I. Developments in arms transfers, 2016[1]

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The volume of international transfers of major arms in the five-year period 2012–16 was 8.4 per cent higher than in 2007–11 (see figure 10.1).[2] This increase marks a continuation of the steady upward trend in the volume of major arms transfers seen since 2003. The highest total volume of international major arms transfers over a five-year period was in 1980–84. After 1980–84 the volume of transfers declined almost continuously until 2000–2004 when the total volume was only 44 per cent of the 1980–84 total. The total for the latest five-year period (2012–16) was 47 per cent higher than 2000–2004 and the highest since 1989–1993 (the five-year period most directly affected by the end of the cold war). While annual fluctuations are common and experience has shown that annual totals are not reliable indicators of future developments, it is noteworthy that the total annual volumes over the past six years (2011–16) have remained relatively stable, albeit that the total for 2016 is clearly higher than the total for any of the preceding five years.

Major supplier developments

SIPRI has identified 57 countries as exporters of major weapons in 2012–16. The five largest suppliers of arms during that period were the United States, Russia, China, France and Germany (in rank order). Together, they were responsible for 74 per cent of the total volume of exports of major arms (see table 10.1); in comparison, the top five suppliers in 2007–11 accounted for 73 per cent.[3] The USA and Russia were by far the biggest exporters in 2012–16, together accounting for 56 per cent of global exports, up from 52 per cent in 2007–11. The composition and order of the five largest suppliers of arms

[1] Except where indicated, the information on arms deliveries and contracts referred to in this chapter is taken from the SIPRI Arms Transfers Database, <http://www.sipri.org/databases/armstransfers>. The database contains data on transfers of major weapons between 1950 and 2016. The data on which this chapter is based is valid as of 27 Jan. 2017. The figures in this chapter may differ from those in previous editions of the *SIPRI Yearbook* because the Arms Transfers Database is updated annually.

[2] SIPRI data on arms transfers refers to actual deliveries of major weapons, including sales, production under licence, aid, gifts and leases. SIPRI uses a trend-indicator value (TIV) to compare the data on deliveries of different weapons and identify general trends. TIVs give an indication only of the volume of arms transfers—based on an assessment of the arms' capabilities—and not of their financial values. Since year-on-year deliveries can fluctuate, a 5-year moving average is employed to provide a more stable measure for trends. For a description of the TIV and its calculation see box 10.1.

[3] The calculation is based on the top 5 exporters in 2007–11—the United States, Russia, Germany, France and the United Kingdom—compared with the top 5 in 2012–16.

Table 10.1. The 50 largest suppliers of major weapons, 2012–16

The table includes all countries and non-state actors that exported major weapons in the 5-year period 2012–16. Ranking is according to 2012–16 total exports. Figures are SIPRI trend-indicator values (TIVs). Percentages above 10 per cent have been rounded to the nearest whole number, those below 10 per cent to one decimal. Figures and percentages may not add up to displayed totals because of the conventions of rounding.

Rank			Volume of exports (TIV, millions)		Share (%)	Change (%)
2012–16	2007–11[a]	Supplier	2016	2012–16	2012–16	with 2007–11
1	1	United States	9 894	47 169	*33*	*21*
2	2	Russia	6 432	33 185	*23*	*4.7*
3	6	China	2 123	8 767	*6.2*	*74*
4	4	France	2 226	8 561	*6.0*	*–5.0*
5	3	Germany	2 813	7 914	*5.6*	*–36*
6	5	United Kingdom	1 393	6 586	*4.6*	*27*
7	7	Spain	483	3 958	*2.8*	*2.9*
8	8	Italy	802	3 824	*2.7*	*22*
9	12	Ukraine	528	3 678	*2.6*	*49*
10	10	Israel	1 260	3 234	*2.3*	*13*
11	9	Netherlands	466	2 747	*1.9*	*–11*
12	11	Sweden	249	1 651	*1.2*	*–35*
13	15	South Korea	534	1 427	*1.0*	*25*
14	13	Switzerland	186	1 380	*1.0*	*–10*
15	14	Canada	127	1 332	*0.9*	*0.8*
16	21	Turkey	277	1 054	*0.7*	*180*
17	17	Norway	150	901	*0.6*	*39*
18	20	Belarus	81	624	*0.4*	*18*
19	16	South Africa	59	462	*0.3*	*–31*
20	22	Australia	127	400	*0.3*	*7.2*
21	25	Finland	66	357	*0.3*	*16*
22	32	Czech Republic	129	343	*0.2*	*233*
23	23	Brazil	109	261	*0.2*	*–29*
24	47	Romania	–	216	*0.2*	*517*
25	24	Poland	3	204	*0.1*	*–41*
26	28	Jordan	20	197	*0.1*	*19*
27	29	Portugal	169	194	*0.1*	*34*
28	39	Singapore	46	173	*0.1*	*154*
29	38	India	42	134	*0.1*	*84*
30	37	United Arab Emirates	12	113	*0.1*	*41*
31	19	Belgium	13	111	*0.1*	*–81*
32	40	Denmark	25	109	*0.1*	*65*
33	46	Bulgaria	4	106	*0.1*	*203*
34	18	Uzbekistan	68	102	*0.1*	*–84*
35	54	Indonesia	94	94	*0.1*	*944*
36	26	Austria	14	91	*0.1*	*–64*
37	27	Iran	–	85	*0.1*	*–61*
38	. .	New Zealand	6	82	*0.1*	. .
39	31	Ireland	–	64	*0*	*–40*
40	35	Serbia	–	61	*0*	*–29*
41	53	Hungary	–	41	*0*	*356*
42	. .	Egypt	–	29	*0*	. .
43	33	Chile	–	20	*0*	*–80*

