry in the database if the item comes from a different supplier from that of the platform.

The SIPRI trend-indicator value

SIPRI has developed a unique system for measuring the volume of transfers of major arms using a common unit, the trend-indicator value (TIV). The TIV is intended to represent the transfer of military resources. Each weapon has its own specific TIV. Second-hand and second-hand but significantly modernized arms are given a reduced TIV. SIPRI calculates the volume of transfers by multiplying the weapon-specific TIV with the number of arms delivered in a given year. SIPRI TIV figures do not represent the financial values of arms transfers.

and the USA's share of total global arms exports rose from 31 per cent to 36 per cent (see table 9.1). The gap between the total arms exports of the USA and those of Russia—the second-largest exporter—has grown rapidly: in 2010–14, US exports of major arms were 17 per cent higher than those of Russia, whereas in 2015–19 they were 76 per cent higher. In 2015–19 the USA delivered major arms to at least 96 states, a far higher number of destinations for arms exports than any other supplier. The USA also delivered a few armoured vehicles and anti-tank missiles to rebel groups in Syria.

States in the Middle East received 51 per cent of total US arms exports in 2015–19 (see table 9.3). The volume of US arms exports to the region increased by 79 per cent between 2010–14 and 2015–19, partly to meet demand arising from the conflict in Yemen (see below).

Arms exports to states in Asia and Oceania accounted for 30 per cent of total US arms exports in 2015–19. US arms exports to this region were 20 per cent lower than in 2010–14 as a result of decreases in arms exports to India (–51 per cent), Pakistan (–92 per cent), Singapore (–60 per cent), South Korea (–34 per cent) and Taiwan (–38 per cent). These decreases were partly offset by increases in US arms exports to Australia, which rose by 41 per cent (making Australia the second-largest importer of US arms in 2015–19), and to Japan, which rose by 85 per cent.

Arms exports to states in Europe accounted for 13 per cent of US arms exports in 2015–19, an increase of 45 per cent on 2010–14. US arms exports to Africa increased by 10 per cent between 2010–14 and 2015–19, while those to the Americas decreased by 20 per cent.

US arms exports to Saudi Arabia and the conflict in Yemen

By far the largest recipient of US arms in 2015–19 was Saudi Arabia. It received 25 per cent of US arms exports (see table 9.2), up from 7.4 per cent in 2010–14.

In recent years, there have been discussions in the US Congress and elsewhere about halting or restricting US deliveries of major arms to the Middle East. These discussions intensified after 2015 when a coalition of Middle Eastern states, led by Saudi Arabia, started a military intervention in the armed conflict in Yemen.[2] Although the discussions in the Congress at that time did not result in an outright block on arms exports, in 2016 the US administration placed restrictions on arms transfers to Saudi Arabia, including on large transfers of guided bombs.[3] In 2018–19 the US Congress discussed the possibility of placing further restrictions on arms exports to Saudi Arabia and considered restrictions on arms exports to the United Arab Emirates (UAE) based on concerns not only about alleged violations of international humanitarian law by Saudi Arabian and Emirati forces in Yemen, but also about the human rights situation in Saudi Arabia itself.[4]

However, the US administration resisted calls to impose additional restrictions, and arms exports to Saudi Arabia continued in 2019. For example, the USA delivered 30 of the 154 F-15SA combat aircraft ordered by Saudi Arabia in 2011. The US administration also controversially authorized the sale to Saudi Arabia of an estimated 59 000 guided bombs and other ammunition and military equipment.[5] To complete the deal, the administration broke

[2] On the conflict in Yemen see chapter 6, section V, in this volume.

[3] Blanchard, C. M., *Saudi Arabia: Background and US Relations*, Congressional Research Service (CRS) Report for Congress RL33533 (US Congress, CRS: Washington, DC, 18 Feb. 2020), p. 25.

[4] Blanchard (note 3), pp. 2–26; Kerr, P. K., *Arms Sales: Congressional Review Process*, Congressional Research Service (CRS) Report for Congress RL31675 (US Congress, CRS: Washington, DC, 3 Mar. 2020), pp. 6–7; and Abramson, J., 'Senate bucks Trump's Saudi approach', *Arms Control Today*, vol. 49, no. 1 (Jan./Feb. 2019).

[5] Blanchard (note 3), p. 53; and Mehta, A., 'Revealed: Trump's $110 billion weapons list for the Saudis', *Defense News*, 8 June 2017.

Table 9.1. The 50 largest suppliers of major arms, 2015–19

The table lists states, international organizations and non-state actors that exported major arms in the 5-year period 2015–19. Figures for volume of exports are SIPRI trend-indicator values (TIV).

