

I. Global developments in military expenditure

NAN TIAN, AUDE FLEURANT, ALEXANDRA KUIMOVA,
PIETER D. WEZEMAN AND SIEMON T. WEZEMAN

Global military expenditure is estimated to have been \$1739 billion in 2017, the highest level since the end of the cold war. This represents an increase of 1.1 per cent in real terms on 2016 and a 9.8 per cent increase since 2008 (see table 4.1 and figure 4.1).¹ The world military burden—global military expenditure as a share of global gross domestic product (GDP)—remained at 2.2 per cent in 2017, while military spending per capita increased to \$230 per person.

The trend in global military expenditure in 2017 can be characterized by significant changes in three regions: Asia and Oceania, Europe, and the Middle East. Spending in Asia and Oceania rose by 3.6 per cent in 2017 to \$477 billion, resulting almost entirely from the continued increase in China's military expenditure. In Europe, military expenditure declined by 2.2 per cent to \$342 billion, mainly caused by the considerable drop in military spending by Russia (–20 per cent). Central Europe, however, had the highest percentage increase in military spending of all subregions (12 per cent), due to the perceived threat of Russia (see figure 4.2). There were particularly large relative increases in military expenditure in Latvia, Lithuania and Romania. For the third consecutive year, SIPRI cannot provide an estimate of total spending in the Middle East due to missing data from several key countries.² However, the combined total military expenditure of those countries in the Middle East for which data is available increased by 6.2 per cent to \$151 billion in 2017. This growth in spending was principally related to an upturn in Saudi Arabia's military spending following a decrease in 2016 (see section II) and the large relative increases in spending in Iran and Iraq.

Military expenditure in the rest of the world remained largely unchanged in 2017. Spending in Africa was marginally down, by 0.5 per cent to \$42.6 billion, primarily due to the first spending decrease in North Africa since 2006. Spending remained unchanged in the Americas, at \$695 billion, with an increase in South America and decreases in North America and in Central America and the Caribbean.

¹ All figures for spending in 2017 are quoted in 2017 current US dollars. Except where otherwise stated, figures for increases or decreases in military spending are expressed in constant (2016) US dollars, often described as changes in 'real terms' or adjusted for inflation. The large differences in 2017 military expenditure when expressed in current 2017 US dollars compared with constant 2016 US dollars are caused by the overall depreciation of the US dollar against the currencies of the rest of the world. All SIPRI's military expenditure data is freely available in the SIPRI Military Expenditure Database on the SIPRI website. The sources and methods used to produce the data discussed in this chapter are also presented on the SIPRI website.

² No data is available for Qatar, Syria, the United Arab Emirates and Yemen.

Table 4.1. Military expenditure by region, 2008–17

Figures for 2008–17 are in US\$ b. at constant (2016) prices and exchange rates. Figures for 2017 in the right-most column, marked *, are in current US\$ b. Figures do not always add up to totals because of the conventions of rounding.

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2017*
World total	1 543	1 652	1 684	1 689	1 677	1 652	1 649	1 676	1 674	1 693	1 739
<i>Geographical regions</i>											
Africa	30.4	31.6	(33.2)	(36.0)	(36.8)	40.3	41.5	(39.3)	(38.9)	(38.7)	(42.6)
North Africa	9.3	(10.4)	(11.4)	(14.3)	15.4	17.7	18.7	(19.1)	(19.5)	(19.1)	(21.1)
Sub-Saharan Africa	21.1	21.2	(21.8)	(21.7)	(21.4)	(22.6)	(22.8)	20.2	19.4	19.6	21.6
Americas	759	818	841	832	789	734	694	682	675	676	695
Central America and the Caribbean	5.3	5.8	6.3	6.5	7.1	7.5	8.2	8.5	7.9	7.3	7.6
North America	710	766	785	776	732	674	634	621	618	617	630
South America	43.9	46.3	49.5	48.9	50.2	52.3	52.6	51.8	49.4	51.5	57.0
Asia and Oceania	295	332	340	354	368	387	409	431	453	469	477
Central and South Asia	52.8	60.6	61.5	62.7	63.1	63.2	66.6	68.3	74.0	77.8	82.7
East Asia	192	218	224	236	250	265	282	297	309	322	323
Oceania	21.6	23.2	23.5	23.1	22.3	22.1	23.9	26.2	28.6	28.4	29.9
South East Asia	29.1	30.5	30.9	31.9	33.1	36.5	36.2	39.8	40.5	40.5	41.1
Europe	323	329	322	316	318	312	314	324	335	327	342
Central Europe	19.2	18.6	17.9	17.5	17.2	17.0	18.0	20.4	20.7	23.1	24.1
Eastern Europe	46.2	47.5	48.2	51.8	59.6	62.4	67.1	72.3	75.5	61.5	72.9
Western Europe	257	263	256	247	241	232	229	231	239	243	245
Middle East	135	141	148	152	165	180	191	..	..	..	..
<i>Military burden (i.e. world military spending as a % of world gross domestic product, both measured in current US\$)</i>											
World	2.4	2.6	2.5	2.4	2.4	2.3	2.1	2.3	2.2	2.2	2.2
Africa	1.9	2.0	1.8	1.7	1.8	2.0	2.2	1.9	1.9	1.8	1.8
Americas	1.5	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.3
Asia and Oceania	1.7	1.9	1.7	1.7	1.7	1.7	1.8	1.9	1.9	1.9	1.7

Europe	1.8	1.8	1.6	1.6	1.6	1.5	1.6	1.6	1.6
Middle East	4.0	4.7	4.4	4.6	5.0	5.0	5.1	5.8	5.2
World military spending per capita (current US\$)	220	226	236	248	246	243	240	228	230

() = total based on country data accounting for less than 90% of the regional total; .. = estimate not provided due to unusually high levels of uncertainty and missing data.

Note: The totals for the world and regions are estimates, based on data from the SIPRI Military Expenditure Database. When military expenditure data for a country is missing for a few years, estimates are made, most often on the assumption that the rate of change in that country's military expenditure is the same as that for the region to which it belongs. When no estimates can be made, countries are excluded from the totals. The countries excluded from all totals here are Cuba, Eritrea, North Korea, Somalia, Syria, Turkmenistan and Uzbekistan. Totals for regions cover the same groups of countries for all years. Further detail on sources and methods can be found on the SIPRI website.

Sources: SIPRI Military Expenditure Database, May 2018; International Monetary Fund, World Economic Outlook Database, Oct. 2017; International Monetary Fund, International Financial Statistics Database, Sep. 2017; and United Nations Department of Economic and Social Affairs, Population Division, July 2017.

