

# 8. Military expenditure

PETTER STÅLENHEIM, CATALINA PERDOMO and  
ELISABETH SKÖNS

## I. Introduction

World military expenditure in 2006 is estimated to have totalled \$1204 billion in current prices.<sup>1</sup> This represents an increase of 3.5 per cent in real terms since 2005 and has raised average spending per capita from \$173 to \$177 in constant (2005) prices and exchange rates and to \$184 in current prices.<sup>2</sup> Military spending amounted to 2.5 per cent of world gross domestic product (GDP).<sup>3</sup>

This chapter analyses military expenditure in 2006 and sets it in the context of the main developments during the past decade. Section II analyses trends in military expenditure by region and in the 15 countries with the highest military expenditure. Section III looks at priorities in government spending and compares allocations for education, health care and the military. Section IV analyses military expenditure in the United States, assesses its economic impact and describes some alternative ways of viewing US security spending as a whole. Section V reviews recent developments region by region and sets each region's military expenditure in an economic and security context. Section VI contains brief conclusions.

Appendix 8A presents SIPRI data on military expenditure for 167 countries for the 10-year period 1997–2006. World and regional totals in constant (2005) US dollars are provided in table 8A.1. Data for individual countries are provided in three formats: in local currency at current prices (table 8A.2); in constant (2005) US dollars (table 8A.3); and as a share of GDP (table 8A.4). Appendix 8B presents spending by members of the North Atlantic Treaty Organization (NATO) for the period 2000–2006, disaggregated into spending on equipment and personnel. Appendix 8C describes the sources and methods

<sup>1</sup> This equals \$1158 billion in constant (2005) prices and exchange rates. Unless otherwise stated, military expenditure figures in this chapter are given in US dollars at constant (2005) prices and exchange rates. In *SIPRI Yearbook 2006*, 2003 was used as the base year for comparison of data across years. Owing to a sharp fall in the value of the US dollar between 2003 and 2005, the change of base year has caused a change in world ranking of military spenders and in their shares of total world military expenditure. The effects of this change of base years are discussed further in appendix 8C.

<sup>2</sup> These per capita averages are based on estimated total world populations of 6540 million in 2006 and 6465 million in 2005. United Nations Population Fund (UNFPA), *State of the World Population 2006* (UNFPA: New York, N.Y., 2006); and United Nations Population Fund (UNFPA), *State of the World Population 2005* (UNFPA: New York, N.Y., 2005)—both available at URL <<http://www.unfpa.org/swp/>>.

<sup>3</sup> This share of GDP is based on a projected figure for world GDP in 2006 of \$47 767 billion at market exchange rates. International Monetary Fund (IMF), *World Economic Outlook, September 2006: Financial Systems and Economic Cycles* (IMF: Washington, DC, 2006), URL <<http://www.imf.org/external/pubs/ft/weo/2006/02/>>, Statistical appendix, table 1, 'Summary of world output', p. 189.

**Table 8.1.** World and regional military expenditure estimates, 1997–2006

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

Region <sup>a</sup>	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Change 97–06
<b>Africa</b>	<b>10.3</b>	<b>11.1</b>	<b>12.3</b>	<b>13.0</b>	<b>13.2</b>	<b>14.4</b>	<b>14.0</b>	<b>14.8</b>	<b>15.3</b>	<b>(15.5)</b>	<b>(+51)</b>
North	4.4	4.6	4.6	5.0	5.2	5.6	5.7	6.2	6.5	6.5	+47
Sub-Saharan	5.8	6.5	7.7	8.0	8.0	8.9	8.3	8.6	8.8	9.0	+55
<b>Americas</b>	<b>375</b>	<b>367</b>	<b>368</b>	<b>381</b>	<b>387</b>	<b>431</b>	<b>481</b>	<b>522</b>	<b>549</b>	<b>575</b>	<b>+53</b>
Caribbean	..	..	..	..	..	..	..	..	..	..	..
Central	3.7	3.6	3.8	3.9	3.9	3.7	3.8	3.5	3.5	3.5	-5
North	347	340	341	354	357	399	453	493	518	542	+56
South	24.1	23.2	22.5	23.3	26.3	27.4	24.5	25.1	27.4	29.1	+21
<b>Asia, Oceania</b>	<b>131</b>	<b>132</b>	<b>136</b>	<b>139</b>	<b>146</b>	<b>153</b>	<b>160</b>	<b>167</b>	<b>176</b>	<b>185</b>	<b>+41</b>
Central	0.6	(0.6)	0.6	..	(0.7)	(0.7)	(0.8)	(0.9)	(1.0)	(1.1)	(+73)
East	99.6	100	100	103	109	116	121	126	131	138	+39
Oceania	10.9	11.4	11.9	11.8	12.2	12.7	13.2	13.8	14.3	15.0	+37
South	19.6	20.2	22.6	23.4	24.2	24.3	25.0	25.8	29.0	30.7	+57
<b>Europe</b>	<b>283</b>	<b>275</b>	<b>280</b>	<b>287</b>	<b>287</b>	<b>294</b>	<b>302</b>	<b>306</b>	<b>309</b>	<b>310</b>	<b>+10</b>
Central	14.8	14.7	14.4	14.4	14.9	15.2	15.7	15.7	16.0	16.7	+13
Eastern	23.7	15.6	15.9	21.4	23.4	25.8	27.6	28.9	34.2	38.3	+61
Western	244	245	249	251	249	253	259	262	258	255	+5
<b>Middle East</b>	<b>46.1</b>	<b>49.3</b>	<b>48.9</b>	<b>55.8</b>	<b>58.4</b>	<b>55.9</b>	<b>58.0</b>	<b>62.8</b>	<b>70.5</b>	<b>72.5</b>	<b>+57</b>
<b>World</b>	<b>844</b>	<b>834</b>	<b>844</b>	<b>876</b>	<b>892</b>	<b>948</b>	<b>1016</b>	<b>1072</b>	<b>1119</b>	<b>1158</b>	<b>+37</b>
Change (%)		-1.2	1.2	3.8	1.9	6.2	7.2	5.5	4.4	3.5	

( ) = 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.

<sup>a</sup> For the country coverage of the regions see appendix 8A, table 8A.1. Some countries are excluded because of lack of data or of consistent time series data—Africa excludes Angola, Benin, Equatorial Guinea and Somalia; 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 8A, tables 8A.1 and 8A.3.

for SIPRI's military expenditure data, and appendix 8D provides statistics on governments' reporting of their military expenditure to SIPRI and the United Nations.

## II. Regional trends and major spenders

SIPRI estimates of military expenditure presented here are likely to be underestimates. There are two basic reasons for this: (a) the estimates of world and regional totals do not include data for all countries, due to lack of consistent data; and (b) the country data reflect official information as reported by governments, which sometimes understate their actual level of military spending. In addition to the prevalent practice of governments concealing smaller or larger parts of their military outlays, military spending sometimes takes place outside the control of the government. This can be because the armed forces

themselves have income from non-government sources to use at their own discretion or because of significant military spending by non-state actors, such as rebel groups.

The world military expenditure in 2006 of \$1158 billion (at constant 2005 prices and exchange rates) represents an increase in real terms of 3.5 per cent compared to 2005 and of 37 per cent over the 10-year period 1997–2006 (see table 8.1). The trend in world military expenditure is highly influenced by US military expenditure. In 2006 the \$24 billion real-terms increase in US spending accounted for 62 per cent of the \$39 billion total increase in world military expenditure.

The region where military expenditure increased the most in relative terms in 2006 was Eastern Europe, with a 12 per cent increase. In two regions military expenditure decreased in 2006: these were Western Europe, with a decrease of 1.5 per cent, and Central America, with a decrease of 0.7 per cent.