Rank			Volume of exports (TIV, millions)			
2012–16	2007–11[a]	Supplier	2016	2012–16	Share (%) 2012–16	Change (%) with 2007–11
44	49	Slovakia	–	19	*0*	*–37*
45	50	Brunei Darussalam	12	12	*0*	*–50*
46	. .	Sudan	–	11	*0*	. .
47	. .	Botswana	–	8	*0*	. .
48	. .	Georgia	7	7	*0*	. .
49	51	Taiwan	–	6	*0*	*–63*
50	. .	Ecuador	–	6	*0*	. .
. .	. .	7 others	3	12	*0*	. .

. . = not available or not applicable; – = no deliveries.

Note: The SIPRI data on arms transfers relates to actual deliveries of major weapons. To enable comparison of the data on deliveries of different weapons and to identify general trends, SIPRI uses a trend-indicator value (TIV). This value is only an indicator of the volume of arms transfers and not of the financial values of such transfers. Thus, it is not comparable to economic statistics. The method for calculating the TIV is described in box 10.1.

[a] The rank order for suppliers in 2007–11 differs from that published in *SIPRI Yearbook 2012* because of subsequent revision of figures for these years.

Source: SIPRI Arms Transfers Database, <http://www.sipri.org/databases/armstransfers/>.

changed between 2007–11 and 2012–16. China rose from sixth to third place behind the USA and Russia, and narrowly ahead of France and Germany. The United Kingdom, which in 2007–11 was the fifth largest supplier, fell to sixth position in 2012–16. Of the top 20 arms-exporting countries for 2012–16, 14 are located in North America and Europe (including Russia), 3 in Asia and Oceania, 2 in the Middle East and 1 in Africa.[4]

The United States

The USA was the largest exporter of major weapons in 2012–16, accounting for 33 per cent of the global volume of deliveries. US arms exports increased by 21 per cent between 2007–11 and 2012–16. At regional level, the Middle East was the main recipient of US weapons, accounting for 47 per cent of US arms exports (see table 10.2). Asia and Oceania received 35 per cent and Europe 10 per cent respectively.

The USA delivered major weapons to at least 100 states in 2012–16, which is a significantly higher number of export destinations than that of any other supplier. The main recipient was Saudi Arabia, accounting for 13 per cent of US arms exports. The flow of weapons to Saudi Arabia is likely to remain at a high level due to large outstanding orders, including for 154 F-15SA combat aircraft, deliveries of which began in 2016. This is despite calls in the US Congress during 2016 for restrictions on arms supplies to Saudi Arabia in

[4] SIPRI includes Israel and Turkey in the region defined as the Middle East. For further detail of SIPRI's regional coverage of the Middle East see chapter 3, section III, in this volume and <http://www.sipri.org/research/armaments/milex/milex_database/regional_coverage>.

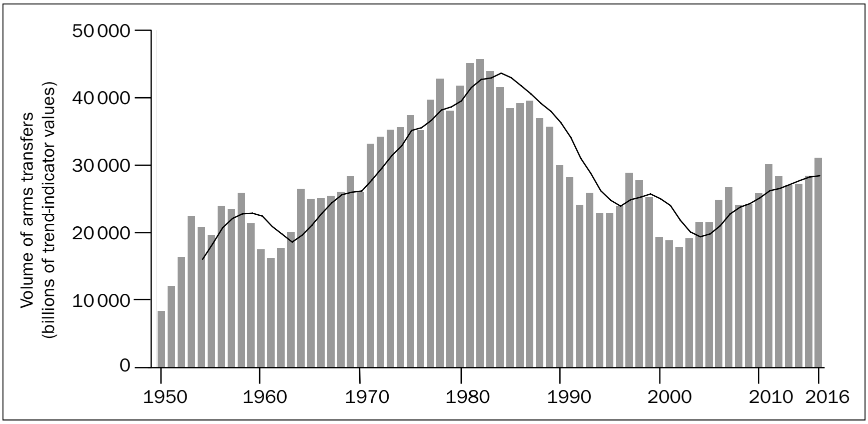

Figure 10.1. The trend in international transfers of major weapons, 1950–2016

Note: The bar graph shows annual totals and the line graph shows the 5-year moving average (plotted at the last year of each 5-year period). See box 10.1 for an explanation of the SIPRI trend-indicator value.

Source: SIPRI Arms Transfers Database, <http://www.sipri.org/databases/armstransfers/>.

response to Saudi military operations in Yemen, which were considered to be indiscriminate and were known to have caused many civilian casualties. The second and third largest recipients of US major weapons, the United Arab Emirates (UAE) (8.7 per cent) and Turkey (6.3 per cent) respectively, are also in the Middle East.[5]

The USA also increased its exports of missile defence systems during 2012–16. Japan, Kuwait, Poland, Qatar, Saudi Arabia, South Korea, Taiwan and the UAE received, ordered or selected the Patriot PAC-3 system. The more advanced and longer-range THAAD system was delivered to the UAE—the first export of this system.