Rank			Volume of exports (TIV, millions)			Change in volume (%),
2015–19	2010–14[a]	Supplier	2019	2015–19	Share (%), 2015–19	compared with 2010–14
1	1	United States	10 752	53 034	*36*	*23*
2	2	Russia	4 718	30 069	*21*	*–18*
3	5	France	3 368	11 544	*7.9*	*72*
4	4	Germany	1 185	8 518	*5.8*	*17*
5	3	China	1 423	8 080	*5.5*	*6.3*
6	6	United Kingdom	972	5 451	*3.7*	*–15*
7	7	Spain	1 061	4 539	*3.1*	*13*
8	12	Israel	369	4 331	*3.0*	*77*
9	9	Italy	491	3 134	*2.1*	*–17*
10	14	South Korea	688	3 085	*2.1*	*143*
11	10	Netherlands	285	2 703	*1.9*	*–2.8*
12	8	Ukraine	91	1 422	*1.0*	*–63*
13	13	Switzerland	254	1 346	*0.9*	*2.6*
14	19	Turkey	245	1 160	*0.8*	*86*
15	11	Sweden	206	883	*0.6*	*–65*
16	15	Canada	188	837	*0.6*	*–33*
17	16	Norway	32	575	*0.4*	*–30*
18	23	UAE	104	537	*0.4*	*86*
19	20	Australia	148	505	*0.3*	*11*
20	18	Belarus	115	504	*0.3*	*–23*
21	34	Czechia	13	487	*0.3*	*453*
22	17	South Africa	145	419	*0.3*	*–36*
23	39	India	115	300	*0.2*	*426*
24	24	Brazil	10	299	*0.2*	*6.8*
25	46	Portugal	3	241	*0.2*	*1 239*
26	52	Indonesia	8	204	*0.1*	*2 450*
27	25	Jordan	86	200	*0.1*	*–28*
28	39	Bulgaria	–	175	*0.1*	*230*
29	22	Finland	24	153	*0.1*	*–59*
30	32	Denmark	4	103	*0.1*	*6.2*
31	21	Uzbekistan	–	102	*0.1*	*–76*
32	31	Singapore	–	95	*0.1*	*–19*
33	28	Belgium	42	89	*0.1*	*–58*
34	36	Serbia	–	88	*0.1*	*33*
35	. .	Lithuania	–	60	*<0.05*	. .
36	30	Austria	3	56	*<0.05*	*–67*
37	49	Slovakia	–	55	*<0.05*	*323*
38	26	Poland	–	44	*<0.05*	*–81*
39	29	Iran	–	40	*<0.05*	*–81*
40	. .	Greece	–	30	*<0.05*	. .
41	53	Egypt	2	24	*<0.05*	*243*

Rank			Volume of exports (TIV, millions)			Change in volume (%), compared
2015–19	2010–14[a]	Supplier	2019	2015–19	Share (%), 2015–19	with 2010–14
42	60	Colombia	10	20	*<0.05*	..
43	35	New Zealand	–	17	*<0.05*	*–77*
44	..	Kyrgyzstan	–	14	*<0.05*	..
45	59	Qatar	11	14	*<0.05*	..
46	..	Georgia	–	13	*<0.05*	..
47	43	Brunei Darussalam	–	12	*<0.05*	*–50*
48	56	Taiwan	2	8	*<0.05*	*300*
49	..	Oman	–	7	*<0.05*	..
50	..	Pakistan	1	7	*<0.05*	..
..	..	19 others	2	35	*<0.05*	..
..	..	Unknown supplier(s)	22	106	*0.1*	*29*
		Total	**27 194**	**145 776**	**..**	***5.5***

.. = not available or not applicable; – = no deliveries, <0.05 = between 0 and 0.05; UAE = United Arab Emirates.

Note: The SIPRI TIV is an indicator of the volume of arms transfers and not their financial value. The method for calculating the TIV is described in box 9.1.

[a] The rank order for suppliers in 2010–14 differs from that published in *SIPRI Yearbook 2015* because of subsequent revision of figures for these years.

Source: SIPRI Arms Transfers Database, Mar. 2020.

from the normal practice of seeking approval from the Congress by invoking an emergency authority under the 1976 Arms Export Control Act to authorize the sale.[6] The authorization was granted despite protests by a majority in both houses of the Congress that this procedure undermined its role in arms export decision making.[7] The administration argued that it needed to use the emergency authority because 'regional volatility' in the Middle East had increased and the arms sales would support US allies to deter and defend themselves against Iran.[8]

US arms exports policy as a tool to counter Russia

The USA has attempted to use its position as the world's largest arms exporter—in terms of both total sales and the number of states that acquire US military technology—as a tool in its efforts to limit Russia's global influence and as part of its sanctions regime against Russia. For this purpose,

[6] Arms Export Control Act of 1976, US Public Law 90–629, as amended up to US Public Law 115–232, Enacted 13 Aug. 2018.

