

I. Global developments in military expenditure

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Global military expenditure in 2018 is estimated to have exceeded \$1.8 trillion for the first time.¹ The total of \$1822 billion was 2.6 per cent higher in real terms than in 2017 and 5.4 per cent higher than in 2009 (see table 4.1 and figure 4.1).² World military spending has been gradually rising following a post-2009 low in 2014. The world military burden—global military expenditure as a share of global gross domestic product (GDP)—fell to 2.1 per cent in 2018 due to a large increase (6.0 per cent) in global GDP (see figure 4.2).³ Military spending per capita increased from \$230 in 2017 to \$239 in 2018, as the 1.1 per cent growth in world population was surpassed by the growth in military spending.

The growth in global military expenditure in 2018 can be attributed to increases in military spending in the Americas and Asia and Oceania. Spending in the Americas rose by 4.4 per cent, the first increase since 2010, to \$735 billion in 2018. Military expenditure grew by 3.3 per cent to \$507 billion in Asia and Oceania, where spending has risen every year since reliable regional estimates became available in 1988. Increases in these two regions were primarily due to substantial rises in military expenditure by the United States and China. Military expenditure also increased in Europe, by 1.4 per cent to reach \$364 billion in 2018. The only region where spending decreased in 2018 was Africa, where it fell by 8.4 per cent to \$40.6 billion.

For the fourth successive year, SIPRI cannot provide an estimate of total spending in the Middle East. No reliable estimate can be made because data is missing from two large spenders (Qatar and the United Arab Emirates, UAE) and from two conflict-affected countries (Syria and Yemen). However, for the 11 countries in the Middle East for which data is available, the combined total military expenditure decreased by 1.9 per cent to \$145 billion in 2018. Seven

¹ Of the 168 countries for which SIPRI attempted to estimate military expenditure in 2018, relevant data was found for 155 countries. See the notes in table 4.1 for more details on estimates in world and regional totals.

² All figures for spending in 2018 are quoted in current 2018 US dollars. Except where otherwise stated, figures for increases or decreases in military spending are expressed in constant 2017 US dollars, often described as changes in 'real terms' or adjusted for inflation. The large difference in 2018 world military expenditure expressed in current 2018 US dollars (\$1822 billion) and in constant 2017 US dollars (\$1780 billion) is 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. The sources and methods used to produce the data discussed here are also presented on the SIPRI website and are summarized in box 4.1 in section II.

³ GDP estimates are from International Monetary Fund (IMF), International Financial Statistics Database, Sep. 2018.

Table 4.1. Military expenditure and military burden by region, 2009–18

Figures for 2009–18 are in US\$ b. at constant (2017) prices and exchange rates. Figures for 2018 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.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018*
World total	1 689	1 722	1 728	1 715	1 691	1 687	1 715	1 715	1 735	1 780	1 822
<i>Geographical regions</i>											
Africa											
North Africa	(35.9)	(37.6)	(40.6)	(41.5)	(45.7)	46.9	(43.8)	(42.9)	(42.7)	(39.2)	(40.6)
Sub-Saharan Africa	(11.5)	(12.7)	(15.8)	17.1	19.9	20.8	(21.2)	(21.4)	(21.1)	(19.9)	(22.2)
Americas	24.4	(25.0)	(24.8)	(24.3)	(25.8)	22.5	21.5	21.5	21.7	19.3	18.4
Central America and the Caribbean	840	864	854	811	755	714	701	694	693	723	735
North America	6.1	6.5	6.8	7.4	7.8	8.5	8.9	8.2	7.7	8.4	8.6
South America	783	802	793	748	689	647	635	631	627	655	670
Asia and Oceania	51.5	55.1	54.4	55.9	58.3	58.4	57.5	54.6	57.9	59.7	55.6
Central and South Asia	338	346	360	374	393	415	438	460	478	494	507
East Asia	64.3	65.2	66.4	66.8	67.0	70.5	72.3	78.0	83.7	87.2	85.9
Oceania	218	225	237	250	266	283	298	310	323	336	350
South East Asia	24.4	24.7	24.3	23.5	23.3	25.1	27.5	30.0	30.1	29.2	29.1
Europe	30.8	31.2	32.2	33.5	36.9	36.6	40.2	41.6	41.3	41.0	41.9
Central Europe	337	331	326	329	324	327	338	350	343	348	364
Eastern Europe	19.4	18.7	18.2	18.0	17.8	18.8	21.3	21.6	23.4	26.1	28.3
Western Europe	55.5	56.4	60.6	69.7	73.1	78.5	84.6	89.3	73.1	71.9	69.5
Middle East	263	256	247	241	233	230	232	240	246	250	266
	137	143	147	159	174	185	..	..	..	..	..

Military burden (i.e. world military spending as a % of world gross domestic product, both measured in current US\$)

World	2.6	2.5	2.4	2.3	2.3	2.1	2.3	2.2	2.1
Africa	2.0	1.8	1.7	1.8	2.0	2.2	1.9	1.8	1.7
Americas	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4
Asia and Oceania	1.8	1.7	1.6	1.6	1.7	1.7	1.8	1.7	1.7
Europe	1.8	1.6	1.6	1.6	1.5	1.5	1.6	1.5	1.6
Middle East	4.6	4.3	4.3	4.6	4.7	4.8	5.4	4.9	4.4
<i>World military spending per capita (current US\$)</i>	228	237	248	245	242	239	226	230	239

() = 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.

Notes: 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, Qatar, 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, Apr. 2019; International Monetary Fund, World Economic Outlook Database, Oct. 2018; International Monetary Fund, International Financial Statistics Database, Sep. 2018; and United Nations Department of Economic and Social Affairs, Population Division, 'World population prospects 2017', July 2018.

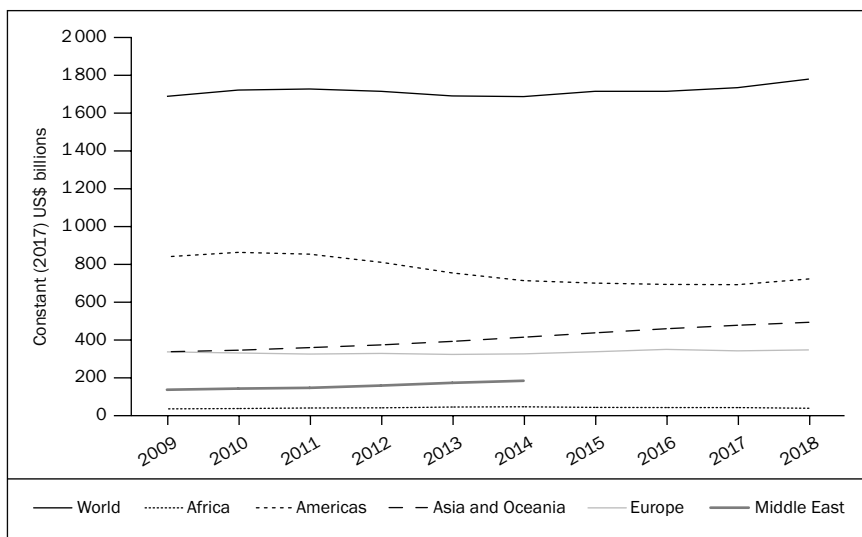


Figure 4.1. Military expenditure by region, 2009–18

Note: No estimate of military expenditure in the Middle East for 2015–18 is given since the data is highly uncertain. However, an estimate for the Middle East is included in the estimated world total.

Source: SIPRI Military Expenditure Database, Apr. 2019.

of these 11 countries decreased spending, but this was partially offset by a large increase by Turkey.

The rise in world military spending in 2018 can be illustrated by comparing the largest increases to the largest decreases in absolute terms. In 2017 constant US dollars, military spending increased by \$27.8 billion in the USA, \$11.3 billion in China and \$4.3 billion in Turkey. In contrast, the largest decreases were much smaller: the largest was \$4.6 billion in Saudi Arabia, followed by \$2.3 billion in Russia and \$2.1 billion in Sudan.

Trends in military expenditure, 2009–18

The growth in total global military spending in 2018 was the second consecutive annual increase. This rise, of 2.6 per cent, was the largest of the past 10 years, surpassing the 2.0 per cent rise in 2010. The 5.4 per cent increase in world military expenditure over the decade 2009–18 can be divided into three distinct periods: an increase between 2009 and 2011, a decrease between 2011 and 2014 and another increase between 2014 and 2018 (see table 4.1).