Russia

The volume of Russia's exports of major weapons grew by 4.7 per cent between 2007–11 and 2012–16, while its share of total global exports decreased from 24 to 23 per cent. Although deliveries in 2016 were higher than in 2014 and 2015, the volume remained substantially below the peak years 2011–13 and were more in line with the levels seen in 2007–10. At regional level, Asia and Oceania accounted for 68 per cent of Russian arms exports in 2012–16, Africa for 12 per cent, the Middle East for 8.1 per cent and Europe for 5.9 per cent.

During 2012–16 Russia delivered weapons to 50 states. The bulk of Russian arms exports went to a comparatively small group of states: India accounted

[5] For further detail see chapter 3, section III, in this volume.

for 38 per cent, Viet Nam and China each for 11 per cent and Algeria for 10 per cent. Azerbaijan and Venezuela were also important recipients accounting for 4 and 4.9 per cent respectively; however, no Russian arms deliveries have been identified to either in 2016. In 2014 Russia delivered major weapons to rebel forces in eastern Ukraine.

China

Chinese exports of major arms increased by 74 per cent between 2007–11 and 2012–16, and China's share of global arms exports rose from 3.8 to 6.2 per cent. At regional level, the majority of China's exports went to Asia and Oceania (71 per cent), followed by Africa (22 per cent) and the Americas (5.1 per cent); exports to Europe and the Middle East were limited.

The highest growth in arms exports was to states in Africa: in 2012–16 exports were 122 per cent higher than in 2007–11. The overall geographic spread and number of recipients increased from 38 countries in 2007–11 to 44 in 2012–16, including 20 in Africa. Pakistan remained by far the largest recipient, accounting for 45 per cent of all Chinese exports of major weapons in 2012–16. Taken together, the former Soviet Central Asian states (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) accounted for 2.7 per cent in that period. Deliveries in 2016 included surface-to-air missile (SAM) systems and armed unmanned aerial vehicles (UAVs) to Turkmenistan, and UAVs to Kazakhstan. These were the first significant deliveries of major arms from China to former Soviet states and may reflect a growing Chinese political influence in Central Asia.

European countries

Five West European states—France, Germany, the UK, Spain and Italy (in rank order)—were among the top 10 suppliers of major weapons in 2012–16: taken together, they accounted for 21.7 per cent of global arms transfers in the period. In addition to these states, the top 25 arms exporters in 2012–16 included 8 other West and Central European states. Of these 13 states a total of 11 are members of the European Union (EU) (see table 10.1). The 28 EU member states accounted for a combined total of 26 per cent of the global total in 2012–16, a 9.8 per cent decrease compared with 2007–11. Of total exports by EU member states, 16 per cent went to other EU member states and 84 per cent to non-EU member states.

France. France was the fourth largest supplier of major weapons in 2012–16, accounting for 6 per cent of the total volume. It delivered arms to 81 countries in 2012–16. At regional level, 38 per cent of its exports went to the Middle East, 29 per cent to Asia and Oceania, 13 per cent to Europe, 11 per cent to the Americas and 9.2 per cent to Africa. French exports decreased by 5 per cent between 2007–11 and 2012–16. However, several

Table 10.2. The 10 largest suppliers of major weapons and their destinations, by region, 2012–16

Figures are the percentage shares of the supplier's total volume of exports delivered to each recipient region. Figures may not add up because of the conventions of rounding. For the states in each region and subregion see page xxv.

	Supplier									
Recipient region	USA	Russia	China	France	Germany	UK	Spain	Italy	Ukraine	Israel
Africa	2.3	12	22	9.2	8.9	1.4	2.6	10	20	1.7
North Africa	1.9	9.8	9.7	7.4	8.4	1.2	–	8.9	0.3	–
Sub-Saharan Africa	0.4	2.4	12	1.8	0.5	0.3	2.6	1.6	20	1.7
Americas	5.5	6.1	5.1	11	16	8.9	11	11	1.7	12
South America	1.9	5.7	4.9	5.3	5.5	2.1	4.2	4.7	1.7	5.3
Asia and Oceania	35	68	71	29	24	28	41	21	54	55
Central Asia	0.1	2.8	2.7	1.1	0.6	–	3.0	1.1	2.6	0.0
East Asia	13	11	–	11	14	5.7	–	0.1	28	5.7
Oceania	6.2	–	–	5.0	0.8	1.0	27	4.5	–	0.4
South Asia	8.9	40	53	5.7	1.6	11	0.3	8.0	9.7	41
South East Asia	6.1	13	16	5.8	6.7	10	11	7.1	13	8.1
Europe	10	5.9	0.0	13	28	6.0	3.0	20	20	27
European Union	9.7	0.0	–	12	28	5.3	3.0	17	1.4	13
Middle East	47	8.1	1.7	38	23	56	43	38	4.4	2.8
Other	<0.05	–	–	–	<0.05	–	–	0.2	0.2	1.5

– = nil; <0.05 = between 0 and 0.05.