Over the 10-year period 1997–2006, Central Asia, with its 73 per cent increase, had by far the highest increase among world regions. The estimate of total Central Asian military expenditure is somewhat unreliable because of lack of data for certain countries and also because of the lack of detail in the data that are available. Military spending in Eastern Europe and the Middle East also increased greatly over the decade, by 61 and 57 per cent, respectively. Central America was the only region where military spending decreased over this 10-year period, with a fall of 5 per cent.

Table 8.2 lists the 15 countries with the highest military spending in 2006 as measured in 2005 prices and exchange rates.<sup>4</sup> These 15 countries account for 83 per cent of total world military spending, while the top 5 countries alone account for 63 per cent. With its 46 per cent share of total world military expenditure, the USA is by far the biggest spender, followed at a distance by the United Kingdom, France, China and Japan, which each account for 4–5 per cent.<sup>5</sup> Military expenditure per capita varies greatly between states. While some rich states with an abundance of resources and relatively small populations can afford to spend more than \$1500 per inhabitant, poorer countries and more populous ones often spend less than \$50 per capita. However, the economic burden of spending on the military relative to what a country can afford is better captured by expressing military expenditure as a share of GDP, as presented in table 8A.4 in appendix 8A.

Table 8.2 also provides a ranking of countries based on military spending in dollars converted using gross national product-level purchasing power parity (PPP) rates. This ranking is presented as an illustration of a major problem

<sup>4</sup> The change in base year from 2003 to 2005 has affected the relative world rankings. See note 1 and appendix 8C.

<sup>5</sup> When (as in *SIPRI Yearbook 2006*) military expenditure is calculated using 2003 as the base year, US military expenditure in 2005 accounts for 48% of the world total. Calculated using 2005 prices and exchange rates, US spending in 2005 accounts for only 45% of the total. This difference is due to the depreciation of the relative value of the US dollar between the two base years.

**Table 8.2.** The 15 countries with the highest military expenditure in 2006 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 <sup>a</sup>		
Rank	Country	Spending (\$ b.)	Spending per capita (\$)	World share (%)		Rank	Country	Spending (\$ b.)
				Spending	Popul.			
1	USA	528.7	1 756	46	5	1	USA	528.7
2	UK	59.2	990	5	1	2	China	[188.2]
3	France	53.1	875	5	1	3	India	114.3
4	China	[49.5]	[37]	[4]	20	4	Russia	[82.8]
5	Japan	43.7	341	4	2	5	UK	51.4
<b>Sub-total top 5</b>		<b>734.2</b>		<b>63</b>	<b>29</b>	<b>Sub-total top 5</b>		<b>965.5</b>
6	Germany	37.0	447	3	1	6	France	46.6
7	Russia	[34.7]	[244]	[3]	2	7	Saudi Arabia <sup>b, c</sup>	36.4
8	Italy	29.9	514	3	1	8	Japan	35.2
9	Saudi Arabia <sup>b, c</sup>	29.0	1 152	3	–	9	Brazil	32.0
10	India	23.9	21	2	17	10	Germany	31.2
<b>Sub-total top 10</b>		<b>888.7</b>		<b>77</b>	<b>50</b>	<b>Sub-total top 10</b>		<b>1 147.0</b>
11	Korea, South	21.9	455	2	1	11	South Korea	30.1
12	Australia <sup>c</sup>	13.8	676	1	–	12	Iran <sup>b</sup>	28.6
13	Canada <sup>c</sup>	13.5	414	1	–	13	Italy	28.6
14	Brazil	13.4	71	1	3	14	Turkey	20.2
15	Spain	12.3	284	1	1	15	Pakistan	15.6
<b>Sub-total top 15</b>		<b>963.7</b>		<b>83</b>	<b>56</b>	<b>Sub-total top 15</b>		<b>1 270.2</b>
<b>World</b>		<b>1 158</b>	<b>177</b>	<b>100</b>	<b>100</b>	<b>World</b>		<b>..</b>

MER = market exchange rate; PPP = purchasing power parity; [ ] = estimated figure.

<sup>a</sup> The figures in PPP dollar terms are converted at PPP rates (for 2005), calculated by the World Bank, based on comparisons of gross national product.

<sup>b</sup> Data for Iran and Saudi Arabia include expenditure for public order and safety and might be slight overestimates.

<sup>c</sup> The populations of Australia, Canada and Saudi Arabia each constitute less than 0.5% of the total world population.

Sources: **Military expenditure:** Appendix 8A; **PPP rates:** World Bank, *World Development Report 2006: Equity and Development* (World Bank: Washington, DC, 2005), URL <<http://econ.worldbank.org/wdr/>>, table 1, pp. 292–93, and table 5, p. 300; **2006 population:** United Nations Population Fund (UNFPA), *State of the World Population 2006* (UNFPA: New York, N.Y., 2006), URL <<http://unfpa.org/swp/>>.

encountered in international comparison of economic data—the choice of conversion method has a major impact on the figures.<sup>6</sup>

<sup>6</sup> On the use of PPP rates in international comparisons of military expenditure see Ward, M., ‘International comparisons of military expenditures: issues and challenges of using purchasing power parities’, *SIPRI Yearbook 2006: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2006), pp. 369–86.

### III. Military and social budget priorities

Data on military and social expenditures and comparisons between them are often used in order to assess how governments prioritize military and social goals. Such data are used in domestic policy debates in order to assess government policies and the use of taxpayers' money, and by individuals and groups interested in assessing how their government addresses their security and social needs. The latter has become more relevant with the emergence of security concepts that focus on the security of the individual, rather than on the security of the state.<sup>7</sup>

National and international actors also use data on a country's military and social expenditures for various types of decisions. For example, some donor countries continue to use military expenditure data as a basis for their assessments of recipient countries' commitment to development when granting economic aid.<sup>8</sup> Nevertheless, the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD) recommends that donor states focus less on levels of military spending and instead assess the process by which that level is decided.<sup>9</sup> Another example is when licensing authorities in arms exporting countries use data on social expenditure as one of several criteria for their decisions. According to criterion 8 of the European Union (EU) Code of Conduct on Arms Exports, EU member states should consider the recipient country's relative levels of military and social expenditures in order to establish whether a proposed export of arms could 'seriously hamper the sustainable development of the recipient country'.<sup>10</sup>

This section looks at the data on government spending on the military, education and health sectors that are available in sources of international statistics. Although most users of these data look at figures for individual countries, it is also interesting to aggregate the data by country income groups since this allows spending by a specific country to be compared with the average for its income group. This section presents available data on average military and social expenditures as shares of GDP for low-, middle- and high-income countries. It continues by describing some of the considerations that should be taken into account when using figures on military and social expenditures.

<sup>7</sup> See chapter 7 in this volume.

<sup>8</sup> See Omitoogun, W. and Sköns, E., 'Military expenditure data: a 40-year overview', *SIPRI Yearbook 2006* (note 6), p. 290.

<sup>9</sup> Organisation for Economic Co-operation and Development (OECD), Development Assistance Committee (DAC), *Security System Reform and Governance*, DAC Guidelines and Reference Series (OECD: Paris, 2005), URL <<http://www.oecd.org/dac/conflict/ssr/>>, p. 37.

<sup>10</sup> The European Union Code of Conduct on Arms Exports was adopted at the Brussels European Council on 5 June 1998 and is available at URL <<http://consilium.europa.eu/uedocs/cmsUpload/08675r2en8.pdf>>. See also Bauer, S and Bromley, M., *The European Union Code of Conduct on Arms Exports: Improving the Annual Report*, SIPRI Policy Paper no. 8 (SIPRI: Stockholm, 2004), URL <<http://www.sipri.org/>>.