The five or six largest military spenders—currently the USA, China, Saudi Arabia, India, France and Russia—typically accounted for about two-thirds of total military expenditure between 2009 and 2018, and so had a significant influence on the trend in global military expenditure. For example, the USA's

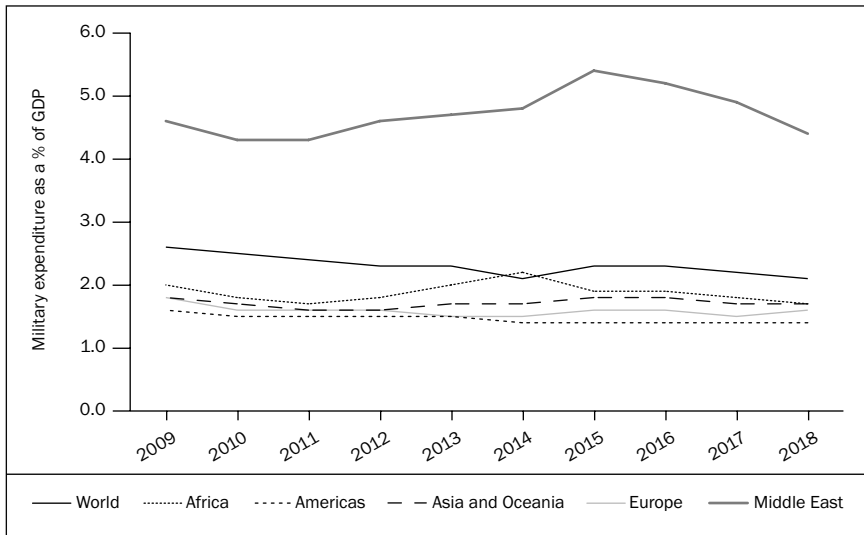


Figure 4.2. Military expenditure as a share of gross domestic product (GDP), by region, 2009–18

Source: SIPRI Military Expenditure Database, Apr. 2019.

higher military budgets to support the ‘global war on terrorism’ led the increases in world military expenditure up until 2011, when it decided to withdraw troops from Afghanistan and Iraq. World military spending then started to fall. In Asia and Oceania, total military expenditure continued to grow, mostly due to increases in spending by China and India. This fuelled the rise in world spending between 2009 and 2011. Russia’s military expenditure also increased in 2009–16, but it then decreased in 2017 and 2018 as the major arms modernization programme implemented since 2010 slowed down. Saudi Arabia’s military expenditure grew steadily from 2009 to 2015 but decreased substantially in 2016 due to the crash in oil prices. This caused a substantial fall in spending in the Middle East and moderated the global rising trend, which was mostly influenced by higher levels of spending in Asia and Oceania and Europe. In Western Europe, austerity measures led to decreases in military expenditure by some major spenders in the initial years following the economic crisis of 2008–2009, most notably France, Italy and the United Kingdom.

Over the decade 2009–18 military spending decreased in only three sub-regions (see table 4.2): sub-Saharan Africa (–21 per cent), North America (–16 per cent) and Western Europe (–4.9 per cent). In all other subregions, military spending grew. The three largest increases were in North Africa (74 per cent), East Asia (54 per cent), and Central America and the Caribbean (39 per cent).

Table 4.2. Key military expenditure statistics by region and subregion, 2018

Expenditure figures are in US\$, at current prices and exchange rates. Changes are in real terms, based on constant (2017) US\$.

Region and subregion	Military expenditure, 2018 (US\$ b.)	Change (%)		Major changes, 2017–18 (%) ^a			
		2017–18	2009–18	Increases		Decreases	
World	1 822	2.6	5.4				
<i>Africa</i> ^b	(40.6)	-8.4	9.2	Burkina Faso	52	South Sudan	-50
North Africa	(22.2)	-5.5	74	Zimbabwe	19	Sudan	-49
Sub-Saharan Africa ^b	18.4	-11	-21	Nigeria	18	Benin	-28
				Uganda	17	Congo (Rep. of the)	-27
<i>Americas</i> ^c	735	4.4	-14	Jamaica	40	Trinidad and Tobago	-18
Central America and Caribbean ^c	8.6	8.8	39	Dominican Republic	13	Argentina	-2.3
North America	670	4.4	-16	Mexico	10		
South America	55.6	3.1	16	Paraguay	8.7		
<i>Asia and Oceania</i> ^d	507	3.3	46	Kazakhstan	16	Myanmar	-8.9
Central and South Asia ^e	85.9	4.2	36	Cambodia	13	Sri Lanka	-8.4
East Asia ^f	350	4.1	54	Pakistan	11	Malaysia	-8.2
Oceania	29.1	-2.9	20	Viet Nam	7.4	Indonesia	-6.3
South East Asia	41.9	-0.8	33				
<i>Europe</i>	364	1.4	3.1	Armenia	33	Russia	-3.5
Central Europe	28.3	12	35	Bosnia and Herzegovina	26	Greece	-3.1
Eastern Europe	69.5	-1.7	29	Latvia	24	North Macedonia	-2.1
Western Europe	266	1.4	-4.9	Bulgaria	23	France	-1.4
<i>Middle East</i> ^g	..	..	..	Turkey	24	Iraq	-16
				Lebanon	6.8	Bahrain	-11
				Kuwait	6.6	Iran	-9.5

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

^a These lists show the countries with the largest increases or decreases for each region as a whole, rather than by subregion. Countries with a military expenditure in 2018 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 estimates for the Middle East are available for 2015–18. A rough estimate for the Middle East (excluding Qatar and Syria) is included in the world total.

Source: SIPRI Military Expenditure Database, Apr. 2019.

The sharp decline in sub-Saharan Africa was the result of spending decreases by two of the countries with the largest military expenditure in the subregion, Angola and Sudan. In North America (i.e. Canada and the USA),

the decrease was solely because of falling US military spending in 2011–17. Spending in Western Europe dropped mainly because decreases by the UK, Italy and Spain outweighed an increase by Germany.

In contrast, the growth in North Africa was the result of higher spending by Algeria, Morocco and Tunisia. In East Asia, China continued to increase its military spending, but lower economic growth led to lower rates of increase in military spending. The higher spending in Central America and the Caribbean can mostly be attributed to Mexico and its ongoing battle against drug cartels (see below).

The world military burden of 2.1 per cent in 2018 was 0.5 percentage points less than in 2009 despite the 5.4 per cent increase in military spending (see table 4.1). This decrease is largely due to the exceptionally low level of GDP in the recession year of 2009. Thus, while the world is now spending more on the military in absolute terms, it is dedicating a smaller proportion of total resources to the military than in 2009 (see figure 4.2). On average, states in the Americas had the lowest military burden in 2018, at 1.4 per cent of GDP; this rises to an average of 1.6 per cent in Europe, 1.7 per cent in both Africa and Asia and Oceania, and 4.4 per cent in the Middle Eastern countries for which data is available.

The largest military spenders in 2018

The top 15 military spenders in the world in 2018 were the same as those in 2017 but there were some significant changes in the rankings (see table 4.3).⁴ Most notably, Russia ranked outside the top five for the first time since 2006.

Together, the top 15 countries spent \$1470 billion in 2018, accounting for 81 per cent of global military expenditure. The two largest spenders remained the USA (with 36 per cent of world spending) and China (14 per cent), each increasing its share of global spending by 1 percentage point over 2017. Despite Saudi Arabia having the largest absolute decrease in military spending in 2018 (see above), it remained the third-largest spender. At \$66.5 billion, India was the fourth-largest spender in 2018, up from rank nine in 2009. Its military expenditure has risen by 29 per cent over the past decade. France, despite its minor decrease (1.4 per cent) in military spending, moved up one place in the rankings to fifth, due to Russia's drop from fourth to sixth position. The changes in rank of France and Russia are partly down to changes in the exchange rate: while the rouble has depreciated against the US dollar, the euro has appreciated.

⁴ The UAE would probably rank as one of the 15 largest spenders, most likely 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 thus it has been omitted from the top 15 ranking.

Table 4.3. The 15 countries with the highest military expenditure in 2018

Expenditure figures and GDP are in US\$, at current prices and exchange rates. Changes are in real terms, based on constant (2017) US\$. Figures may not add up to stated subtotals due to the conventions of rounding.

Rank		Country	Military expenditure, 2018 (\$ b.)	Change, 2009–18 (%)	Military expenditure as a share of GDP (%) ^b		Share of world military expenditure, 2018 (%)
2018	2017 ^a				2018	2009	
1	1	United States	649	-17	3.2	4.6	36
2	2	China	[250]	83	[1.9]	[2.1]	[14]
3	3	Saudi Arabia	[67.6]	28	[8.8]	9.6	[3.7]
4	5	India	66.5	29	2.4	2.9	3.7
5	6	France	63.8	1.6	2.3	2.5	3.5
Subtotal top 5			1 097	..	..	..	60
6	4	Russia	61.4	27	3.9	3.9	3.4
7	7	United Kingdom	50.0	-17	1.8	2.4	2.7
8	9	Germany	49.5	9.0	1.2	1.4	2.7
9	8	Japan	46.6	2.3	0.9	1.0	2.6
10	10	South Korea	43.1	28	2.6	2.7	2.4
Subtotal top 10			1 347	..	..	..	74
11	13	Italy	27.8	-14	1.3	1.6	1.5
12	11	Brazil	27.8	17	1.5	1.5	1.5
13	12	Australia	26.7	21	1.9	1.9	1.5
14	14	Canada	21.6	12	1.3	1.4	1.2
15	15	Turkey	19.0	65	2.5	2.5	1.0
Subtotal top 15			1 470	..	..	..	81
World			1 822	5.4	2.1	2.6	100

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

^a Rankings for 2017 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 2017 given in *SIPRI Yearbook 2018* and in other SIPRI publications in 2018.

^b These figures are based on GDP estimates from the International Monetary Fund's World Economic Outlook and International Financial Statistics databases.

Sources: SIPRI Military Expenditure Database, Apr. 2019; International Monetary Fund, World Economic Outlook Database, Oct. 2018; and International Monetary Fund, International Financial Statistics Database, Sep. 2018.

The top 15 countries can be divided into four groups according to the scale of their military expenditure. The USA and China are the largest spenders—together they spent over 1.5 times more than the next 13 countries combined. Next are four countries—Saudi Arabia, India, France and Russia—that each spent around \$60–70 billion in 2018; their combined expenditure was equal to that of China. The third group consists of the UK, Germany, Japan and South Korea, which each spent \$40–50 billion in 2018. The fourth group includes five countries—Italy, Brazil, Australia, Canada and Turkey—that each spent around \$20–30 billion.