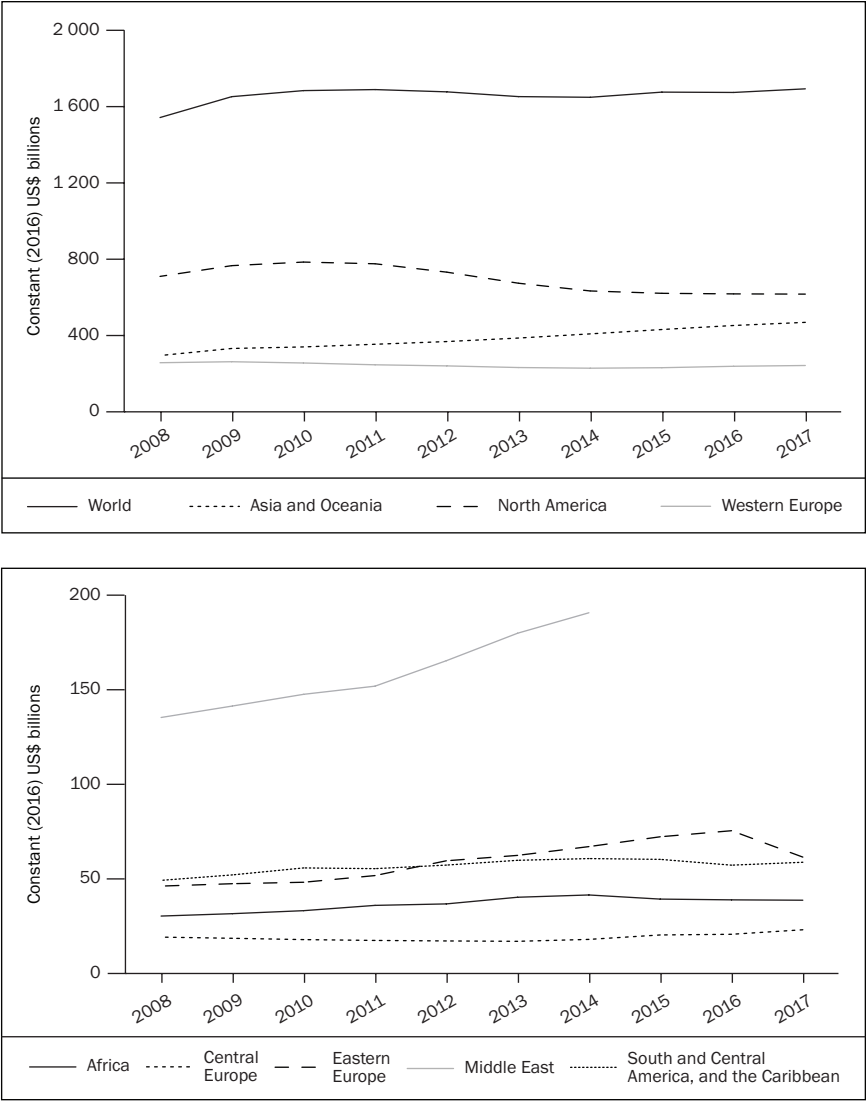


Figure 4.1. Military expenditure in major spending regions compared with other regions, 2008–17

Trends in military expenditure, 2008–17

While total global military spending continued its general upward trend in 2017, the spending trend for 2008–17 was relatively turbulent: annual increases in 2008–11, decreases in 2012–14 and then fluctuation in spending in 2015–16 (i.e. an increase and then a decrease). Various drivers have had major influences on the trends in 2008–17. The increases between 2008 and 2011 can be traced to the United States’ ‘global war on terrorism’ and the

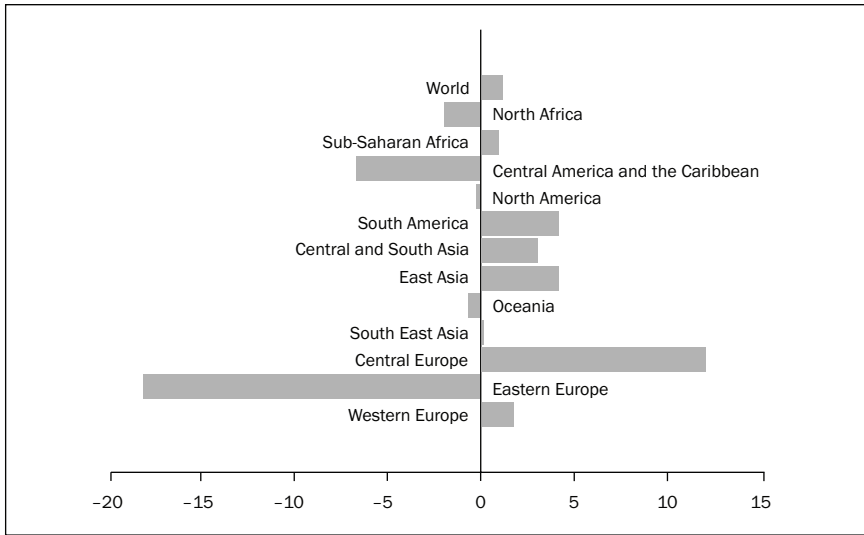


Figure 4.2. Changes in military expenditure by subregion, 2016–17

Note: No estimate of change in military expenditure in the Middle East is given since data for 2015–17 is highly uncertain. However, an estimate for the Middle East is included in the estimated world total. Totals for regions cover the same groups of countries for all years. Further detail on sources and methods can be found on the SIPRI website.

economic boom in the first half of the 2000s. The subsequent decreases until 2014 were due in part to the withdrawal of US troops from Afghanistan and Iraq, the USA's caps on government spending, and the post-2009 austerity measures adopted in many countries.³ While spending in Asia and Oceania continues to push global military expenditure upwards, the overall effect of fluctuations in military expenditure in Europe and the Middle East since 2014—due to a fall in the price of oil and security concerns—has slowed the global rate of growth.

Between 2008 and 2017 the largest increases in military expenditure at the subregional level were in North Africa (105 per cent) and in three subregions of Asia and Oceania: East Asia (68 per cent), Central and South Asia (47 per cent) and South East Asia (39 per cent; see table 4.2). The growth in North Africa was the result of higher spending in all four countries, particularly Algeria. In East Asia, China's military spending continued to expand in line with its economic growth and its ambitions to increase global influence.⁴ The higher spending in Central and South Asia can be attributed to India's procurement programmes and that in South East Asia to the tensions around the South China Sea.

³ Fleurant, A., 'US military expenditure', *SIPRI Yearbook 2015*, pp. 353–59.

⁴ Denyer, S., 'China's slowing economy leads to smallest increase in military spending in years', *Washington Post*, 4 Mar. 2016.

Table 4.2. Key military expenditure statistics by region, 2017

Spending figures are in US dollars, at current prices and exchange rates. Changes are in real terms, based on constant (2016) US dollars.