**Table 8.3.** Military and social expenditure priorities, select countries, 1999–2003<sup>a</sup>

Figures are averages of the percentage of each country's gross domestic product devoted to each sector

Income group/ Sector <sup>b</sup>	1999	2000	2001	2002	2003	Average, 1999–2003
<i>Low-income countries</i>						
Military	2.7	2.7	2.5	2.5	2.3	2.5
Education	3.4	3.5	3.8	4.0	4.0	3.8
Health	1.8	2.0	2.0	2.2	2.2	2.1
<i>Middle-income countries</i>						
Military	1.9	1.9	2.0	1.9	1.9	1.9
Education	4.8	4.5	4.7	4.6	4.7	4.7
Health	3.3	3.3	3.4	3.4	3.4	3.4
<i>High-income countries</i>						
Military	2.1	2.0	2.0	2.0	2.0	2.0
Education	5.5	5.4	5.6	5.7	5.9	5.6
Health	5.8	5.8	6.1	6.2	6.4	6.1

<sup>a</sup> The countries covered are those for which data are available for at least 2 of the 3 sectors throughout the 5-year period, totalling 82 of the 167 countries in the SIPRI Military Expenditure Database. The coverage is uneven between income groups: 24 high-income countries out of 37 countries; 45 middle-income countries out of 81; and 13 low-income countries out of 49 countries in the SIPRI database. In addition, although data were available for Eritrea (a low-income country), it has nevertheless been excluded as a statistical outlier.

<sup>b</sup> The data on education and health expenditures refer to general government expenditure, including central, regional and local government. Data on health expenditure include social security contributions and funding from external resources.

Sources: **Military expenditure:** Appendix 8A; **Education expenditure:** UNESCO Institute for Statistics (UIS), UIS Global Education Database, accessed 18 Jan. 2006, URL <<http://stats.uis.unesco.org/>>; **Health expenditure:** World Health Organization (WHO), *The World Health Report 2004–2006* (WHO: Geneva, 2004–2006), URL <<http://www.who.int/whr/en/>>.

### Data on military and social expenditures

A national budgeting process involves the allocation of public funds to various categories of public spending, subject to the constraints of the size of the total budget and the size of the national economy.<sup>11</sup> Two of the main areas competing for resources are the military and social sectors.

The purpose of military spending is to provide the military defence of, principally, a country's national security (both its state interest and territory) and, ultimately, security of its citizens. The purpose of social expenditure is to provide social services to the citizens of a country. This often involves significant redistribution of resources between income groups and generations in order to

<sup>11</sup> In the standard neoclassical model, nation states are represented as rational agents which maximize a welfare function for their citizens depending on the security and economic situations and subject to budget constraint. Smith, R., 'The demand for military expenditure', eds K. Hartley and T. Sandler, *Handbook of Defense Economics*, vol. 1 (North-Holland: Amsterdam, 1995), p. 71.

attain government social policy goals. Social expenditure is a broad category, covering support for education, health care, institutional care for the elderly and disabled, retirement pensions, as well as other types of state subsidy.<sup>12</sup> Only two types of social expenditure are considered here—for the education and health sectors. This is common practice since these are the categories of spending for which it is possible to find roughly comparable data for a large number of countries.<sup>13</sup> Moreover, providing education and health care are two of the most basic requirements when attending to social needs.<sup>14</sup>

Table 8.3 presents data on the average proportion of national GDP spent by governments on the military, education and health sectors by country income group. Spending as a proportion of national GDP is used to show the relative burden of the expenditure on the national economy. The table covers the period 1999–2003, which is the most recent five-year period for which such data are available. Data are organized into three country income groups in order to illustrate the pattern for and differences between these three types of countries. Data are not available for all countries in each income group. In particular, data are available for a higher proportion of high-income countries than low- and middle-income countries, and thus the figures for the former group are more representative than those for the latter groups. Caution should therefore be exercised when using these figures since the averages could differ if data for more countries were available.

Three main observations arise from table 8.3. First, the high- and middle-income countries prioritized spending on education and health care over military expenditure during the five-year period 1999–2003, both on average for the period and for each year in the period. In contrast, the low-income group prioritized spending on the military over health expenditure but prioritized expenditure on education over both. Second, the higher the level of income, the higher the proportion of GDP devoted to social spending. While low-income countries spent on average 5.9 per cent of GDP on health care and education, middle- and high-income countries spent 8.1 per cent and 11.7 per cent, respectively. Finally, the share of GDP spent on the military remained roughly constant at around 2 per cent in both high- and middle-income countries during the five-year period, while in low-income countries it declined somewhat. At the same time spending on education and health care as a share

<sup>12</sup> Organisation for Economic Co-operation and Development (OECD), '1980–1998, 20 years of social expenditure: the OECD database', Paris, URL <<http://www.oecd.org/dataoecd/3/63/2084281.pdf>>.

<sup>13</sup> See Gupta, S. et al., *Review of Social Issues in IMF-Supported Programs*, International Monetary Fund (IMF) Occasional Paper no. 191 (IMF: Washington, DC, Jan. 2000); Baqir, R., 'Social sector spending in a panel of countries', IMF Working Paper no. WP/02/35, IMF, Washington, DC, Feb. 2002, URL <<http://www.imf.org/external/pubs/cat/longres.cfm?sk=15564>>; and Martin, R. and Segura-Ubiergo, A., 'Social spending in IMF-supported programs', Independent Evaluation Office (IEO) Background Paper no. BP/04/1, International Monetary Fund, Washington, DC, Apr. 2004, URL <<http://www.imf.org/external/np/ieo/pap.asp>>.

<sup>14</sup> United Nations Development Programme (UNDP), *Human Development Report 2005: International Cooperation at a Crossroads—Aid, Trade and Security in an Unequal World* (UNDP: New York, N.Y., 2005), URL <<http://hdr.undp.org/reports/global/2005/>>, pp. 18–19. See also the definition of social opportunities in Sen, A., *Development as Freedom* (Oxford University Press: Oxford, 1999), pp. 11, 295.

of GDP increased in high- and low-income countries but remained relatively stable in middle-income countries.

These average figures offer a rough picture of typical national relative priorities between military and social expenditures and could be used to compare the spending of a specific country with the average for its income group. This must be done with due consideration of the weaknesses in the data related to the limited sample of countries and other factors described below.

### **The utility of the expenditure data**

Spending figures are useful only if their limitations are considered and if they are put into a broader context. Three limitations are considered here.

Principally, data on military and social expenditure are only a measure of input and do not necessarily indicate the level of output, in this case military capability and standards of education and health, since the output also depends on a range of other factors. What the spending figures do indicate are government priorities. However, such priorities need to be analysed in their political, social and economic contexts in order to establish their popular legitimacy and if they correspond to the relative needs of these sectors.

Second, if the main purpose of the data is to assess government expenditure priorities, in principle only public expenditure is relevant, and not private expenditure. However, the level of private expenditure may have an impact on the level of public expenditure. In some countries there is a significant amount of private expenditure on social services.<sup>15</sup> Such large private provision of social services can be caused by, for example, shortcomings in public sector provision of services or the interest of the private sector in offering broader choices of services such as religious or elite schools.<sup>16</sup> In some countries, funding from the private and public sectors has become increasingly mixed, with some public resources being allocated to finance the provision of services by the private sector and with some private funding of public social services.<sup>17</sup> Similarly, even though the military sector is often perceived as belonging exclusively to the public sector, non-state groups also have significant armed forces, which are thus financed by non-government sources.

