

5. Military expenditure

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I. Introduction

World military expenditure in 2007 is estimated to have been \$1339 billion, a real-terms increase over 2006 of 6.0 per cent.¹ Over the 10-year period 1998–2007, world military spending has increased by 45 per cent in real terms. Military spending in 2007 corresponded to 2.5 per cent of world gross domestic product (GDP) and \$202 per capita.²

Based on data from the SIPRI Military Expenditure Database, this chapter provides information on military expenditure trends over the period 1998–2007 and analyses these trends for selected countries in each region.³ Section II presents the statistics on regional trends in military spending and data on the 15 largest spenders. Section III is devoted to US military expenditure since the United States accounts for the overwhelming share—45 per cent—of global spending. The rest of the chapter focuses on the countries that have increased military spending most rapidly in recent years. Section IV discusses the factors driving and facilitating the particularly rapid increases in military expenditure in the South Caucasus. Section V provides information on regional trends. The concluding section VI summarizes the main factors driving the increase in military spending in 2007.

Appendix 5A presents SIPRI data on military expenditure for 168 countries for 1998–2007. As well as world and regional totals, data for individual countries are provided in local currency at current prices for 1998–2007, in constant US dollars for 1998–2007, in current US dollars for 2007 and as a share of GDP for 1998–2006. Appendix 5B presents the military expenditure of members of the North Atlantic Treaty Organization (NATO) devoted to equip-

¹ The figure for world military expenditure in 2007 is in current US dollars. The real-terms increase is based on expenditure in US dollars at constant (2005) prices and exchange rates. Figures in constant dollars are used to assess the trends in spending, while figures in current dollars are used for analysing shares of spending, such as country shares of regional totals and country or regional shares of the world total. All figures in US dollars are calculated using the average annual market exchange rates. On the choice of exchange rate see appendix 5C, section V. SIPRI provides figures in current dollars only for the most recent year. See tables 5A.1 and 5A.3 in appendix 5A.

² The share of GDP is based on a projected figure for world GDP in 2007 of \$53 352 billion at market exchange rates. International Monetary Fund (IMF), *World Economic Outlook, October 2007: Globalization and Inequality* (IMF: Washington, DC, 2007), p. 215. The per capita spending figure is calculated by dividing world military spending by world population, estimated at 6616 million in 2007, with no national weighting. United Nations Population Fund (UNFPA), *State of the World Population 2007: Unleashing the Potential of Urban Growth* (UNFPA: New York, 2007), p. 99.

³ The SIPRI Military Expenditure Database can be accessed at <http://www.sipri.org/contents/milap/milex/mex_database1.html>.

Table 5.1. World and regional military expenditure estimates, 1998–2007

Figures are in US\$ b., at constant (2005) prices and exchange rates. Figures in italics are percentages. Figures may not add up because of the conventions of rounding.

Region ^a	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	% change, 1998–07
Africa	11.1	11.9	12.3	13.5	14.3	14.1	15.8	16.0	15.8	16.8	+51
North	4.3	4.0	4.1	5.2	5.2	5.4	5.9	6.2	6.0	6.6	+53
Sub-Saharan	6.8	7.9	8.3	8.4	9.1	8.7	9.9	9.8	(9.7)	(10.1)	+49
Americas	367	367	382	388	431	481	522	548	559	598	+63
North	340	341	354	357	399	453	493	516	525	562	+65
Central	3.6	3.7	3.9	3.8	3.6	3.6	3.4	3.4	3.6	4.0	+14
South	23.3	22.1	23.9	26.7	27.5	24.6	25.8	28.1	30.1	32.0	+38
Caribbean	..	..	..	..	..	..	..	..	..	..	..
Asia, Oceania	132	135	139	146	153	160	166	176	186	200	+52
Central	(0.6)	0.5	..	(0.6)	..	(0.8)	..	..	..	..	..
East	100	101	104	110	116	122	127	132	140	152	+51
Oceania	11.4	11.9	11.8	12.2	12.7	13.2	13.8	14.3	15.1	16.4	+45
South	19.6	21.9	22.8	23.5	23.6	24.2	25.0	28.2	29.7	30.7	+57
Europe	276	280	287	288	295	302	306	306	311	319	+16
Central	15.1	14.7	14.8	15.5	15.8	16.2	16.3	16.8	17.1	18.0	+19
Eastern	15.6	15.9	21.4	23.3	25.8	27.6	28.9	32.0	35.6	40.8	+162
Western	245	250	251	249	253	258	261	257	258	261	+6
Middle East	48.8	48.1	54.3	56.7	54.3	56.0	60.3	67.2	73.9	79.0	+62
World	834	843	875	892	947	1013	1071	1113	1145	1214	+45
Change (%)		1.0	3.8	2.0	6.2	7.0	5.7	4.0	2.9	6.0	

() = total based on country data accounting for less than 90 per cent of the regional total; .. = available data account for less than 60 per cent of the regional total.

^a For the country coverage of the regions, see appendix 5A, table 5A.1. Some countries are excluded because of lack of data or of consistent time series data—Africa excludes Angola, Equatorial Guinea and Somalia; the Americas excludes Cuba, Guyana, Haiti and Trinidad and Tobago; Asia excludes North Korea, Myanmar (Burma) and Viet Nam; and the Middle East excludes Qatar. World totals exclude all these countries.

Source: Appendix 5A, tables 5A.1 and 5A.3.

ment and personnel. Appendix 5C describes the sources and methods used for SIPRI's military expenditure data and appendix 5D provides statistics on the reporting by governments of their military spending to SIPRI and the United Nations.

II. Regional trends and major spenders

SIPRI estimates on military expenditure by region and subregion are presented in table 5.1. These data reflect what is available in open sources and in particular in official government sources. They understate the true level of spending for three reasons: (a) data are not available for all countries; (b) the data on some countries are underestimates, since the SIPRI figures are based on official government data which do not always cover all military-related expenditure; and (c) some countries finance military activities outside the budget,

through extra-budgetary revenues or other off-budget sources. In addition, the division between military and other security spending—accounted for in internal security expenditure—is often blurred, since some countries' internal security forces have military functions. With these qualifications, the SIPRI data broadly capture overall levels of and trends in military expenditure.⁴

The subregion with by far the highest rate of increase in military expenditure during the 10-year period 1998–2007 is Eastern Europe, at 162 per cent.⁵ Russia accounted for 86 per cent of this increase. Other subregions with 10-year real-term growth rates exceeding 50 per cent are North America, entirely due to the trend in US military spending; the Middle East, with strong increases in all Gulf Cooperation Council (GCC) member states apart from the United Arab Emirates (UAE), and in Iran, Jordan and Lebanon;⁶ South Asia, where the trend is dominated by a real-terms increase of 64 per cent in Indian military spending; North Africa, because of Algeria's 97 per cent increase; and East Asia. In East Asia, three countries increased their military spending by more than 50 per cent over the period 1998–2007: China with a 202 per cent increase, Indonesia with a 100 per cent increase and Malaysia with a 153 per cent increase. Other countries in East Asia reduced their military spending, including Cambodia and Taiwan.⁷ The subregions with the lowest rates of increase in military expenditure over the 10-year period were Western Europe and Central America.

The pattern of increases in 2007 over 2006 was slightly different. The subregions with the strongest increases included not only Eastern Europe (15 per cent), North Africa (10 per cent) and the Middle East (6.8 per cent), but also Central America (13 per cent). Military spending in Oceania is also picking up, with growth of 8.6 per cent in 2007, the same rate as in East Asia. The subregions with the lowest rates of increase in 2007 were Western Europe (0.9 per cent) and South Asia (3.1 per cent).

Table 5.2 lists the countries with the highest military spending in 2007. On the left-hand side of the table, countries are ranked according to their military spending converted into constant US dollars using market exchange rates. The top 15 military spenders accounted for 83 per cent of world military spending and the top 5 spenders accounted for 63 per cent, the same proportions as in 2006. The USA accounted for 45 per cent of the world total, with the next-largest spenders—the United Kingdom, China, France and Japan—far behind, at 4–5 per cent each. The levels of military spending per capita and as a share of GDP vary significantly among the top 5. The countries among the top 15 with the highest economic burden of military expenditure ('military burden')

⁴ See also appendix 5C.

⁵ Eastern Europe includes Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russia and Ukraine. See appendix 5A.

⁶ The GCC member states are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. See annex B in this volume. The SIPRI Military Expenditure Database does not have data for Qatar, and the data series for Iraq and the UAE do not cover the full 10-year period 1998–2007. See appendix 5A.

⁷ No data were available for Myanmar (Burma), North Korea and Viet Nam.

Table 5.2. The 15 countries with the highest military expenditure in 2007 in market exchange rate terms and purchasing power parity terms

Spending figures are in US\$, at constant (2005) prices and exchange rates.

Military expenditure in MER dollar terms					Military expenditure in PPP dollar terms ^a			
Rank	Country	Spending (\$ b.)	World share (%)	Spending per capita (\$)	% of GDP, 2006 ^b	Rank	Country	Spending (\$ b.)
1	USA	547	45	1 799	4.0	1	USA	547
2	UK	59.7	5	995	2.6	2	China	[140]
3	China	[58.3]	[5]	[44]	2.1	3	Russia	[78.8]
4	France	53.6	4	880	2.4	4	India	72.7
5	Japan	43.6	4	339	1.0	5	UK	54.7
Sub-total top 5		762	63			Sub-total top 5		893
6	Germany	36.9	3	447	1.3	6	Saudi Arabia ^c	52.8
7	Russia	[35.4]	[3]	[249]	3.6	7	France	47.9
8	Saudi Arabia ^c	33.8	3	1310	8.5	8	Japan	37.0
9	Italy	33.1	3	568	1.8	9	Germany	33.0
10	India	24.2	2	21	2.7	10	Italy	29.6
Sub-total top 10		925	76			Sub-total top 10		1 094
11	South Korea	22.6	2	470	2.5	11	South Korea	29.4
12	Brazil	15.3	1	80	1.5	12	Brazil	26.7
13	Canada	15.2	1	461	1.2	13	Iran ^d	22.1
14	Australia	15.1	1	733	1.9	14	Turkey	16.5
15	Spain	14.6	1	336	1.2	15	Taiwan	15.8
Sub-total top 15		1 008	83			Sub-total top 15		1 204
World		1 214	100	183	2.5			

GDP = gross domestic product; MER = market exchange rate; PPP = purchasing power parity; [] = estimated figure.

^a The figures in PPP dollar terms are converted at PPP rates (for 2005), based on price comparisons of the components of GDP.

^b The figures for national military expenditure as a share of GDP are for 2006, the most recent year for which GDP data are available.

^c The figures for Saudi Arabia include expenditure for public order and safety and might be slight overestimates.

^d The figure for Iran is for national defence and does not include spending on the Islamic Revolutionary Guards Corps, which constitutes a considerable part of Iran's total military expenditure.

Sources: *Military expenditure*: Appendix 5A; *PPP rates*: International Comparison Program, 2005 *International Comparison Program: Preliminary Results* (World Bank: Washington, DC, Dec. 2007), pp. 21–24.

in 2006 are Saudi Arabia, the USA and Russia, while seven of the countries had a military burden below 2 per cent.

Although SIPRI uses market exchange rates for its analysis of military expenditure, for the purpose of comparison on the right-hand side of table 5.2 countries are ranked according to their military spending converted using

GDP-based purchasing power parity (PPP) rates.⁸ The PPP-based ranking is significantly different, primarily for developing countries and, to a lesser extent, transition economies, largely due to the higher domestic purchasing power of such countries' currencies. This leads to the higher ranking of, in particular, China, India, Russia and Saudi Arabia and to the presence of Iran, Taiwan and Turkey in the list. However, interpreting military expenditure converted to dollars using GDP-based PPP rates—the only PPP rates available for most countries—is highly problematic because they primarily reflect the price ratios of civilian goods and services. International comparison of expenditure data is a problematic task in general, and no ideal method for comparisons of military expenditure is available today.⁹

III. The United States

US military expenditure has increased considerably since September 2001. By 2007 the level was higher than at any point since the end of World War II. However, the growth of the US economy and the total budget mean that military spending as a share of GDP and as a share of total US Government outlays is lower than during previous periods.¹⁰ This section provides details of these trends, the budget request for financial year (FY) 2008, and the distribution of military spending between allocations for the annual base budget for defence and emergency supplemental funding under the heading of the 'global war on terrorism'.¹¹

Military expenditure trends

During FYs 2001–2007, US military expenditure increased by 85 per cent in nominal terms and by 59 per cent in real terms according to SIPRI data.¹² Official US data for the same period show an increase in US outlays for national

⁸ The PPP rates are estimates made by the International Comparison Program (ICP) for the World Bank. On the ICP PPP rates and on the problems involved in interpreting military expenditure in PPP terms see appendix 5C, section V.