[7] Blanchard, C. M., Sharp, J. M. and Thomas, C., 'Emergency arms sales to the Middle East: Context and legislative history', Memorandum, US Congress, Congressional Research Service, 7 June 2019; Blanchard (note 3), pp. 22, 26; Kerr (note 4), pp. 5–6; and Abramson (note 4).

[8] Pompeo, M. R., US Secretary of State, 'Emergency notification of arms sales to Jordan, the United Arab Emirates, and Saudi Arabia', Press statement, 24 May 2019. On Iranian–US relations in 2019 see chapter 6, section I, in this volume.

Table 9.2. The 25 largest suppliers of major arms and their three main recipients, 2015–19

Rank		Main recipients (share of supplier's total exports, %), 2015–19		
2015–19	Supplier	1st	2nd	3rd
1	United States	Saudi Arabia (25)	Australia (9.1)	UAE (6.4)
2	Russia	India (25)	China (16)	Algeria (14)
3	France	Egypt (26)	Qatar (14)	India (14)
4	Germany	South Korea (18)	Greece (10)	Algeria (8.1)
5	China	Pakistan (35)	Bangladesh (20)	Algeria (9.9)
6	United Kingdom	Saudi Arabia (41)	Oman (14)	USA (9.1)
7	Spain	Australia (33)	Singapore (13)	Turkey (11)
8	Israel	India (45)	Azerbaijan (17)	Viet Nam (8.5)
9	Italy	Turkey (20)	Pakistan (7.5)	Saudi Arabia (7.2)
10	South Korea	UK (17)	Iraq (14)	Indonesia (13)
11	Netherlands	Indonesia (17)	USA (14)	Jordan (13)
12	Ukraine	China (31)	Russia (20)	Thailand (17)
13	Switzerland	Australia (18)	China (14)	Saudi Arabia (14)
14	Turkey	Turkmenistan (25)	Oman (12)	Pakistan (12)
15	Sweden	USA (22)	Algeria (12)	UAE (9.9)
16	Canada	Saudi Arabia (34)	India (11)	UAE (10)
17	Norway	Oman (35)	USA (20)	Finland (14)
18	UAE	Egypt (41)	Algeria (13)	Unknown recipient (12)
19	Australia	USA (42)	Indonesia (18)	Canada (18)
20	Belarus	Viet Nam (31)	Sudan (16)	Serbia (15)
21	Czechia	Iraq (39)	USA (17)	Ukraine (9.0)
22	South Africa	USA (23)	UAE (20)	Malaysia (11)
23	India	Myanmar (46)	Sri Lanka (25)	Mauritius (14)
24	Brazil	Afghanistan (38)	Indonesia (17)	Lebanon (11)
25	Portugal	Romania (95)	Uruguay (2.9)	Cabo Verde (1.2)

UAE = United Arab Emirates.

Source: SIPRI Arms Transfers Database, Mar. 2020.

in 2017 the US Congress passed the Countering America's Adversaries Through Sanctions Act (CAATSA).[9] Among other things, the act gives the US Government the authority to deny US arms exports to states that buy arms from Russia and to impose other sanctions on states, companies or persons. In several cases, CAATSA has been used to put pressure on states that are seen as strategic partners by the USA but that have acquired or planned to acquire arms from Russia. For example, the USA has invoked procedures

[9] Countering America's Adversaries Through Sanctions Act, US Public Law 115–44, signed into law 2 Aug. 2017. See also US Department of the Treasury, 'Resource center: Countering America's Adversaries Through Sanctions Act', updated 21 May 2019; US Department of State, Bureau of International Security and Nonproliferation, 'Section 231 of the Countering America's Adversaries Through Sanctions Act of 2017', [n.d.]; and Wezeman, S. T. et al., 'Supplier developments, 2018', *SIPRI Yearbook 2019*, pp. 235–39.

under CAATSA against Egypt, India and Turkey. (On the case of India see section II.)