A third complication is that, while data-collecting organizations strive to obtain data which conform as closely as possible to their definitions, in practice countries report data compiled according to their own definitions. In many cases, these national definitions differ widely from the definitions of the data-collecting organizations, as well as between countries. It is therefore difficult for governments to fill in standardized questionnaires such as SIPRI's on military expenditure, UNESCO's on education expenditure and the World

<sup>15</sup> E.g. in Chile, China and Paraguay private expenditure constitutes as much as 40% of total education expenditure. UNESCO and Organisation for Economic Co-operation and Development (OECD), World Education Indicators Programme, *Financing Education: Investments and Returns*, Analysis of the World Education Indicators, 2002 edn (OECD: Paris, 2003), URL <[http://www.uis.unesco.org/ev.php?ID=5245\\_201&ID2=DO\\_TOPIC](http://www.uis.unesco.org/ev.php?ID=5245_201&ID2=DO_TOPIC)>, p. 102.

<sup>16</sup> UNESCO and Organisation for Economic Co-operation and Development (note 15), pp. 95–96.

<sup>17</sup> UNESCO and Organisation for Economic Co-operation and Development (note 15), p. 94.

Health Organization's on health expenditure. Furthermore, lack of sufficient information means that these organizations cannot make their own calculations in accordance with their standardized definitions, and so problems with the comparability of the data also need to be considered.

## IV. The United States

### **Military expenditure trends**

US military expenditure has increased significantly since 2001, when the post-September 2001 'global war on terrorism' was launched by the US Administration of President George W. Bush. Between financial years (FYs) 2001 and 2006, outlays by the US Department of Defense (DOD) increased by 53 per cent in real terms, while the increase in outlays for national defence (a functional category that includes non-DOD defence-related activities) was 49 per cent (see table 8.4).<sup>18</sup> These increases are the result primarily of the massive supplemental appropriations made under the heading 'global war on terrorism', mostly to fund military operations in Afghanistan, Iraq and elsewhere.

The largest relative increase was in outlays for research, development, test and evaluation (RDT&E), rising by 58 per cent in real terms between FYs 2001 and 2006, while the increases in funding for operations and maintenance and for procurement were both 47 per cent. Military construction, military personnel and family housing received below average increases.

### **Appropriations for the 'global war on terrorism'**

Between September 2001 and June 2006, the US Government provided a total of \$432 billion in annual and supplemental appropriations under the heading 'global war on terrorism' (see table 8.5).<sup>19</sup> Of this, \$381 billion was provided for military operations—\$254 billion for the operation in Iraq and \$128 billion for those in Afghanistan, the Philippines, the Horn of Africa and elsewhere. Of this, the total already obligated (i.e. commissioned to particular projects) by June 2006 amounted to about \$287 billion for foreign operations (excluding classified activities),<sup>20</sup> of which \$227 billion was for military operations in Iraq and \$60 billion for operations in Afghanistan and elsewhere; an additional

<sup>18</sup> According to SIPRI data, US military expenditure increased by 53% in real terms between 2001 and 2006. This is higher than the rate of increase reported in official US data because of the method of conversion into constant dollars. While SIPRI uses the consumer price index (CPI) for price conversion for all countries, the US official figures are converted using military-specific deflators. Thus, the SIPRI data show the trend in the purchasing power of the military budget had it instead been spent on typical consumer goods and services, while the US official data show the trend in its purchasing power for military goods and services. The nominal change is the same for the two series.

<sup>19</sup> In US Government documents the heading used is 'Global War on Terror'.

<sup>20</sup> Funding of classified 'global war on terrorism' activities is not included in the DOD reports. It has been estimated by the US Congressional Budget Office to be at least \$25 billion. US Government Accountability Office (GAO), *Global War on Terrorism*, Report GAO-07-76 (GAO: Washington, DC, Nov. 2006), URL <<http://www.gao.gov/docdb/lite/details.php?rptno=GAO-07-76>>, p. 10.

**Table 8.4.** Trends in US military expenditure, financial years 2001–2006

Figures are in US\$ b. and are for financial years (running for 12 months from 1 Oct. of the previous year).

	2001	2002	2003	2004	2005	2006 <sup>a</sup>	Change, 2001–2006 (%)
<i>Outlays in constant (FY 2007) prices</i>							
<b>DOD outlays<sup>b</sup></b>							
Military personnel	91.8	101.6	120.6	124.2	134.8	119.5	30
O&M	133.9	152.3	173.0	192.0	199.5	197.4	47
Procurement	61.5	69.4	74.6	82.1	86.2	90.7	47
RDT&E	45.7	49.5	58.5	65.5	68.8	72.3	58
Military construction	5.6	5.7	6.4	6.8	5.6	7.5	34
Family housing	3.9	4.2	4.2	4.2	3.9	3.9	0
Other	1.2	0.7	1.6	1.8	1.6	2.4	100
<b>Sub-total<sup>b</sup></b>	<b>343.6</b>	<b>382.0</b>	<b>435.7</b>	<b>476.6</b>	<b>500.4</b>	<b>493.7</b>	<b>44</b>
Anticipated supplemental appropriations <sup>c</sup>	..	..	..	..	..	30.8	
<b>Total DOD outlays</b>	<b>343.6</b>	<b>382.0</b>	<b>435.7</b>	<b>476.6</b>	<b>500.4</b>	<b>524.5</b>	<b>53</b>
<i>Outlays in constant (FY 2000) prices</i>							
National defence <sup>d</sup>	297.2	329.4	365.3	397.3	419.8	443.1	49
<i>Outlays in current prices<sup>d</sup></i>							
DOD, military	290.3	332.0	387.3	436.5	474.2	512.1	
DOE, military	12.9	14.8	16.0	16.6	18.0	18.7	
Other military-related	1.6	1.8	1.6	2.8	3.1	5.1	
<b>Total national defence</b>	<b>304.9</b>	<b>348.6</b>	<b>404.9</b>	<b>455.9</b>	<b>495.3</b>	<b>535.9</b>	

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

<sup>a</sup> Figures for 2006 are for budgeted, not actual, expenditure. These are estimated figures, based on requests for budget authority.

<sup>b</sup> Figures for DOD outlays are from data released by the DOD in Mar. 2006 which do not include future emergency funding for FY 2006.

<sup>c</sup> This figure is based on data from the US Office of Management and Budget (OMB), which include anticipated funding for the 'global war on terrorism' for FY 2006.

<sup>d</sup> This data series from the OMB includes outlays from 'anticipated funding for the global war on terrorism' for FY 2006.

*Sources:* **DOD outlays:** US Department of Defense (DOD), Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2007* (DOD: Washington, DC, Mar. 2006), URL <<http://www.defenselink.mil/comptroller/defbudget/fy2007/>>, table 6-11, p. 133; **Supplemental appropriations and national defence outlays:** US Office of Management and Budget, *Historical Tables: Budget of the United States Government, Fiscal Year 2007* (Government Printing Office: Washington, DC, 2006), URL <<http://www.whitehouse.gov/omb/budget/fy2007/>>, tables 3.2, 6.1.

\$27.7 billion was obligated for US homeland defence activities.<sup>21</sup> Most of this funding was provided through supplemental appropriations outside the annual defence budget.

Total 'global war on terrorism' funding for FY 2006 was approximately \$114.4 billion, of which \$15.9 billion was for military personnel, \$55.9 billion for operations and maintenance, \$21.5 billion for procurement, and \$21.1 billion for RDT&E and military construction.<sup>22</sup>

The US Congressional Budget Office has projected the costs of military and diplomatic operations in Iraq for the period FYs 2007–2016 under two scenarios specified by the US House of Representatives Budget Committee.<sup>23</sup> In the first scenario, assuming the removal of all US troops from Iraq by the end of 2009, the total cost over this 10-year period was projected as being \$166 billion for the US military (in addition to the \$254 billion already appropriated for the period FYs 2003–2006) and \$36 billion for the US costs for diplomatic operations, Iraqi security forces, foreign aid and ex-combatants' programmes (in addition to \$37 billion for the period FYs 2003–2006). This would bring the total cost for the period 2003–16 to \$493 billion. In the second scenario, assuming a reduction in the number of US troops in Iraq to 40 000 by 2010, the cost for military operations in 2007–16 is projected to be \$368 billion, with other costs of \$38 billion, bringing the total cost for US military and other operations in Iraq to \$697 billion from the beginning of the war in March 2003 to the end of FY 2016.