Region/ subregion	Military spending, 2017 (US\$ b.)	Change (%)		Major changes, 2017 (%) ^a			
		2016–17	2008–17	Increases		Decreases	
World	1 739	1.1	9.8				
<i>Africa</i> ^b	(42.6)	–0.5	28	Gabon	42	South Sudan	–56
North Africa	(21.1)	–1.9	105	Benin	41	Chad	–33
Sub-Saharan Africa ^b	21.6	0.9	–6.8	Sudan	35	Mozambique	–21
				Mali	26	Côte d'Ivoire	–19
<i>Americas</i>	695	0.0	–11	Venezuela	20	Peru	–23
Central America and Caribbean ^c	7.6	–6.6	39	Bolivia	16	Guatemala	–9.7
North America	630	–0.2	–13	Argentina	15	Mexico	–8.1
South America	57.0	4.1	17	Uruguay	13	Trinidad and Tobago	–7.5
<i>Asia and Oceania</i> ^d	477	3.6	59	Philippines	21	Myanmar	–28
Central and South Asia ^e	82.7	3.0	47	Cambodia	21	Malaysia	–16
East Asia ^f	323	4.1	68	Nepal	12	Brunei Darussalam	–14
Oceania	29.9	–0.6	32	Bangladesh	7.2	Kazakhstan	–7.6
South East Asia	41.1	0.1	39				
<i>Europe</i>	342	–2.2	1.4	Romania	50	Russia	–20
Central Europe	24.1	12	20	Cyprus	22	Belarus	–5.6
Eastern Europe	72.9	–18	33	Lithuania	21	Georgia	–5.4
Western Europe	245	1.7	–5.7	Latvia	21	Moldova	–4.4
<i>Middle East</i> ^g	..	..	..	Iraq	17	Oman	–21
				Iran	15	Egypt	–11
				Turkey	9.7	Lebanon	–9.1

() = uncertain estimate; .. = not available.

^a The list shows the countries with the largest increases or decreases for each region as a whole, rather than by subregion. Countries with a military expenditure in 2017 of less than \$100 million (or \$50 million in Africa) are excluded.

^b Figures exclude Eritrea and Somalia.

^c Figures exclude Cuba.

^d Figures exclude North Korea, Turkmenistan and Uzbekistan.

^e Figures exclude Turkmenistan and Uzbekistan.

^f Figures exclude North Korea.

^g No SIPRI estimate for the Middle East is available for 2015–17. A rough estimate for the Middle East (excluding Syria) is included in the world total.

Source: SIPRI Military Expenditure Database, May 2018.

By contrast, there were falls in military spending in North America (13 per cent), sub-Saharan Africa (6.8 per cent) and Western Europe (5.7 per cent). The decline in North America (which consists of Canada and the USA) was due to cuts in the US military budget. The decrease in sub-Saharan Africa

was caused by the decline in Angola's and Sudan's military spending. In Western Europe, spending reductions in Italy, Spain and the United Kingdom, a relatively minor increase in Germany, and stagnancy in French military spending resulted in an overall subregional decrease between 2008 and 2017.

The largest military spenders in 2017

The 15 countries with the highest military spending in 2017 were the same set of countries as in 2016 (see table 4.3). However, there were some changes in ranking between the two years.⁵ The USA (with 35 per cent of world military expenditure) and China (with 13 per cent) are by far the two largest spenders in the world. The countries ranked from third to fifth—Saudi Arabia, Russia and India—are starting to increase the spending gap with the rest of the top 15 countries: while these three countries all allocated over \$60 billion to their militaries in 2017, all but one of the countries outside the top five spent less than \$50 billion (the exception being France which spent \$57.8 billion). Saudi Arabia regained the position of third largest spender from Russia following a 9.2 per cent increase in Saudi Arabian military spending and a 20 per cent drop in Russian spending. India moved from sixth place to fifth in the rankings.

Brazil moved up two places from 13th to 11th after its first annual increase in military spending since 2014. Italy and Australia each moved down one place in the ranking. Italy's military spending remained constant in 2017, while Australia had its first annual decline since 2013.

In analysing the trends of the top 15 military spenders over the past 10 years, several different patterns emerge. China, Turkey, India, Russia, Saudi Arabia and Australia made large increases (of more than 30 per cent) during 2008–17. There were more moderate increases (of 10–30 per cent) in the Republic of Korea (South Korea), Brazil and Canada, and minor increases (of less than 10 per cent) in Germany, France and Japan. Military spending fell in Italy, the UK and, most notably, the USA. US military expenditure decreased by 14 per cent (equivalent to \$95 billion) between 2008 and 2017.

Five of the top 15 countries allocated less of their GDP to military spending in 2017 than 2008: the USA, India, the UK, Germany and Italy. Saudi Arabia, Russia, Australia and Canada spent a larger proportion of their GDP on their military, while the proportions were unchanged in China, France, Japan, South Korea, Brazil and Turkey. Of the top 15 spenders, Saudi Arabia

⁵ The United Arab Emirates should be among the 15 largest spenders in 2017, probably ranking in the range 11–15, but a lack of data since 2014 means that no reasonable estimate of its military spending can be made and it has thus been omitted from the top 15 rankings.

Table 4.3. The 15 countries with the highest military expenditure in 2017

Spending figures and GDP are in US dollars, at current prices and exchange rates. Changes are in real terms, based on constant (2016) US dollars. Figures may not add up to stated totals due to the conventions of rounding.

Rank		Country	Military spending, 2017 (\$ b.)	Change, 2008–17 (%)	Share of GDP (%) ^b		Share of world military spending, 2017 (%)
2017	2016 ^a				2017	2008	
1	1	USA	610	–14	3.1	4.2	35
2	2	China	[228]	110	[1.9]	[1.9]	[13]
3	4	Saudi Arabia	[69.4]	34	[10]	7.4	[4.0]
4	3	Russia	66.3	36	4.3	3.3	3.8
5	6	India	63.9	45	2.5	2.6	3.7
Subtotal top 5			1 038	..	..	..	60
6	5	France	57.8	5.1	2.3	2.3	3.3
7	7	UK	47.2	–15	1.8	2.3	2.7
8	8	Japan	45.4	4.4	0.9	0.9	2.6
9	9	Germany	44.3	8.8	1.2	1.3	2.5
10	10	South Korea	39.2	29	2.6	2.6	2.3
Subtotal top 10			1 271	..	..	..	73
11	13	Brazil	29.3	21	1.4	1.4	1.7
12	11	Italy	29.2	–17	1.5	1.7	1.7
13	12	Australia	27.5	33	2.0	1.8	1.6
14	14	Canada	20.6	13	1.3	1.2	1.2
15	15	Turkey	18.2	46	2.2	2.2	1.0
Subtotal top 15			1 396	..	..	..	80
World			1 739	9.8	2.2	2.4	100

[] = estimated figure; GDP = gross domestic product.