Between 2009 and 2018, all but three of the top 15 countries increased their military expenditure: the exceptions being the USA (–17 per cent), the UK (–17 per cent) and Italy (–14 per cent). There were particularly high increases (i.e. 40 per cent or more) in spending over the decade by China (83 per cent) and Turkey (65 per cent). There were more moderate increases (i.e. 10–39 per cent) in the spending of Australia, Brazil, Canada, India, Russia, Saudi Arabia and South Korea, and minor increases (i.e. less than 10 per cent) by France, Germany and Japan.

Among the top 15 military spenders in 2018, Saudi Arabia had the highest military burden, devoting 8.8 per cent of its GDP to military expenditure, while Japan had the lowest, at 0.9 per cent. The military burdens of all 15 countries were lower in 2018 than in 2009.⁵ This can be explained by the 2009 global recession, when countries either experienced negative GDP growth (e.g. Russia, Saudi Arabia and the USA) or lower than usual increases in GDP (e.g. China and India). In 2009 in particular, the military burden peaked for many countries. The USA had the largest decrease in military burden, dropping from 4.6 per cent of GDP in 2009 to 3.2 per cent in 2018.

The United States

Following seven years of decline, US military expenditure increased by 4.6 per cent in 2018 to reach \$649 billion.⁶ The USA remained by far the largest spender in the world, spending 2.6 times more than the second-largest military spender, China (see below). However, US military expenditure in 2018 remained 19 per cent lower than its peak in 2010. Over the decade 2009–18, US military spending decreased by 17 per cent. The US Government's budget-adoption process has been particularly difficult during the 2010s, in the context of severe and antagonistic divisions in the Congress and between the Congress and the administration on the correct level of the US military budget.⁷

The 2010 peak was due to the intensification of the US military operation in Afghanistan through increasing resources and US military personnel. The objective of this military troop 'surge' was to target the Taliban insurgency and ultimately improve the security environment in Afghanistan. The goal was to enable the USA to withdraw all of its troops from the country by the

⁵ Due to rounding conventions, in table 4.3 military spending as a share of GDP for Australia, Brazil, Russia and Turkey appears to be the same in 2009 and 2018, but in all these cases the military burden in 2009 was higher.

⁶ The US military expenditure data is based on figures obtained from the White House's Office of Management and Budget (OMB), which includes nuclear spending by the Department of Energy, plus information on spending by the Department of State on International Military Education and Training (IMET), peacekeeping and Foreign Military Financing (FMF) from the congressional budget justification.

⁷ Rosenberg, Y., 'What will a divided Congress do about the defence budget?', *Fiscal Times*, 20 Nov. 2018.

end of 2014.⁸ Starting in 2011, US military spending decreased each year until it was 23 per cent lower in 2017.

When he took office in 2017, President Donald J. Trump added \$15 billion to the 2017 budget of the Department of Defense (DOD) by increasing funds for its Overseas Contingency Operations (OCO). While the 2011 Budget Control Act (BCA) imposed limits on certain budget lines in order to reduce the USA's large deficit, the OCO category was not one of these.⁹ The budget limitations imposed by the BCA were often circumvented in this way. According to a 2018 report by the US Congressional Budget Office, between 1970 and 2000 non-base funding—which includes overseas military operations—accounted for about 2 per cent of the DOD's total appropriations.¹⁰ After 2001, the DOD began treating funding for OCO and funding for its base budget differently. Over the period 2001–18, non-base funding averaged about 20 per cent of the DOD's total funding each year.

In 2018 the BCA was set aside by a two-year bipartisan budget agreement, which increased the overall government budget, including for the DOD.¹¹ Despite the short-term agreement, political discord on appropriate levels of military expenditure remains.

The growth in US military budgeting and spending in 2018 can be attributed to two central factors. The first is increases in military salaries, which are decided automatically according to a statutory formula.¹² Salaries rose by 2.4 per cent in 2018, a bigger increase than in many previous years, but still lower than those of 3.4–3.9 per cent in 2008–10.¹³ The second factor is the implementation of large and costly arms acquisition programmes, for both conventional and nuclear weapon modernization. According to an estimate for the US Congress, the total costs of just the nuclear modernization will be \$1.2 trillion (in 2017 dollars) over the period 2017–46.¹⁴ If fully implemented, the plan would increase the total cost of US nuclear forces by about

⁸ White House, 'Remarks by the President in address to the nation on the way forward in Afghanistan and Pakistan', 1 Dec. 2009; and Perlo-Freeman, S., Ismail, O. and Solmirano, C., 'Military expenditure', *SIPRI Yearbook 2010*, pp. 177–200.

⁹ Sköns, E. and Perlo-Freeman, S., 'The United States' military spending and the 2011 budget crisis', *SIPRI Yearbook 2012*, pp. 162–66; and Heniff, B., Rybicki, E. and Mahan, S. M., *The Budget Control Act of 2011*, Congressional Research Service (CRS) Report for Congress (US Congress, CRS: Washington, DC, 19 Aug. 2011).

¹⁰ US Congressional Budget Office (CBO), *Funding for Overseas Contingency Operations and Its Impact on Defense Spending* (CBO: Washington, DC, Oct. 2018).

¹¹ Daniels, S. P. and Harrison, T., 'Making sense of the bipartisan budget act of 2018 and what it means for defense', Center for Strategic and International Studies, 20 Feb. 2018.

¹² Kapp, L., 'Defense primer: Military pay raise', In Focus, US Congressional Research Service, 17 Dec. 2018.

¹³ US Department of Defense, Office of the Under Secretary of Defense for Personnel and Readiness, Military Compensation, 'Annual pay adjustment', [n.d.].

¹⁴ US Congressional Budget Office (CBO), *Approaches for Managing the Costs of US Nuclear Forces, 2017 to 2046* (CBO: Washington, DC, Oct. 2017). On the nuclear modernization see chapter 6, section I, in this volume.

50 per cent above what it would be without this modernization, and is thus likely to increase US military spending significantly.

The DOD presented the drivers behind these budgeting decisions in a summary of the 2018 National Defense Strategy.¹⁵ The strategy presents an international security environment characterized by an erosion of international rules and the USA's 'competitive military advantage', and challenges to the USA from such powers as China and Russia.¹⁶

China

China, the world's second-largest military spender, allocated an estimated \$250 billion to the military in 2018, an increase of 5.0 per cent compared with 2017. China's military spending accounted for 14 per cent of global spending.

SIPRI's military expenditure figures for China differ from the figures in China's official government publications. China's national defence budget does not include additional important elements that SIPRI considers to be military spending. This includes expenditure on the People's Armed Police (the largest of the additional elements); payments to demobilized soldiers; military research, development, testing and evaluation; military construction; and arms imports. As a result, SIPRI's estimated figure for China's military expenditure is typically around 40 per cent higher than the figure that the Chinese Government publishes in its national defence budget: 1.1 trillion yuan (\$175 billion) in 2018.¹⁷

SIPRI has data for China's military spending for the period 1989–2018. In the three decades from 1989, China's military expenditure grew more in absolute terms (\$220 billion in constant 2017 prices) than any other country in the world, and by 1140 per cent in real terms. In 1989 China spent a similar amount on its military to Brazil, Iran and Saudi Arabia (see table 4.4). By 1999 it was spending more than Russia and a similar amount to Italy. By 2009 its spending was second only to the USA. In 2018 China's spending was 19 times that of Iran, 9 times that of Brazil and almost 4 times that of Saudi Arabia.

While Chinese military spending has grown more than tenfold since 1989, the growth has been in line with economic development. This is in accordance with the Chinese Government's principle that military expenditure should rise at the same rate as economic growth and that funds should not be diverted from other civilian requirements.¹⁸ Over the period 1989–2018, China's military expenditure as a share of GDP averaged 2.0 per cent, never

¹⁵ US Department of Defense (DOD), *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge* (DOD: Washington, DC, Jan. 2018). The National Defense Strategy itself is classified.

¹⁶ US Department of Defense (note 15), pp. 1–3.

¹⁷ On SIPRI's methodology for estimating China's military spending see SIPRI, 'SIPRI estimates for China', [n.d.].

¹⁸ Chinese State Council, *China's National Defense in 2008* (Information Office of the State Council: Beijing, Jan. 2009), chapter XII.

Table 4.4. Military expenditure by China and selected countries, 1989–2018

Expenditure figures are in US\$, at current prices and exchange rates. Changes are in real terms, based on constant (2017) US\$.

	Military expenditure (current US\$ b.)				Change (%), 1989–2018
	1989	1999	2009	2018	
China	11.4	21.0	106	250	1 140
Brazil	8.8	9.9	25.6	27.8	71
Iran	16.3	6.7	12.6	13.2	191
Italy	17.7	21.0	34.0	27.8	–10
Russia	..	6.5	51.5	61.4	32 ^a
Saudi Arabia	12.7	18.3	41.3	67.6	199
United States	304	281	669	649	5.4

.. = not available.

^a No figure for spending by Russia in 1989 is available since it was part of the Soviet Union at the time. The change figure for Russia is for the period 1992–2018.

Source: SIPRI Military Expenditure Database, Apr. 2019.

leaving the range 1.7–2.5 per cent. Since 2013, China has allocated 1.9 per cent of its GDP to the military each year.