⁹ See appendix 5C.

¹⁰ In US budget terminology, an *outlay* is a payment made. An outlay may be for payment of obligations incurred in previous financial years. In contrast, a *budget authority* is the authority to incur legally binding financial obligations on the US Government. A budget authority may result in immediate or future outlays. Funds are provided to US Government agencies for specified purposes through an annual *appropriations* act or a permanent law. A *supplemental appropriation* may provide additional budget authority. See e.g. the glossary in US Congress, Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2008 to 2018* (US Congress: Washington, DC, Jan. 2008), pp. 165–81.

¹¹ In budget documents published by the US Department of Defense (DOD) and the White House Office of Management and Budget, funding under the heading 'global war on terrorism' (or 'global war on terror' or GWOT) includes allocations to the DOD and other departments for Operation Iraqi Freedom, for Operation Enduring Freedom (in Afghanistan, the Philippines, the Horn of Africa and elsewhere) and for Operation Noble Eagle (which covers enhanced security in the USA). Most of the 'global war on terrorism' funding (94% during the period FYs 2001–2007) is allocated to the DOD.

¹² See appendix 5A. SIPRI data for US military expenditure are based on NATO data for all years but the most recent. Figures for 2007 are obtained by applying the percentage change in US official estimates, including Department of Defense outlays for the 'global war on terrorism'.

Table 5.3. US outlays for the Department of Defense and total national defence, 2001–2008

Figures are in US\$ b. Years are financial years. Figures may not add up to totals because of the conventions of rounding.

	2001	2002	2003	2004	2005	2006	2007 ^a	2008 ^b
<i>Outlays^c at current prices</i>								
DOD, military	290.2	331.9	387.2	436.5	474.1	499.3	548.9	583.3
Military personnel	74.0	86.8	106.7	113.6	127.5	127.5	128.8	135.7
O&M	112.0	130.0	151.4	174.0	188.1	203.8	224.8	248.6
Procurement	55.0	62.5	67.9	76.2	82.3	89.8	104.3	110.8
RDT&E	40.5	44.4	53.1	60.8	65.7	68.6	71.1	69.6
Military construction	5.0	5.1	5.9	6.3	5.3	6.3	8.8	10.1
Family housing	3.5	3.7	3.8	3.9	3.7	3.7	4.3	4.0
Other ^d	0.3	-0.6	-1.6	1.6	1.5	-0.3	6.8	4.5
DOE, military	12.9	14.8	16.0	16.6	18.0	17.5	17.9	18.0
Other, military	1.6	1.8	1.6	2.8	3.2	5.1	5.1	5.3
Total national defence	304.7	348.5	404.8	455.8	495.3	521.8	571.9	606.5
Military expenditure (SIPRI)	312.7	356.7	415.2	464.7	503.4	527.7	578.3	..
<i>Outlays at constant prices</i>								
Total national defence (FY 2000 prices)	297.2	329.3	364.4	394.3	407.8	417.2	446.7	461.3
Military expenditure (SIPRI, 2005 prices)	344.9	387.3	440.8	480.5	503.4	511.2	546.8	..
<i>Outlays as a share of gross domestic product (%)</i>								
Total national defence	3.0	3.4	3.7	4.0	4.0	4.0	4.2	4.2
Military expenditure (SIPRI)	3.1	3.4	3.8	4.0	4.0	4.0	..	..
<i>Outlays as a share of total US Government outlays (%)</i>								
Total national defence	16.4	17.3	18.7	19.9	20.0	19.7	20.5	20.9

DOD = Department of Defense; DOE = Department of Energy; FY = financial year; O&M = operations and maintenance; RDT&E = research, development, test and evaluation.

^a The figures for FY 2007 are estimates that include outlays derived from the emergency supplemental request in Feb. 2007 for \$93.4 billion in budget authority for FY 2007.

^b The figures for FY 2008 are the estimated future outlays to be generated from requested budget authority. In addition to the annual base budget, they include outlays from the initial FY 2008 'global war on terrorism' request (for \$141.7 billion). They do not include estimated outlays from the 'global war on terrorism' requests submitted in July and Oct. 2007 for additional budget authority of \$5.3 billion and \$42.3 billion, respectively, and are thus underestimates.

^c Outlays are the amount of money spent in a given year (i.e. expenditure), as a result of budget authority provided.

^d A negative number in this category is the result of difficulties of classifying budget activities according to function rather than to spending agency or organization.

Sources: US Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2008: Historical Tables* (Government Printing Office: Washington, DC, 2007), <<http://www.budget.gov/budget/fy2008/>>, pp. 59–60, 124–25; and appendix 5A.

defence of 88 per cent in nominal terms and 50 per cent in real terms (see table 5.3).¹³ The increase has been high across all spending categories, although with some variation. The category of spending that has increased most rapidly is operations and maintenance, which doubled in nominal terms between 2001 and 2007. The increase in nominal terms in procurement was 90 per cent, in military construction 76 per cent, in research, development, test and evaluation 76 per cent, and in military personnel 74 per cent.

The level of US military expenditure (total outlays on national defence) in FY 2007 was 7.4 per cent higher in real terms than the spending peak during the Korean War (FY 1953), 6.3 per cent higher than at the peak of Viet Nam War spending (FY 1968) and 12 per cent higher than at the third peak of cold war spending (FY 1989). However, due to the growth of the US economy, military expenditure as a share of GDP and as a share of total US Government outlays was lower in FY 2007 than during all previous peak spending years since World War II (see figure 5.1).

The budget request for financial year 2008

The defence budget request for FY 2008 was submitted to the US Congress by the Administration of President George W. Bush on 5 February 2007.¹⁴ It consists of two separate requests for budget authority: one for the Department of Defense (DOD) of \$481.4 billion—a nominal increase of 11.3 per cent over FY 2007 and a real-terms increase of 8.6 per cent—and one for the ‘global war on terrorism’ of \$141.7 billion.¹⁵ The request also includes \$22.5 billion for Department of Energy and other non-DOD military activities, giving a total budget authority request for national defence of \$645.6 billion.¹⁶ An emergency supplemental request for an additional \$93.4 billion in ‘global war on terrorism’ funding for FY 2007 was presented at the same time.¹⁷

¹³ The difference between SIPRI and US official data in real terms depends on the use of different deflation methods. While SIPRI uses the consumer price index, the US Department of Defense uses defence-specific deflators (which are not available for most countries), which indicate a faster rate of inflation in the prices of military goods than in consumer prices.

¹⁴ The request of the US Administration is always for budget authority. Most defence budget authority is provided in the form of annually enacted appropriations. See also note 10. The budget authority figures here differ from the figures in table 5.3, which are for outlays.

¹⁵ US Department of Defense, ‘Fiscal 2008 Department of Defense budget released’, News Release no. 129-07, 5 Feb. 2007, <<http://www.defenselink.mil/releases/release.aspx?releaseid=10476>>. In addition to the \$481.4 billion, there was a small mandatory authority for the DOD, giving a total DOD budget authority of \$483.2 billion. Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2008* (Department of Defense: Washington, DC, Mar. 2007). This and other FY 2008 defence budget materials are available at <<http://www.defenselink.mil/comptroller/defbudget/fy2008/>>.

¹⁶ Kosiak, S. M., *Analysis of the FY2008 Defense Budget Request* (Center for Strategic and Budgetary Assessments: Washington, DC, 2007), p. 1. Total US military (national defence) expenditure consists of the military spending of the DOD and of other departments, primarily the Department of Energy, for nuclear weapon-related activities.

¹⁷ US Department of Defense (note 15).

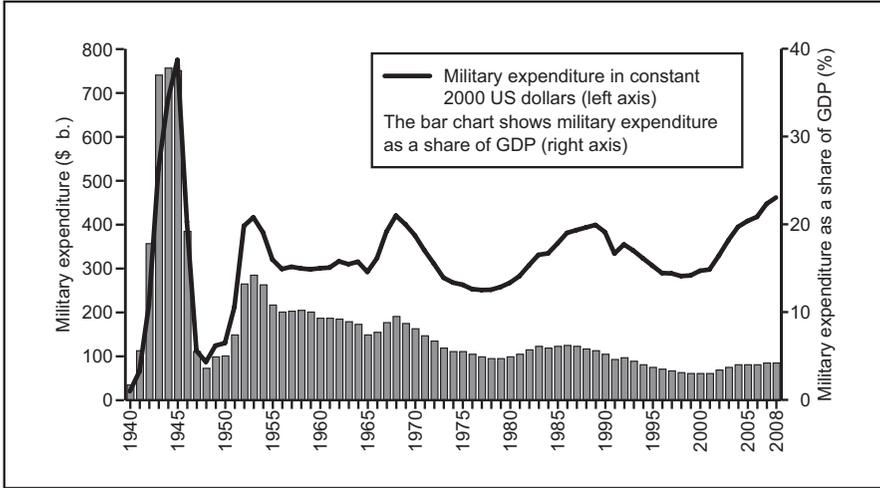


Figure 5.1. Trends in US military expenditure, financial years 1940–2008

Source: US Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2008: Historical Tables* (Government Printing Office: Washington, DC, 2007), <<http://www.budget.gov/budget/fy2008/>>, pp. 118–25.

While in previous years the Bush Administration had used emergency supplemental appropriations throughout the year and outside the annual base budget to request funding for ‘global war on terrorism’ activities, the FY 2008 budget request was the first to include a separate budget request under this heading in addition to the base budget. However, this was based on the DOD’s best estimate of war funding needs as of February 2007, and two supplementary ‘global war on terrorism’ funding requests for FY 2008 followed later in the year. In July \$5.3 billion was requested to maximize the production and deployment of mine-resistant ambush-protected (MRAP) vehicles for US troops in Afghanistan and Iraq. In October a request for \$45.9 billion was submitted for military and intelligence operations in support of the ‘global war on terrorism’, of which \$42.3 billion was for the DOD.¹⁸

The justifications given for the growth in the FY 2008 base budget request were: ‘to ensure a high state of military readiness and ground force strength; to enhance the combat capabilities of the United States Armed Forces; to . . . maintain traditional U.S. superiority against potential threats; and to continue the [DOD’s] strong support for service members and their families’.¹⁹ The FY 2008 base budget request includes funding to increase the size of the US Army and the Marine Corps: ‘Recognizing that threats to U.S. security exist beyond the war on terror in Iraq and Afghanistan’, the DOD plans to increase the size of the army by 65 000 troops to 547 000 active personnel by FY 2012 and the

¹⁸ US Office of Management and Budget, ‘FY 2008 revised emergency proposal’, Estimate no. 5, 31 July 2007; and Estimate no. 6, 22 Oct. 2007, <<http://www.whitehouse.gov/omb/budget/07amendments.htm>>.

¹⁹ US Department of Defense (note 15), p. 1.