^a Rankings for 2016 are based on updated military expenditure figures for 2017 in the current edition of the SIPRI Military Expenditure Database. They may therefore differ from the rankings for 2016 given in *SIPRI Yearbook 2017* and in other SIPRI publications in 2017.

^b The figures for military expenditure as a share of GDP are based on estimates of 2017 GDP from the International Monetary Fund World Economic Outlook and International Financial Statistics databases.

Sources: SIPRI Military Expenditure Database, May 2018; International Monetary Fund, World Economic Outlook Database, Oct. 2017; and International Monetary Fund, International Financial Statistics Database, Sep. 2017.

remained the country with the highest military burden, at 10 per cent of GDP, while Japan had the lowest, at 0.9 per cent of GDP.

The United States

At \$610 billion, US military expenditure in 2017 was slightly lower, by 0.5 per cent, than in 2016. The country remains by far the largest spender in the world, spending 2.7 times more than the second largest military spender, China (see below). However, US military expenditure in 2017 was 22 per cent

below the peak reached in 2010, which can be attributed to the US military 'surge' in Afghanistan and Iraq.⁶

Total US military expenditure covers outlays (actual expenditure) from (a) 'the base budget', that is, spending on the regular activities of the Department of Defense; (b) Department of Energy spending on the US nuclear arsenal; (c) military spending in other government departments; (d) spending on Overseas Contingency Operations, which funds military operations around the world; and (e) spending by the Department of State on foreign military aid.⁷

The failure to agree on a plan to reduce the USA's budget deficit following the impact on government revenues of the global financial crisis that began in around 2008 led to the adoption of the 2011 Budget Control Act (BCA).⁸ The BCA limits US Government spending until 2021 in order to reduce the country's growing deficit.⁹ Since the enactment of the BCA, negotiations on the budget, including the military budget, have been increasingly difficult and have illustrated the considerable polarization in US politics, both within the chambers of the US Congress and between the Congress and the president.¹⁰ The election of the Republican candidate, Donald J. Trump, as US President in 2016 has not substantially changed this dynamic.¹¹

In 2017 continuing discord led to an almost five-month delay in adopting the budget for the 2018 fiscal year (FY), which covers the period 1 October 2017 to 30 September 2018. During the delay, the Congress adopted short-term 'continuing' resolutions to keep government institutions open.¹²

On 19 October 2017 the Senate approved the Republican-backed military budget for FY 2018, which in turn was passed by the House of Representatives and signed by the president on 8 February 2018.¹³ As Trump promised during his presidential campaign, the approved military budget for 2018 represents a significant increase (to \$700 billion) over the military

⁶ White House, Office of the Press Secretary, 'Remarks by the President in address to the nation on the way forward in Afghanistan and Pakistan', 1 Dec. 2009.

⁷ Total US military aid spending in 2017 was \$7 billion, or about 1.1% of total US military spending. US Department of State, *Congressional Budget Justification: Department of State, Foreign Operations, and Related Programs, Fiscal Year 2018* (US Department of State: Washington, DC, 23 May 2017).

⁸ Budget Control Act of 2011, US Public Law no. 112-25, signed into law 2 Aug. 2011.

⁹ The BCA mandates \$1 trillion in savings between 2012 and 2021. On the BCA and its background see Sköns, E. and Perlo-Freeman, S., 'The United States' military spending and the 2011 budget crisis', *SIPRI Yearbook 2012*, pp. 162–66.

¹⁰ Pew Research Center, 'The partisan divide on political values grows even wider', 5 Oct. 2017.

¹¹ Foran, C., 'America's political divide intensified during Trump's first year as president', *The Atlantic*, 5 Oct. 2017.

¹² As a general rule, continuing resolutions extend the level of resources allocated to government departments and agencies based on the previous year's budget allocations.

¹³ Gambino, L., 'Senate passes Trump's budget, a first step towards contentious tax reform', *The Guardian*, 20 Oct. 2017.

Table 4.4. Components of SIPRI's estimates of China's military expenditure, 2013–17

Unless otherwise stated, figures are in yuan b. at current prices. Figures may not add up to stated totals because of the conventions of rounding.

	2013	2014	2015	2016	2017
National defence budget (central and local)	741	829	908	977	1 046
People's Armed Police	139	157	164	178	196
Additional military RDT&E spending	[116]	[120]	[122]	[132]	[140]
Payments to demobilized soldiers	68	70	76	86	92
Additional military construction spending	[45]	[49]	[52]	[56]	[60]
Arms imports	[3.7]	[8.6]	[9.3]	[8.4]	[11]
Commercial earnings of the PLA	[1.0]	[1.0]	[1.0]	[1.0]	[1.0]
Total	1 115	1 233	1 333	1 437	1 544
Total in US\$ b. (current prices)	180	201	214	216	228

[] = estimated figure, PLA = People's Liberation Army; RDT&E = research, development, testing and evaluation.

Sources: SIPRI Military Expenditure Database, May 2018; and Chinese Ministry of Finance, various documents.

expenditure of \$610 billion in 2017.¹⁴ The higher military budget is intended to support increases in the number of military personnel as well as a comprehensive weapon modernization programme for both conventional and nuclear weapons. These projects follow from the new National Security Strategy that identifies China and Russia as rivals of the USA that 'challenge [US] power, influence and interests'.¹⁵

A consequence of the evolution of the US military budget in recent years is the general confusion surrounding the processes at work and a lack of clarity on the current and near future level of US military spending. Disputes between the Congress and the administration and between the political parties, as well as the use of continuing resolutions, have made the already complex US Government budget process even more difficult to follow by the public in the context of significant polarization of political life.

China

China, the world's second largest spender, allocated an estimated \$228 billion to its military in 2017, an increase of 5.6 per cent since 2016. The rise in Chinese military expenditure continues to be in line with the government's

¹⁴ McCarthy, T., 'Does the US really need a huge boost in military spending?', *The Guardian*, 9 Feb. 2018.

¹⁵ White House, *National Security Strategy of the United States of America* (White House: Washington, DC, Dec. 2017), p. 2; and Gordon, M. R., 'Trump plans shift to US security strategy', *Wall Street Journal*, 18 Dec. 2017.

practice in previous years of following GDP growth plus inflation. The military burden thus remained at 1.9 per cent of GDP in 2017. If China continues to follow this approach, increases in military spending will slow down as the country's economy matures and growth stabilizes and slows down. The spending increase in 2017 was the lowest since 2010, and the rate of growth has not been this low since 1995.