The annual rate of growth of China's military spending has slowed steadily since it reached a post-2009 recession high of 9.3 per cent in 2013. The growth of 5.0 per cent in 2018 was the lowest annual increase since 1995. With its economic growth slowing in 2018 to the lowest level in 28 years, slower rates of growth in the coming years can be expected if China continues to follow the principle described above.¹⁹

Regional trends

Africa

Military expenditure in Africa fell for the fourth consecutive year in 2018, decreasing by 8.4 per cent to an estimated \$40.6 billion.²⁰ This was the largest relative drop in spending by a region. While military spending in Africa was still 9.2 per cent higher than in 2009, it was 16 per cent below the previous peak, reached in 2014 (see tables 4.1 and 4.2).

Military spending in North Africa totalled \$22.2 billion in 2018. This was a decrease of 5.5 per cent compared with 2017 (see figure 4.3) and the second consecutive year of decline. Nonetheless, spending in 2018 was 74 per cent higher than in 2009.

¹⁹ Kuo, L., 'China's economic growth slowest since 1990 amid trade war with US', *The Guardian*, 21 Jan. 2019.

²⁰ This regional total excludes Eritrea and Somalia, for which it was impossible to make a reliable series of estimates. SIPRI has no military spending data for Eritrea since 2003. While Somalia has a military budget in US dollars, there is no GDP or inflation data, so it is not possible to include the country in estimates of regional or world totals.

With a total of \$9.6 billion in 2018, Algeria had by far the highest level of military spending in North Africa and in Africa as a whole. While in nominal terms Algeria's military spending has remained the same since 2016, inflation meant that military expenditure fell in real terms by 6.1 per cent in 2018. The reliability of the data provided by the Algerian Government is questionable: although it has reported the same figures for its military budget for three consecutive years, it is unlikely that the same amount of money has been allocated to the military. Inflation and the changing security situation in the region mean that spending is likely to have risen, and the figure of \$22.2 billion given here is thus likely to be an underestimate.

Military spending by Algeria's neighbours was almost unchanged in 2018: Morocco spent \$3.7 billion (an increase of 0.1 per cent) and Tunisia spent \$844 million (a decrease of 0.4 per cent). Algeria and Morocco have the highest and third-highest military burdens in Africa, at 5.3 per cent and 3.1 per cent of GDP, respectively.

In sub-Saharan Africa, military spending was \$18.4 billion in 2018, down by 11 per cent from 2017 and 21 per cent lower than in 2009. The large decrease meant that, for the first time, North Africa (with only four countries) spent more than sub-Saharan Africa (with 45 countries).²¹ The number of countries in the subregion that increased military spending was roughly the same as the number that decreased military spending. Poor economic conditions remained the main driver of the cuts and conflict remained the main driver of the increases in military spending.

Decreases in spending by Angola and Sudan were the main contributors to the decline in the subregional total. While both provide an official military budget, this data may not be reliable. The militaries of these two countries may be receiving additional allocations from outside the state budget through channels linked to oil revenue.²² If Angola and Sudan are excluded from the total, military spending in sub-Saharan Africa would have been unchanged between 2017 and 2018.

Angola's military expenditure fell for the fourth consecutive year in 2018 to reach \$2.0 billion. This was 18 per cent less than in 2017 and 68 per cent below its peak in 2014. Lower oil prices since mid 2014 have placed the Angolan economy under severe stress. The government has reacted by implementing economic reforms, aimed at macroeconomic stabilization and fiscal consolidation.²³ In late 2018 the International Monetary Fund (IMF)

²¹ The total for sub-Saharan Africa excludes the Comoros and Sao Tome and Principe, which are assumed to have low expenditure, and Eritrea and Somalia (see note 20).

²² Sharife, K., 'Military, political leaders behind murky Angola deepwater oil deals', *Mail and Guardian*, 19 Apr. 2016; and Nuba Reports, 'Sudan's economy: Annual budget designed for war', 16 Feb. 2016.

²³ International Monetary Fund (IMF), *Angola: Staff Report for the 2018 Article IV Consultation*, IMF Country Report no. 18/156 (IMF: Washington, DC, 25 Apr. 2018).

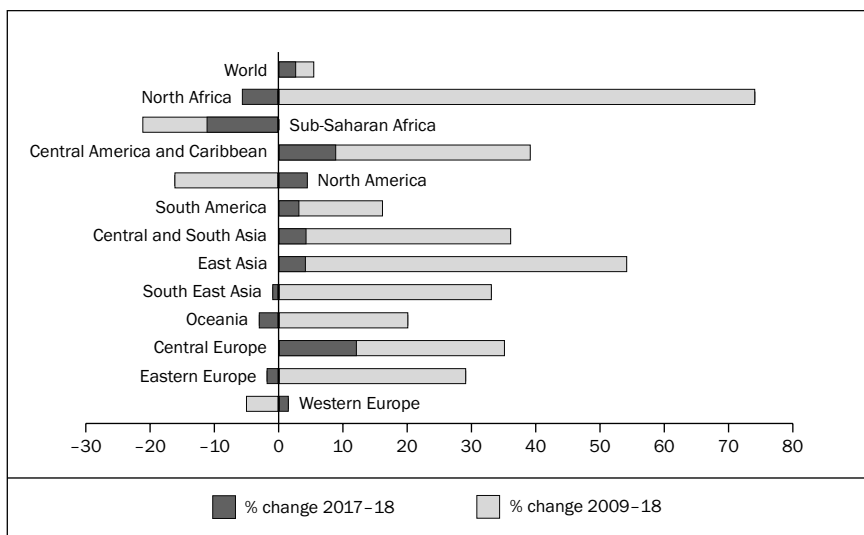


Figure 4.3. Changes in military expenditure by subregion, 2009–18 and 2017–18

Note: No estimate of change in military expenditure in the Middle East is given since data for 2015–18 is highly uncertain. However, an estimate for the Middle East is included in the estimated world total.

Source: SIPRI Military Expenditure Database, Apr. 2019.

approved a \$3.7 billion loan to support Angola's economic reforms, but high levels of debt (both foreign and domestic) remain a problem and spending cuts (including in military expenditure) are expected to continue in 2019.²⁴

Sudan has faced a combination of economic crisis, continued violent conflict in the Darfur region and a surge in protests against President Omar al-Bashir.²⁵ This has contributed to the volatile development of Sudan's military spending over the past five years, with double-digit real-terms decreases in spending in three years (2014, 2015 and 2018) and increases in two years (2016 and 2017). Military expenditure fell by 49 per cent to \$1.0 billion in 2018.²⁶ This was the largest absolute decrease and second-largest relative decrease in Africa in 2018. Sudan's economic woes are also predicted to continue. To be eligible for debt relief under the Heavily Indebted Poor Countries

²⁴ International Monetary Fund (IMF), 'IMF Executive Board approves US\$3.7 billion Extended Arrangement under the Extended Fund Facility for Angola', Press Release no. 18/463, 7 Dec. 2018; and MacauHub, 'Angolan government orders cuts in public spending included in the 2019 budget', 15 Jan. 2019.

²⁵ Armed Conflict Location and Event Data Project (ACLED), *Ten Conflicts to Worry About in 2019* (ACLED: Madison, WI, 1 Feb. 2019), p. 21; and Baldo, S., *Sudan's Self-inflicted Economic Meltdown: With a Corrupt Economy in Crisis, the Bashir Regime Scrambles to Consolidate Power* (Enough Project: Washington, DC, Nov. 2018), p. 3.

²⁶ In local currency, the Sudanese military budget decreased by 17% in nominal terms between 2017 and 2018.

initiative of the IMF and the World Bank, Sudan must impose further cuts in government spending.²⁷

Other notable decreases in military spending in sub-Saharan Africa in 2018 occurred in South Sudan (50 per cent), Benin (28 per cent) and the Republic of the Congo (27 per cent). Even in South Africa, the subregion's biggest military spender, there was a fall of 5.2 per cent to \$3.6 billion in 2018.

The fall in South Sudan's military spending, the seventh since 2009, occurred in the context of a civil war that has pushed the economy into disarray.²⁸ Among South Sudan's economic problems are real GDP contraction, surging food prices, currency depreciation and hyperinflation.²⁹ South Sudanese military spending of \$59.4 million in 2018 was only 4.2 per cent of the peak reached in 2011. However, the data on South Sudan's military spending measures only what is reported in the state budget; a substantial amount reportedly comes from off-budget sources, channelled directly from the country's state-owned oil company.³⁰ The exact amount of such spending is unknown.

In Benin military spending dropped after spending on infrastructure projects and equipment for the armed forces fell by 68 per cent in 2018.³¹ In the Republic of the Congo, as for many other sub-Saharan African countries, poor economic conditions remain the single biggest contributor to budgetary cuts.³² At \$292 million, its military spending in 2018 was down by 57 per cent from the peak reached in 2014.

In contrast to the cuts described above, several countries in sub-Saharan Africa increased their military spending in 2018. These included Nigeria, sub-Saharan Africa's second-largest spender, which increased its military spending for the first time in six years, by 18 per cent to \$2.0 billion. Nigeria is faced with a number of complex security challenges, including activities by Boko Haram.³³

Burkina Faso increased its military expenditure by 52 per cent in 2018 to \$312 million—the highest relative increase of any country in the world. Investment in military equipment and infrastructure increased fivefold over

²⁷ *Sudan Tribune*, 'Sudan appeals for IMF help to alleviate economic woes', 17 July 2018; and Baldo (note 25), p. 5.