The most important development in this area in 2019 involved Turkey—a long-term ally of the USA and a member of the North Atlantic Treaty Organization (NATO). In late 2017 Turkey ordered S-400 surface-to-air missile (SAM) systems from Russia, having rejected offers from the USA and China and a combined offer from France and Italy. In response to the order, the USA completely removed Turkey from the F-35 programme in mid-2019 after the first S-400 systems were delivered.[10] Turkey had by that time ordered 30 F-35s and planned to acquire up to 70 more. The USA's decision was not based on CAATSA; instead, it was based on US concerns that Russia's access to the Turkish S-400 systems could possibly have allowed it to gather intelligence on the capabilities of the F-35 aircraft supplied to Turkey.[11] Later in 2019 the US Congress invoked CAATSA to apply pressure on the US administration to take further steps and implement sanctions against Turkey for not yielding to US demands to remove the S-400 systems from its arsenal.[12]

The USA has supplied Egypt with large volumes of major arms since 1978 as aid, making the USA one of the top arms suppliers to Egypt. However, from around 2015 Egypt started to turn to Russia to fulfil several major arms procurement programmes, including deals for combat aircraft and combat helicopters (see section II). Egypt placed these orders before CAATSA was introduced. However, in 2019 Egypt reportedly signed a deal for 20 Su-35 combat aircraft from Russia. In response, the US Government signalled that the deal would 'complicate' US military aid to Egypt and would put Egypt at risk of sanctions under CAATSA.[13] By the end of 2019 it remained unclear whether the pressure applied by the USA had had an impact on the deal.

Russia

Russian arms exports accounted for 21 per cent of total world arms exports in 2015–19. However, the volume of Russia's exports was 18 per cent lower than in 2010–14 (see table 9.1). In 2015–19 Russia delivered major arms to 47 states, with 55 per cent of its arms exports going to its three main recipients: India, China and Algeria (see table 9.2). Although India remained the main recipient of Russian arms in 2015–19, accounting for 25 per cent of the total, the

[10] White House, 'Statement by the Press Secretary', 17 July 2019.

[11] Mehta, A., 'Turkey officially kicked out of F-35 program, costing US half a billion dollars', *Defense News*, 17 July 2019; and Roque, A. and Herschelman, K., 'Washington to cut ties with Turkey on F-35 programme and shift supply chain to US', *Jane's Defence Weekly*, 24 July 2019, p. 5.

[12] Seligman, L., 'US lawmakers move to punish Turkey for buying Russian missile system', *Foreign Policy*, 10 Dec. 2019.

[13] Sharp, J. M., *Egypt: Background and US Relations*, Congressional Research Service (CRS) Report for Congress RL33003 (US Congress, CRS: Washington, DC, 21 Nov. 2019), pp. 21–23.

Table 9.3. The 10 largest suppliers of major arms and their destinations, by region and subregion, 2015–19

Figures are the percentage shares of the supplier’s total volume of exports delivered to each recipient region or subregion in the 5-year period 2015–19.

	Supplier									
Recipient region	USA	Russia	France	Germany	China	UK	Spain	Israel	Italy	South Korea
Africa	2.7	17	3.5	8.3	16	1.5	0.9	1.0	7.4	–
North Africa	2.4	14	1.7	8.2	9.9	1.4	–	–	3.7	–
Sub-Saharan Africa	0.3	3.3	1.8	0.1	6.4	0.2	0.9	1.0	3.7	–
Americas	3.5	0.8	7.5	11	2.6	12	6.2	11	8.2	9.5
Central America and the Caribbean	1.1	0.4	0.6	0.1	0.2	–	2.5	1.2	0.4	–
North America	1.4	–	3.1	8.3	–	9.1	1.9	6.4	0.2	–
South America	1.0	0.4	3.8	2.5	2.4	3.1	1.7	3.0	7.6	9.5
Asia and Oceania	30	57	30	30	74	23	66	61	23	50
Central Asia	0.1	5.2	0.9	0.6	4.7	–	2.1	0.1	1.1	–
East Asia	12	16	5.3	18	–	8.1	8.6	2.3	–	–
Oceania	9.3	–	2.3	1.2	–	0.4	33	–	5.1	–
South Asia	4.9	27	14	3.0	56	8.1	0.3	45	9.3	7.0
South East Asia	3.5	8.8	7.3	6.8	13	6.3	22	14	7.2	43
Europe	13	5.7	6.6	26	0.2	7.6	0.8	25	15	24
Central Europe	0.9	0.5	0.5	3.5	0.2	1.3	–	1.6	5.0	1.9
Eastern Europe	0.1	5.2	0.4	–	<0.05	0.1	0.3	17	–	–
Western Europe	12	–	5.6	23	. .	6.1	0.5	6.4	9.8	22
European Union	10	–	5.9	26	0.2	7.4	0.5	8.0	11	20
Middle East	51	19	52	24	6.7	56	26	1.5	47	17
Other	<0.05	–	–	–	–	–	0.6	0.2	<0.05	–

. . = not available or not applicable; – = nil; <0.05 = between 0 and 0.05.