China publishes a national defence budget each year, but this does not include additional important elements of total military expenditure—these lie in other parts of the state budget (see table 4.4). Data for several of these additional elements is available from official sources for at least some years (e.g. for the People's Armed Police and payments to demobilized soldiers), but data for others (e.g. additional spending on military research, development, testing and evaluation, additional spending on military construction, and spending on arms imports) is unavailable, incomplete or unreliable. As a result, the estimate of total Chinese military expenditure involves a significant degree of uncertainty.¹⁶

A notable element of China's military spending that is not currently included in the SIPRI estimate is 'retirement settlement' (退役安置, *tùiyì ānzhì*)—payments to military personnel who leave service. However, in 2015 China announced that it planned a reorganization of the People's Liberation Army, leading to a reduction of 300 000 military personnel by 2017.¹⁷ This led to a sharp jump in the retirement settlement line of the national budget, which increased by 26 per cent from 47.4 billion yuan (\$7.7 billion) in 2014 to 59.6 billion yuan (\$9.6 billion) in 2015 and maintained a similar level in 2016 (with figures for 2017 yet to be released). As new information on this item of spending becomes available, SIPRI will review its methodology and, if appropriate, amend its estimate of China's military expenditure in a consistent manner.

Regional trends

Africa

Military expenditure in Africa remained roughly unchanged in real terms in 2017, marginally down by 0.5 per cent to an estimated \$42.6 billion.¹⁸ This fall continued the downward trend from the post-cold war peak reached in

¹⁶ On SIPRI's methodology for estimating China's military spending see Perlo-Freeman, S., 'China's military expenditure', *SIPRI Yearbook 2016*, pp. 516–19.

¹⁷ Perliz, J., 'China to raise military spending, but less than in recent years', *New York Times*, 4 Mar. 2017; and China Armed Forces, 'Experts' comments on defense and military reform', *Xinhua*, 27 Jan. 2016.

¹⁸ This total excludes Eritrea and Somalia, for which it was impossible to make a reliable series of estimates for inclusion in the regional total.

2014 (see table 4.1). Despite three consecutive years of decreases, military expenditure in Africa was still 28 per cent higher in 2017 than in 2008.

Military spending in North Africa decreased for the first time since 2006, falling by 1.9 per cent to an estimated \$21.1 billion in 2017. Nonetheless, spending in 2017 was 105 per cent higher than in 2008. Algeria accounts for around half of North African military expenditure and around a quarter of African military expenditure. Algeria's military spending decreased by 5.2 per cent to \$10.1 billion in 2017. This was the first time since 2003 that its spending had fallen, and only the second time since 1995. The drop in spending in 2017 can be mainly attributed to the low price of oil and the continued fall in the Algerian Government's revenues from hydrocarbon extraction, which have kept the budget deficit high, depleted Algeria's national savings (down from 43 per cent of GDP in 2009 to just 4.6 per cent in 2016) and international reserves, substantially increased domestic borrowings, and prompted decreases in public spending (e.g. 5.8 per cent in 2016, with more cuts expected in 2017).¹⁹

Military expenditure in sub-Saharan Africa in 2017 was \$21.6 billion, up 0.9 per cent from 2016 but 6.8 per cent lower than in 2008. The surge in Sudan's military expenditure in 2017 drove the upward trend, but this was partly counteracted by decreases in spending in three of the four largest spenders in the subregion: Angola, Nigeria and South Africa. Principal of those was the continued drop in Angola's military expenditure, which fell by 16 per cent to \$3.1 billion in 2017. With austere government spending measures remaining in force, military spending was 61 per cent lower than at its peak in 2014.²⁰ While Angola was once the largest military spender in sub-Saharan Africa (with 26 per cent of the subregional total in 2014), it was in second place by 2016 and fell to third in 2017 (with 14 per cent of the subregional total), behind Sudan and South Africa (see section II).

There were also substantial cuts in military spending in 2017 in South Sudan (–56 per cent), Chad (–33 per cent), Mozambique (–21 per cent) and Côte d'Ivoire (–19 per cent). The decrease in Côte d'Ivoire's military spending, the first since 2013, was the result of the sharp drop in world prices for cocoa, the country's main export, which led to budget cuts in 2017 of around \$413 million, including \$117 million in military spending.²¹ Chad's military expenditure has fluctuated dramatically from year to year: the 33 per cent decrease in 2017 followed a 42 per cent increase in 2016 and a 37 per cent

¹⁹ International Monetary Fund (IMF), *Algeria: Staff Report for the 2017 Article IV Consultation*, IMF Country Report no. 17/141 (IMF: Washington, DC, 11 May 2017).

²⁰ International Monetary Fund (IMF), *Angola: Staff Report for the 2016 Article IV Consultation*, IMF Country Report no. 17/39 (IMF: Washington, DC, 23 Dec. 2016).

²¹ 'Ivory Coast to cut budget spending by 10 pct on low cocoa prices—president', Reuters, 20 Apr. 2017; and Monnier, O., 'Ivory coast cuts budget as cocoa decline slashes export earnings', Bloomberg Markets, 12 May 2017.

decrease in 2015. The fall in 2017 can be attributed to a combination of the withdrawal of troops from fighting Boko Haram in Niger, low oil revenues and a deepening economic crisis.²² In South Sudan, despite the renewed fighting between the national army (the Sudan People's Liberation Army, SPLA) and the Sudan People's Liberation Movement-in-Opposition (SPLM-IO), the worsening economic conditions (i.e. a fall in oil revenue, surging food prices, currency depreciation and hyperinflation) led to further reductions in military spending in 2017.²³

The intensification in fighting between the Sudanese Government and rebels in Darfur from mid-2017 contributed to a considerable rise in Sudan's military spending, up 35 per cent to \$4.4 billion in 2017.²⁴ The lull in armed activity in 2015 coincided with the lowest level of Sudanese military spending since the beginning of the armed conflict in Darfur, in 2003. But the government's subsequent commitment to military responses in Darfur drove up Sudanese military expenditure in 2016 and 2017 to become the highest in sub-Saharan Africa.²⁵

Gabon had the highest relative increase in military expenditure in 2017 of any country in Africa. While Gabon's overall government budget decreased by 17 per cent, military spending increased by 42 per cent in 2017 to \$299 million. Gabon became the third largest spender in West Africa, behind Nigeria and Côte d'Ivoire.

Nigeria's military expenditure fell for the sixth consecutive year in 2017, by 4.2 per cent to \$1.6 billion, despite continued military operations against Boko Haram. Military spending by South Africa, the second largest spender in sub-Saharan Africa, has stabilized at around \$3.6 billion, with a marginal decrease of 1.9 per cent in 2017.