Source: SIPRI Arms Transfers Database, <http://www.sipri.org/databases/armstransfers/>.

large arms export contracts were agreed in 2012–16, including 12 submarines for Australia, 6 frigates for Malaysia and 5 for Egypt, 36 Rafale combat aircraft for India and 24 each for Egypt and Qatar. These orders, together with deliveries of other larger orders signed before 2012, will keep France among the top five suppliers in the coming years and will likely increase its share of the global total. The Rafale deals show the emphasis France places on exports. The most advanced version of the radar for the Rafale will be fitted on aircraft for Egypt and Qatar before the radars ordered for France's own Rafales are fitted.[6]

Germany. Germany was the fifth largest supplier of major weapons in 2012–16, even though its exports decreased by 36 per cent compared with 2007–11. Its share of the global total fell from 9.4 per cent in 2007–11 to 5.6 per cent in 2012–16. However, total exports in 2016 reached a level similar to the annual average for 2007–11, when Germany was the third largest supplier. Germany supplied major arms to 60 states in 2012–16. A total of 28 per cent went to other states in Europe, 24 per cent to states in Asia and Oceania, 23 per cent to states in the Middle East, 16 per cent to states in the Americas and 8.9 per cent to states in Africa.

The United Kingdom. The UK was the sixth largest supplier of major arms in 2012–16, accounting for 4.6 per cent of the global total. Its arms exports increased by 27 per cent between 2007–11 and 2012–16. However, it remained outside the top five suppliers for the second consecutive year. The Middle East accounted for 56 per cent of British exports in 2012–16, with the majority of deliveries going to Saudi Arabia. Based on its outstanding orders at the end of 2016, it seems likely that the UK will remain outside the top five for the foreseeable future.

Spain. Spain was the seventh largest supplier in 2012–16, accounting for 2.8 per cent of the global total. Its arms exports grew by 2.9 per cent between 2007–11 and 2012–16. Exports of tanker aircraft and large transport aircraft were the main drivers behind the increase. These aircraft are produced by Airbus. Airbus is a European conglomerate based mainly in France and Germany, where most of its production is carried out. However, its military products are assembled in and exported from Spain.

Italy. Italy was the eighth largest supplier in 2012–16. It accounted for 2.7 per cent of global deliveries in that period. Italy's arms exports rose by 22 per cent between 2007–11 and 2012–16. It exported to at least 59 states in

[6] Lert, F., 'Thales ramps up AESA radar workforce, deliveries', *Jane's Defence Weekly*, 22 Feb. 2017, p. 21.

2012–16, the fourth highest number of recipients (behind the USA, France and Germany).

Ukraine. Ukraine was the ninth largest supplier in 2012–16. Its arms exports rose by 49 per cent between 2007–11 and 2012–16. China received the highest percentage (28 per cent) of Ukraine's major arms exports in 2012–16. Deliveries included an unfinished aircraft carrier, which was subsequently completed to a slightly modified design in China; it entered into service in 2012. Russia received the second highest percentage (17 per cent) of Ukraine's arms exports in 2012–16, with deliveries continuing even after Ukraine had banned the export of military equipment to Russia in 2014. Such deliveries included transport aircraft produced under licence in Russia and the acceptance by Russia of domestically produced aircraft and ships with Ukrainian-produced engines.[7] These types of deliveries were coming to an end by late 2016.

Other suppliers

Only 7 of the top 25 arms exporters in 2012–16 were outside of Europe or North America: China, Israel, South Korea, Turkey, South Africa, Australia and Brazil (in order of export volume). Of these countries, only China and Israel were ranked in the top 10.

Israel was the 10th largest supplier of major arms in 2012–16, accounting for 2.3 per cent of global arms exports. Its exports increased by 13 per cent between 2007–11 and 2012–16. Israel has developed strong and close ties with India over the past decade and India accounted for 41 per cent of Israel's exports in 2012–16. Israel has supplied India with ground-based and airborne radars, guided missiles and UAVs—weapon types for which Israel has built a strong niche position.

Major recipient developments

In 2012–16 Asia and Oceania was the main recipient region of major weapons, accounting for 43 per cent of global imports. The Middle East received 29 per cent of global imports in the period. Europe was the third largest recipient region, but its share fell from 18 per cent in 2007–11 to 11 per cent in 2012–16. The share for the Americas also fell: from 11 per cent in 2007–11 to 8.6 per cent in 2012–16. Africa accounted for 8.1 per cent in 2012–16. Imports by states in the Middle East rose by 86 per cent between 2007–11 and 2012–16, while imports by states in Asia and Oceania grew by 7.7 per cent. By

[7] SIPRI normally counts as the year of delivery the year in which the weapon enters service with the military forces. The year of delivery of components (e.g. engines) is counted as the year in which the platform is delivered.

contrast, imports by states in Africa, the Americas and Europe decreased by 6.6, 18 and 36 per cent respectively.

Africa

Imports by states in Africa decreased by 6.6 per cent between 2007–11 and 2012–16. The three largest importers in Africa in 2012–16 were Algeria (46 per cent of regional imports), Morocco (15 per cent) and Nigeria (4.6 per cent). Russia was the largest supplier of major weapons to Africa, accounting for 35 per cent of exports to the region, followed by China (17 per cent), the USA (9.6 per cent) and France (6.9 per cent).

Algeria. Arms imports by Algeria increased by 4.7 per cent in 2012–16 compared with 2007–11. Russia accounted for 60 per cent of Algerian arms imports, China for 15 per cent and Germany for 12 per cent. Algerian arms imports rose steeply in 2016 when deliveries under some large contracts started. Deliveries in 2016 included 2 frigates from Germany and 2 frigates from China, as well as 8 combat aircraft and 180 tanks from Russia.