²⁸ On the conflict in South Sudan see chapter 2, section VI, in this volume. On the related arms embargoes imposed on South Sudan by the African Union, the European Union and the United Nations see chapter 10, section II, in this volume.

²⁹ Oduha, J., 'Economic crisis forces South Sudanese to eat less', *East African*, 29 Oct. 2017.

³⁰ Global Witness, *Capture on the Nile* (Global Witness: London, Apr. 2018), pp. 7–8; and Miriri, D., 'Activists accuse South Sudan of using oil cash to fund conflict', Reuters, 6 Mar. 2018.

³¹ Beninese Ministry of the Economy and Finance, 'Documents sur les finances publiques' [Documents on public finances], [n.d.].

³² International Monetary Fund (IMF), 'IMF staff concludes program negotiation mission to the Republic of Congo', Press Release no. 18/137, 19 Apr. 2018; and Elion, C. and Ross, A., 'Congo Republic to cut 2018 spending by 9 pct as growth lags', Reuters, 28 Dec. 2017.

³³ On the conflict in Nigeria see chapter 2, section VI, in this volume.

2017. This is linked to the participation of the Burkinan armed forces in a joint force established by the Group of Five for the Sahel (G5 Sahel) to undertake collective military operations against militant groups, such as Boko Haram.³⁴

The Americas

At \$735 billion, military expenditure in the Americas in 2018 was up by 4.4 per cent compared with 2017 but was still 14 per cent lower than in 2009 (see tables 4.1 and 4.2). Spending by the two countries in North America (Canada and the USA) accounted for the vast majority (91 per cent) of the region's total; South America accounted for 7.6 per cent while Central America and the Caribbean accounted for 1.2 per cent. Three of the world's top 15 spenders are in the Americas: the USA (rank 1), Brazil (rank 12) and Canada (rank 14).

North America's military spending totalled \$670 billion in 2018, up by 4.4 per cent from 2017 (see figure 4.3); however, this was 16 per cent lower than spending in 2009. In contrast, military spending in Central America and the Caribbean grew by 39 per cent and in South America by 16 per cent over the decade 2009–18. Between 2017 and 2018, spending in Central America and the Caribbean increased by 8.8 per cent (to \$8.6 billion) and in South America by 3.1 per cent (to \$55.6 billion).

The three largest relative increases in military spending in 2018 in the Americas were all in Central America and the Caribbean: Jamaica increased its spending by 40 per cent, the Dominican Republic by 13 per cent and Mexico by 10 per cent.

Mexico's military expenditure accounted for 77 per cent of the total for Central America and the Caribbean. Its annual military spending grew by 10 per cent to \$6.6 billion in 2018, the first increase since 2015. For over a decade Mexico has militarized its law enforcement efforts to combat drug cartels by deploying the military alongside the national police and gendarmerie.³⁵ The 2017 Internal Security Law formalized the military's involvement in policing, but in November 2018 the National Supreme Court overturned the law, making it once more unlawful to use the military to fight drug cartels.³⁶ Given this development, the future role of the armed forces in dealing with the drug cartels is uncertain.

The main contributors to total South American military spending were Brazil (50 per cent), Colombia (19 per cent), Chile (10 per cent) and Argentina

³⁴ French Ministry for Europe and Foreign Affairs, 'G5 Sahel Joint Force and the Sahel alliance', France Diplomatie, Feb. 2019. On the armed conflict in the Sahel region see chapter 2, section VI, in this volume.

³⁵ Lee, B., Renwick, D. and Labrador, R. C., 'Mexico's drug war', Backgrounder, Council on Foreign Relations, 24 Jan. 2019; and Imison, P., 'Unleashing the military on Mexico's drug war', *Dissent*, 11 Jan. 2018.

³⁶ Ley de Seguridad Interior [Internal Security Law], *Diario Oficial de la Federación*, 21 Dec. 2017; and Deutsche Welle, 'Mexico rules military fight against cartels is unlawful', 16 Nov. 2018.

(7.5 per cent). Together, they accounted for 87 per cent of the subregion's spending in 2018. Military expenditure fell in only two countries in South America: Argentina (by 2.3 per cent) and Venezuela (see below).

Brazil's military spending rose by 5.1 per cent to \$27.8 billion in 2018.³⁷ This followed a 6.5 per cent rise in 2017. Military spending increased despite the country's ongoing economic slowdown and public expenditure constraints. In 2016 a constitutional amendment implemented a new fiscal regime that limits overall government spending for a period of 20 years.³⁸ However, unlike other government spending sectors, military spending has not been affected. Whereas Brazilian military spending increased in 2018, total spending on health and education fell by 3.8 per cent.³⁹

The Brazilian military regularly participates in police operations around the country, but funding for such operations falls outside the annual state budget for the Ministry of Defence (MOD). SIPRI does not count the use of the military in police activities as military spending and so does not include these payments in Brazil's military expenditure (see section II for a detailed discussion on this topic).

Against the backdrop of Venezuela's economic, political and social crises, the military remains in a position of privilege during the allocation of the state budget.⁴⁰ The evidence suggests that the official military budget is prioritized over vital social needs such as education, housing and food.⁴¹ As the rate of inflation soared into thousands of per cents in 2018, additional funding was needed for all government sectors. Not only was the military sector one of the first to receive the additional resources, but it was also among those that received the highest allocations of the new funding.⁴² Because of severe hyperinflation, currency depreciation and unreliable GDP estimates, for the first time SIPRI has not estimated Venezuela's military expenditure in current or constant US dollars or as a share of GDP in 2018.⁴³ Based on the government budget, military spending (in local currency) fell by 81 per cent

³⁷ Rapoza, K., 'This is where Brazil's economy is a failure', *Forbes*, 7 Sep. 2018.

³⁸ Emenda Constitucional no. 95, 2016 [Constitutional Amendment no. 95, 2016], 15 Dec. 2016.

³⁹ On the Brazilian budget see Brazilian Ministry of Planning, Development and Management, Federal Budget Secretariat, 'Sistema Integrado de Planejamento e Orçamento' [Integrated Planning and Budgeting System], [n.d.].

⁴⁰ Melimopoulos, E., 'Venezuela in crisis: How did the country get here?', Al Jazeera, 22 Jan. 2019.

⁴¹ Transparencia Venezuela, 'El gobierno aprobó a los militares créditos adicionales que superan el Presupuesto Nacional 2018' [The government approved additional credits to the military that exceed the 2018 national budget], 4 July 2018.

⁴² Transparencia Venezuela, 'Créditos adicionales aprobados este año superan en 691% el presupuesto de 2018' [Additional credits approved this year exceed the 2018 budget by 691%], 5 June 2018.

⁴³ Only the nominal budget in local currency is provided in the SIPRI Military Expenditure Database (note 3). An estimate for Venezuelan military spending in US dollars is used here to calculate the regional and world totals.

compared with 2017, but this is still less than the decreases in spending on housing (97 per cent) and education (87 per cent).⁴⁴

Asia and Oceania

Military spending in Asia and Oceania amounted to \$507 billion in 2018. This accounted for 28 per cent of global military spending and five of the top 15 global spenders in 2018 are in this region: China (rank 2), India (rank 4), Japan (rank 9), South Korea (rank 10) and Australia (rank 13). Spending in 2018 increased by 3.3 per cent compared with 2017, continuing an uninterrupted upward trend dating back to 1988. It is the only region in which annual growth has been continuous since 1988, and the 46 per cent increase between 2009 and 2018 was by far the largest of any region.⁴⁵ The increase was due primarily to the rise in Chinese spending, which in 2018 accounted for 49 per cent of total spending in the region, up from 31 per cent in 2009 (see above).

There were substantial increases in all four subregions between 2009 and 2018: East Asia by 54 per cent, Central and South Asia by 36 per cent, South East Asia by 33 per cent, and Oceania by 20 per cent (see figure 4.3). In 2018 spending in Central and South Asia increased by 4.2 per cent and in East Asia by 4.1 per cent, continuing the consistent trend of growth in both subregions (since 1992 in Central and South Asia and since 1995 in East Asia). In contrast, spending dropped slightly in 2018 in South East Asia (by 0.8 per cent) and Oceania (by 2.9 per cent).

The largest relative increases in military spending in Asia and Oceania between 2009 and 2018 were made by Cambodia (191 per cent), Mongolia (115 per cent) and Bangladesh (102 per cent). There were other high (40–100 per cent) increases in Indonesia (99 per cent), China (83 per cent), Viet Nam (76 per cent), Pakistan (73 per cent), Kyrgyzstan (72 per cent), Myanmar (57 per cent), Kazakhstan (53 per cent) and the Philippines (50 per cent). Eight countries in the region decreased spending over the decade: Afghanistan, Brunei Darussalam, Fiji, Malaysia, Papua New Guinea, Sri Lanka, Taiwan and Timor-Leste.

India's total military spending in 2018 was \$66.5 billion, including spending by the MOD and spending on several large paramilitary forces under the Ministry of Home Affairs.⁴⁶ In 2017 India had passed France in the top 15

⁴⁴ Transparencia Venezuela, 'Una ojeada a la "secreta" Ley de Presupuesto Nacional' [A look at the 'secret' national budget law], 27 Sep. 2018.

⁴⁵ No data is available for North Korea, Turkmenistan or Uzbekistan for 2009–18 and they are not included in the totals for Asia and Oceania. Incomplete data for Tajikistan and Myanmar, which both indicate an increase, is included in the total.