The Americas

At \$695 billion, military expenditure in the Americas in 2017 was unchanged from 2016 but was 11 per cent lower than in 2008. Spending by the two countries in North America (Canada and the USA) accounted for 91 per cent of the total for the Americas. North America's total of \$630 billion was 0.2 per cent

²² International Monetary Fund (IMF), *Chad: Third and Fourth Reviews under the Extended Credit Facility Arrangement, and Requests for Waivers of Nonobservance of Performance Criteria, Augmentation of Access, Extension of the Current Arrangement, and Rephasing of Disbursements*, IMF Country Report no. 16/364 (IMF: Washington, DC, 28 Oct. 2016); and Balima, B. and Farge, E., 'Chad withdraws troops from fight against Boko Haram in Niger', Reuters, 12 Oct. 2017.

²³ Pinaud, M., 'South Sudan—November 2017 update', 27 Dec. 2017, Armed Conflict Location and Event Data Project (ACLED), 27 Dec. 2017; Soi, C., 'There are no clear winners in South Sudan's war', Al Jazeera, 20 Apr. 2017; and International Monetary Fund (IMF), *Republic of South Sudan: Staff Report for the 2016 Article IV Consultation*, IMF Country Report no. 17/73 (IMF: Washington, DC, 28 Feb. 2017).

²⁴ Nuba Reports, 'A new conflict in Darfur, more displaced', 1 June 2017.

²⁵ United Nations, Security Council, Final report of the panel of experts on the Sudan established pursuant to Resolution 1591 (2005), 22 Dec. 2016, S/2017/22, 9 Jan. 2017.

lower than 2016 and 13 per cent lower than 2008. South American military spending grew by 4.1 per cent in 2017 to \$57.0 billion, the first annual increase since 2014, bringing the overall increase since 2008 to 17 per cent. Between 2016 and 2017 military spending in Central America and the Caribbean fell by 6.6 per cent to \$7.6 billion, but this was still 39 per cent higher than total spending in 2008. The combined military expenditure in South America and Central America and the Caribbean amounted to \$64.6 billion in 2017, up by 2.7 per cent compared with 2016 and by 19 per cent compared with 2008.

The 4.1 per cent rise in military spending in South America can mainly be attributed to the increases by Argentina (by 15 per cent to \$5.7 billion) and Brazil (by 6.3 per cent to \$29.3 billion). Changes in Argentinian military expenditure for the latest year (in this case between 2016 and 2017) must be viewed with caution due to the regular and substantial differences between budgeted and actual spending. In each year since 1991, actual military expenditure has been on average only 94 per cent of budgeted expenditure for that year. The planned 2017 military budget of \$5.7 billion could thus result in actual military expenditure of around \$5.3 billion once spending is reported in 2018, representing a much lower annual increase of 6–7 per cent.

The increase in Brazil's military expenditure comes as a surprise given the country's current economic and political turmoil. The loosening of the government's budget deficit targets (up to 2020) and the release of additional funds (\$4.1 billion) seem to have benefited all major sectors (education, healthcare and military spending), with the proportion of spending on these areas as a share of total government expenditure increasing in 2017 compared with 2016.²⁶ Military expenditure, at \$29.3 billion, is the third largest area of government expenditure, behind healthcare and education.

Changes in military expenditure in Central America and the Caribbean are influenced mainly by Mexico, which accounts for 76 per cent of the sub-region's spending. After many years of unofficial involvement by the military in combating Mexico's drug cartels, the 2017 Internal Security Law has now formalized that role. However, the weight of economic pressures (e.g. a high budget deficit and government debt) continues to limit government expenditure.²⁷ At \$5.8 billion, Mexico's military spending in 2017 was 8.1 per cent lower than in 2016, down for the second consecutive year.

²⁶ Ayres, M. and Cascione, S., 'Brazil softens budget deficit goals through 2020', Reuters, 16 Aug. 2017; and Cascione, S., 'Update 1: Brazil frees up \$4 billion in 2017 gov't spending', Reuters, 22 Sep. 2017.

²⁷ Agren, D., 'Amid criticism, Mexico is on track to strengthen military's role in fighting crime', *Washington Post*, 10 Dec. 2017; Webber, J., 'Mexico steps up austerity plans in 2017 budget', *Financial Times*, 9 Sep. 2016; and Ley de Seguridad Interior [Internal security law], *Diario Oficial de la Federación*, vol. 771, no. 18 (21 Dec. 2017).

Asia and Oceania

Military spending in Asia and Oceania amounted to \$477 billion in 2017, an increase of 3.6 per cent compared with 2016. This was the lowest annual increase since the 2.4 per cent rise in 2010.

Military spending in the region grew by 59 per cent between 2008 and 2017.²⁸ The largest relative increases in military spending between 2008 and 2017 were made by Cambodia (332 per cent), Bangladesh (123 per cent), Indonesia (122 per cent) and China (110 per cent). There were other significant increases (higher than 40 per cent, but less than 100 per cent) in Viet Nam, the Philippines, Kyrgyzstan, Myanmar, Pakistan, Nepal and India. Military spending decreased in only five countries in Asia and Oceania over the 10-year period: Timor-Leste, Afghanistan, Fiji, Malaysia and Brunei Darussalam. Military spending in Asia and Oceania has risen from 17 per cent of global spending in 2008 to 27 per cent in 2017, primarily due to the significant increase in China's spending over the period. Moreover, five of the top 15 global spenders in 2017 are in Asia and Oceania: China (rank 2), India (rank 5), Japan (rank 8), South Korea (rank 10) and Australia (rank 13).

Many Asian states are continuing their long-term plans for modernization of their military capabilities. Existing interstate tensions in many Asian countries remain the main driving force behind the growth in military expenditure in the region.²⁹ The ongoing tensions include those between (a) the Democratic People's Republic of Korea (DPRK, or North Korea), South Korea and Japan on the Korean Peninsula; (b) China and Japan in the East China Sea; (c) China and several South East Asian countries over claims in the South China Sea; (d) India and Pakistan; and (e) India and China.

China's military spending, at an estimated \$228 billion, accounted for 48 per cent of the regional total and was 3.6 times that of the second largest spender in Asia and Oceania, India. China's spending as a share of world spending rose from 5.8 per cent in 2008 to 13 per cent in 2017.

India's total military spending in 2017 was \$63.9 billion, an increase of 5.5 per cent compared with 2016 and of 45 per cent compared with 2008. The Indian Government plans to modernize and enhance the operational capability of its armed forces and develop indigenous arms-production capabilities.³⁰ Both steps seem to be, at least partially, motivated by tensions with China and Pakistan.

²⁸ No data is available for North Korea, Turkmenistan and Uzbekistan for 2008–17 and they are not included in the totals for Asia and Oceania. The incomplete data for Tajikistan, which indicates an increase, is included in the total. Data for Laos is too incomplete to determine any clear trend.