## Future spending

The Bush Administration's budget request in February 2006 to the US Congress for FY 2007 included \$441 billion in budget authority for the DOD, an increase of 8 per cent over the enacted funding level for FY 2006 in nominal terms.<sup>24</sup> However, this FY 2006 figure does not include supplemental 'global war on terrorism' appropriation requests after February 2006. Adding the subsequent supplements requested during 2006—\$70 billion for FY 2006 and \$50 billion for FY 2007—the overall budget authority requested for the DOD totalled \$538 billion in FY 2006 and \$491 billion for FY 2007.<sup>25</sup>

<sup>21</sup> US Government Accountability Office (note 20), p. 10.

<sup>22</sup> US Government Accountability Office (note 20), p. 8.

<sup>23</sup> US Congress, Congressional Budget Office (CBO), 'Estimated costs of U.S. operations in Iraq under two specified scenarios', Washington, DC, 13 July 2006, URL <<http://www.cbo.gov/showdoc.cfm?index=7393>>.

<sup>24</sup> US Department of Defense (DOD), Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2007* (DOD: Washington, DC, Mar. 2006), URL <<http://www.defenselink.mil/comptroller/defbudget/fy2007/>>, table 1-1, p. 4. In US budget terminology, budget authority is the authority to spend in the current as well as future years and actual expenditure during the year is called outlays. This figure of \$441 billion is slightly higher than the original figure of \$439.3 billion presented by President Bush in his budget request on 6 Feb. 2006. US Department of Defense, 'Fiscal 2007 Department of Defense budget is released', Press release no. 104-06, Washington, DC, 6 Feb. 2006, URL <<http://www.defenselink.mil/Releases/Release.aspx?ReleaseID=9287>>.

<sup>25</sup> Kosiak, S., 'Historical and projected funding for defense: presentation of the FY 2007 request in tables and charts', Center for Strategic and Budgetary Assessments, Washington, DC, 7 Apr. 2006, URL <<http://www.csbaonline.org/2006-1/2.DefenseBudget/Topline.shtml>>, table 1.

**Table 8.5.** US appropriations for the 'global war on terrorism', financial years 2001–2006

Figures are for budget authority, in US\$ b. Years are financial years (running for 12 months from 1 Oct. of the previous year). Figures do not always add up because of the conventions of rounding.

	2001	2002	2003	2004	2005	2006	Total 2001–2006
Military operations	14	18	80	88	70	111	381
Iraq <sup>a</sup>	0	0	46	68	53	87	254
Afghanistan and other <sup>b</sup>	14	18	34	21	18	24	128
Indigenous security forces <sup>c</sup>	0	0	0	5	7	5	17
Iraq	0	0	0	5	6	3	14
Afghanistan	0	0	0	0	1	2	3
Diplomatic operations and foreign aid	<0.5	2	8	17	3	4	34
Iraq	0	0	3	15	1	3	22
Other	<0.5	2	5	2	2	1	12
<b>Total</b>	<b>14</b>	<b>19</b>	<b>88</b>	<b>111</b>	<b>81</b>	<b>120</b>	<b>432</b>

<sup>a</sup> This is funding for Operation Iraqi Freedom.

<sup>b</sup> This includes funding for Operation Enduring Freedom (in and around Afghanistan), Operation Noble Eagle (homeland security missions), restructuring of army and Marine Corps units and classified activities other than those funded through the Iraq Freedom Fund. It excludes funds for Operation Noble Eagle for 2005 and 2006 because these have been included in annual DOD appropriations and cannot be identified separately.

<sup>c</sup> Funding for indigenous security forces is for training and equipping local military and police units in Afghanistan and Iraq.

Sources: US Congress, Congressional Budget Office (CBO), *The Budget and Economic Outlook: An Update* (CBO: Washington, DC, Aug. 2006), URL <<http://www.cbo.gov/showdoc.cfm?index=7492>>, box 1-1, p. 9.

According to the Future Year Defense Plan for FYs 2007–2011, budget authority for national defence was projected to increase in real terms from \$463 billion in FY 2007 to \$482 billion in FY 2009 and then fall to \$477.2 billion in FY 2011 (all at constant FY 2007 prices), not including estimated future spending for wars.<sup>26</sup> According to the US Army, Navy and Air Force, this will lead to a substantial gap between their funding and the costs of their planned future activities. During the 2006 congressional budget process of the FY 2007 defence budget, the Army Chief of Staff, General Peter Schoomaker, testified that the US Army had a funding shortfall of \$17 billion caused by the need to replace equipment that had been worn out or destroyed in combat in Afghanistan and Iraq and he projected an annual shortfall of \$12 billion for each of FYs 2008 and 2009. Similarly, US Air Force officials argued that they faced a budget shortfall of \$8 billion in FYs 2008–2013 to pay for personnel, equipment and operational costs. According to the US Navy, its shortfall will

<sup>26</sup> US Department of Defense, Office of the Under Secretary of Defense (Comptroller) (note 24), table 1-2, p. 5.

be \$3–4 billion annually compared with the projected costs of achieving its goal of building a 313-ship fleet. To save money, both the air force and the navy are cutting their forces, by roughly 40 000 personnel each. However, according to the Senate Budget Committee, this would not be nearly enough to close the gap between force planning and budget plans, to allow the services to afford all the weapon programmes in their acquisition plans.<sup>27</sup>

While these budget shortfalls are partly related to costs incurred for the wars in Afghanistan and Iraq—for example, for repairs and replacement of equipment damaged or destroyed in combat—another factor is the increased costs of weapon programmes initiated before the wars. The post-September 2001 period has been associated with substantial increases in the cost of weapon systems. The USA's weapon system acquisition plan has increased from 71 major weapon programmes with a combined cost of \$790 billion in FY 2001 to 85 programmes with a cost of \$1585 billion by December 2005.<sup>28</sup> This is the result both of an increasing number of major weapon programmes and of increasing unit programme costs. This trend is unlikely to be changed, at least in the short term, owing to the character of the weapon acquisition process, including the contractual arrangements and 'pork barrel' politics. Thus, according to a 2006 report by the Republican Party staff on the Senate Budget Committee, it would be difficult for the Congress to stem these cost increases by cancelling some ongoing weapon acquisition programmes because of the contractual arrangements and the employment implications, which have historically been an important political barrier to the cancellation of arms production programmes.<sup>29</sup>

Overall, the paradox of the dynamics of US military spending by the end of 2006 was that, in spite of the strong increase in US military expenditure during the period FYs 2001–2006 and a level of military spending nearly as high as the combined military expenditure of all other countries in the world, the funding is nevertheless insufficient for the defence plans of the US armed forces.

### **Alternative strategies and spending**

The USA's post-September 2001 policies have not only incurred great costs. By the end of 2006 it had been demonstrated in a number of assessments that

<sup>27</sup> Matthews, W., 'Worldwide defense spending forecast: leading the pack', *Defense News*, 11 Sep. 2006.

<sup>28</sup> US Senate, Budget Committee, Republican Staff, 'Informed budgeteer', *Budget Bulletin*, 28 July 2006, URL <<http://www.senate.gov/~budget/republican/NewBB.htm>>. By the end of FY 2006, the acquisition plan had reached 87 programmes at a total cost of \$1613 billion. US Department of Defense, 'Selected Acquisition Report (SAR) summary tables as of date: September 30, 2006', Washington, DC, 14 Nov. 2006, URL <<http://www.acq.osd.mil/ara/am/sar/>>.