Marine Corps by 27 000 to 202 000 active personnel by FY 2011.²⁰ The FY 2008 budget also included funding to continue a broad range of weapon programmes, including \$27 billion to fund the acquisition of unmanned aerial vehicles and combat aircraft—including 20 F-22, 18 EA-18G, 24 F/A-18 and 26 V-22 aircraft—the continued development and procurement of 12 Joint Strike Fighter (F-35) combat aircraft, and the upgrading of existing aircraft.²¹

Funding the ‘global war on terrorism’

It has proven difficult to keep track of the appropriations and actual expenditure incurred for the ‘global war on terrorism’. Since the attacks on the USA of 11 September 2001, three operations have been initiated under this heading: Operation Iraqi Freedom; Operation Enduring Freedom, covering operations in Afghanistan, the Philippines, the Horn of Africa and elsewhere; and Operation Noble Eagle, covering enhanced security in the USA. According to estimates by the US Congressional Research Service (CRS), by late December 2007 a total of \$699.9 billion had been approved by the US Congress for FYs 2001–2007 for these three operations.²² Of this total, the CRS report estimates that the DOD has received \$655.0 billion (94 per cent), the Department of State and the US Agency for International Development (USAID) \$42.4 billion—for reconstruction, embassy operation and construction, and foreign aid programmes for Afghanistan and Iraq—and the Department of Veterans Affairs \$2.5 billion. The CRS report estimates total US appropriations for the ‘global war on terrorism’ at \$805.1 billion for the period FYs 2001–2008.

In October 2007 the DOD presented data showing the distribution of defence budget authority between the base budget and ‘global war on terrorism’ operations (see table 5.4). These show that, while overall DOD appropriations have increased by 110 per cent in nominal terms over the period FYs 2001–2008, the base budget has also increased—albeit at a lower rate—by 59 per cent.²³

The US Government Accountability Office (GAO), which has the authority to conduct evaluations on its own initiative, has conducted a series of reviews of the funding of military operations in support of the ‘global war on terrorism’. In particular, it has criticized the use of emergency supplemental appropriation requests. In a November 2007 report the GAO describes how the

²⁰ US Department of Defense (note 15), p. 2. This refers to ‘active permanent end strength’.

²¹ US Department of Defense (note 15), p. 3.

²² Belasco, A., *The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11*, Congressional Research Service (CRS) Report for Congress RL33110 (US Congress, CRS: Washington, DC, 8 Feb. 2008), pp. 6–7. The US Congressional Budget Office provides figures based on funds already obligated. According to a Jan. 2008 report, the US Congress and the US President had provided a total of \$691 billion ‘in budget authority for military and diplomatic operations in Iraq, Afghanistan and other regions in support of the war on terrorism and for related veteran’s benefits and services’. US Congress (note 10), p. 6.

²³ The increase in overall appropriations does not take account of the full amount of supplemental appropriations for FY 2008. US Department of Defence (DOD), *FY2008 Global War on Terror Amendment* (DOD: Washington, DC, Oct. 2007), <<http://www.defenselink.mil/comptroller/defbudget/fy2008/>>, p. 1.

Table 5.4. US appropriations for the Department of Defense base budget and the ‘global war on terrorism’, 2001–2008

Figures are for budget appropriations,^a in US\$ b. at current prices. Years are financial years.

	2001	2002	2003	2004	2005	2006	2007	2008
Base budget ^b	302	328	375	377	403	421	438	481
‘Global war on terrorism’ ^c	17	14	69	66	103	115	169	189
Total Department of Defense appropriations	319	342	444	443	506	536	607	670

^a The figures for 2001–2007 are from defence appropriation acts. The figures for 2008 are from the initial and supplemental budget requests submitted up to Oct. 2007.

^b The base budget is for the regular defence budget during peacetime.

^c These appropriations are for budget authority requested and appropriated under the heading ‘global war on terrorism’.

Source: US Department of Defense (DOD), *FY2008 Global War on Terror Amendment* (DOD: Washington, DC, Oct. 2007), <<http://www.defenselink.mil/comptroller/defbudget/fy2008/>>, p. 1.

DOD’s emergency funding requests for most contingency operations have historically been limited to funding the initial incremental costs—defined as additional costs ‘that would not have been incurred if a contingency operation . . . had not been supported’.²⁴ As soon as a limited and partial projection of costs could be made, previous administrations had requested funding for ongoing military operations in the base budget requests. However, despite this past practice and the recommendations of several GAO reports, the GAO notes that current US Administration policy dictates that funding for military operations in support of the ‘global war on terrorism’, such as operations Enduring Freedom and Iraqi Freedom, should be requested as emergency funding, and that this has been the practice since September 2001.

There have also been claims that the practice of in effect running two parallel budget processes—one for the annual base defence budget and another for the ‘global war on terrorism’, based on emergency supplemental appropriations—has had an impact on the integrity of the defence budget process at the DOD. For example, Gordon Adams, the senior national security budget official in the US Administration of President Bill Clinton, has argued that the fact that emergency and supplemental funding requests are not processed through the normal mechanisms of the DOD’s Planning, Programming, Budgeting and Execution System (PPBES) has resulted in a tendency at the DOD to treat the base and ‘global war on terrorism’ budgets as mutually interchangeable.²⁵ Given that by FY 2008 about a quarter of all the resources avail-

²⁴ US Government Accountability Office (GAO), *Global War on Terrorism: DOD Needs to Take Action to Encourage Fiscal Discipline and Optimize the Use of Tools Intended to Improve GWOT Cost Reporting*, GAO-08-68 (GAO: Washington, DC, Nov. 2007), pp. 6, 19–20.

²⁵ Adams, G., ‘Budgeting for Iraq and the GWOT’, Testimony before the US Senate Committee on the Budget, 6 Feb. 2007, <<http://budget.senate.gov/republican/NewHearings&Testi2007.htm>>.

able to the DOD were provided through the emergency funding mechanism, Adams saw the impact as considerable.

In October 2006 (with effect from FY 2007) the DOD revised the funding guidance for the 'global war on terrorism' to allow for the inclusion of funding for what it calls the 'longer war against terror' in addition to the specific operations in Afghanistan and Iraq. However, the DOD has not clearly defined the 'longer war' and the new guidance has resulted in billions of dollars being added to 'global war on terrorism' funding requests. The DOD now includes funding for items generally found in the base budget request—such as future weapon systems, transformation and general increases in military personnel—in the budget request for the 'global war on terrorism'. The GAO notes that this has blurred the line between longer-term costs—that have traditionally been requested and funded from the base budget—and additional costs of contingency operations.²⁶ It argues that 'if the administration believes that the nature of the security challenges facing the United States has changed such that [the USA is] engaged in a long-term conflict, the implications—for example, in terms of force structure, investment priorities, and long-term versus short-term costs—should be the focus of discussion with Congress'. The GAO concludes that continuing to fund the 'global war on terrorism' through emergency funding requests 'reduces transparency and avoids the necessary reexamination and discussion of defense commitments', and since the Bush Administration defines the 'global war on terrorism' as long term, more of its costs should be included in the base budget to allow it to be transparent and subject to debate.

IV. Rapidly rising military expenditure in the South Caucasus

The South Caucasus is a region with a host of different security concerns, the most salient being the more or less dormant conflicts in Abkhazia and South Ossetia (both secessionist regions in Georgia) and in Nagorno-Karabakh (a de facto independent Azerbaijani region largely controlled from Armenia; see figure 5.2). A significant factor in the region's security situation is the involvement of external actors. Russia, the United States and, increasingly, the European Union (EU) compete for access to and control over the region's energy resources and transit routes. The international interest is also due to the region's important geographical location for the USA's 'global war on terrorism'.²⁷

The combined military expenditure of the three South Caucasian countries—Armenia, Azerbaijan and Georgia—has increased by more than 500 per cent in real terms over the 10-year period 1998–2007 and by 285 per cent over the five years 2003–2007 (see table 5.5). By 2006 all these countries spent a greater share of their GDPs on their militaries than the world average of

²⁶ US Government Accountability Office (note 24), pp. 6–8.

²⁷ de Haas, M., 'Current geostrategy in the South Caucasus', Eurasia Insight, Eurasianet, 7 Jan. 2007, <<http://www.eurasianet.org/departments/insight/articles/pp010707.shtml>>.



Figure 5.2. Map of the South Caucasus

2.5 per cent; Georgia in particular had a very high level of military spending in comparison to the size of its economy. Since these figures do not include spending by non-state actors, they underestimate the economic burden that military spending constitutes for these countries. These figures also under-represent the military build-up in the South Caucasus, since they do not take account of the vast amounts of military aid that have flowed into the region over recent years.²⁸

The driving factors behind the upward trend in military expenditure in the South Caucasus are: the unresolved conflicts in Abkhazia, Nagorno-Karabakh and South Ossetia; the aspirations of the three countries to join NATO and the high cost associated with the related need for transformation and modernization; the states' respective relationships with, or perceived threat from, neighbouring states; and efforts to secure energy resources and transport routes. The effect of these driving factors has been facilitated by the three countries' increasing economic resources, which have been generated by economic reforms and high and rising oil revenues.

While the driving forces—especially the probability of resumed conflict in the region—work in favour of continued increases in military spending in all the South Caucasian states, the economic factors have a more diverse impact. In Azerbaijan the oil-driven economy is booming, resulting in a windfall of revenues, which the government has chosen to use for increased spending on military expenditure. The more moderate economic growth in Armenia and Georgia has given less leeway for increased spending on both the military and the non-military sectors. Thus, unless the immediate security situation deteriorates, Armenia and, to a lesser degree, Georgia are likely to keep military expenditure increases at a more moderate level than Azerbaijan.

²⁸ Foreign military aid is included in the military expenditure of the donor country, not the recipient. On military expenditure and foreign military aid in the South Caucasus for the period up to 2002 see Perlo-Freeman, S. and Stålenheim, P., 'Military expenditure in the South Caucasus and Central Asia', A. J. K. Bailes et al., *Armament and Disarmament in the Caucasus and Central Asia*, SIPRI Policy Paper no. 3 (SIPRI: Stockholm, July 2003), <<http://books.sipri.org/>>.

Table 5.5. Military expenditure in the South Caucasus, 1998–2007

Figures are in US\$ m., at constant (2005) prices and exchange rates and as share of gross domestic product (GDP).

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	% change, 2003–07
<i>Military expenditure (\$ m.)</i>											
Armenia	86.4	93.0	94.3	91.5	90.5	104	115	141	157	194	87
Azerbaijan	[102]	[133]	[141]	[160]	[172]	[215]	[260]	305	625	667	210
Georgia	[51.7]	[39.8]	[27.2]	[34.5]	49.3	57.7	80.6	214	362	592	921
Total	240	266	262	286	312	377	456	660	1144	1453	285
<i>Military expenditure as a share of GDP (%)</i>											
Armenia	3.5	3.7	3.6	3.2	2.7	2.7	2.7	2.9	2.8	..	
Azerbaijan	[2.4]	[2.6]	[2.3]	[2.3]	[2.2]	[2.4]	[2.6]	2.3	3.6	..	
Georgia	[1.1]	[0.9]	[0.6]	[0.7]	1.0	1.1	1.4	3.3	5.2	..	

[] = SIPRI estimate.

Source: Appendix 5A, tables 5A.2 and 5A.4.

Armenia and Azerbaijan

The major reason for the rapid increases in military spending in Armenia and Azerbaijan has been the unresolved conflict over Nagorno-Karabakh.²⁹ Military expenditure in Armenia has increased by 125 per cent in real terms between 1998 and 2007. Azerbaijani military spending has increased much faster over the decade: by 554 per cent in real terms. The increase was particularly high in 2006, when spending more than doubled. The official justification for this increase was Russia's transfer of military equipment from its base in Batumi, Georgia, to its 102nd Military Base in Gyumri, Armenia, which the Azerbaijani Government sees as Russian military aid to Armenia.³⁰ Despite Russia asserting that the move would not change the balance of forces in the South Caucasus and that the military equipment would not be available for Armenian forces, Azerbaijani President Ilham Aliyev argued that such a move could spur an arms race in the South Caucasus.³¹ Another significant increase in Azerbaijan's military spending has been budgeted for 2008 with the explicit goal of 'creating a powerful army' to be able to 'liberate its lands by any means'.³² One interpretation is that 'The goal of the Azeri leadership is

²⁹ According to the Azerbaijani Foreign Minister, Elmar Mammadyarov, the issue of Nagorno-Karabakh is the most serious challenge to the region's security. UN News Centre, 'Armenia and Azerbaijan offer views on Nagorno-Karabakh during UN debate', 30 Oct. 2007 <<http://www.un.org/apps/news/story.asp?NewsID=24169>>.

³⁰ Matirosyan, S. and Mir Ismail, A., 'Armenia and Azerbaijan differ over Russian base pull-out', Eurasia Instight, Eurasianet, 28 June 2005, <<http://www.eurasianet.org/departments/insight/articles/eav062805.shtml>>.