²⁹ Tellis, A. J., Marble, A. and Tanner, T. (eds), *Strategic Asia 2010–11: Asia's Rising Power and America's Continued Purpose* (National Bureau of Asian Research: Seattle, WA, 2010); and Tweed, D., 'China tensions fuel acceleration in military spending in Asia', Bloomberg, 22 Feb. 2016.

³⁰ Jaitley, A., Indian Minister of Finance, 'Budget 2018–2019', Speech to the Lok Sabha, 1 Feb. 2018; and Magnus, G., 'Belt and road initiative stokes India–China confrontation', *Nikkei Asian*

Military spending by Japan was \$45.4 billion in 2017, almost unchanged from 2016 (up by 0.2 per cent) and 4.4 per cent higher than in 2008. While perceived threats from China and North Korea remain key to Japan's security strategy, it is also focusing on improving the efficiency of, and streamlining, its armed forces.³¹

Europe

At a total of \$342 billion in 2017, military spending in Europe accounted for 20 per cent of global military expenditure. It was 2.2 per cent lower than in 2016 and was only marginally (1.4 per cent) higher than in 2008. Between 2016 and 2017 military spending increased in Central Europe by 12 per cent to \$24.1 billion and in Western Europe by 1.7 per cent to \$245 billion, while it fell by 18 per cent in Eastern Europe to \$72.9 billion. Over the 10-year period 2008–17, military spending in Central Europe and Eastern Europe rose by 20 and 33 per cent, respectively, while spending fell by 5.7 per cent in Western Europe.

Four of the 15 largest military spenders in the world in 2017 are in Western Europe: France (rank 6), the UK (rank 7), Germany (rank 9) and Italy (rank 12), all of which are members of the North Atlantic Treaty Organization (NATO). Together, they accounted for 10 per cent of global military expenditure in 2017, down from 15 per cent in 2008. This overall decrease in the share of global military spending represents a remarkable rank reversal between these largest West European spenders and China over the period 2008–17. In 2008 the combined spending of these four countries accounted for 2.6 times that of China, but by 2017 they spent only 78 per cent of China's total.

France's spending fell by 1.9 per cent to \$57.8 billion in 2017, the first annual decrease since austerity measures ended in 2013. This was not unexpected following the new French Government's pledge to trim the 2017 military budget as a way to reduce the country's budget deficit.³²

By contrast, Germany raised its military expenditure by 3.5 per cent in 2017 after a 4.2 per cent increase in 2016. At \$44.3 billion, spending in 2017 was at its highest level since 1999. This followed the publication in 2016 of a government white paper on the military. In it the government concluded that the many crisis areas in the world and the increasing expectations of the role Germany should play in global security required the strengthening of

Review, 27 Feb. 2018.

³¹ Japanese Ministry of Defense (MOD), *Defense Programs and Budget of Japan: Overview of FY2017 Budget Request* (MOD: Tokyo, Aug. 2016).

³² Rubin, A. J., 'France's top general resigns in dispute over military spending', *New York Times*, 19 July 2017.

its armed forces and substantial increases in military spending.³³ It declared a long-term aim of reaching the NATO target of spending on the military—at least 2 per cent of GDP—but did not set an explicit timeline.³⁴ Based on Germany's GDP in 2017, reaching the NATO target would bring its military spending to about \$70 billion, the highest in Europe. The stated objective of implementing such a large change prompted debate between the parties of the governing coalition during 2017 about the rate of further growth in military expenditure.³⁵

British military spending rose by 0.5 per cent to \$47.2 billion in 2017. This real-terms growth rate matches the government's announcement made in May 2017 that the military budget would increase by at least 0.5 per cent above the rate of inflation, a rate matched in previous years.³⁶ The British Ministry of Defence (MOD) estimates that the UK's military burden is around 2.2 per cent of GDP—above the NATO target of at least 2 per cent.³⁷ However, SIPRI estimates that it was 1.8 per cent in 2017. It is possible that this discrepancy can be attributed to differences in the definition of military spending. SIPRI's definition does not include non-monetary costs such as depreciation or amortization, which amounted to around \$12 billion in 2017. By adding this figure to the SIPRI total, the UK's military burden would reach 2.2 per cent of GDP and thus match the figure quoted by the MOD.

The combined military spending of countries in Central Europe rose by 12 per cent in 2017 to \$24.1 billion. All but two countries—Bosnia and Herzegovina and Serbia—increased their military expenditure in 2017, many citing the perceived threat to the subregion from Russia.³⁸ While Poland was by far the largest spender in Central Europe in 2017, accounting for 42 per cent of the subregional total, Romania made the largest relative increase: its military expenditure rose by 50 per cent compared with 2016 as it started to implement its military procurement, modernization and expansion plan for the period 2017–26. The plan is expected to cost a total of \$11.6 billion and has already raised Romania's military burden to the NATO target of 2 per cent of GDP—the first time the country has reached that target since it became

³³ German Government, *Weissbuch 2016 Zur Sicherheitspolitik und zur Zukunft der Bundeswehr* [White paper 2016 on security policy and the future of the Bundeswehr] (German Ministry of Defence: Berlin, July 2016).

³⁴ For further detail on the NATO target see e.g. North Atlantic Council, 'Wales summit declaration', Press Release (2014) 120, 5 Sep. 2014.

³⁵ Werkhäuser, N., 'Mehr Geld fürs Militär?' [More money for the military?], *Deutsche Welle*, 8 Aug. 2017.

³⁶ Merrick, R., 'Theresa May pledges to increase defence spending after military chiefs warn UK losing the ability to fight wars', *The Independent*, 10 May 2017.

³⁷ See e.g. British Ministry of Defence, 'UK defence in numbers', Sep. 2017.

³⁸ Pezard, S. et al., *European Relations with Russia: Threat Perceptions, Responses and Strategies in the Wake of the Ukrainian Crisis*, Research Report no. 1579 (RAND Corporation: Santa Monica, CA, 2017).

a member of NATO in 2004.³⁹ Other notable increases in spending in the subregion were those of Latvia and Lithuania, both with annual increases of 21 per cent.

Military spending in Eastern Europe was \$72.9 billion in 2017, a fall of 18 per cent compared with 2016. This decline in spending breaks the upward trend that began in 1998: between 1998 and 2016 military spending in Eastern Europe increased every year in real terms, and by 2016 it was almost 400 per cent higher than in 1998.