Note: ‘Other’ refers to international organizations (or some non-state actors) that are not based in a single region, as well as unidentified recipients that cannot be linked to a specific region.

Source: SIPRI Arms Transfers Database, Mar. 2020.

volume of Russian arms exports to India fell by 47 per cent between 2010–14 and 2015–19.

At the regional level, the largest share of Russia's arms exports (57 per cent) went to states in Asia and Oceania (see table 9.3), but China and India alone accounted for nearly three-quarters of this (41 per cent of the total). Similarly, Algeria's large share of Russian exports (14 per cent) meant that the third-largest share of Russian exports (17 per cent) went to states in Africa.

The second-largest share of Russian exports of major arms went to states in the Middle East (19 per cent). The volume of Russia's exports to this region increased by 30 per cent between 2010–14 and 2015–19. Egypt and Iraq were the main recipients of Russian arms exports to the Middle East in 2015–19. Deliveries to Egypt rose by 191 per cent between 2010–14 and 2015–19 to account for 49 per cent of Russian deliveries to the region. Similarly, exports to Iraq rose by 212 per cent to account for 29 per cent of Russian deliveries to the Middle East. Although Russian forces have been operating in Syria since 2015 in support of the Syrian Government, the volume of Russian arms deliveries to Syria (including as aid) fell by 87 per cent between 2010–14 and 2015–19.[14] They accounted for only 3.9 per cent of Russian arms exports to the Middle East and 0.7 per cent of total Russian arms exports in 2015–19.

In 2015–19 Russia continued to be the main arms supplier to many states of the former Soviet Union. The exports are an important part of the military cooperation between Russia and the recipient states, and they are often provided as aid or on preferential terms.[15] The volume of Russian arms exports to several of these states increased significantly between 2010–14 and 2015–19. Kazakhstan became the largest recipient of Russian arms among the former Soviet states, accounting for 5.0 per cent of all Russian arms exports in 2015–19, after a fivefold increase. Deliveries included 16 Su-30 combat aircraft and 5 S-300 SAM systems. In 2015–19 the volume of Russian arms exports to Belarus was three times higher than in 2010–14. Exports included S-300 SAM systems and Yak-130 trainer/combat aircraft. Russia was also the main supplier of major arms to Armenia and the second-largest supplier to Azerbaijan, as the armed conflict between the two countries continued (see section II).

Arms suppliers in the European Union

The top 25 arms exporters in 2015–19 included 9 members of the European Union (see table 9.2).[16] The five largest of these exporters—France, Germany,

[14] On Russia's role in the conflict in Syria see chapter 6, section II, in this volume.

[15] E.g. Russian Embassy in Belarus, [Military and military-technical cooperation], [n.d.] (in Russian); and Putz, C., 'Kazakhstan takes delivery of (free) Russian S-300 defense systems', The Diplomat, 9 June 2016.

[16] The UK was a member of the EU until Jan. 2020 and is included as such here.

the UK, Spain and Italy—together accounted for 23 per cent of global arms exports in 2015–19, compared with 20 per cent in 2010–14. The volume of French, German and Spanish arms exports increased between the two periods, while British and Italian arms exports decreased.

The combined arms exports by all 28 EU member states were 9.0 per cent higher than in 2010–14 and they accounted for 26 per cent of the global total in 2015–19. Intra-EU transfers of arms remained at a relatively low level: only 12 per cent of the exports by EU member states in 2015–19 were to other EU member states. Among the five largest EU exporters, only two delivered more than 10 per cent of their total arms exports to other EU states: Germany (26 per cent) and Italy (11 per cent). However, because the volume of arms imported by EU member states is relatively low (only 7.8 per cent of the global total), deliveries from other EU member states accounted for 41 per cent of all arms imports by EU member states.

France

France was the third-largest supplier of major arms in 2015–19, accounting for 7.9 per cent of the global total (see table 9.1). In 2015–19 French arms exports reached their highest level for any five-year period since 1990. After a fall of 31 per cent between 2005–2009 and 2010–14, French arms exports rose by 72 per cent between 2010–14 and 2015–19. The volume of French arms exports to states in the Middle East was 363 per cent higher than in 2010–14. The region accounted for the largest share—52 per cent—of French arms exports in 2015–19, followed by Asia and Oceania with 30 per cent (see table 9.3).