³¹ Matirosyan and Mir Ismail (note 30).

³² 'Azerbaijan boosts defence budget, warns Armenia', Reuters, 22 Oct. 2007, <<http://www.alertnet.org/thenews/newsdesk/L22373221.htm>>.

to drive defense spending upward to the point where it will break the back of Armenia's will to continue the impasse between the two countries over territorial issues'.³³ Azerbaijan has clearly stated that it aims to spend more on its armed forces than Armenia does on its total state budget.³⁴

According to the Armenian Defence Minister, Serge Sarkisian, Armenia's 24 per cent increase in military expenditure in 2007 would suffice to sustain its combat readiness and to match Azerbaijani forces if the conflict between the two countries resumes.³⁵ The official military budget does not fully reflect Armenia's military capabilities. Armenia reportedly has a higher combat capability than Azerbaijan, which is reinforced by the geostrategic advantage of holding strategic heights on the frontline.³⁶ In addition, Armenia has received considerable amounts of military aid from Russia and, allegedly, from Iran.³⁷ However, lack of information about the size of these extra resources makes it difficult to assess the overall level of spending on Armenia's military.

Both Armenia and Azerbaijan hope for closer cooperation with NATO, and ultimately NATO membership. The aim of achieving NATO standards throughout their security sectors and to be able to participate in NATO and Partnership for Peace exercises and peacekeeping operations has pushed their military expenditures up.³⁸ For Azerbaijan, the need to secure energy interests in the Caspian Sea and energy transport routes has also added to the upward trend in military expenditure.

During the late 1990s both Armenia and Azerbaijan went through fundamental economic reforms that laid the ground for sound economic growth. For Azerbaijan, these reforms along with windfall revenues from gas and oil exports have been the basis for a rapidly improved economic situation. GDP growth rates in recent years have been among the highest in the world, which has facilitated Azerbaijan's rapidly increasing military spending.³⁹ Armenia's economic reforms have resulted in a rapidly growing economy.⁴⁰ However,

³³ Darling, D., 'Azerbaijan boosting military spending', Forecast International, 9 May 2007, <<http://www.forecastinternational.com/press/release.cfm?article=110>>.

³⁴ 'Azeri military budget to equal total Armenian state budget—Aliyev', *Central Asia—Caucasus Analyst*, 22 Mar. 2006, p. 21.

³⁵ 'Armenian defense chief unfazed by bigger military spending in Azerbaijan', Arminfo, Yerevan, 6 Nov. 2006, Translation from Russian, World News Connection, National Technical Information Service, (NTIS), US Department of Commerce; and Darling (note 33).

³⁶ Darling (note 33); and International Crisis Group (ICG), *Nagorno-Karabakh: Risking War*, Europe Report no. 187 (ICG: Brussels, 14 Nov. 2007), <<http://www.crisisgroup.org/home/index.cfm?id=5157>>, p. 13.

³⁷ Haeri, S., 'Islamic Iran, Orthodox Armenia, strange bedfellows', Iran Press Service, 9 Sep. 2004, <http://www.iran-press-service.com/ips/articles-2004/september/khatami_armenia_9904.shtml>.

³⁸ NATO Parliamentary Assembly, Sub-committee on Future Security and Defence Capabilities, 'Viewing NATO from the South Caucasus: Armenia, Azerbaijan and Georgia', 167 DSCFC 07 E bis, 6 Oct. 2007, <<http://www.nato-pa.int/default.asp?SHORTCUT=1161>>.

³⁹ According to the International Monetary Fund, Azerbaijan's GDP growth was among the 5 largest in 2006. International Financial Statistics database, Sep. 2007, <<http://www.imfstatistics.org/imf/>>.

⁴⁰ International Monetary Fund (IMF), *Republic of Armenia: Fifth Review under the Three-Year Arrangement under the Poverty Reduction and Growth Facility and Request for Modification of Performance Criteria*, IMF Country Report no. 07/377 (IMF: Washington, DC, 9 Nov. 2007).

with its geostrategically advantageous position and without Azerbaijan's energy revenues, Armenia has not been willing or able to fully respond to the challenge of Azerbaijan's spending.

Georgia

Georgia's military expenditure has increased more than tenfold in real terms since 2003. This fast growth came after a period of continuously declining military expenditure. Since its low point of 0.6 per cent of GDP in 2000, Georgian military expenditure has increased to 5.2 per cent of GDP in 2006.

When Georgian President Mikhail Saakashvili took office in January 2004, following the November 2003 'Rose Revolution', he inherited a country close to state failure. The economy and many state functions were in ruins and the government did not have full control over all Georgian territory. Abkhazia and South Ossetia were de facto independent republics, and the renegade region of Adjara was also outside Tbilisi's control.⁴¹ During the presidency of Eduard Shevardnadze, constant underfunding, fraud and corruption had made the armed forces non-functional.⁴²

Saakashvili's government faced the seemingly impossible tasks of rebuilding society, reforming the economy, rejuvenating the armed forces and restoring the country's territorial integrity. To achieve these, the government decided to establish closer ties with the West rather than with Russia and it made serious moves towards starting the intensified process for NATO membership. The hope was that NATO would act as a counterweight to Russia's strong position in Abkhazia and South Ossetia and its friendly relations with the Adjarian leader, Aslan Abashidze.

Georgia now receives military aid from several NATO members, with the bulk coming from the USA.⁴³ In 2002 the USA provided more than \$34 million in military aid, equal to 70 per cent of Georgia's domestic military spending. Of this, \$20 million was given specifically to enable the Georgian armed forces to deal with Chechen rebels in the Pankisi Gorge.⁴⁴ In 2006 and 2007 US military aid amounted to approximately \$10 million.⁴⁵

After Saakashvili took power, military expenditure increased at a very high rate: 40, 166, 69 and 64 per cent, respectively, for each of the years 2004–

⁴¹ Lynch, D., *Why Georgia Matters*, Chaillot Paper no. 86 (EU Institute for Security Studies: Paris, Feb. 2006), pp. 24–31.

⁴² Perlo-Freeman and Stålenheim (note 28), pp. 13–14; and Lynch (note 41), pp. 17–22.

⁴³ US Department of State, Bureau of Political–Military Affairs, 'Georgia: security assistance', 2 July 2007, <<http://www.state.gov/t/pm/64766.htm>>; and Darling, D., 'Onward, upward, Georgia defense spending continues to swell', *Forecast International*, 4 May 2007.

⁴⁴ Perlo-Freeman and Stålenheim (note 28), p. 15.

⁴⁵ In addition, the USA has provided Georgia with other security-related aid under the US 1992 Freedom Support Act (FSA) to improve export controls, border security and law enforcement. FSA-related aid was \$97 million in 2002 and \$55 million in 2007. US Department of State, *Congressional Budget Justification, Foreign Operations, Fiscal Year 2004* (US Department of State: Washington, DC, Feb. 2003), pp. 340–42; US Department of State, *Congressional Budget Justification, Foreign Operations, Fiscal Year 2009* (US Department of State: Washington, DC, Feb. 2008), pp. 462–65; US Department of State (note 43); and Darling (note 43).

2007. The most common official justification for the big increase in Georgian military spending is its aim of NATO membership. NATO accession enjoys wide popular support and is seen as a legitimate reason for increased military spending, both domestically and by many of Georgia's Western partners.⁴⁶ Georgia joined NATO's Partnership for Peace in March 1994 and negotiated an individual Partnership Action Plan in 2006. In February 2007, President Saakashvili was confident that Georgia would join NATO in 2009.⁴⁷ However, the Georgian Government's declaration of a state of emergency and the forced closure of an opposition television station and other media in November 2007 might have decreased the likelihood of an early accession. The NATO declaration issued following these events clearly indicated disapproval of these decisions. It stated that 'The imposition of Emergency Rule, and the closure of media outlets in Georgia . . . are of particular concern and not in line with Euro-Atlantic values.'⁴⁸

The other major reason for the increase in Georgia's military expenditure is its ambition to re-establish control over Abkhazia and South Ossetia, as had already been done, in a largely peaceful manner, with Adjara in May 2004. More recently, the Georgian Government has adopted a more peaceful approach to resuming control over its territory, especially South Ossetia. The Georgian Government intends to decrease Georgia's military budget over a number of years: the budget for 2008 is 27 per cent lower than in 2007.⁴⁹ This policy, which is necessary for balancing the budget, is dependent on the peaceful resolution of the South Ossetian and Abkhaz conflicts, but the option of resorting to force has not been abandoned.

V. Regional trends

Africa

Military expenditure in Africa was \$18.5 billion in 2007, 1.4 per cent of the world total.⁵⁰ During the period 2004–2006, military expenditure in the region was relatively flat, following average annual growth of 6 per cent in 1998–2004. This changed in 2007: African military expenditure increased again by 6 per cent in real terms over 2006. Over the 10-year period 1998–2007 the real-terms growth was 51 per cent.

These figures show the broad trends for Africa. However military expenditure statistics for Africa are problematic and in some countries they tend to

⁴⁶ '77% Georgians voted for NATO membership—Central Election Commission', Regnum News Agency, 18 Jan 2008, <<http://www.regnum.ru/english/944417.html>>.

⁴⁷ Fiorenza, N., 'Georgia aims to start NATO membership talks by early 2008', *Jane's Defence Weekly*, 7 Mar. 2007, p. 6.

⁴⁸ NATO, 'Statement by the Secretary General on the situation in Georgia', Press Release (2007)114, 8 Nov. 2007, <<http://www.nato.int/docu/pr/2007/p07-114e.html>>.

⁴⁹ Brunstrom, D., 'Georgia PM vows to cut defense spending', *Defense News*, 5 Dec. 2007; and 'Georgian parliament approves 2008 state budget', Kavkaz-Press, Tbilisi, 28 Dec. 2007, Translation from Russian, World News Connection, NTIS.

⁵⁰ See appendix 5A, table 5A.1.

understate the true level of spending.⁵¹ Several countries in Africa are involved in armed conflict, which makes access to reliable data difficult.⁵² Furthermore, SIPRI data cover only the military expenditure of governments, not spending by non-state actors.

The 2007 increase in African military expenditure can be explained by a number of factors, some of which generate the demand for increased spending and some of which facilitate the increase. Demand-side factors include increased participation in peacekeeping operations; ongoing demobilization, disarmament and reintegration (DDR) processes; military reform and modernization programmes; and internal security problems. Strong economic growth, in some cases reinforced by increased oil revenues, has allowed these demand factors to be translated into increased military spending. For three consecutive years (2004–2006), sub-Saharan Africa had annual economic growth rates of 5–6 per cent, and this is projected to increase to 6–7 per cent in 2007.⁵³

To a great extent, three major spenders—Algeria, Morocco and South Africa—determine the trend for Africa’s military expenditure since they account for 58 per cent of the total. Of these, Algeria had the highest real-terms growth over the period 2003–2007: 45 per cent. Mid-level spenders also increased their military expenditure in 2003–2007. In particular, Ghana, Nigeria and Angola—among the top 10 spenders in the region—accelerated their military spending in real terms.

Ghana’s military budget increased sharply in 2007, by 71 per cent—the highest increase globally—to 106 million cedis (\$114 million).⁵⁴ While part of the 2007 military budget is for human resource development and housing projects, a major part is for the military equipment and logistics required by Ghana’s provision of troops to United Nations and African Union peacekeeping operations. To meet this need the Ghanaian Government has agreed to provide the Ministry of Defence with a loan of \$73 million. This money is to be raised through a private financing initiative, which the government says will be serviced and repaid by the anticipated future annual revenues of

⁵¹ For an analysis of the quality of official military expenditure data for select African countries see Omitoogun, W., *Military Expenditure Data in Africa: A Survey of Cameroon, Ethiopia, Ghana, Kenya, Nigeria and Uganda*, SIPRI Research Report no. 17 (Oxford University Press: Oxford, 2003).