Sub-Saharan Africa. States in sub-Saharan Africa received 35 per cent of total African imports. Nigeria, Sudan and Ethiopia were the largest importers in the subregion, accounting for 13, 12 and 9.8 per cent of the subregional total respectively. China was the largest supplier to the subregion, accounting for 27 per cent of the total, followed by Russia with 19 per cent and Ukraine with 18 per cent.

Most sub-Saharan African states have limited budgets and import only small volumes of major weapons, despite the fact that many are involved in or located close to major armed conflicts.[8] In 2012–16 the top five arms importers in sub-Saharan Africa were Nigeria, Cameroon, Sudan, Ethiopia and Tanzania (by order of import volume). Together, they accounted for 48 per cent of arms imports in the subregion. With the exception of Tanzania, all of these states are involved in armed conflicts. Fighting with Boko Haram is directly related to arms imports in Nigeria and Cameroon.

The fighting in Darfur and Sudan's involvement in the civil war in South Sudan have coincided with sustained high levels of arms imports by Sudan. Tensions between Ethiopia and Eritrea are ongoing and the two are occasionally involved in border skirmishes. Ethiopia is also supporting the Somali Government in its fight against al-Shabab rebels and has used light armoured vehicles against anti-government protests in the Oromia region.[9]

[8] For further detail of military spending by African countries see chapter 9 in this volume.

[9] Solomon, S., 'Latest Ethiopia–Eritrea clash is culmination of long-festering tensions', Voice of America, 17 June 2016; and 'Death toll rising in West Arsi, regime using American Humvees to crackdown on protestors, Zenawi's portrait set ablaze', Ethiopian Satellite Television and Radio (ESAT), 18 Feb. 2016.

The Americas

Imports of major weapons by states in the Americas decreased by 18 per cent between 2007–11 and 2012–16. The USA remained the largest importer of major weapons in the Americas, despite a fall in imports of 26 per cent between the two periods.

Arms imports by South American states accounted for 46 per cent of the total for the Americas. They fell by 30 per cent between 2007–11 and 2012–16. Russia accounted for 34 per cent of deliveries to South America, followed by the USA and France with 16 and 8.1 per cent respectively.

Venezuela. Venezuela was the largest importer in South America and the second highest in the Americas in 2012–16. However, the country has been hit hard by falling oil prices since 2014. Its arms imports in 2016, for example, were only 1.7 per cent of the total for 2012–16, and it has not placed many major orders during the past five years.[10]

Mexico. Mexico was the only significant recipient of major arms in Central America in 2012–16. Its imports rose by 184 per cent compared with 2007–11, making it the fourth largest importer in the Americas. This increase was largely a result of the growing role taken by the armed forces (since 2006) in the campaign against the drug cartels.[11] The USA accounted for 56 per cent of deliveries to Mexico in 2012–16, followed by Spain and France, each with 11 per cent.

Colombia. Arms imports by Colombia decreased by 19 per cent between 2007–11 and 2012–16. The USA was the main supplier of major weapons to Colombia, accounting for 39 per cent of total deliveries in 2012–16. For decades the country's arms acquisitions, including major weapons, have been largely linked to internal conflicts with several rebel forces and drug cartels. The recent decline in arms imports coincides with the growing momentum of the peace process with the largest rebel force—the Revolutionary Armed Forces of Colombia (Fuerzas Armadas Revolucionarias de Colombia, FARC).[12]

Asia and Oceania

Of the 10 largest recipients of major weapons, 5 were in Asia and Oceania—India, China, Australia, Pakistan and Viet Nam (see tables 10.3 and 10.4). Arms imports by states in the region increased by 7.7 per cent between

[10] For further detail on the impact of oil prices on military spending see chapter 9, section III, in this volume.

[11] Woody, C., 'After a decade fighting the cartels, Mexico may be looking for a way to get its military off the streets', Business Insider Nordic, 13 Feb. 2017.

[12] For further detail see chapter 2, section II, in this volume.

2007–11 and 2012–16. States in the region received 43 per cent of global imports in 2012–16, the same total as for 2007–11. South Asia accounted for 43 per cent of the total for Asia and Oceania, East Asia for 24 per cent, South East Asia for 22 per cent, Oceania for 7.9 per cent and Central Asia for 3.3 per cent. Russia accounted for 37 per cent of deliveries to Asia and Oceania, followed by the USA with 27 per cent and China with 10 per cent.

South East Asia. Tensions over maritime claims in the South China Sea involving China and several other countries have directly or indirectly driven up demand for major weapons in South East Asia. Imports by states in the subregion increased by 6.2 per cent between 2007–11 and 2012–16. Most of the major weapons acquired have a maritime role. They include frigates, submarines, minor warships, support ships, combat aircraft and anti-ship missiles. Viet Nam was the largest importer in the subregion, jumping from being the 29th largest importer globally in 2007–11 to the 10th largest in 2012–16, with arms imports increasing by 202 per cent. This was the highest growth rate among the top 10 importers in 2012–16. Among Viet Nam's imports were five Project-636 submarines from Russia armed with anti-ship and land-attack missiles. A sixth submarine is to be delivered in 2017. The Philippines has started a military expansion programme and increased its arms imports by more than 400 per cent between 2006–11 and 2012–16. Substantial orders have been placed for delivery in the next few years. The increase is largely due to the delivery of ships and aircraft that will be useful in the disputed maritime areas. Indonesia is also modernizing and expanding its armed forces with an emphasis on maritime forces. Its imports increased by 70 per cent in 2012–16 compared with 2007–11. Singapore is not involved in the disputes over maritime claims but is indirectly affected. Its imports decreased by 47 per cent between 2007–11 and 2012–16, making it the 16th largest arms importer. However, Singapore is still absorbing the major arms acquisitions that took place in 2007–11 when it was the seventh largest importer.