Although France delivered major arms to 75 states in 2015–19, a large proportion of its arms exports tends to be concentrated among a small number of recipients. In 2010–14 France's three main recipients—Morocco, China and the UAE—together received 39 per cent of French arms exports, while its three main recipients in 2015–19—Egypt, Qatar and India—together received 54 per cent (see table 9.2). The five-year period 2015–19 was the first in which Egypt, Qatar and India had been among the main recipients of French arms since the 1980s. Deliveries of a total of 49 Rafale combat aircraft to these three countries accounted for nearly a quarter of French arms exports in 2015–19.

At the end of 2019 there were outstanding orders for a wide range of French major arms, including orders for 43 Rafales (from India and Qatar), 8 submarines (from Brazil and India) and 15 frigates (from Egypt, Malaysia, Romania and the UAE). Most of these are planned to be delivered in the next five years, indicating that France's arms exports will remain at a relatively high level.

France officially claims that its arms industry is a necessary foundation of its strategic autonomy and independent foreign policy.[17] However, while France procures significant numbers of major arms for its armed forces in all categories from its own arms industry, the French Government assesses that domestic demand is insufficient to sustain many of its key arms development and production programmes.[18] In order to maintain a viable arms industry, the French Government has taken an assertive approach to arms exports in recent years. For example, it has frequently offered advantageous credit facilities and technology transfers to prospective clients. It has even been willing to fast-track deliveries by exporting major arms that were originally ordered and put into production for the French armed forces.[19]

This assertive approach continued in 2015–19. The French Government pressed ahead with exports of major arms to certain countries, including Egypt and states involved in the Saudi Arabia-led military intervention in Yemen. This was despite allegations that these countries had used French arms in human rights violations or infringements of international humanitarian law.[20] In particular, according to official French documents leaked in 2019, French major arms supplied to Saudi Arabia and the UAE have been used against civilian targets in Yemen.[21] While some of these arms (e.g. Mirage 2000-9 combat aircraft) were delivered over a decade ago, some (e.g. Aravis armoured vehicles and targeting pods for combat aircraft) were delivered after the intervention in Yemen started in 2015.[22] Despite criticism from some non-governmental organizations (NGOs) and opposition parliamentarians, France's policy on exports of arms to countries involved in the conflict in Yemen remained unchanged.

Germany

Germany was the world's fourth-largest supplier of major arms in 2015–19, with 5.8 per cent of the global total. The volume of its exports was 17 per cent higher than in 2010–14 (see table 9.1). The largest share of its exports

[17] French National Assembly, Commission for National Defence and the Armed Forces, 'Audition de Mme Florence Parly, ministre des Armées, sur les opérations en cours et les exportations d'armement' [Hearing of Florence Parly, Minister for the Armed Forces, on current operations and arms exports], 7 May 2019. On the largest French arms-producing companies see section V in this chapter.

[18] French Ministry of the Armed Forces (MAF), *Rapport au Parlement sur les exportations d'armements de la France 2019* [Report to Parliament on French arms exports 2019] (MAF: Paris, June 2019), p. 18.

[19] Béraud-Sudreau, L., *La politique française de soutien à l'export de defense: Raison et limites d'un succès* [French defence export support policy: The reasons for and limits to success], Focus stratégique no 73 (Institut français des relations internationales: Paris, June 2017).

[20] Houry, N. and Jeannerod, B., '« Les armes françaises favorisent les abus en Egypte »' ['French weapons facilitate abuses in Egypt'], *Le Monde*, 28 Jan. 2019; and Human Rights Watch (HRW), *World Report 2020* (HRW: New York, 2019), pp. 487–94.

[21] Dodman, B., 'France under pressure to come clean over arms exports in Yemen war', France 24, 20 Apr. 2019.

[22] Human Rights Watch (note 20); and Disclose, 'Made in France: The Yemen papers', 15 Apr. 2019.

Table 9.4. Deliveries by arms category by the 10 largest suppliers of major arms, 2015–19

Figures are the percentage share of each category of major arms in the exports of the 10 largest suppliers in 2015–19.

	Aircraft	Air defence systems	Armoured vehicles	Artillery	Engines	Missiles	Sensors	Ships	Other
USA	56	6.1	12	0.3	3.2	17	2.5	1.6	0.3
Russia	51	7.6	9.9	0.2	9.2	13	1.8	6.5	1.5
France	42	2.1	3.6	0.9	4.1	13	9.9	22	1.9
Germany	12	0.9	13	2.1	9.4	7.9	4.5	49	–
China	27	9.0	15	2.0	<0.05	17	2.5	27	0.3
UK	60	0.9	0.4	1.7	11	9.5	2.0	6.9	7.7
Spain	62	–	0.9	0.7	–	–	4.2	33	–
Israel	4.7	25	1.3	0.9		33	21	11	3.3
Italy	58	–	6.9	2.1	<0.05	3.9	14	8.5	6.3
South Korea	26	–	1.2	9.7	–	0.9	–	62	–
World	**45**	**5.9**	**10**	**1.1**	**5.0**	**13**	**4.6**	**13**	**1.3**

– = no deliveries; <0.05 = between 0 and 0.05.