⁵² In 2005 there were 5 state-based armed conflicts (including 3 major armed conflicts) and 14 non-state armed conflicts in sub-Saharan Africa, according to data from the Uppsala Conflict Data Program (UCDP), Uppsala University. See Human Security Centre, *Human Security Brief 2006* (University of British Columbia, Liu Institute for Global Issues, Human Security Centre: Vancouver, 2006), pp. 7, 10; and appendix 2A in this volume.

⁵³ ‘Sub-Saharan Africa economic outlook: growth outlook is positive, but more reforms are needed’, *IMF Survey*, vol. 36, no. 7 (23 Apr. 2007), p. 110.

⁵⁴ Judging from the past record of relatively good defence budget implementation in Ghana, it is likely that the increase in the 2007 defence budget will be translated into actual expenditure. However, in 2005 the budget for administration of the Ministry of Defence, which represented 13% of the total budget, was overspent by more than 400%—it ultimately represented 50% of total spending. World Bank, *Ghana: 2006 External Review of Public Financial Management*, Report no. 36384-GH, vol. 1 (World Bank: Washington, DC, June 2006), p. 39.

\$26 million from UN peacekeeping operations.⁵⁵ Ghana's participation in peacekeeping missions serves as a way of creating a more professional military force.⁵⁶ Previously, the substantial revenues from international peacekeeping were excluded from the official Ghanaian defence budget, which was a major source of unreliability in its military expenditure data.⁵⁷

Ghana has established close ties with China and Russia for the acquisition of new military equipment and the rebuilding of facilities. The defence budget for 2007 includes funding for the procurement of K-8 trainer aircraft and a simulator from China, as well as for refurbishment of Ghana's Fokker aircraft. A Chinese construction company has been contracted to build a new Ministry of Defence office complex, starting in 2007. This project has an estimated cost of \$6.75 million, of which \$5 million is to be provided by the Chinese Government.⁵⁸

Nigeria's military spending amounted to 122 billion naira (\$960 million) in 2007, an increase of 17 per cent in real terms over 2006. The combination of rising internal security demands, Nigeria's role in regional peacekeeping missions and high oil revenues could partly explain the growth in spending on defence in Nigeria, particularly for 2007.

The oil-rich Niger Delta region has increasingly been the scene of armed violence from non-state actors.⁵⁹ This is one of the reasons for the Nigerian Government's investment in maritime capabilities, which are intended particularly for the surveillance of the Niger Delta region. Construction began in 2006 on a naval surveillance system, intended to protect Nigeria's coastline and offshore oil platforms.⁶⁰ This programme was complemented in 2007 with the acquisition of equipment such as modern patrol boats, to provide security for the oil companies operating in the region.⁶¹ The Nigerian Government allocated 2 billion naira (\$16 million) for this purpose in 2007, a decision that attracted strong domestic criticism.⁶²

⁵⁵ Republic of Ghana, *The Budget Statement and Economic Policy of the Government of Ghana for the 2007 Financial Year* (Ministry of Finance and Economic Planning: Accra, 16 Nov. 2006), <<http://www.mofep.gov.gh/budget2007.cfm>>, p. 370.

⁵⁶ E.g. in Oct. 2005 more than 1000 soldiers from the Ghanaian Armed Forces and NATO engaged in joint training exercises. 'Security sector reform in Ghana', Inventory of security sector reform (SSR) efforts in partner countries of German development assistance, Bonn International Center for Conversion (BICC), [n.d.], <http://www.bicc.de/ssr_gtz/>, pp. 2–3.

⁵⁷ Omitoogun (note 51), pp. 57, 61.

⁵⁸ Maslov, A., 'Gana mozhet stat' klyuchevym pokupatelem rossiiskogo oruzhiya v Zapadnoi Afrike [Ghana can become a key customer of Russian weapons in Western Africa], *Eksport Vooruzheniy*, no. 4/2006 (July–Aug. 2006), pp. 4–5; 'Re-equipping our air force', *Accra Daily Mail*, 6 June 2006; and 'China to build Ghana Defence Ministry offices', Ghana Broadcasting Corporation Radio 1, 20 Apr. 2007, Transcript from World News Connection, NTIS.

⁵⁹ According to the US Department of State, there were 54 attacks on oil installations during which 11 hostages were taken during 2006. Fisher-Thompson, J., 'US partners with Nigeria on security for oil-rich Delta region', US Department of State, USINFO, 15 Mar. 2007.

⁶⁰ Ben-David, A., 'Nigeria develops unmanned coastal capability', *Jane's Defence Weekly*, 12 Apr. 2006.

⁶¹ 'FG procures gun boats to battle N/Delta Militants', *Daily Champion* (Lagos), 6 Mar. 2007.

⁶² Buhari, R., 'Nigerian government spending of \$16.3 million on security enhancements attracts criticism', *This Day*, 7 Feb. 2007.

The USA has been supporting Nigeria with training and equipment programmes to protect oil facilities and their workers because the violence in the region threatens the daily delivery of more than 1 million barrels to the USA (8 per cent of total US oil imports).⁶³ In the 2008 budget the government of President Umaru Yar'Adua, who took office in May 2007, clearly prioritized spending on infrastructure in the Niger Delta and on security in the Niger Delta and elsewhere in Nigeria.⁶⁴

Improvement of the Nigerian Air Force was another important area in 2007. However, while the government pursued negotiations in 2007 with Italy and the Czech Republic, among others, for the purchase and refurbishment of aircraft,⁶⁵ a lack of funding meant that the acquisition of 14 F-7 combat aircraft from China, agreed in 2000, was suspended in late 2007.⁶⁶

Angolan military expenditure has increased considerably over the decade 1998–2007. However, it is impossible to make reliable estimates of the precise increase because of the uncertainty of data on military expenditure during and immediately after the 1975–2002 civil war and, even more so, because of deficient and unreliable macroeconomic data, which are the basis for assessments of real-terms trends. The best estimates suggest that Angola's military spending increased by 500–800 per cent in real terms between 1998 and 2007.

Most of this growth can be explained by the 1975–2002 civil war with UNITA (União Nacional para a Independência Total de Angola, National Union for the Total Independence of Angola) and the 1975–2006 conflict with the Front for the Liberation of the Enclave of Cabinda (FLEC). In more recent years, significant spending has been required for DDR programmes and a modernization plan for the Angolan Armed Forces (Forças Armadas de Angolanas, FAA) to be completed by 2015.⁶⁷ In 2007 the process of integrating FLEC soldiers into the FAA and, to a lesser extent, the National Police began. A large part of the DDR costs have been covered by domestic spending because of problems with the donor involvement in Angola's post-war rebuilding efforts.⁶⁸

Asia

Military expenditure in Asia increased by 7.9 per cent in real terms in 2007 and reached \$200 billion.⁶⁹ Asian military spending has increased by 25 per

⁶³ Fisher-Thompson (note 59).

⁶⁴ 'FY08 budget to reach \$19 billion', Agence France-Presse, 3 Oct. 2007.

⁶⁵ 'Possible Czech L-159 sales to Georgia and Nigeria', *Air Forces Monthly*, July 2007; and Cini, M., 'New Nigerian Air Force G.222', *Air Forces Monthly*, Dec. 2007.

⁶⁶ Egua, H., 'N50 billion abandoned defence projects for review', *Business Day* (Lagos), 7 Feb. 2008.

⁶⁷ 'Minister highlights head of state's engagement in modernisation of armed forces', Angola Press Agency, Luanda, 9 Oct. 2007; and 'Armed forces modernisation ends by 2015', Angola Press Agency, Luanda, 28 Sep. 2007.

⁶⁸ 'Roundup: reporting on incorporation of FLEC soldiers to Angolan Armed Forces', 11 Jan. 2007, World News Connection, NTIS; and Ruigrok, I., 'Whose justice? Contextualising Angola's reintegration process', *African Security Review*, vol. 16 no. 1 (Mar. 2007), p. 2.

⁶⁹ See appendix 5A, table 5A.1.

cent since 2003 and by 53 per cent since 1998. Over the past decade, the average annual rate of increase has been 4.8 per cent. Historically, military expenditure in this region, and especially in East Asia, has risen steeply. The trend over the 10-year period 1998–2007 was affected by two major events: the Asian financial crisis in 1997–98—which led to a reduction from even higher growth rates before 1997—and the Indian Ocean tsunami of December 2004, which led to some reallocation of budgetary resources from the military to reconstruction. The four major spenders in the region—China, India, Japan and South Korea, with expenditures in 2007 of \$66 billion, \$28 billion, \$40 billion and \$26 billion, respectively—together account for 80 per cent of the regional total.

South Asia

India's military expenditure, which accounts for 80 per cent of South Asia's total, increased by 3 per cent in real terms in 2007. The average annual growth rate over 1998–2007 was 6 per cent. Afghanistan is the South Asian country with the highest increase in military expenditure in 2007, at 52 per cent. This was an increase from a low level as the Afghan National Army (ANA) is being rebuilt virtually from scratch. Even though the ANA is not expected to be a well-equipped force in the short term, the build-up of new armed forces requires a large amount of resources, large parts of which come from foreign military aid.⁷⁰

Over a longer time period, most South Asian states have had high rates of increase in their military expenditure. Over the period 2003–2007, Pakistan's expenditure increased by 11 per cent in real terms, Nepal's by 8 per cent, India's by 30 per cent and Sri Lanka's by 43 per cent. Over the decade since 1998, Nepal had by far the greatest rate of increase—at 150 per cent—followed by India and Pakistan—at 64 per cent and 38 per cent, respectively.

Mutual accusations over high military expenditure are still a significant element in relations between India and Pakistan. Even if Pakistan's increase since 1998 can be largely explained by the armed conflict with India in Kashmir, other factors—such as military operations in the regions bordering on Afghanistan⁷¹—also play a role. India's increase has paralleled its economic growth and rise as a regional power.⁷²

In Sri Lanka the intensified fighting between the government and the Liberation Tigers of Tamil Eelam (LTTE) since July 2006 has resulted in an increase in military spending by 13 per cent in real terms in 2007 and plans for

⁷⁰ On arms acquisitions for the ANA see chapter 7 in this volume, section V. According to SIPRI's definition of military expenditure foreign military aid is not included in the recipient country's military expenditure. To the extent possible, SIPRI has deducted military aid received from the figures for Afghanistan's military expenditure. Afghanistan also received foreign general budget support. This has not been deducted.

⁷¹ See chapter 2 in this volume, section V.

⁷² Raghuvanshi, V., 'India may increase defense spending as percent of GDP', *Defense News*, 24 Sep. 2007, p. 25.

a further increase of 20 per cent in nominal terms in the 2008 budget.⁷³ Sri Lanka's military spending has fluctuated considerably in the past decade, reflecting the security and economic situations in the country.

In contrast to the large increases elsewhere in South Asia in 2007, Nepal's military spending decreased by 8 per cent in real terms following the 2006 peace agreement between the government and Maoist insurgents.⁷⁴

East Asia

In 2007 Chinese military expenditure increased by 12 per cent while Japan's spending was stable in real terms. In combination with sharp increases in the mid-level spenders Taiwan, South Korea and Singapore—with increases of 28, 10 and 5 per cent, respectively—the subregion saw a total increase of 9 per cent in real terms in 2007. The countries with the highest real-terms increases in 2007 were Thailand and Taiwan—32 and 28 per cent, respectively. Over the five-year period 2003–2007, China had the highest increase—59 per cent—while over the past decade, China, Malaysia and Indonesia had the highest increases—202, 153 and 100 per cent, respectively.

Transparency in Chinese military spending has increased over recent years. Each of the biannual Chinese Defence White Papers provides more disaggregated data.⁷⁵ In 2007 China reported its military expenditure to the UN for the first time using the Instrument for Reporting Military Expenditures.⁷⁶ However, large parts of Chinese military expenditure remain undisclosed.

China has increased its military spending rapidly over the past decade, in some years at a higher rate than the country's already impressive rate of economic growth. The Chinese military burden increased from 1.7 to 2.1 per cent of GDP between 1998 and 2006. While the rapid rate of increase is widely acknowledged, the actual level of Chinese military spending is contested. SIPRI's estimate of Chinese military expenditure in 2007 is 506 billion yuan, which is 46 per cent higher than the official figure of 347 billion yuan.⁷⁷ Most other external analysts do not provide estimates in local currency and there are major differences between their estimates in dollar terms. While SIPRI uses market exchange rates for conversion from local currency into dollars, others use various purchasing power parity rates, which generate much higher dollar estimates of Chinese military spending.⁷⁸

⁷³ Athas, I., 'Sri Lanka records 20% rise', *Jane's Defence Weekly*, 7 Nov. 2007, p. 16.