India. India was the world's largest importer of major arms in 2012–16, accounting for 13 per cent of the global total. Imports rose by 43 per cent between 2007–11 and 2012–16. India's imports in the most recent period were far greater than those of its regional rivals, China and Pakistan, with whom it has tense relations. A key reason for the high level of imports is the failure of India's state-owned arms development organization and arms industry to design and produce weapons that are capable of competing with their foreign equivalents.

Russia supplied 68 per cent of India's imports of major arms in 2012–16, the USA 14 per cent and Israel 7.2 per cent. Imports from Russia are often in the form of assembly or licensed production of major weapons by India's state-owned arms industry. Based on planned and existing orders, Russia

Table 10.3. The 50 largest recipients of major weapons, 2012–16

The table includes all countries and non-state actors that imported major weapons in the five-year period 2012–16. Ranking is according to 2012–16 total imports. Figures are SIPRI trend-indicator values (TIVs). Percentages above 10 per cent have been rounded to the nearest whole number, those below 10 per cent to one decimal. Figures and percentages may not add up to displayed totals because of the conventions of rounding.

Rank			Volume of imports (TIV, millions)		Share (%)	Change (%)
2012–16	2007–11[a]	Recipient	2016	2012–16	2012–16	with 2007–11
1	1	India	2 547	18 239	*13*	*43*
2	11	Saudi Arabia	2 979	11 689	*8.2*	*212*
3	10	United Arab Emirates	1 278	6 593	*4.6*	*63*
4	2	China	993	6 380	*4.5*	*–11*
5	5	Algeria	2 882	5 312	*3.7*	*4.7*
6	12	Turkey	437	4 721	*3.3*	*42*
7	6	Australia	1 060	4 636	*3.3*	*–6.8*
8	20	Iraq	1 734	4 598	*3.2*	*123*
9	4	Pakistan	759	4 493	*3.2*	*–28*
10	29	Viet Nam	1 196	4 272	*3.0*	*202*
11	18	Egypt	1 483	4 203	*3.0*	*69*
12	8	United States	512	3 589	*2.5*	*–26*
13	3	South Korea	1 333	3 586	*2.5*	*–49*
14	25	Indonesia	382	2 967	*2.1*	*70*
15	56	Taiwan	120	2 824	*2.0*	*647*
16	7	Singapore	173	2 616	*1.8*	*–47*
17	14	Venezuela	37	2 215	*1.6*	*–17*
18	64	Bangladesh	438	2 132	*1.5*	*681*
19	23	Israel	607	2 062	*1.4*	*12*
20	17	United Kingdom	260	1 940	*1.4*	*–22*
21	34	Azerbaijan	257	1 933	*1.4*	*75*
22	43	Qatar	901	1 866	*1.3*	*245*
23	67	Oman	393	1 862	*1.3*	*692*
24	24	Morocco	254	1 772	*1.2*	*–2.7*
25	31	Italy	868	1 617	*1.1*	*27*
26	16	Japan	330	1 536	*1.1*	*–39*
27	28	Canada	258	1 386	*1.0*	*–9.7*
28	9	Greece	318	1 369	*1.0*	*–67*
29	46	Kuwait	194	1 349	*0.9*	*175*
30	27	Afghanistan	176	1 336	*0.9*	*–15*
31	37	Myanmar	261	1 256	*0.9*	*23*
32	51	Thailand	318	1 252	*0.9*	*212*
33	47	Mexico	388	1 200	*0.8*	*184*
34	33	Brazil	125	1 117	*0.8*	*–3.1*
35	54	Finland	202	1 082	*0.8*	*175*
36	65	Kazakhstan	225	981	*0.7*	*269*
37	21	Poland	170	969	*0.7*	*–52*
38	36	Netherlands	117	900	*0.6*	*–13*
39	39	Jordan	196	879	*0.6*	*0.7*
40	60	Turkmenistan	392	850	*0.6*	*177*
41	30	Spain	97	802	*0.6*	*–42*
42	38	Colombia	29	797	*0.6*	*–19*
43	32	Syria	–	747	*0.5*	*–35*

Rank			Volume of imports (TIV, millions)		Share (%)	Change (%)
2012–16	2007–11[a]	Recipient	2016	2012–16	2012–16	with 2007–11
44	79	Russia	169	733	*0.5*	*420*
45	58	Peru	136	596	*0.4*	*84*
46	13	Malaysia	273	581	*0.4*	*–80*
47	35	Germany	38	523	*0.4*	*–52*
48	53	Nigeria	74	524	*0.4*	*34*
49	15	Norway	140	515	*0.4*	*–80*
50	95	Belarus	190	496	*0.3*	*536*
. .	. .	105 others	2 380	10 337	*7.3*	. .

. . = not available or not applicable; – = no deliveries.

Note: The SIPRI data on arms transfers relates to actual deliveries of major weapons. To permit comparison between the data on deliveries of different weapons and to identify general trends, SIPRI uses a trend-indicator value (TIV). This value is only an indicator of the volume of arms transfers and not of the financial values of such transfers. Thus, it is not comparable to economic statistics. The method for calculating the TIV is described in box 10.1.