⁴⁶ These paramilitary forces include the Assam Rifles, the Border Security Force, the Indo-Tibetan Border Police and the Sashastra Seema Bal (Armed Border Force). Together, these have almost 1 million personnel compared with 1.4 million for the armed forces under the MOD. International Institute for Strategic Studies, *The Military Balance 2018* (Routledge: Abingdon, 2018), pp. 265–66.

ranking and in 2018 it also passed Russia to become the fourth-largest spender globally (see table 4.3). India's spending grew in 2018 for the fifth consecutive year and was 3.1 per cent higher than in 2017 and 29 per cent higher than in 2009. Despite this rise, India's military burden in 2018 was at one of its lowest levels since the early 1960s: 2.4 per cent of GDP compared with 2.5 per cent in 2017 and 2.9 per cent in 2009. Motivated largely by tensions and rivalry with Pakistan and China, the Indian Government aims to acquire new equipment from abroad and from its local arms industry to enhance the capabilities of its armed forces.⁴⁷ However, as most of the military budget is spent on salaries, capital spending has in recent years been substantially below the levels needed for India's stated acquisition plans and there has been pressure from many directions, including the Indian Parliament's Standing Committee on Defence, to increase the military budget to 3 per cent of GDP.⁴⁸ Critics of the proposed rise claim that it is unfeasible and that better defence planning and acquisition processes, as well as a reduction in the number of military personnel, would free up funds for capital spending within current budget levels.⁴⁹

Military spending in Japan was \$46.6 billion in 2018, almost unchanged from 2017 (down by 0.1 per cent). Since 2009, spending has increased by 2.3 per cent, by far the lowest growth rate in East Asia.⁵⁰ A similar level of spending is planned for the period 2019–23.⁵¹ In 2018 Japan's military spending was 0.9 per cent of its GDP and the plans for 2019–23 indicate that the military burden will remain below the threshold of 1 per cent of GDP for that period. This threshold has been official since 1987 but was unofficially maintained between 1976 and 1987.⁵² However, growing perceived security threats, mainly from China and the Democratic People's Republic of Korea (DPRK, or North Korea), and US pressure have led to a discussion in Japan

⁴⁷ 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 Review*, 27 Feb. 2018. On India's rivalry with Pakistan and other armed conflicts see chapter 2, section III, in this volume. On the local arms industry see Jackson, S. and Grinbaum, M., 'The Indian arms-production and military services industry', *SIPRI Yearbook 2012* (note 9), pp. 239–46. On India's arms acquisitions from abroad see chapter 5, section III, in this volume.

⁴⁸ Behera, L. K., 'Examining the feasibility and affordability of raising the share of defence expenditure to three percent of GDP', Institute for Defence Studies and Analyses, Issue Brief, 20 Aug. 2018; Dubey, A. K., 'Top army general: Budget cut in defence dashed our hopes', *Mail Today*, 14 Mar. 2018; and Raghuvanshi, V., 'India's defense budget will rise—but it will get eaten up by personnel costs', *Defense News*, 5 Feb. 2018.

⁴⁹ Behera (note 48); and Sharma, S., 'Here's how to fix India's defence budget: More allocation, fewer soldiers', *Economic Times*, 22 Jan. 2018.

⁵⁰ The SIPRI figures for Japan do not include spending by the MOD on the large coast guard, which is considered a civilian police force.

⁵¹ Japanese Ministry of Defense, 'Medium term defense program (FY 2019–FY 2023)', 18 Dec. 2018; and Takahashi, K., 'Japan to spend more than USD240 billion on defence over next five years', *Jane's Defence Weekly*, 18 Dec. 2018.

⁵² Nippon.com, 'Japan's defense budget and the 1% limit', 18 May 2018.

about increasing military spending up to the same 2 per cent of GDP target set by the North Atlantic Treaty Organization (NATO) for its members.⁵³

In South Korea the upward trend in military spending since 2000 continued. In 2018 its military spending reached \$43.1 billion, an increase of 5.1 per cent compared with 2017 and of 28 per cent since 2009. This total includes \$850 million paid to the USA as a direct contribution to the cost of the 28 500 US troops stationed in South Korea, equivalent to 41 per cent of the total non-personnel costs of the US presence.⁵⁴ Since South Korea started making such direct contributions to US costs in 1991, the amount has increased almost every year.⁵⁵ A further increase has been agreed for 2019, but this is below the amount (of up to three times more) demanded by US President Trump.⁵⁶

Australian military expenditure in 2018 was \$26.7 billion. This was 21 per cent higher than in 2009 but 3.1 per cent lower than in 2017. Australia's military expenditure, including major arms procurement, has risen over the past decade, and particularly in the period 2014–17, in response to a perceived increase in threats in the Asia-Pacific region.⁵⁷

Some of the smaller spenders in Asia and Oceania, such as Malaysia, Afghanistan and Timor-Leste, have made notable decreases over the past few years.

Despite ongoing tensions with its neighbours over rights in the South China Sea and its strong economic growth in recent years, Malaysia's military spending of \$3.5 billion in 2018 was 8.2 per cent lower than in 2017 and 18 per cent lower than in 2009.⁵⁸ The cut in 2018 was the third annual decrease in a row and brought Malaysia's spending as a share of GDP down to 1.0 per cent, the lowest in its history. The decreases are part of an effort to reduce the country's budget deficit and debts.⁵⁹

At \$198 million, Afghanistan's military spending in 2018 was 6.7 per cent higher than in 2017 but 26 per cent lower than in 2009. As a share of GDP, the military burden in Afghanistan decreased from 2.1 per cent in 2009 to 1.0 per cent in 2018. The long-term decrease and low military burden are

⁵³ Pryor, C. and Le, T., 'Looking beyond 1 percent: Japan's security expenditures', *The Diplomat*, 3 Apr. 2018; and Kato, M., 'Ruling party panel calls for doubling Japan's defense budget', *Nikkei Asian Review*, 6 June 2018.

⁵⁴ Jang, S. Y., 'US–South Korea military negotiations could cost the alliance', *East Asia Forum*, 13 Feb. 2019.

⁵⁵ Jang (note 54).

⁵⁶ Yonhap News Agency 'US wants S. Korea to pay \$1.2 billion for USFK in one-year contract: Source', 23 Jan. 2019; and Jang (note 54).

⁵⁷ Australian Department of Defence (DOD), *2016 White Paper* (DOD: Canberra, 2016); and Greene, A., 'Australian Defence Force spends over \$10 billion on US arms in four years', *ABC News*, 28 Dec. 2017. See also chapter 5, sections II and III, in this volume.

⁵⁸ See e.g. Tønnesson, S. et al., 'The fragile peace in East and South East Asia', *SIPRI Yearbook 2013*, pp. 28–40.

⁵⁹ Razak, N., Malaysian Prime Minister and Minister of Finance, 'The 2018 budget speech', 27 Oct. 2017.

perhaps surprising considering the high intensity of the conflict between the Afghan Government and the Taliban insurgency.⁶⁰ However, most of the financial burden of the war in Afghanistan has been carried by the USA, which is estimated to have spent \$1–2 trillion or more since the war started in 2001.⁶¹ According to the US DOD, in 2019 the USA will provide \$5.2 billion to support the Afghan military and plans to spend approximately \$39 billion on US combat operations in Afghanistan.⁶²

Timor-Leste's military spending dropped by 20 per cent in 2018 to \$20.6 million (63 per cent lower than in 2009). This is the lowest level of spending among the states in Asia and Oceania for which SIPRI collects data. The reduction was partly possible because of the military aid provided by foreign donors.⁶³

Europe

Total military spending in Europe in 2018 was \$364 billion, 1.4 per cent higher than in 2017 and 3.1 per cent higher than in 2009 (see tables 4.1 and 4.2). Europe accounted for around 20 per cent of global military expenditure, behind the Americas and Asia and Oceania. Five of the world's 15 largest military spenders are in Europe: France (rank 5), Russia (rank 6), the UK (rank 7), Germany (rank 8) and Italy (rank 11). A significant number of Central and West European countries increased their military expenditure in 2018 partly to address perceived threats from Russia.

Military spending in Western Europe was \$266 billion in 2018, representing nearly three-quarters of European spending. It was up 1.4 per cent from 2017 but down 4.9 per cent from 2009 (see figure 4.3). Of the 20 states in Western Europe (excluding microstates), only three decreased their military spending in 2018: Greece (–3.1 per cent), France (–1.4 per cent) and Italy (–1.4 per cent). The highest increases occurred in Ireland (11 per cent), the Netherlands (10 per cent) and Luxembourg (9.8 per cent).

In nominal terms, France's military budget remained unchanged from 2017, resulting in the real-terms decrease of 1.4 per cent. However, its military expenditure of \$63.8 billion in 2018 represents an increase of 1.6 per cent from 2009. During 2014–18, France's military expenditure grew by 9.3 per cent, following a decline of 7.1 per cent in 2009–14. From 2014, increases in French military expenditure were driven by costs associated

⁶⁰ On the armed conflict in Afghanistan see chapter 2, section III, in this volume.

⁶¹ Sahadi, J., 'The financial cost of 16 years in Afghanistan', CNN Business, 22 Aug. 2017; Amadeo, K., 'Afghanistan war cost, timeline and economic impact', The Balance, 2 Jan. 2019; and Crawford, N. C., 'United States budgetary costs of the post-9/11 wars through FY2019: \$5.9 trillion spent and obligated', Brown University, Watson Institute for International and Public Affairs, 14 Nov. 2018.