The decline in military spending in Eastern European was due almost entirely to the fall in Russian military expenditure, which in 2017 accounted for 91 per cent of the subregional total. From 2009 Russia's military spending had funded an accelerated programme for acquisition of new equipment and for modernization of arms factories.⁴⁰ This programme was intended to last until at least 2020 or 2025. However, the Russian economy has suffered a number of setbacks since 2014, including a significant drop in oil export revenues, and government spending has been falling since then. The military budget remained unaffected until 2017, when it fell for the first time since 1998. In 2017 Russian military spending was \$66.3 billion, a real-terms drop of 20 per cent compared with 2016. It should be noted, however, that the Russian Government made a one-off debt repayment of roughly \$11.8 billion (793 billion roubles) to Russian arms producers in 2016, which raised annual spending above the usual level. Russia plans to maintain a lower level of spending in 2018–20, which means that the 2011–20 budgets for force modernization will be significantly lower than originally planned, probably around 40 per cent lower.⁴¹ The decrease in spending in 2017 brought Russia's military burden down to 4.3 per cent of GDP, from 5.5 per cent in 2016.

Ukraine's military expenditure in 2017 was \$3.6 billion. While spending increased by 10 per cent in nominal terms, high inflation meant that military expenditure fell in real terms by 2.0 per cent. This is similar to the change in 2016 and very different from the strong real-terms growth in 2014–15, reflecting the stagnation in the scope of the conflict in eastern Ukraine since 2016.⁴² Concerns, however, remain about a re-escalation of the conflict, as skirmishes between government soldiers and rebels continued into 2018.

³⁹ 'Romania commits to keep annual defence spending at 2 pct of GDP until 2026', Reuters, 1 Aug. 2017; and Wezeman, S. T. and Kuimova, A., 'Romania and Black Sea security', SIPRI Background Paper, forthcoming 2018.

⁴⁰ On Russia's state armament programme (*gosudarstvennaya programma vooruzheniya*, GPV) see e.g. Perlo-Freeman, S., 'Russian military expenditure, reform and restructuring', *SIPRI Yearbook 2013*, pp. 142–45.

⁴¹ Cooper, J., 'Military spending in Russia's draft federal budget, 2018–20', Unpublished research note, 2 Oct. 2017.

⁴² On the conflict in Ukraine see chapter 2, section IV, in this volume. See also Wezeman, S. T. and Kuimova, A., 'Ukraine and Black Sea security', SIPRI Background Paper, forthcoming 2018.

Improved economic conditions in Ukraine since 2016 have reduced its military spending as a share of GDP from a high of 4.0 per cent in 2015 to 3.4 per cent in 2017.⁴³

The Middle East

Seven of the 10 countries with the highest military burden in the world in 2017 are in the Middle East.⁴⁴ However, SIPRI has not estimated total military spending in the Middle East in 2017 because of a lack of accurate data for several countries. These include Qatar and the United Arab Emirates (UAE)—which are assessed to be major military spenders based on their known large weapons acquisitions and their military spending levels in previous years—and Syria and Yemen.

The combined total military expenditure for those countries for which data is available shows a continuous increase between 2009 and 2015, resulting in a total increase between those years of 41 per cent. However, with the fall in oil prices, spending by these countries decreased by 16 per cent between 2015 and 2016. Their spending increased again in 2017, by 6.2 per cent, but their total was still 11 per cent lower than in 2015.

Saudi Arabia and the UAE are estimated to be the two largest military spenders in the region. Long-standing threat perceptions of and rivalry with Iran, along with the related military intervention in Yemen since 2015, are important drivers for their military expenditure. Major tensions between Qatar on the one side and Saudi Arabia and the UAE on the other that surfaced in 2017 have added further pressures to invest in military assets in these countries. Saudi Arabia is by far the largest military spender in the region and was the third largest in the world in 2017. Its military spending increased by 74 per cent between 2008 and 2015 to a peak of \$90.3 billion. It then fell by 29 per cent in 2016, but increased again by 9.2 per cent in 2017 to \$69.4 billion (see section II). The last available estimate for military spending by the UAE is for 2014 (\$24.4 billion), when it was the second largest military spender in the region. Considering its military operations in Libya, Syria and Yemen, major arms procurement in recent years and developments in its overall government spending, it is reasonable to assume that the UAE's military spending remains at a similar level to 2014.

By 2014 Iran's military expenditure had declined steadily (by 31 per cent) from its peak in 2006. However, since 2014 the Iranian economy has benefited from the gradual lifting of European Union and United Nations

⁴³ World Bank, 'Ukraine economy update', 4 Apr. 2017.

⁴⁴ The 7 countries are Oman (12% of GDP), Saudi Arabia (10% of GDP), Kuwait (5.8% of GDP), Jordan (4.8% of GDP), Israel (4.7% of GDP), Lebanon (4.5% of GDP) and Bahrain (4.1% of GDP).

sanctions, which in turn facilitated a 37 per cent increase in military spending between 2014 and 2017 to \$14.5 billion in 2017.⁴⁵

Following a peak in Israel's spending in 2014–15, which coincided with its military operations in Gaza in 2014, Israel's military expenditure dropped by 13 per cent between 2015 and 2016. While military spending increased by 4.9 per cent to \$16.5 billion in 2017 (excluding about \$3.1 billion in military aid from the USA), this total is well below the levels of spending in 2014 and 2015.

Egyptian military expenditure in 2017 was 11 per cent lower than in 2016 and 16 per cent lower than in 2015. Considering Egypt's military operations in the Sinai, its security concerns regarding Libya, its contributions to the military intervention in Yemen and the major arms procurement programmes that it initiated in 2015, this development is notable. However, the available data may be inaccurate, possibly due to off-budget spending. Another explanation could be increased foreign military aid: while the USA has given military aid of typically \$1.3 billion annually to Egypt since 1978, some of Egypt's recent arms imports from France were reportedly financed by additional military aid from Saudi Arabia.⁴⁶

Between 2008 and 2017 Turkish military expenditure increased by 46 per cent to reach \$18.2 billion, making it the 15th largest spender globally.⁴⁷ Over this decade, spending grew in real terms every year except for 2010. While the original 2017 military budget was lower than the 2016 budget, actual spending grew during the year by almost 10 per cent as military operations along the Syrian and Iraqi border increased. In 2017 Turkey spent 2.2 per cent of its GDP on the military, up from 2.1 per cent in 2016. Turkey exceeded the NATO target of 2 per cent of GDP in 8 of the 10 years between 2008 and 2017.

⁴⁵ On the lifting of sanctions see chapter 7, section V, and chapter 10, section II, in this volume.

⁴⁶ Sharp, J. M., *Egypt: Background and US Relations*, Congressional Research Service (CRS) Report for Congress RL33003 (US Congress, CRS: Washington, DC, 8 Feb. 2018), pp. 15–18; and Jova, P., 'Un des Mistral vendus à l'Égypte a pris la mer' [One of the Mistrals sold to Egypt went to sea], *Le Figaro*, 6 May 2016. SIPRI includes military aid in the military spending of the donor country, not the recipient.

⁴⁷ On Turkish military expenditure and military policy see Wezeman, S. T. and Kuimova, A., 'Turkey and Black Sea security', SIPRI Background Paper, forthcoming 2018.