⁷⁴ The Comprehensive Peace Agreement was signed on 21 Nov. 2006. An English translation of its text is available at <<http://www.parliament.gov.np/downloads.htm>>.

⁷⁵ Chinese State Council, *China's National Defense, 1998–2006* (Information Office of the State Council of the People's Republic of China: Beijing, 1998–2006), all available at <<http://www.china.org.cn/e-white/>>.

⁷⁶ On the reporting of military expenditure to the UN see appendix 5D.

⁷⁷ The SIPRI estimate is based on a method developed in Wang, S., 'The military expenditure of China, 1989–98', *SIPRI Yearbook 1999: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 1999), pp. 334–49.

⁷⁸ On the use of PPP rates in international comparisons of military expenditure see appendix 5C, section V.

The rapidly increasing Chinese military expenditure since 1997 has been directed primarily towards (a) a major pay raise for military personnel,⁷⁹ (b) long-term investment to transform the People's Liberation Army (PLA) into a high-technology force and (c) a build-up of military capabilities for a potential war over Taiwan. The military reform process, which began in the late 1990s, was largely a reaction to the high level of technology demonstrated by the USA in the 1991 Gulf War.⁸⁰ The aim is to transform the PLA from a mass army trained and equipped for protracted wars on the Chinese mainland into a 'slim but strong' force able to engage in local high-tech wars by 2010 and a high-tech force able to project power globally by 2050.⁸¹

One reason for the very rapid increases in some East Asian countries—in particular Indonesia and Malaysia—over the 10 years since 1998 is the effect of the 1997–98 Asian financial crisis. In the first years following the crisis these countries reduced their military spending by postponing or cutting procurement programmes. These have since been resumed.

Indonesia, and especially the conflict-riven Aceh province, was also severely affected by the 2004 tsunami. The Indonesian Government decided to decrease its 2005 military budget in order to reallocate funds to the reconstruction of the catastrophe-hit areas. Despite almost a decade of military reform, the Indonesian armed forces and their finances are still largely outside the control of the Indonesian Parliament and Department of Defence. Vast commercial activities are a source of considerable extra-budgetary funding for the military.⁸²

Although Malaysia's current five-year plan envisages a decrease in total military spending over the years 2006–10, the country increased its military spending by 13 per cent in real terms in 2007 according to SIPRI data. The Malaysian armed forces are currently undergoing reform, with the aim of transforming a counter-insurgency force into a more conventional territorial defence force.⁸³ As the planned budgets have proven to be insufficient, several of the largest procurement deals have been paid for from accounts other than the defence budget. It is not clear whether these external contingency funds will eventually be included in the official total military spending figure.⁸⁴

⁷⁹ In the second half of 2006 many low- and middle-rank officers received a salary increase of 80–100%. Chinese State Council, *China's National Defense in 2006* (note 75); and Xu G., 'What's behind increase in the military budget?', *China Daily*, 15 Mar. 2007, p. 9.

⁸⁰ Scobell, A., *Chinese Army Building in the Era of Jiang Zemin* (US Army War College, Strategic Studies Institute: Carlisle, Pa., Aug. 2000), <<http://www.strategicstudiesinstitute.army.mil/pubs/display.cfm?PubID=69>>, p. 11; 'Chinese army commander warns military reform threatened', BBC News, 15 Mar. 1998, <<http://news.bbc.co.uk/2/hi/65750.stm>>; and 'Jiang calls for military reform of Chinese army', *People's Daily*, 11 Mar. 2003.

⁸¹ Jacobs, K., 'China's military modernisation', *Asia-Pacific Defence Reporter*, Sep. 2007, pp. 46–48; and 'China to "gradually" increase defense budget: president', Xinhua, Beijing, 1 Aug. 2007.

⁸² Mietzner, M., *The Politics of Military Reform in Post-Suharto Indonesia: Elite Conflict, Nationalism, and Institutional Resistance*, Policy Studies no. 23 (East–West Center: Washington, DC, 2006), pp. 62–63.

⁸³ Mahadzir, D., 'Modernising Malaysia's armed forces', *Asia-Pacific Defence Reporter*, Nov. 2007, pp. 42–45.

⁸⁴ Mahadzir, D., 'Malaysia's defence budget shows strong boost for RMAF', *Asia-Pacific Defence Reporter*, Mar. 2007, pp. 54–56.

In the wake of the military coup in Thailand in September 2006, the new government proposed a budget for 2007 that included a 34 per cent nominal increase in military spending.⁸⁵ The 2008 budget includes a continued increase in military spending, by 24 per cent in nominal terms.⁸⁶ The Prime Minister, Surayud Chulanont, gained broad support for the massive increases by referring to misspending and depletion of military resources under the previous government, led by Thaksin Shinawatra, and to the armed forces' additional internal security tasks, primarily due to the ongoing insurgency in the south of the country.⁸⁷

In Taiwan the six-year-long parliamentary feud over the procurement of a large package of military equipment from the USA, which had blocked any major procurement, was finally resolved in 2007.⁸⁸ After two years of declining military spending, the defence budget increased by 28 per cent in real terms in 2007.

Europe

Military expenditure in Europe in 2007 amounted to \$370 billion, a real-terms increase of 3 per cent over the previous year.⁸⁹ The subregion with the highest rate of increase globally in 2007 was Eastern Europe, at 15 per cent. Central and Western Europe increased by 6 and 0.9 per cent, respectively. The trend over the 10-year period 1998–2007 shows similar patterns. While the regional total increased by 16 per cent in real terms, Eastern Europe increased by 162 per cent and Central and Western Europe by 19 and 6 per cent, respectively. While Western Europe accounts for 80 per cent of the 2007 European total, this share is shrinking as the spending of Central and Eastern European states is increasing faster. Meanwhile, of the 27 European countries that increased their spending in 2007, 17 were Central or East European states; and seven of the 10 Central European states that joined NATO in 1999 and 2004 increased their spending.

In contrast with the pattern elsewhere in Western Europe, Austria (which is not a member of NATO) increased its military spending by 23 per cent in real terms in 2007. The reasons given for the increase were (a) participation in international operations, (b) the 2005–12 military reform programme and (c) the purchase of 15 Eurofighter Typhoon combat aircraft.⁹⁰

⁸⁵ Cropley, E., 'Thai military draws fire for post-coup budget hike', Reuters, 4 July 2007, <<http://www.reuters.com/article/idUSBKK27720>>; and Matthews, R., 'Fighter purchase: heralding Thai military modernisation programme?', *The Nation* (Bangkok), 21 Feb. 2008.

⁸⁶ 'Bt115-bn budget for defence as transport takes a Bt622m cut', *The Nation* (Bangkok), 12 Dec. 2006.

⁸⁷ 'Military now has to shape up', *The Nation* (Bangkok), 8 Dec. 2006. On the conflict in southern Thailand see Melvin, N. J., *Conflict in Southern Thailand: Islamism, Violence and the State in the Patani Insurgency*, SIPRI Policy Paper no. 20 (SIPRI: Stockholm, Sep. 2007), <<http://books.sipri.org/>>.

⁸⁸ Black, S., 'Arms sales to Taiwan: a means to what end?', Center for Defence Information, Washington, DC, 25 July 2007, <<http://www.cdi.org/program/document.cfm?documentid=4031>>.

⁸⁹ See appendix 5A, table 5A.1.

⁹⁰ Austrian Ministry of Finance, *Bericht der Bundesregierung: Budgetbericht 2007/2008* [Report of the Federal Government: budget report 2007/2008] (Ministry of Finance: Vienna, 2007), <<http://www>>.

Estonia, which joined NATO in 2004, increased its military spending by 31 per cent in 2007. This is the second highest growth rate in Europe (after Georgia). Estonia is trying to increase its military spending to 2 per cent of GDP, the target set by NATO.⁹¹ It aims to reach this target by 2010 and since 1998 has increased its military expenditure by 283 per cent in real terms. By 2006 the military burden had reached 1.6 per cent of GDP, up from 1.1 per cent in 1998. Spending is set to increase by 21 per cent in nominal terms in 2008.⁹²

In 2006 only six of the 24 European NATO member states reached or exceeded the target of 2 per cent of GDP—Bulgaria, France, Greece, Poland, Turkey and the UK. Several other members intend to increase their spending in line with the NATO requirement but for other countries this is not an option that they even consider. During 2007 the NATO Secretary General, Jaap de Hoop Scheffer, continued to express concern about the unwillingness of member states—especially the pre-1999 members—to shoulder the common defence burden.⁹³ The discussion of whether military expenditure as a share of GDP is a good measure of a member state's contribution to the alliance is not new and many countries consider their niche capabilities and contribution of troops to international operations as relevant factors. For example, the Czech Republic points to the fact that, despite spending only 1.8 per cent of its GDP on the military in 2006, it managed to implement military reforms and to participate in military exercises while nearly 1900 of its personnel were deployed in Afghanistan, the Balkans and Iraq.⁹⁴

A factor that can push up the military spending of several Central and Eastern European states is their ambitions to transform their armed forces into fully professional forces. Albania plans to have a small professional force by 2010 and Bulgaria ended conscription in favour of a fully professional force by 1 January 2008.⁹⁵ Modernization, professionalization and adaptation to NATO standards have pushed up military expenditure since 1998 by 182 per cent in Albania—which signed a NATO membership action plan in 1999—and 32 per cent in Bulgaria—which joined NATO in 2004.⁹⁶

bmf.gv.at/budget/budget20072008/>, p. 16; and Mader, G., 'Austria stays with Typhoon—to a point', *Military Technology*, vol. 31, no. 8 (2007), pp. 6–7.

⁹¹ E.g. De Hoop Scheffer, J., Speech at the NATO Parliamentary Assembly's Annual Session, Reykjavík, 9 Oct. 2007, <<http://www.nato.int/docu/speech/2007/s071009a.html>>.

⁹² 'Defense spending to make up 1.69 pct of Estonia's GDP in 2008', Baltic News Services, Tallin, 20 Sep. 2007.

⁹³ De Hoop Scheffer (note 91).

⁹⁴ 'Czech military completes stage 1 of reform in '06, faces budget slip in '07', CTK, Prague, 25 Jan. 2007.

⁹⁵ Agence France-Presse, 'Bulgaria to reduce army size', *Defence News*, 1 Feb. 2008; and 'Defense minister expects Albania to have "small professional army" by 2010', *Rilindja Demokratike* (Tirana), 13 Nov. 2006, Translation from Albanian, World News Connection, NTIS.

⁹⁶ 'Defense minister Bliznakov: 2007 [sic] budget jeopardizes Bulgarian army modernization', BGNES, Sofia, 7 Nov. 2006, Translation from Bulgarian, World News Connection, NTIS; and NATO, 'NATO's relations with Albania', 11 Apr. 2008, <http://www.nato.int/issues/nato_albania/>.

Russia

Russian military expenditure increased by 13 per cent in 2007, a somewhat higher growth rate than the 11 per cent annual average over the past 10 years. Russia's spending has increased by 41 per cent since 2003 and by 160 per cent since 1998, the year of the Russian financial crisis. Due to the large resource-driven increase in the overall economy, military spending as a share of GDP declined from 4.3 per cent in 2003 to 3.6 per cent in 2006.