<sup>29</sup> US Senate (note 28). According to the Senate Budget Committee, DOD contracts contain a termination liability clause to indemnify the contractor if the government prematurely ends the contract for reasons other than default by the contractor, and the termination liability payment is often larger than the amount the government would have to pay to continue production.

**Table 8.6.** The proposals of the Task Force on a Unified Security Budget for the United States, 2007

Figures are in US\$ b. and are the proposed changes from the US Administration's budget request for financial year 2007

Item	Proposed change
Combat aircraft (in F-22 and F-35 programmes)	-5.3
Future combat systems	-2.7
Ships (Virginia Class submarines and DD(X) destroyer)	-5.6
Nuclear warheads, weapons and missiles	-14.0
National missile defence	-8.0
Military forces and personnel (air force and navy)	-7.2
Research and development	-5.0
Waste in procurement and business operations	-5.0
Other	-8.7
<b>Total proposed cuts in military spending</b>	<b>-61.5</b>
Homeland security (public health, first responders, public transport security)	23.75
Economic development assistance	10.00
Alternative energy sources	8.80
Non-proliferation (focusing on dismantling and securing nuclear weapons)	4.60
Diplomatic operations	1.80
Contributions to international organizations, peace missions, etc.	2.79
<b>Total proposed increases in non-military spending</b>	<b>51.74</b>

Source: Korb, L. and Pemberton, M., *Report of the Task Force on a Unified Security Budget for the United States, 2007* (Foreign Policy in Focus and the Center for Defense Information: Washington, DC, May 2006), URL <<http://www.fpif.org/fpiftxt/3253/>>, pp. 16, 22.

these policies had not achieved their aims.<sup>30</sup> These are two important factors behind the emergence of a number of alternative security strategies and spending options by the domestic political opposition during 2006.

A proposal from the Democratic Party in early 2006 included a number of non-military (e.g. homeland, energy and diplomatic) strategies to protect US territory, communication systems, chemical and nuclear plants and critical infrastructure from terrorist attacks, to reduce US dependence on foreign oil and to restore confidence in the ability of the US Government to respond to an attack or natural disaster.<sup>31</sup> However, it did not imply cuts in US military spending, since it also included a plan to rebuild the military forces. Similarly, a set of proposals for reforming US military strategy by a think tank associated with the Democratic Party included a number of suggestions for defensive

<sup>30</sup> For a brief summary see Gold, D., 'Is the war on terror "worth it"?', Security Policy Working Group, Proteus Fund, New York, N.Y., Sep. 2006, URL <<http://www.proteusfund.org/spwg/collab/>>. For a broader review of the domestic critique during 2006 of US defence policy, both as regards the war in Iraq and the design and requirements of future US armed forces, see chapter 1 in this volume.

<sup>31</sup> US Democratic Party, 'Real security: the Democratic plan to protect America and restore our leadership in the world', Washington, DC, 29 Mar. 2006, URL <<http://www.democrats.gov/BK.html>>.

measures, expanding non-military forms of engagement and raising taxes, while also calling for a 'bigger and better military'.<sup>32</sup>

A third set of proposals is contained in the third version of the Unified Security Budget, which is the work of a group of non-governmental policy analysts that includes former government officials who have served in the US DOD, Congress and armed forces.<sup>33</sup> Based on a broad conception of security, the Unified Security Budget's analysis covered both military and non-military expenditure items for promoting security and identified \$62 billion in cuts to the defence budget, 'mostly to weapon systems that have scant relevance to the threats we face', and suggested \$52 billion for additional non-military measures for defence and prevention.<sup>34</sup> These proposals are summarized in table 8.6.

### Economic impact

The massive increase in US military spending is taking place in a period of rising budget deficits, increasing US Government debt and increasing outlays on servicing that debt. It has also been one of the factors contributing to the deterioration of these economic indicators. According to the US Office of Management and Budget, the slowdown in the US economy that began in 2001 was exacerbated by the terrorist attacks of 11 September 2001. The deterioration in the performance of the economy, together with reduction in income tax and additional spending in response to the terrorist attacks, produced a fall in the US Government's budget surplus to \$128 billion in 2001 and a return to deficits in 2002.<sup>35</sup> By FY 2006, the deficit was \$423 billion, corresponding to 3.2 per cent of GDP. During the period FYs 2001–2006 the US Government's debt increased by \$2.84 trillion and in FY 2006 corresponded to 66.1 per cent of GDP, while net interest payments to service the debt increased from \$206 billion to \$220 billion (see table 8.7).

In the long term there will be greater competition for funds from the US budget because of the increased cost of servicing the debt caused by the rising budget deficit and the costly demands of the ageing baby boom generation. People born in the post-World War II baby boom period will begin to retire in FY 2008 and to do so in great numbers from FY 2011, which will result in dramatic increases in US Government spending on retirement and health programmes. According to the US Government Accountability Office, in the

<sup>32</sup> Marshall, W. (ed.), Progressive Policy Institute, *With All Our Might: A Progressive Strategy for Defeating Jihadism and Defending Liberty* (Routledge: London, 2006). See also Hartung, W. D., 'Fighting the "good fight": an alternative to current Democratic proposals for a new national security strategy', Security Policy Working Group, Proteus Fund, New York, N.Y., Sep. 2006, URL <<http://www.proteusfund.org/spwg/collab/>>.

<sup>33</sup> Korb, L. and Pemberton, M., *Report of the Task Force on a Unified Security Budget for the United States, 2007* (Foreign Policy in Focus and the Center for Defense Information: Washington, DC, May 2006), URL <<http://www.fpif.org/fpifxt/3253/>>.

<sup>34</sup> Korb and Pemberton (note 33), p. i.

<sup>35</sup> US Office of Management and Budget, *Historical Tables: Budget of the United States Government, Fiscal Year 2007* (Government Printing Office: Washington, DC, 2006), URL <<http://www.whitehouse.gov/omb/budget/fy2007/>>, pp. 5–6.

**Table 8.7.** US budget surplus or deficit, government debt and net interest payments, financial years 2000–2007

Years are financial years (running for 12 months from 1 Oct. of the previous year).

	2000	2001	2002	2003	2004	2005	2006 <sup>a</sup>	2007 <sup>a</sup>
<i>Figures in current prices (\$ b.)</i>								
Surplus/deficit	+236	+128	-158	-378	-413	-318	-423	-354
Debt	5 629	5 770	6 198	6 760	7 355	7 905	8 611	9 295
Net interest payments	223	206	171	153	160	184	220	247
<i>Figures as a share of gross domestic product (%)</i>								
Surplus/deficit	+2.4	+1.3	-1.5	-3.5	-3.6	-2.6	-3.2	-2.6
Debt	58.0	57.4	59.7	62.6	63.7	64.3	66.1	67.5
Net interest payments	2.3	2.0	1.6	1.4	1.4	1.5	1.7	1.8

<sup>a</sup> Figures for financial years 2006 and 2007 are estimates, based on requested budget authority.

Source: US Office of Management and Budget, *Historical Tables: Budget of the United States Government, Fiscal Year 2007* (Government Printing Office: Washington, DC, 2006), URL <<http://www.whitehouse.gov/omb/budget/fy2007/>>, tables 1.3, 7.1, 8.1, 8.4.

absence of policy changes, the currently growing imbalance between expected US Government spending and tax revenues will mean ‘ultimately unsustainable federal deficits and debt that serve to threaten [the USA’s] future national security as well as the standard of living for the American people’.<sup>36</sup>

In addition, the US military operations in Afghanistan, Iraq and elsewhere will have a long-term economic impact far beyond the direct effect of military expenditure. The indirect costs of armed conflict include a range of costs to the warring parties themselves, as well as to neighbouring countries, and the negative macroeconomic impact of disturbances caused by the conflict.<sup>37</sup> Among the indirect costs to the parties are the lives lost, the treatment of the wounded, the destruction of infrastructure, productive capacity and other capital, and the lack of investment in the country of conflict. Some of these may incur further budgetary costs (e.g. for the provision of care for injured soldiers), while others affect the national economy. In addition, major armed conflicts often have global macroeconomic implications, in the case of the conflict in Iraq primarily due to the impact on the oil market.