Notes: 'Other' includes naval weapons, satellites, gun turrets for armoured vehicles, and air refuelling systems. On SIPRI's categories of major arms see box 9.1.

Source: SIPRI Arms Transfers Database, Mar. 2020.

(30 per cent) went to states in Asia and Oceania (see table 9.3), but it also exported large shares to other states in Europe (26 per cent) and to states in the Middle East (24 per cent).

Germany delivered major arms to 55 countries in 2015–19. South Korea was by far the largest recipient, accounting for 18 per cent of German arms exports. Ships made up almost half of the volume of major arms exported by Germany (see table 9.4). Most of these were submarines (39 per cent of the total): Germany delivered four to South Korea, three each to Egypt and Greece, two each to Colombia and Italy, and one to Israel. Among the new large export deals that Germany agreed in 2019 were deals for 4 frigates each for Brazil and Egypt and for 508 armoured vehicles for the UK.

In 2018–19 the German Government suspended some arms exports to Saudi Arabia and Turkey, both of which were among the largest arms importers in 2015–19. The suspension of some arms exports to Saudi Arabia in 2018 was in response to its military operations in Yemen and its involvement in the murder of the journalist Jamal Khashoggi in Istanbul in October 2018.[23] The suspension was formalized in March 2019 and in September 2019 was extended to March 2020. The main direct effect of the suspension on German arms exports in 2019 was a block on the delivery of 20 patrol boats

[23] Deutsche Welle, 'German arms export freeze on Saudi Arabia extended', 18 Sep. 2019. See also chapter 14, section IV, in this volume.

from an order for 35 made by Saudi Arabia in 2014. In 2019 Germany also announced that it would stop issuing new licences for exports of arms to Turkey that could be used in the conflict between Turkey and Kurdish rebel groups in Syria.[24] However, these restrictions did not apply to the export of naval equipment and will therefore not affect the delivery of six submarines to Turkey planned for 2022–27.[25]

The United Kingdom

The UK was the world's sixth-largest arms exporter in 2015–19, with 3.7 per cent of the total volume of arms exports. More than half (56 per cent) of British exports of major arms went to states in the Middle East (see table 9.3), mainly to Saudi Arabia (41 per cent of the total) and Oman (14 per cent).

British arms exports fell by 15 per cent between 2010–14 and 2015–19 (see table 9.1). This was primarily caused by decreases in arms exports to three of the UK's four largest recipients: India (–48 per cent), the USA (–27 per cent) and Saudi Arabia (–13 per cent). In contrast, exports to Oman rose by 77 per cent between 2010–14 and 2015–19, mainly as a result of the delivery of 12 Typhoon combat aircraft in 2017–18.

In 2015–19 the British Government came under pressure from parliamentarians, NGOs and the general public to place restrictions on arms exports to the Middle East, in particular to Saudi Arabia. The pressure increased in the light of allegations that arms supplied by the UK had been used in breaches of international humanitarian law by the Saudi Arabia-led coalition in its military intervention in Yemen.[26] In a court action against the British Government, a group of NGOs argued that the government had failed to properly assess Saudi Arabia's application of international humanitarian law, as it was obliged to do under British arms export licensing law. In June 2019 the Court of Appeal in London ordered the British Government to make the required assessments for both past and future export licences.[27] As a result, the government suspended the issuance of new licences for export

[24] Deutsche Presse-Agentur, 'Kein kompletter Stopp deutscher Rüstungsexporte für die Türkei' [No complete stop of German arms exports to Turkey], *Süddeutsche Zeitung*, 19 Oct. 2019; and Nußbaum, U., 'Schriftliche Frage an die Bundesregeirung im Monat Oktober 2019, Fragen Nt. 109' [Written question to the Federal Government in October 2019, Question no. 109], German Ministry for Economic Affairs and Energy, 18 Oct. 2019.

[25] Muller, N., 'German arms exports to Turkey at highest level since 2005', Deutsche Welle, 17 Oct. 2019.

[26] Maletta, G., 'Legal challenges to EU member states' arms exports to Saudi Arabia: Current status and potential implications', SIPRI Commentary, 28 June 2019.