[a] The rank order for suppliers in 2007–11 differs from that published in *SIPRI Yearbook 2012* because of subsequent revision of figures for these years.

Source: SIPRI Arms Transfers Database, <http://www.sipri.org/databases/armstransfers/>.

will remain, by far, the main supplier of major arms to India for the next few years. However, India also expects to receive deliveries of several major orders in the coming years from France (another traditional supplier) and also from the USA, South Korea and Spain—all countries that only recently became suppliers of major weapons to India. In addition, the Indian Government has launched a number of initiatives to encourage private industry involvement in large-scale arms acquisition programmes with the aim of increasing indigenous production. This may lead to a larger share for suppliers outside of Russia (and therefore to a reduction in Russia's overall share) as many of the private Indian companies seeking to be part of the bidding process are partnering with European and US companies.[13]

China. China is increasingly capable of producing its own advanced weapons and has become less dependent on arms imports, which decreased by 11 per cent between 2007–11 and 2012–16. Russia was the largest supplier of major arms to China in 2012–16, accounting for 57 per cent of China's imports. China is also scheduled to receive several large deliveries from Russia during 2017–19. Ukraine accounted for 16 per cent of Chinese imports in 2012–16 and France for 15 per cent.[14]

[13] Grevatt, J., 'Saab in talks with India over potential Gripen sale', *Jane's Defence Weekly*, 6 Jan. 2016, p. 6.

[14] Most of the deliveries from France are produced under licence in China, often under contracts signed decades ago. The European Union (EU) embargo on arms trade to China, in force since 1989, is weak and unclear, allowing deliveries of many systems considered by SIPRI to be 'major weapons' to continue. For further discussion of the EU embargo and exports by Western countries to China

Table 10.4. The 10 largest recipients of major conventional weapons and their suppliers, 2012–16

Figures are the percentage shares of the recipient’s total volume of imports received from each supplier. Only suppliers with a share of 1 per cent or more of total imports of any of the 10 largest recipients are included in the table. Smaller suppliers are grouped together under ‘Others’. Figures may not add up to 100 because of the conventions of rounding.

	Recipient									
Supplier	India	Saudi Arabia	UAE	China	Algeria	Turkey	Australia	Iraq	Pakistan	Viet Nam
Belarus	–	–	–	2.7	–	–	–	0.3	–	3.5
Bulgaria	–	<0.05	–	–	–	–	–	1.2	–	–
Canada	0.7	2.0	0.7	–	–	0.3	–	–	–	0.6
China	–	0.1	0.1	–	15	0.7	–	0.4	68	–
Czech Republic	–	–	–	–	–	–	–	3.6	–	1.1
France	2.4	4.1	12	15	0.5	0.5	8.2	–	0.4	–
Germany	0.6	1.9	2.0	0.6	12	2.2	1.3	0.8	0.1	–
Ireland	–	–	–	–	–	–	1.4	–	–	–
Israel	7.2	–	–	–	–	0.9	–	–	–	2.7
Italy	0.2	1.3	6.5	–	5.8	12	–	–	3.8	–
Jordan	–	–	–	–	–	–	–	–	3.1	–
Netherlands	0.2	0.9	–	–	0.7	3.0	–	–	–	–
Russia	68	–	2.7	57	60	–	–	23	3.3	88
South Korea	–	–	–	–	–	8.0	–	–	–	–
Spain	–	4.2	4.5	–	–	9.3	28	0.7	–	0.8
Sweden	–	1.4	3.2	–	1.9	–	0.8	–	0.6	–
Switzerland	0.4	2.3	0.7	4.1	–	–	–	–	0.4	–
Turkey	–	1.8	3.2	–	–	–	–	–	–	–
Ukraine	1.5	–	–	16	0.2	–	–	3.5	–	2.8
United Kingdom	4.0	27	1.0	2.8	1.4	–	1.5	–	–	–
United States	14	52	62	–	0.5	63	60	56	–	–
Uzbekistan	–	–	–	1.6	–	–	–	–	–	–
Others	0.4	1.8	1.3	–	0.9	0.2	0.6	1.1	0.4	0.1

– = nil; <0.05 = between 0 and 0.05; UAE = United Arab Emirates.

Source: SIPRI Arms Transfers Database, <http://www.sipri.org/databases/armstransfers/>.

While China was the largest importer globally by a wide margin in the early 2000s, it dropped to fourth place in 2012–16. China remains partly dependent on imports for some key weapons and components, including large transport aircraft and helicopters, and engines for aircraft, armoured vehicles and ships. Engines accounted for 30 per cent of China's imports in 2012–16. In 2016 China received the first 4 of the 24 Su-35 combat aircraft ordered from Russia in 2015. It is likely that it ordered these aircraft because, so far, it has not managed to produce combat aircraft with the capabilities of the Su-35. However, China is making a strong effort to develop its indigenous capabilities in all relevant fields, meaning that its imports are almost certain to decrease further.[15]