When these factors are taken into account, the costs to the USA of the war in Iraq become much higher than the increased level of military expenditure. In an assessment produced in late 2006 by Linda Bilmes and Joseph Stiglitz, current and future budgetary costs for military operations, demobilization and

<sup>36</sup> US Government Accountability Office (GAO), *21st Century Challenges: Reexamining the Base of the Federal Government*, GAO-05-325SP (GAO: Washington, DC, Feb. 2005), URL <<http://www.gao.gov/21stcentury.html>>, p. 5.

<sup>37</sup> See e.g. Hartley, K., ‘Iraq and the costs of conflict’, *Socialist Review*, July 2006; and Sköns, E., ‘The costs of armed conflict’, International Task Force on Global Public Goods, *Peace and Security*, Expert Paper Series no. 5 (Secretariat of the International Task Force on Global Public Goods: Stockholm, 2006), URL <[http://www.gpgtaskforce.org/bazment.aspx?page\\_id=265](http://www.gpgtaskforce.org/bazment.aspx?page_id=265)>, pp. 169–90.

ex-combatants' health care and disability compensation were estimated to total \$1012 billion for the period up to 2016.<sup>38</sup> In addition, the economic impact of lives lost, jobs interrupted and increased oil prices as a result of political uncertainty in the Middle East was estimated at \$1255 billion, resulting in a total cost of \$2267 billion.<sup>39</sup>

Thus, even for a power such as the USA, a major war like that in Iraq involves a significant economic burden, with severe future economic and political implications.

## V. Regional survey<sup>40</sup>

### Africa

In 2006 military expenditure in Africa amounted to \$15.5 billion in constant (2005) dollars (see table 8.1). This represents an increase in real terms of 1.3 per cent since 2005. The rate of increase was significantly lower than in the previous two years: 5.3 per cent in 2004 and 3.5 per cent in 2005. Over the 10-year period 1997–2006, total military spending in the region increased by 51 per cent in real terms. As in previous years, North Africa, and in particular Algeria, accounted for the bulk of the increase. Sub-Saharan Africa, with 46 of the 50 African states, only accounts for 58 per cent of the region's military expenditure, the rest being spent by the four North African countries.

Algeria was responsible for 46 per cent of North African military expenditure in 2006 and was the second highest spender in Africa. Algeria's ambitions to replace or upgrade ageing weapon systems have led it to approach both France and the USA for arms purchases.<sup>41</sup> However, in 2006 Russia stepped in to meet Algeria's requests. Under the terms of contracts signed between December 2005 and March 2006, Algeria will purchase arms from Russia worth \$10.5 billion and Russia will in return write off Algeria's remaining \$4.74 billion Soviet-era debt.<sup>42</sup> Morocco increased its military expenditure only marginally in 2006, while Libya and Tunisia decreased theirs, in Tunisia's case by 16 per cent.

Even if military expenditure in sub-Saharan Africa is not high in absolute terms compared to that of other regions, the economic burden that it represents is considerable. In 2005 the military burdens of Angola and Burundi—as

<sup>38</sup> Bilmes, L. and Stiglitz, J. E., 'Encore: Iraq hemorrhage', *Milken Institute Review*, no. 4/2006 (Dec. 2006), pp. 76–83. This study is based on the 2 scenarios used in the Congressional Budget Office report to the US Congress (note 23).

<sup>39</sup> This was an upward revision of the same authors' earlier estimates of \$1026–2239 billion. Bilmes, L. and Stiglitz, J. E., 'The economic costs of the Iraq war: an appraisal three years after the beginning of the conflict', National Bureau of Economic Research (NBER) Working Paper no. 12054, Cambridge, Mass., Feb. 2006, available at URL <<http://www2.gsb.columbia.edu/faculty/jstiglitz/papers.cfm>>.

<sup>40</sup> For the country coverage of the regions discussed in this section see appendix 8A, table 8A.1

<sup>41</sup> Daoud, A., 'North Africa's own defense buildup: regional risk or legitimate decision?', *North Africa Journal*, 18 Apr. 2006.

<sup>42</sup> Anderson, G. and Novichkov, N., 'Algeria signs for Russian arms', *Jane's Defence Weekly*, 22 Mar. 2006, p. 19; and Abdullaev, N., 'Russia eyes debt-for-deals strategy', *Defense News*, 20 Mar. 2006. For more on Russia's deals with Algeria see chapter 10 in this volume.

measured by military spending as a share of GDP—were among the highest in the world, at 5.7 and 6.2 per cent of GDP, respectively. At the same time, these two countries were among those with the lowest human development indices.<sup>43</sup> Both countries are recovering from war and are re-establishing government institutions and, as in many other poor countries, there is constant debate over priorities in the allocation of their scarce resources (as discussed in section III). While such countries need to keep their armed forces satisfied in order to maintain the military's support for civilian government, they also need to provide for the social needs of their populations. According to a 2006 report, one of the main causes of military mutinies against civilian rule in Africa is inefficient military expenditure as a result of problems such as corruption.<sup>44</sup>

South Africa is one of the few countries in the region that has made progress towards more efficient military expenditure. Although South Africa has the largest military budget in Africa (\$3.6 billion in 2006), it represents a moderate and stable economic burden of 1.5 per cent of GDP. The stability and efficiency of the South African military budget is the result of a transformation process that was undertaken in the decade after the transition to democracy in order to make the military sector accountable to civil authorities.<sup>45</sup> Key guidelines for the control of the military have been created as part of the transformation process. Those guiding the military budget are contained in the 1996 White Paper on Defence, the 1998 Defence Review, the 1999 Public Finance Management Act and the 2002 Defence Act.<sup>46</sup>

Several other sub-Saharan countries are in the process of reforming their military sectors. During such reform processes there can be apparent increases in military expenditure, at least in the short term.<sup>47</sup> In post-conflict countries these reforms can include demobilization or the integration of former rebel combatants into national armies as well as the rebuilding of military infrastructure damaged during the war.<sup>48</sup> For example, in the Democratic Republic

<sup>43</sup> United Nations Development Programme (UNDP), *Human Development Report 2006: Beyond Scarcity—Power, Poverty and the Global Water Crisis* (UNDP: New York, N.Y., 2006), URL <<http://hdr.undp.org/hdr2006/>>, p. 413

<sup>44</sup> Reeve, R., 'Inadequate military funding puts African countries at risk of coup', *Jane's Intelligence Review*, Apr. 2006, pp. 6–10.

<sup>45</sup> Le Roux, L., 'South Africa', eds W. Omitoogun and E. Hutchful, SIPRI, *Budgeting for the Military Sector in Africa: The Processes and Mechanisms of Control* (Oxford University Press: Oxford, 2006), p. 197.

<sup>46</sup> South African Department of Defence (DOD), *Defence in a Democracy: White Paper on National Defence for the Republic of South Africa* (DOD: Pretoria, May 1996); and South African Department of Defence, *South African Defence Review* (DOD: Pretoria, 1998). The Public Finance Management Act, Act no. 1 of 1999 (as amended by Act no. 29 of 1999), was assented to on 2 Mar. 1999 and took effect on 1 Apr. 2000. The Defence Act, Act no. 42 of 2002, was assented to on 12 Feb. 2003 and took effect on 23 May 2003. These documents are available at URL <<http://www.dod.mil.za/documents/documents.htm>>. See also South African National Treasury, *Estimates of National Expenditure 2006* (National Treasury: Pretoria, Feb. 2006), URL <<http://www.treasury.gov.za/documents/budget/2006/ene/>>, p. 462.