Russia is now the seventh biggest spender in the world. With its national defence budget for 2008–10 projecting increases of 16 per cent in 2008, 11 per cent in 2009 and 12 per cent in 2010, Russia is set to continue climbing the ranks.⁹⁷

As oil revenues have increased, the Russian Ministry of Finance has repeatedly revised the original budgets upwards by raising spending in different government sectors, in particular national security. This makes the military budget highly opaque.⁹⁸ The particular focus on security in the budget is said to reflect the Russian leadership's ambitions for the country to reassert itself in the international arena by improving the capability of its conventional forces and maintaining its nuclear forces.⁹⁹ It also reflects President Vladimir Putin's determination to reform and modernize the Russian armed forces, which still are in a poor state. The reform process currently focuses on the transformation of the Russian armed forces from a large, conscripted force into a smaller, professional force. However, a lack of suitable recruits means that this process will become increasingly expensive.¹⁰⁰ The modernization process has not yielded the expected results, despite the increase in the state defence order by 81 per cent over the period 2003–2007.¹⁰¹ One reason for this is mismanagement; according to Sergey Stepashin, head of the Russian Accounts Chamber (the national audit office), the Ministry of Defence's main problem is not a shortage of funds but a lack of financial management and quality control.¹⁰²

Latin America

Total military expenditure in Latin America (Central and South America) amounted to \$43.9 billion in 2007, a 7 per cent increase in real terms over

⁹⁷ Cooper, J., 'Military expenditure in the three-year federal budget of the Russian Federation, 2008–10', Research working paper, Oct. 2007, <<http://www.sipri.org/contents/milap/milex/publications/unpublished.html>>.

⁹⁸ On the trend towards less transparency in the Russian military budget see Cooper (note 97).

⁹⁹ Sardzhyan, S., 'Russia prepares for "wars of the future"', ISN Security Watch, 12 Feb. 2007, <<http://www.isn.ethz.ch/news/sw/details.cfm?id=17240>>; and Liaropoulos, A., 'The Russian defense reform and its limitations', *Caucasian Review of International Affairs*, vol. 2, no. 1 (winter 2008). See also chapter 1 in this volume, section III.

¹⁰⁰ Tsimbal, V. and Zatsepin, V., 'Army accounting', *Kommersant*, 5 Apr. 2007.

¹⁰¹ The state defence order is the state plan for the procurement and modernization of all state armaments, not only for the Ministry of Defence. Lashkina, E., 'Son v novogodiyuyu noch'' [Dream in new year's night], *Rossiiskaya gazeta*, 31 Dec. 2004; Gavrilov, Y., '300 milliardov oborony' [300 billion defence], *Rossiiskaya gazeta*, 1 Sep. 2006; and Tsimbal and Zatsepin (note 100).

¹⁰² Kukol, E., 'Stepashin post prinyal' [Stepashin assumed office], *Rossiiskaya gazeta*, 22 June 2007.

2006.¹⁰³ Following a drop in 2003, annual growth has averaged 6 per cent in real terms. Over the 10-year period 1998–2007 the real-terms increase was 34 per cent, which is low compared to other regions.

Significant arms purchases by Brazil, Chile and Venezuela in recent years have given rise to speculation about an arms race in Latin America. While it is doubtful that these are signs of an arms race in the sense of an action–reaction pattern,¹⁰⁴ nonetheless there have been big increases in the military spending of some countries in the region.¹⁰⁵

Over the five-year period 2003–2007, Venezuela, Ecuador and Chile had the highest increases in military spending in South America, with real-terms increases of 78, 53 and 49 per cent, respectively. In Central America, Honduras (20 per cent) and Mexico (16 per cent) had the highest increases over this period. In absolute terms, Brazil is by far the largest spender in the region, accounting for 46 per cent of the Latin American total. Other significant spenders are Colombia (15 per cent of the regional total) and Chile (13 per cent of the total).

Some of the main factors that have led to increased military expenditure in Latin America are exemplified by the cases of Ecuador and Mexico. Both countries have had significant growth in military spending in recent years, and in neither case is there evidence of an action–reaction cycle in relation to their neighbours.

While Ecuador increased its military spending in 2007 by 30 per cent, there were considerable cuts during the 10-year period 1998–2007. An economic crisis meant that military expenditure decreased by nearly 50 per cent in real terms between 1998 and 1999.¹⁰⁶ Spending returned to the pre-crisis level in 2003, and since then military expenditure has been growing almost continuously, following the recovery of the economy. The rise in spending in recent years can be partly attributed to an increase in military salaries. In 2006 salaries for military personnel increased by 10 per cent, and an additional increase of 22.5 per cent was budgeted for 2007.¹⁰⁷ These salary increases are part of a process to integrate the defence establishment's salary system with that of the rest of the central government.¹⁰⁸

¹⁰³ See appendix 5A, table 5A.1.

¹⁰⁴ See chapter 7 in this volume, section IV.

¹⁰⁵ It should be noted that it is not clear whether the most recent arms acquisitions by some Latin American countries are fully reflected in military expenditure figures, since payments for the acquisition of major weapon systems are often spread out over a number of years.

¹⁰⁶ Ecuadorean Ministry of National Defence, *Política de la Defensa Nacional del Ecuador* [National defence policy of Ecuador], White Paper 2006 (Ministry of National Defence: Quito, 2006), <<http://midena.gov.ec/content/section/10/135/>>. Ecuador's military expenditure was \$688 million in 1998 and \$353 million in 1999, at constant (2005) prices and exchange rates. See appendix 5A.

¹⁰⁷ 'Ejecutivo aprobó aumento de sueldo para militares' [Executive approves salary increase for the military], *Ecuador News*, 23 Jan. 2008; and Baranauskas, T., 'Ecuadoran military asking for \$918m for 2007', Forecast International Government & Industry Group, 12 Feb. 2007.

¹⁰⁸ Celi, P., 'Ecuador: transformación de la defensa y reestructuración de las Fuerzas Armadas' [Ecuador: defence transformation and armed forces restructuring], *Atlas comparativo de la defensa en América Latina* [Comparative atlas of defence in Latin America], 2007 edn (Red de Seguridad y Defensa de América Latina: Buenos Aires, 2007), p. 180.

There is a strong link between political power and the armed forces in Ecuador. The military has intervened directly and openly in the country's political processes by removing elected presidents.¹⁰⁹ This has led to suggestions that President Rafael Correa supports high military budgets as a way to establish friendly relations with the military.¹¹⁰

Soon after taking office in January 2007, the government of President Correa started to implement a plan for new priorities and military acquisitions for the Ecuadorean armed forces, which would involve substantial increases in military spending.¹¹¹ The plan prioritizes improving security along the northern border with Colombia. Outposts on the border with Peru have been closed and 15 army detachments have been redeployed to the northern border and given better transport capabilities.¹¹² The proposed defence budget for 2008 represents a further increase of 50 per cent in nominal terms, including \$149 million to boost capabilities on the northern border.¹¹³

Mexico has the fourth largest military budget in Latin America, and by far the largest in Central America.¹¹⁴ In 2007 military expenditure in Mexico amounted to 43 152 million pesos (\$3941 million), a 13 per cent increase in real terms. Mexico's main security challenges are internal, such as drug trafficking or the conflict in the southern state of Chiapas, and the Mexican military has always been involved in the provision of internal security.¹¹⁵ This role has expanded since the mid-1990s as a result of the Azteca Directive, which gave the armed forces the task of fighting drug trafficking and organized crime.¹¹⁶ Growth in the number of drug cartels and in drug-related violence in Mexico prompted the government of President Vicente Fox to take a harder stance on security matters from 2005.¹¹⁷ Among various approaches during recent years is the México Seguro (secure Mexico) operation, which began in

¹⁰⁹ Since 1997, 3 presidents have been removed from power after interventions by the military. Danopoulos, C. P. and Zirker, D., 'Governability and contemporary forms of military intervention: expanding Ecuadorian and Turkish models', *Journal of Security Sector Management*, vol. 4, no. 1 (Jan. 2006), p. 5.

¹¹⁰ '\$300 millones vinculan a Correa con las FF.AA.' [\$300 million link Correa with the Armed Forces], *El Universo* (Guayaquil), 26 Aug. 2007.

¹¹¹ Baranuskas, T., 'New Ecuadorian government plans to modernize military equipment', Forecast International Government & Industry Group, 31 Jan. 2007.

¹¹² 'Defence minister says armed forces operating on a "tight" budget', 2 May 2007, *El Universo* (Guayaquil), World News Connection, NTIS; and 'Ecuador remains coy about new role regarding Colombia', *Latin America Weekly Report*, 29 Aug. 2006.

¹¹³ 'Ecuador's defence spending increased', Forecast International, 6 Nov. 2007; and Vásquez, L., 'Ecuador eyes UAV for maritime surveillance', *Jane's Defence Weekly*, 16 Jan. 2008, p. 10.

¹¹⁴ Military expenditure figures are not available for Belize, while both Costa Rica and Panama have no military expenditure since they have abolished their armed forces. See appendix 5A.

¹¹⁵ 'When army and police become hard to tell apart', *Latin American Security & Strategic Review*, Nov. 2006.

¹¹⁶ Díez, J. and Nicholls, I., *The Mexican Armed Forces in Transition* (US Army War College, Strategic Studies Institute: Carlisle, Pa., Jan. 2006), <<http://www.strategicstudiesinstitute.army.mil/pubs/display.cfm?PubID=638>>, p. 37; and Sánchez, A., 'Mexico's drug war: a society at risk—soldiers versus narco-soldiers', Council on Hemispheric Affairs, 22 May 2007, <<http://www.coha.org/2007/05/22/>>.

¹¹⁷ Contreras, J., 'Losing the battle', *Newsweek International*, 11 July 2005.

June 2005 as an initiative to tackle drug crimes on the border with the USA.¹¹⁸ The armed forces have also taken on public order tasks, for example in the 2006 civil protests in Oaxaca.¹¹⁹

Since President Felipe Calderón took office in December 2006, the role of the Mexican armed forces in domestic affairs has increased further, particularly in the fight against drug trafficking.¹²⁰ More troops have been mobilized to fight drug trafficking and organized crime, including 6000 troops in Tamaulipas state alone.¹²¹ Calderón has also emphasized the need to produce better-trained troops with high morale in order to reduce the number of desertions—123 000 troops deserted between 2000 and 2006—and a large part of the military spending increase in 2007 was to improve the income and social benefits of military personnel.¹²² In addition, Calderón aims to increase the effectiveness of the country's modestly sized forces by consolidating operational capabilities.¹²³ To finance the increasing expenditure on the military, Calderón excluded the armed forces from the Austerity Decree, a national economic strategy for reducing budget spending.¹²⁴

The Middle East

Military expenditure in the Middle East was \$91.5 billion in 2007.¹²⁵ It is estimated to have increased in real terms by 7 per cent in 2007 and by 62 per cent over the 10-year period 1998–2007. The estimates are uncertain, since data are not always available and some data are of uncertain reliability. The regional totals for recent years are based on rough estimates of some countries' spending, including for Iran, Iraq, Saudi Arabia and the United Arab Emirates. Data for Iraq and the UAE are not available for all years and no data are available for Qatar.

Oman, Saudi Arabia and Israel had the highest military burdens in the Middle East: they spent, respectively, 11.2, 8.5 and 8.0 per cent of their GDPs in 2006. The two highest spenders are Saudi Arabia (which accounted for 39 per cent of the regional total in 2007) and Israel (15 per cent of the regional

¹¹⁸ 'Despite 'México Seguro', drug-related violence rises', *Latin American Security & Strategic Review*, July 2005; and 'As violence escalates, a new federal plan', *Latin American Security & Strategic Review*, Oct. 2005.

¹¹⁹ 'When army and police become hard to tell apart' (note 115).

¹²⁰ Aguayo Quezada, S., 'Mexico: a war dispatch', *Open Democracy*, 25 June 2007, <http://www.opendemocracy.net/democracy_power/politics_protest/mexico_war_dispatch>; and 'Calderón signals tough stance on crime and unrest', *Latin American Security & Strategic Review*, Dec. 2006.

¹²¹ McKinley, J. C., 'Mexico hits drugs gangs with full fury of war', *New York Times*, 22 Jan. 2008; and 'Mexican armed forces increase security, counternarcotic efforts in 2007', *Notimex*, Mexico City, 15 Dec. 2007, Translation from Spanish, World News Connection, NTIS.

¹²² Guevara, I., 'Mexico charts new course for defence doctrine', *Jane's Defence Weekly*, 6 Feb. 2008; and 'Mexican armed forces increase security, counternarcotic efforts in 2007' (note 121).

¹²³ Guevara, I., 'Mexico's 2008 defence budget goes under review', *Jane's Defence Weekly*, 12 Dec. 2007, p. 8.