[27] Court of Appeal of England and Wales, The Queen (on the application of Campaign Against Arms Trade) v. Secretary of State for International Trade and others, Case no. T3/2017/2079, Judgement, 20 June 2019; Cable, V., British Secretary of State for Business, Innovation and Skills, 'Consolidated EU and national arms export licensing criteria', Written statement, British House of Commons, *Hansard*, 25 Mar. 2014, column 9WS; and Isbister, R., 'The UK's arms-to-Saudi quagmire: From tragedy to farce', Saferworld, 20 Sep. 2019.

to Saudi Arabia and its coalition partners of arms that might be used in the conflict in Yemen.[28]

Arms suppliers outside Europe and North America

Countries outside Europe and North America play a relatively small role in exports of major arms: they accounted for just 13 per cent of total exports in 2015–19 and 11 per cent in 2010–14. Only nine of the top 25 arms-exporting countries in 2015–19 were outside Europe or North America: China, Israel, South Korea, Turkey, the UAE, Australia, South Africa, India and Brazil (see table 9.2). Of these countries, only China, Israel and South Korea were among the top 10 exporters of major arms.

China

China was the world's fifth-largest arms exporter in 2015–19, with a 5.5 per cent share of the total volume of arms exports (see table 9.1). After an increase of 133 per cent between 2005–2009 and 2010–14, Chinese arms exports grew by only 6.3 per cent between 2010–14 and 2015–19.

The number of countries to which China delivers arms has grown significantly: from 40 in 2010–14 to 53 in 2015–19. Nearly all of China's arms exports in 2015–19 were to developing states, and it has now clearly emerged as a competitor to Russia and Western arms exporters in selling arms to such states.[29]

Pakistan was the main recipient of Chinese arms exports in 2015–19 (receiving 35 per cent of the total), as it has been for all five-year periods since 1991. Overall, nearly three-quarters (74 per cent) of China's exports in 2015–19 went to a total of 16 other states in Asia and Oceania (see table 9.3).

In 2015–19, 16 per cent of China's exports of major arms went to states in Africa. China exported to 22 states in Africa—more than any other arms exporter. China also exported to eight states in the Middle East (accounting for 6.7 per cent of its exports) and to five states in the Americas (2.6 per cent).

Some of the world's largest arms importers in 2015–19—including Australia, India, Japan, South Korea, the USA and almost all European states—have not bought arms from China and are unlikely to do so in the near future. Unless there is a major political shift, it appears that China's arms exports are close to reaching a ceiling.

[28] Brooke-Holland, L., *UK Arms Exports to Saudi Arabia: Q&A*, Briefing Paper no. 08425 (House of Commons Library: London, 11 July 2019). See also chapter 14, section IV, in this volume.

[29] Raska, M. and Bitzinger, R. A., 'Strategic contours of China's arms transfers', *Strategic Studies Quarterly*, vol. 14, no. 1 (spring 2020), pp. 91–116.

Israel

Israel was the eighth-largest arms supplier in 2015–19. Its arms exports accounted for 3.0 per cent of the global total and were 77 per cent higher than in 2010–14 (see table 9.1). Although Israel has ranked higher than eighth in some earlier five-year periods, the volume of its arms exports in 2015–19 was at its highest level ever.

Israel exported major arms to 39 countries in 2015–19. India was the main recipient, receiving 45 per cent of Israeli arms exports (see table 9.2). Exports of air defence systems, missiles and sensors accounted for 79 per cent of Israeli exports of major arms in 2015–19 (see table 9.4).

South Korea

South Korea was the 10th-largest arms exporter in 2015–19, with a 2.1 per cent share of the global total. Its arms exports increased by 143 per cent between 2010–14 and 2015–19, the highest level of increase among exporters in the top 10 (see table 9.1).

The number of countries to which South Korea delivered arms rose from 7 in 2010–14 to 17 in 2015–19. Unlike in 2005–2009 and 2010–14, when well over half of South Korean arms exports went to just one state (Turkey), in 2015–19 the distribution of South Korean arms exports was far wider. Half of the volume went to other states in Asia and Oceania, 24 per cent to Europe and 17 per cent to the Middle East (see table 9.3), while the largest recipient (the UK) accounted for only 17 per cent of South Korean arms exports.

South Korea sees its arms industry as a 'growth engine' of the national economy and strongly promotes arms exports for economic reasons.[30] However, in 2015–19 its arms imports remained substantially higher than its arms exports.

[30] Grevatt, J., 'South Korea launches military export agency', *Jane's Defence Industry*, Nov. 2018. On South Korea's largest arms-producing companies see section V in this chapter.