⁶² Thomas, C., *Afghanistan: Background and US Policy in Brief*, Congressional Research Service (CRS) Report for Congress R45122 (US Congress, CRS: Washington, DC, 26 Feb. 2019), p. 10.

⁶³ Australian Department of Defence (DOD), *Defence Economic Trends in the Asia-Pacific 2018* (DOD: Canberra, Dec. 2018), pp. 26–27.

with external military operations and the large domestic military operation (Opération Sentinelle) that followed the terrorist attacks in Paris on 7–9 January and 13 November 2015.⁶⁴

Since at least the early 2010s, a significant part of the supplementary costs of French military operations beyond normal operations has been funded by the budget of every other ministry under the principle of ‘interdepartmental solidarity’. This is a convention by which all ministries agree to contribute a share of their budget to quickly address a catastrophic event, such as a terrorist attack or nuclear power station breakdown in France or an additional overseas military operation (e.g. a military intervention or a peace operation).⁶⁵ The MOD was the only beneficiary of this convention. It received funds from other ministries to cover the extra costs of French overseas military operations for several years: 35 per cent of these costs came from the MOD budget and other ministries contributed 65 per cent. However, this practice changed in 2018 and the MOD must now pay for all the supplementary costs of France’s military operations.⁶⁶

The UK’s military expenditure increased by 1.0 per cent between 2017 and 2018, to reach \$50.0 billion. However, over the decade 2009–18, British military expenditure decreased by 17 per cent in real terms (see table 4.3). After sharp falls in the first years of that decade, since 2015 military spending has been more or less stable. The UK has a long-term programme to modernize its major weapons, including costly nuclear-armed submarines.⁶⁷ Stagnant military budgets in the past five years and the developments in the British economy leading up to the UK’s possible departure from the European Union have raised concerns about the UK’s capacity to pay for these systems, which are planned to be operational sometime in the 2030s.⁶⁸

Germany, the third-largest military spender in Western Europe, raised its military spending by 1.8 per cent in 2018 to \$49.5 billion, which was 9.0 per cent higher than in 2009. This represented 1.2 per cent of GDP. The German Government decided in 2016 that Germany should play a greater role in global security and would aim to make substantial increases in its

⁶⁴ French Court of Auditors, *Les opérations extérieures de la France 2012–2015* [France’s external operations, 2012–2015], Submission to the Senate Finance Committee (Cour des Comptes: Paris, Oct. 2016), p. 7; Agence France-Presse, ‘L’opération « Sentinelle » en question après l’attaque à Levallois’ [Operation ‘Sentinelle’ in question after the attack at Levallois], *Le Monde*, 10 Aug. 2017; and Agence France-Presse, ‘Les attaques du 13 novembre 2015 sont sans précédent en France’ [The attacks of 13 November 2015 are without precedent in France], *Libération*, 14 Nov. 2015.

⁶⁵ French National Assembly, ‘Projet de loi de finance rectificative pour 2018’ [Proposed supplementary finance law for 2018], 7 Nov. 2018, p. 139.

⁶⁶ Loi no. 2018-1104 du 10 décembre 2018 de finances rectificative pour 2018 [Law no. 2018-1104 of 10 Dec. 2018 amending finances for 2018], *Journal Officiel de la République Française*, 11 Dec. 2018.

⁶⁷ On the UK’s plans for new nuclear-armed submarines see chapter 6, section III, in this volume.

⁶⁸ Mills, C. and Dempsey, N., *The Cost of the UK’s Strategic Nuclear Deterrent*, Briefing Paper no. 8166 (House of Commons Library: London, 22 Jan. 2019); Wolf, M., ‘Known unknowns to help the UK budget for Brexit’, *Financial Times*, 18 Oct. 2018; and Chalmers, M., ‘UK defence and the 2018 budget’, Royal United Services Institute (RUSI), 30 Oct. 2018.

military spending. It declared a long-term aim of reaching the NATO target of spending 2 per cent of GDP on the military but did not set an explicit timeline.⁶⁹ In 2018 the defence minister, Ursula von der Leyen, announced that this long-term goal remained possible, but that the current objective would be to increase military expenditure to 1.5 per cent of GDP by 2025.⁷⁰

In Central Europe, total military expenditure of \$28.3 billion accounted for only 7.8 per cent of military spending in Europe. In 2018 spending in the subregion grew by 12 per cent compared with 2017 and 35 per cent compared with 2009. The increases in military spending are largely due to growing perceptions of a threat from Russia.⁷¹ Several countries in the subregion had the highest relative increases in military spending in Europe since 2009. Poland, which is by far the largest spender in Central Europe, accounting for 41 per cent of the total, increased its military spending by 48 per cent between 2009 and 2018. Romania, the second-largest spender in the subregion, increased its military spending by 112 per cent. Lithuania made the highest increase over the decade: 156 per cent.

Military spending in Eastern Europe was \$69.5 billion in 2018, a 1.7 per cent decrease compared with 2017 but 29 per cent higher than in 2009. This was the second consecutive year of decline in East European military spending, following steady increases since 1998. However, only two countries in the subregion—Moldova and Russia—decreased their military spending. The military burden of four East European countries—Armenia, Azerbaijan, Russia and Ukraine—is relatively high, at 3.8–4.8 per cent, a level that is significantly higher than the global average (2.1 per cent) and all other European countries.

Military spending by Russia was \$61.4 billion in 2018, accounting for nearly 88 per cent of the subregion's total. This includes spending on Russia's paramilitary forces (the National Guard and the Border Service), which makes up 9.2 per cent of the total. Russia's implementation of a major military modernization plan—which started in 2010—led to significant annual increases in military spending until 2016.⁷² However, after the 2016 peak, Russia's military spending fell by 19 per cent in 2017 and again by 3.5 per cent in 2018. In nominal local currency, Russia allocated 0.8 per cent less to the

⁶⁹ German Ministry of Defence (MOD), *Weissbuch 2016 Zur Sicherheitspolitik und zur Zukunft der Bundeswehr* [White book 2016 on security policy and the future of the Bundeswehr] (MOD: Berlin, June 2016).

⁷⁰ German Bundestag, 'Wehretat steigt in diesem Jahr auf mehr als 38 Milliarden Euro an' [Defence budget increases this year to more than 38 billion euro], 5 July 2018.

⁷¹ Pezard, S. et al., *European Relations with Russia: Threat Perceptions, Responses and Strategies in the Wake of the Ukrainian Crisis* (RAND Corporation: Santa Monica, CA, 2017), pp. 5–29.

⁷² On the revised plan for 2017–27 see Connolly, R. and Boulègue, M., *Russia's New State Armament Programme: Implications for the Russian Armed Forces and Military Capabilities to 2027* (Chatham House: London, May 2018); and Luzin, P., 'Russia's GPV-2017 State Arms Programme', Riddle, 18 Apr. 2018. On the early years of the original plan for 2010–20 see Perlo-Freeman, S., 'Russian military expenditure, reform and restructuring', *SIPRI Yearbook 2013* (note 58), pp. 142–45.

military in 2018 than in 2017. Thus, the real-terms decrease in 2018 can be attributed to the inflation rate of 2.8 per cent. The 2018 decrease brought the military burden down from 4.2 per cent of GDP in 2017 to 3.9 per cent in 2018, back to its level of 2014–15 and also 2009 (see table 4.3). Russia plans to increase its military spending by around 4.0 per cent in 2019 and to keep it stable in 2020.⁷³ In 2018 spending on arms procurement as a share of the total budget remained high—around 40 per cent of total military spending. For 2019–21, the amount to be spent on arms procurement is expected to decrease slightly in real terms, but since the decrease in the total military budget is expected to be larger, procurement will represent a bigger share of the total military budget.⁷⁴

There has been armed conflict in Ukraine since early 2014.⁷⁵ Its military spending in 2018 was \$4.8 billion, an increase of 21 per cent compared with 2017 and of 53 per cent compared with 2013. Prior to the increase in 2018 there had been minor decreases in two consecutive years. The change in 2018 can be attributed to the ongoing reform of the Ukrainian armed forces, including the procurement of equipment.⁷⁶ However, procurement as a share of total spending remained below 15 per cent in 2018.⁷⁷

The continuing armed conflict in Nagorno-Karabakh involving Armenia and Azerbaijan was a major driver of increased military spending in both these countries in 2018.⁷⁸ Azerbaijan's military expenditure was \$1.7 billion in 2018, 6.2 per cent higher than in 2017, while Armenia increased its military spending by 33 per cent to \$609 million. Armenia's increase brought the military burden up from 3.8 per cent of GDP in 2017 to 4.8 per cent in 2018, the highest share since it became independent in 1991. Both countries have budgeted additional increases for 2019.⁷⁹

The Middle East

SIPRI has not provided an estimate for Middle Eastern military expenditure since 2014 because of a lack of data for four countries: Qatar, Syria, the UAE and Yemen. Qatar and the UAE are considered to have significant levels of military spending based on their current known large weapon acquisitions and the levels of their military spending in earlier years.

⁷³ Cooper, J., 'Russian military expenditure in 2017 and 2018, arms procurement and prospects for 2019 and beyond', Changing Character of War Centre, University of Oxford, Feb. 2019.

⁷⁴ Cooper (note 73).

⁷⁵ On the armed conflict in Ukraine see chapter 2, section IV, in this volume.