Australia. Imports of major weapons by Australia accounted for 3.3 per cent of the global total for 2012–16. Australia's arms imports decreased marginally between 2007–11 and 2012–16 (–6.8 per cent). Its imports in 2012–16 included combat, tanker and airborne early warning (AEW) aircraft and large warships. The imports are aimed at providing Australia with capabilities to operate further from its shores than before and are partly to counter a perceived growing threat from China.[16] Additional large orders for combat aircraft and frigates are to be fulfilled in the coming years. Australia also ordered 12 submarines in 2016 (twice the number of submarines currently in service), delivery of which is planned to start in 2033.[17]

Europe

Imports by states in Europe decreased by 36 per cent between 2007–11 and 2012–16, with the region accounting for 11 per cent of total global imports. Economic pressures forced states such as Greece and Spain to greatly reduce arms procurement and arms imports in 2012–16. Although imports by the UK also decreased (–22 per cent), it remained the largest importer of major weapons in Europe. The USA accounted for 32 per cent of deliveries to Europe in 2012–16, followed by Germany (14 per cent) and Russia (13 per cent). Acquisitions of new combat aircraft will dominate arms imports of many West and Central European countries in the coming years. In particular, the introduction of the fifth generation F-35, supplied by the USA, will drive up arms import volumes over the next five years. During

see Bräuner, O., Bromley, M. and Duchâtel, M., *Western Arms Exports to China*, SIPRI Policy Paper no. 43, (SIPRI: Stockholm, Jan. 2015).

[15] Rajagopalan, R. P. and Wezeman, S. T., 'Impact of shifts in arms trade and exercises on South Asia and Europe', ed. L. Saalman, *China–Russia Relations and Regional Dynamics: From Pivots to Peripheral Diplomacy* (SIPRI: Stockholm, Mar. 2017).

[16] Australian Department of Defence (DOD), *2016 Defence White Paper* (DOD: Canberra, 2016).

[17] Wroe, D., 'France wins $50b contract to help Australia's new submarines', *Sydney Morning Herald*, 27 Apr. 2016; and Evans, G., 'The next step for Australia's future submarines', Naval Technology, 9 Jan. 2017.

Box 10.1. Methodology

The SIPRI Arms Transfers Database, <http://www.sipri.org/databases/armstransfers/>, contains information on deliveries of major weapons to states, international organizations and non-state armed groups from 1950 to 2016. A new set of data is published annually, replacing data in several editions of the *SIPRI Yearbook* or other SIPRI publications.

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

In cases where a sensor, engine, turret, refuelling system or naval gun or other system (items *d*, *h*, *i*, *k* 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.

SIPRI has developed a unique system to measure the volume of transfers of major weapons 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 and similar weapons have similar TIVs. Second-hand and second-hand but significantly modernized weapons are given a reduced TIV. SIPRI calculates the volume of transfers by multiplying the weapon-specific TIV with the number of weapons delivered. SIPRI TIV figures do not represent sales prices for arms transfers.

2012–16 the UK received 5 out of 138 F-35s, Italy received 6 out of 90, Norway 4 out of a planned order of 52, and the Netherlands received 2 out of 37. In 2016 Denmark selected the F-35 for a planned order of 27. Other countries, including Belgium, Finland, Germany, Poland, Spain and Switzerland, have stated requirements for new combat aircraft in the near future; most, if not all, of these aircraft will be imported.

Countries bordering Russia. Largely based on what they perceive to be a growing threat from Russia, several countries bordering Russia have embarked on new arms import programmes. However, volumes of arms imports by Estonia, Latvia and Lithuania in 2012–16 were still below the levels of 2007–11. Poland has announced new arms procurement programmes and has placed several large orders for major weapons, including air defence and ballistic missile defence systems and artillery. However, this has not yet resulted in substantial deliveries. Its arms import levels in 2012–16 were 50 per cent lower than in 2007–11. In 2016 Poland took delivery from the USA of the first batch of 68 AGM-158A air-launched missiles with a 370-kilometre range. Finland also received the first batch of 70 such missiles in 2016. In addition, in 2016 Poland ordered 70 AGM-158B missiles with a range of 925 km. Both Finland and Poland now have the capability to strike targets much further inside Russia and with greater precision than before.

Azerbaijan and Armenia. Imports by Azerbaijan and Armenia—whose conflict over Nagorno-Karabakh flared up again in 2016—remained asymmetric.[18] In 2012–16 Azerbaijan's imports were 75 per cent higher than in 2007–11, and 20 times higher than those of Armenia. Armenia's most notable arms import consisted of a small number of Iskander surface-to-surface missiles from Russia, which with a 280-km range can reach nearly all of Azerbaijan.[19] Azerbaijan imported a much wider variety of weapons, including tanks and other armoured vehicles, anti-ballistic missile systems and combat aircraft. Russia was an important supplier to both countries.

The Middle East

Arms imports by states in the Middle East increased by 86 per cent between 2007–11 and 2012–16. During 2012–16, 28 per cent of arms transfers to the region went to Saudi Arabia, 16 per cent to the UAE and 11 per cent to Turkey. The USA accounted for 53 per cent of total arms supplies, the UK for 8.9 per cent and France for 8 per cent. The region's main arms importers often invested in advanced combat support systems ('force multipliers') that can significantly increase the combat potential of their armed forces, including airborne and space-based long-range sensors.[20]

[18] For further detail on the Nagorno-Karabakh conflict see chapter 4, section II, in this volume.

[19] Abrahamyan, E., 'Armenia's new ballistic missiles will shake up the neighbourhood', *National Interest*, 12 Oct. 2016.

[20] For further detail see chapter 3, section III, in this volume.