¹²⁴ Mexican Presidency of the Republic, 'President Calderón at presentation of evaluation of start of government', 15 Mar. 2007, <<http://www.presidencia.gob.mx/en/press/?contenido=29477>>.

¹²⁵ See appendix 5A, table 5A.1.

total). These two countries were also among those that increased their military budgets the most in 2007.

The official Iranian defence budget for 2007 of 79 871 billion rials (\$8618 million) represents a decrease of 14 per cent in real terms over 2006.¹²⁶ Obtaining information on Iran's military expenditure is problematic. This official figure does not include spending on the Islamic Revolutionary Guards Corps, which consists of ground, air and naval forces. The Revolutionary Guards have 125 000 personnel, comparable to one-third of the regular armed forces, and are responsible for Iran's missile forces.¹²⁷ While the primary role of the Revolutionary Guards is internal security, they also have military functions and so part of the spending on the Revolutionary Guards should be included in total military spending. It has proven impossible to obtain this data. The Revolutionary Guards are also a major commercial enterprise, reportedly the third largest in the country. According to some sources they are financed through non-reported revenues from an array of activities such as petroleum production and construction work, with branches throughout the Middle East.¹²⁸

Among the member states of the Gulf Cooperation Council, Saudi Arabia increased its military expenditure the most in 2007, facilitated by high oil revenues. Its budgeted military spending in 2007 was 133 billion rials (\$35 billion), a 17 per cent real increase compared to 2006. Part of this increase was for a 20 per cent increase in ground forces.¹²⁹ The implementation of the major weapon acquisition programme initiated in 2007 will have a large impact on future levels of Saudi military expenditure. This includes the arms deal signed with the British Government in September 2007 for 72 Eurofighter Typhoon combat aircraft, the largest British–Saudi arms deal since the 1985 Al Yamamah arms deal; and other deals negotiated during 2007 with the USA and France.¹³⁰

Israel's military budget for 2007 amounted to 56 billion shekels (\$13.5 billion), including domestically funded military expenditure of 45.7 billion

¹²⁶ Iran does not report its military expenditure to SIPRI or to the UN, nor are data on overall military expenditure available in any official Iranian statistics. The source for the SIPRI figures for Iran is the IMF's *Government Finance Statistics Yearbook*. These figures are reported to the IMF by the Iranian Government according to the IMF's definition of defence. In previous editions of the SIPRI Yearbook, the figures for Iran included the figures provided under the heading 'public order and safety' as reported by Iran to the IMF. It was believed that this included spending on paramilitary forces. However, it now appears that this is not the case. Because the official Iranian Government figures do not include spending on the Revolutionary Guards (see below), the current SIPRI figures are likely to represent an underestimate of at least one-third. The inclusion of the figures for public order and safety may have given a closer estimate of Iran's total military expenditure, but it distorted the trend. See appendix 5A.

¹²⁷ Bruno, G., 'Iran's Revolutionary Guards', Council on Foreign Relations, 25 Oct. 2007, <<http://www.cfr.org/publication/14324/>>.

¹²⁸ One of the most significant companies is Khatam al-Anbya, which in 2006 had over \$7 billion worth of deals in the oil, gas and transportation sectors. US Department of State, 'Briefing on Iran', 25 Oct. 2007, <<http://www.state.gov/p/us/rm/2007/94178.htm>>.

¹²⁹ 'Saudis launches \$60b modernization plan', *Middle East Newslines*, 11 Nov. 2006; and 'Saudi military spending rising', *International Air Letter*, 27 July 2006, p. 5.

¹³⁰ 'Saudis launches \$60b modernization plan' (note 129). See also chapter 7 in this volume, section III.

shekels (\$11 billion) and \$2.34 billion in military aid from the USA.¹³¹ The 10 per cent real increase in Israel's military expenditure in 2007 was the second largest increase in 10 years. Military expenditure in Israel has increased in most years since 1998 and by 2007 it was 36 per cent higher in real terms than in 1998.

Israel's military operations against Hezbollah in Lebanon in July–August 2006 had a major impact on Israel's 2007 defence budget. The lessons drawn from this war may also have significant implications for Israel's future military strategy and spending. The costs of the war were substantial, both in terms of military expenditure and in economic damage. According to early estimates, there were direct costs to the Israeli Defence Forces (IDF) of 11.2 billion shekels (\$2.7 billion). In addition, the cost of restoring military preparedness was estimated at 7–7.5 billion shekels (\$1.7–1.8 billion) and the civilian costs (including physical damage, compensation payments to residents and lost income tax revenues) at 20–22 billion shekels (\$4.8–5.3 billion).¹³² The 2007 defence budget compensated the Ministry of Defence with 8.2 billion shekels (\$2 billion) to cover the costs of the military operations in Lebanon.¹³³

The Winograd Commission, the government appointed inquiry into the war in Lebanon which reported in January 2008, found that Israel's naval and air forces were inadequate to address the type of challenges posed by Hezbollah and that the ground forces were insufficiently prepared.¹³⁴ In anticipation of such a conclusion, the Tefen defence plan for 2008–12, which was finalized and approved in September 2007, is to raise investment in the ground forces, including plans to increase training and acquire armoured personnel carriers.¹³⁵

¹³¹ The domestically funded defence budget includes a direct budget of 35 billion shekels (\$8.4 billion) and revenues from sales by the Ministry of Defence of 2.5 billion shekels (\$0.6 billion). The remaining 8.2 billion shekels (\$2 billion) is for the cost of the war in Lebanon (see below). Ben-David, A., 'Israel set for record defence spend in 2007', *Jane's Defence Weekly*, 3 Jan. 2007, p. 16. The US Government pledged in 2007 to increase military aid to Israel by 25% over 10 years, from \$2.4 billion in 2008 to nearly \$3 billion by 2018. Sharp, M. J., *US Foreign Assistance to Israel*, Congressional Research Service (CRS) Report for Congress RL33222 (US Congress, CRS: Washington, DC, 2 Jan. 2008), p. 2. See also chapter 7 in this volume, section III.

According to SIPRI's definition of military expenditure, foreign military aid should not be included in the recipient country's military expenditure. However, in the case of Israel, it has not been possible to separate foreign aid from the domestically funded military budget in a consistent manner over time. The figures for Israel in appendix 5A therefore include foreign military aid.

¹³² Baranauskas, T., 'Recent fighting costs Israeli military \$1.6 billion', Forecast International Government & Industry Group, 21 Aug. 2006; and 'Israeli military puts Lebanon war costs at ILS11.2 billion', *Haaretz*, 7 Sep. 2006.

¹³³ Opall-Rome, B., 'Lebanon war proves blessing for Israeli budget', *Defence News*, 11 Sep. 2006; and Ben-David (note 131).

¹³⁴ Israeli Ministry of Foreign Affairs, 'Winograd Committee submits final report', 30 Jan. 2008, <http://www.mfa.gov.il/MFA/MFAArchive/2000_2009/2008/>; and Boot, M., 'The second Lebanon war', *Weekly Standard* (Washington, DC), 4 Sep. 2006.

¹³⁵ Israel Defence Forces, 'IDF finalizes acquisition plans for coming years', 3 Sep. 2007, <<http://dover.idf.il/IDF/English/News/today/2007/09/>>; Israel Defence Forces, 'IDF response to the Winograd Committee report', 30 Jan. 2008, <<http://dover.idf.il/IDF/English/News/today/2008n/01/>>; and Eshel, D., 'Israel sets the stage for a massive, \$60 billion buildup', *Defense Update*, 3 Sep. 2007. See also Krant, A., 'Multi-year plan to strengthen IDF conventional capabilities', Jewish Institute for National Security Affairs, 12 Nov. 2007, <<http://www.jinsa.org/articles/view.html?documentid=3964>>.

This is a reversal from the Kela defence plan for 2003–2008, which involved a 25 per cent cut in Israeli ground forces.¹³⁶

VI. Conclusions

Global military spending increased by 45 per cent in real terms over the 10-year period 1998–2007 and by 6 per cent in 2007. Since 2001 growth in world military spending has accelerated to an annual average of 5.3 per cent from 2.2 per cent in the period 1998–2001. This is due primarily to US military spending, which accounts for 45 per cent of the world total and 63 per cent of the post-2001 increase in world military spending. Since 2001 US military spending has increased by 59 per cent in real terms, due mostly to spending on military operations in Afghanistan and Iraq, but also to increases in the base defence budget.

A large number of other countries have also increased their military spending since 2001. Of the 151 countries for which data were available for the entire period 2001–2007, the number that increased their military spending was 98–106 in the period 2001–2006, increasing to 117 countries in 2007.

The subregion with the highest increase in military expenditure over the decade 1998–2007 was Eastern Europe, with 162 per cent. Eastern Europe also had the highest increase in 2007, of 15 per cent, mostly accounted for by Russia. North America, the Middle East, South Asia, Africa and East Asia also had 10-year growth rates exceeding 50 per cent. Western Europe and Central America had the lowest growth in military spending, with 6 and 14 per cent growth respectively over the period 1998–2007.

The motivations for increases in military spending vary considerably between regions and countries and the diversity of these motivations has increased since 2001. They range from long-term, policy-based improvements in military capabilities in order to achieve certain objectives to urgent responses to immediate threats.

Aspirations to maintain, achieve or resume positions as a global or regional power are at play behind the military expenditure trends of the USA and such countries as Brazil, China, India and Russia. Another type of policy-related motivation is military reform or transformation. This can be as a result of shifting military allegiances, economic and political transition, aid-donor requirements or other factors. This type of motivation for increasing military spending is illustrated by the Central and East European countries that have joined or seek to join NATO and some countries in Africa. A third type of policy-related motivation is the desire to contribute to international peace-keeping operations. This is often associated with the build-up of new military capabilities with the goal of achieving interoperability with armed forces from other countries. While this motivation has contributed to increased military

¹³⁶ Ben-David, A., 'Israel cancels ground forces cuts', *Jane's Defence Weekly*, 17 Jan. 2007, p. 7. See also Omitoogun, W., 'Military expenditure in the Middle East after the Iraq war', *SIPRI Yearbook 2004: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2004), p. 387.

expenditure in some developing countries, such as Ghana, the goals of the EU's European Security and Defence Policy have not yet led to a significant rising trend in the military spending of EU member states.

Affordability also plays a role in policy-related increases in military expenditure. In several of the countries with high military expenditure growth in 2007, the availability of economic resources was an important factor. Increased revenues from natural resources such as oil and gas made higher spending on the military possible in, for example, the Middle East and the South Caucasus. In other cases, increased military spending was facilitated by a large economy, as in the USA, or by economic growth, as in China, India and some countries in Africa and Latin America.

The more immediate security requirements that lead to increases in military spending include participation in armed conflicts and wars. For the USA, the conflicts in Afghanistan and Iraq have been key factors in obtaining congressional consent for massive increases in military expenditure. Similarly, Israeli military operations in the Palestinian territories and in Lebanon in 2006 have required increases in military spending. Involvement in actual or latent armed conflict is also the main reason for the rapid increases in military expenditure in the South Caucasus, South Asia and parts of East Asia. The risk that any of the dormant conflicts in Abkhazia, South Ossetia or Nagorno-Karabakh could reignite is clearly a factor behind increased military spending in the South Caucasus. The war in Afghanistan has created an unstable security environment in South Asia, particularly in Pakistan, in addition to the long-term conflicts in Kashmir and Sri Lanka. Several East Asian governments have reacted to internal rebel movements with military build-ups. Armed conflicts are also driving up military expenditure in Africa, both in countries directly involved in conflict and in their neighbours, although this is not fully reflected in military spending figures due to a lack of reliable data.

An uncertain external security environment short of conflict can also lead to increases in military spending. For example, although they are not directly involved in any of the conflicts in the Middle East, almost all members of the Gulf Cooperation Council have increased their military expenditure. Internal security problems and border security are other factors of an immediate nature that drive up military spending in some Latin American states and increasingly also in East Asia.

The factors driving increases in military spending in different countries since 2001 thus constitute a mixture of foreign policy objectives, real or perceived threats, armed conflict, and policies to contribute to international peacekeeping operations.