⁷⁶ *Defense Express*, 'Ukraine's Ministry of Defense 2018 budget approved at \$3.1b', 26 Mar. 2018; and Wezeman, S. T. and Kuimova, A., 'Ukraine and Black Sea Security', SIPRI Background Paper, Dec. 2018.

⁷⁷ Procurement spending is 21% of the \$3.1 billion budget for the armed forces but is less than 15% of Ukraine's total military expenditure, as defined by SIPRI, which also includes spending on military pensions and paramilitary forces.

⁷⁸ On the conflict in Nagorno-Karabakh see chapter 2, section IV, in this volume.

⁷⁹ ARKA News Agency, 'Armenia's defense budget to grow by 26.6% in 2019', 6 Nov. 2018; and Trend News Agency, 'Azerbaijan to increase spending on defense, national security', Azernews, 23 Oct. 2018.

The combined total military expenditure in 2018 for the 11 countries for which data is available was \$145 billion.⁸⁰ The total spending of these countries increased every year between 2009 and 2015 followed by a significant decrease in 2016. Oil is a major source of income for several of the largest military spenders in the region, and the fall in oil prices in 2014 appears to be the main reason for this decrease.⁸¹ Spending rose again in 2017 but fell by 1.9 per cent in 2018.

Two of the top 15 global spenders in 2018 are in the Middle East: Saudi Arabia (rank 3) and Turkey (rank 15).

Saudi Arabia is by far the largest military spender in the region, with an estimated total of \$67.6 billion in 2018 (see table 4.3). Its military burden of 8.8 per cent of GDP in 2018 was the highest in the world.⁸² There were several changes in the pattern of its military spending during 2009–18. After an initial increase of 72 per cent after 2009 to a peak in 2015, spending dropped by 28 per cent in 2016 as falling oil prices caused a decline in government revenue. There was a smaller increase of 11 per cent in 2017, followed by another drop in 2018, of 6.5 per cent.

Between 2009 and 2018, Turkish military expenditure increased by 65 per cent to reach \$19.0 billion. In 2018 alone it increased by 24 per cent, the highest increase in military spending among the global top 15 military spenders. The military burden rose by 0.4 percentage points in 2018 to 2.5 per cent of GDP. Turkey's military burden in 2018 was almost 40 per cent higher than in 2015—when its military burden reached its lowest level—but was at the same level as in 2009. Funding for arms procurement has increased rapidly. The Defence Industry Support Fund, a special fund that pays for a variety of projects related to arms production and arms procurement, increased its budget by 77 per cent after 2016 to reach \$4.2 billion in 2018.⁸³ The increase in military spending also coincided with a large-scale Turkish military operation against Kurdish armed groups in Syria.⁸⁴

If data were available, the UAE would also probably have ranked in the top 15 in 2018. The most recent available estimate for military spending by the UAE is \$22.8 billion (in current US dollars) in 2014, when it was the

⁸⁰ The 11 countries included in the estimate are Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Turkey and Saudi Arabia. In 2014 these 11 countries accounted for 87% of the regional total.

⁸¹ Tian, N. and Lopes da Silva, D., 'Debt, oil price and military expenditure', *SIPRI Yearbook 2018*, pp. 171–78.

⁸² Wezeman, P. D., 'Saudi Arabia, armaments and conflict in the Middle East', *SIPRI Topical Background*, 14 Dec. 2018.

⁸³ Turkish Ministry of Finance, General Directorate of Budget and Fiscal Control, *2019 Yılı Bütçe Gerekçesi* [2019 budget justification] (Ministry of Finance: Ankara, Oct. 2018), p. 348. On Turkey's military expenditure and military policy see Wezeman, S. T. and Kuimova, A., 'Turkey and Black Sea security', *SIPRI Background Paper*, Dec. 2018.

⁸⁴ On Turkey's role in the conflict in Syria and its conflict with the Kurds see chapter 2, section V, in this volume.

second-largest military spender in the region. It is likely that the UAE's military spending in 2018 was of the same order of magnitude or higher, as it was involved in major military operations in Yemen, which it was not in 2014, remained militarily involved in Libya, as it was in 2014, and imported large volumes of weapons, as it did in 2014.⁸⁵

Military spending in Israel was \$15.9 billion in 2018, a marginal increase of 0.7 per cent compared with 2017. After a peak in 2015—related to military operations in 2014 in the Gaza Strip—Israeli military expenditure decreased by 13 per cent in 2016 and by 1.0 per cent in 2017. Citing accumulating threats and a growing economy, in 2018 the Israeli Prime Minister, Benjamin Netanyahu, announced plans to increase the combined budget of the Israel Defense Forces and the intelligence services by 0.2–0.3 per cent of GDP over the coming years.⁸⁶ This was estimated to be \$1.1 billion more annually than the combined 2018 budget for these services.⁸⁷ As the planned budget increase has not been disaggregated, the impact on military spending remained unclear.

By 2014, Iran's military expenditure had declined steadily by 30 per cent from its peak in 2006. This was followed by a 32 per cent increase in military spending up to 2017. However, in 2018 military spending decreased again by 9.5 per cent, to reach \$13.2 billion, as the Iranian economy went into recession and inflation increased from 10 per cent in 2017 to 30 per cent in 2018.

The military spending data for several other countries in the Middle East is not known and in other cases is subject to a high degree of uncertainty. Three examples illustrate this.

In the context of a complex and long-running civil war, military spending in Yemen is unknown.⁸⁸ However, the Yemeni National Army loyal to the internationally recognized government has been reported to be constrained by a lack of funding.⁸⁹ In addition, these government forces and the paramilitary forces that are formally under the control of the government have received funding and equipment from the UAE, although the amounts are not known.⁹⁰ Such funding would be counted as military spending by the UAE.

⁸⁵ United Nations, Security Council, Final report of the Panel of Experts on Yemen, S/2019/83, 25 Jan. 2019; and United Nations, Security Council, Final report of the Panel of Experts on Libya established pursuant to Resolution 1973 (2011), S/2018/812, 5 Sep. 2018. On the UAE's role in the armed conflict in Yemen see chapter 2, section V, in this volume. On its arms imports see chapter 5, section III, in this volume.

⁸⁶ Israeli Ministry of Foreign Affairs, 'PM Netanyahu presents "2030 Security Concept" to the Cabinet', 15 Aug. 2018.

⁸⁷ Amit, H., 'Reversing policy, Netanyahu seeks long-term rise in defense spending', *Haaretz*, 16 Aug. 2018.

⁸⁸ On the conflict in Yemen see chapter 2, section V, in this volume.

⁸⁹ United Nations, S/2019/83 (note 85), para. 49.

⁹⁰ United Nations, S/2019/83 (note 85), paras 52–54; and El Yaakoubi, A., 'UAE builds up Yemen regional army but country fragments', *Reuters*, 3 May 2017.

Oman has featured for several years as the country with the highest military burden in the world. However, based on new information SIPRI has adjusted its estimates for Omani military expenditure downwards. The Omani Ministry of Finance and the Central Bank of Oman publish annual documents that include data on the budget for 'defence and security' and actual spending. As well as military expenditure this includes spending on the police, customs and other activities that do not fall under the SIPRI definition of military expenditure. The proportion of the defence and security budget that is spent on these non-military activities is unknown. However, based on public data about the sizes of the military and the police, SIPRI now estimates that roughly 75 per cent of the defence and security budget is for military expenditure. This results in an estimated military burden of 8.2 per cent of GDP for Oman in 2018, which was still the second highest in the world that year.

At \$3.1 billion, Egyptian military expenditure in 2018 was 7.3 per cent lower than in 2017 and 20 per cent lower than in 2009. The decrease in military spending is at least partly explained by a 78 per cent devaluation of the Egyptian pound between 2016 and 2017 and an inflation rate of 21 per cent in 2018. However, it remains unclear how Egyptian military spending can be declining while the country is involved in major military operations in the Sinai peninsula and is implementing major arms procurement programmes.⁹¹ It is possible that the budget data published by the government does not include all military spending. Alternatively, part of Egypt's arms procurement may be funded by foreign military aid. The USA has given large-scale military aid to Egypt since 1975; in 2018 this totalled \$1.2 billion, an amount similar to that received in most other years in the past decade.⁹² Saudi Arabia provides Egypt with significant financial and economic aid. It has been reported that this also includes financial support for the procurement of weapons by Egypt, including an order in 2018 for two new frigates.⁹³ However, neither country has officially confirmed this.

⁹¹ On the armed conflict in Egypt see chapter 2, section V, in this volume. On Egypt's arms imports see the SIPRI Arms Transfers Database.

⁹² Sharp, J. M., *Egypt: Background and US Relations*, Congressional Research Service (CRS) Report for Congress RL33003 (US Congress, CRS: Washington, DC, 7 June 2018), pp 19–24; and Lee, M., 'US to release \$1.2 billion in military aid to Egypt', Associated Press, 9 Sep. 2018.

⁹³ Eleiba, A., 'Sea power: The significance of Egypt's Mistral deal', *Ahram Online*, 4 Oct. 2015; Murphy, M., 'Thyssen-Krupp soll Fregatten für Ägypten bauen' [Thyssen-Krupp to build frigates for Egypt], *Handelsblatt*, 7 Nov. 2011; and Cabirol, M., 'L'Arabie Saoudite bloque le contrat des corvettes Meko A200 en Egypte' [Saudi Arabia blocks the contract for Meko A200 corvettes for Egypt], *La Tribune*, 5 Nov. 2018.