<sup>47</sup> Omitoogun, W., 'Introduction', eds Omitoogun and Hutchful (note 45), p. 3.

<sup>48</sup> Omitoogun and Sköns (note 8), p. 283. On military expenditure in post-conflict states see also Collier, C. and Hoeffler, A., 'Military expenditure in post-conflict societies', Centre for the Study of African Economies Working Paper no. 2004-13, Oxford University, Oxford, 8 Apr. 2004, URL <<http://www.csaec.ox.ac.uk/workingpapers/wps-list.html>>.

of the Congo (DRC), after the transitional government had been established in 2003 according to the 2002 Global and All-Inclusive Agreement, military expenditure increased by 56 per cent in 2004 over 2003.<sup>49</sup> Since then military spending has decreased by 27 per cent. However, these are figures for government spending on the military and do not include the spending by rebels and other non-governmental actors. If this non-governmental spending were included, the overall trend in military spending would most likely be a greater decrease since the end of the conflict.

## Latin America

Military expenditure in Latin America (i.e. South and Central America) amounted to \$32.7 billion in constant (2005) dollars in 2006. This represents an increase of 5 per cent in real terms since 2005, considerably lower than the 8 per cent increase in the previous year. Over the 10-year period 1997–2006 military spending in this region rose by 18 per cent in real terms.

Increases in the military expenditure of Latin American countries have been levelling off following the end of the rule of the last military dictatorship in 1990.<sup>50</sup> Since 1993, the post-1990 year with the highest annual rate of increase in the region's military expenditure (18 per cent), spending levels have increased more slowly. The high rate of increase in the years immediately after the end of the dictatorships can be explained by pressure from strong military lobbies on the new civilian governments.<sup>51</sup> However, in some of these countries democratic government has become well rooted, making military reforms possible, including modernization processes. Such reforms intensified in the aftermath of the September 2001 terrorist attacks on the USA, following pressure from the USA to make security institutions more effective, and with the end of the economic crises of the late 1990s.<sup>52</sup>

However, the characteristics of the reforms differ within the region. Two Central American countries—Costa Rica and Panama—have no defence forces, having disbanded them and replaced them with paramilitary forces—in 1948 and 1990, respectively. Other countries, following peace agreements in the 1980s, have focused on shifting resources from the military sector to

<sup>49</sup> The Global and All-Inclusive Agreement on Transition in the Democratic Republic of the Congo was signed at Pretoria on 17 Dec. 2002. Among other objectives agreed was the formation of a restructured and integrated national army. The text of the agreement is available at URL <<http://www.reliefweb.int/rw/RWB.NSF/db900SID/MHII-65G8B8>>. See also UN General Assembly Resolution A/RES/59/207, 17 Mar. 2005, URL <<http://www.un.org/ga/59/>>, Article 6.

<sup>50</sup> There was a military-backed government in Venezuela for a short time in 2002.

<sup>51</sup> Robledo Hoecker, M., 'Instituciones, intereses y cultura política en las relaciones entre civiles y militares en Chile: 1990–2004' [Institutions, interest and political culture in the civil–military relations in Chile: 1990–2004], eds J. S. Tulchin, R. Benítez Manaut and R. Diamint, *El rompecabezas: Conformando la seguridad hemisférica en el siglo XXI* [The puzzle: creating hemispheric security in the 21st century] (Prometeo Libros: Buenos Aires, 2006), pp. 475–78.

<sup>52</sup> Martín, F. E., 'The Latin American military in the new millennium', *Hemisphere*, vol. 16 (spring 2006), p. 3.

internal security.<sup>53</sup> The latter trend continued during the 10-year period 1997–2006, with military expenditure in Central America decreasing by 5 per cent in real terms. This represents the only regional decrease in military spending globally over this period. However, in a few countries, such as Guatemala, the police force's lack of capabilities has led to the military taking over some policing functions, blurring the line between the roles of the police and the military.<sup>54</sup>

While South American countries have internal security concerns similar to those in Central America, the approach to reforming the armed forces is different.<sup>55</sup> There is currently a focus in South America on modernization of equipment. Chile and Venezuela have both pursued large programmes for the modernization of their military capabilities and many other South American states have done so on a smaller scale. These countries have made two types of political argument to justify their acquisitions of up-to-date armaments. One group of countries argues that these arms purchases are the routine replacement of old equipment and the acquisition of capabilities for a more active role in international peace operations. Countries in the other group argue that their acquisitions of equipment are in response to a perceived military threat. Of course, both of these arguments can be used simultaneously, while other tacit motives—such as support of the local arms industry, as in Brazil—are not aired in the political discourse.

The first group includes Argentina, Brazil, Chile and Uruguay. The modernization of the Brazilian military has focused on the air force, with the acquisition of Mirage 2000 combat aircraft and a number of helicopters. The main Brazilian replacement programme in 2006 was the purchase of 62 transport aircraft for \$64 million. The modernized fleet is part of the Brazilian Government's ongoing prioritization of control over the Amazon through the Amazon Surveillance System (Sistema de Vigilância da Amazônia, SIVAM).<sup>56</sup> The F-X next-generation combat aircraft programme, which Brazil cancelled in 2005 to redirect funds to the 'Fome Zero' (zero hunger) plan, was revived in 2006.<sup>57</sup> Brazil's procurement programme is part of its efforts to maintain its

<sup>53</sup> Córdova Macías, R. and Pérez, O. J., 'La agenda de seguridad en centroamérica hacia el siglo XXI' [The security agenda in Central America towards the XXI century], eds Tulchin, Benítez Manaut and Diamint (note 51), pp. 226–30.

<sup>54</sup> 'Army to patrol streets for another two terms', *Latin American Weekly Report*, 3 Oct. 2006, p. 12; and 'Civilians and soldiers: roles and outlooks', *Latin American Security and Strategic Review*, Oct. 2006, pp. 4–5.

<sup>55</sup> Bruneau, T. C. and Goetze, R. B., 'Civilian–military relations in Latin America', *Military Review*, Sep./Oct. 2006, p. 68.

<sup>56</sup> SIPRI Arms Transfers Database, URL <<http://www.sipri.org/contents/armstrad/>>; 'CASA delivers first 12 Brazilians C-295s', *International Air Letter*, 27 Oct. 2006, p. 5; and Brazilian Ministry of Defence, 'Política de defesa nacional' [National defence policy], Decree no. 5484 of 30 June 2005, URL <[https://www.planalto.gov.br/ccivil\\_03/\\_Ato2004-2006/2005/Decreto/D5484.htm](https://www.planalto.gov.br/ccivil_03/_Ato2004-2006/2005/Decreto/D5484.htm)>, section 7.1.

<sup>57</sup> Baranauskas, T., 'Brazil appears ready for major aircraft buys', Government & Industry Group, Forecast International, Newtown, Conn., 18 Dec. 2006, URL <<http://emarketalerts.forecast1.com/mic/eabstract.cfm?reco=131002>>. See also Sköns, E. et al., 'Military expenditure', *SIPRI Yearbook 2004: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2004), pp. 335–37.

role as a major regional power and to gain support for a permanent seat on the UN Security Council.<sup>58</sup>

The second group of countries, whose modernization programmes are in response to a perceived military threat, includes Bolivia, Colombia and Venezuela. Bolivia has expressed concern about neighbouring Chile's modernization programmes.<sup>59</sup> As part of its own plan's to divert resources to the modernization of its armed forces, in 2006 it was proposed that 2–3 per cent of the profit from the country's gas sales be invested in the military.<sup>60</sup>

Colombia's military spending is driven mostly by its four-decade-long war against insurgent groups and the fight against the drug trade. In the past decade the Colombian Government has pursued a number of strategies to end the conflict. Plan Colombia, which aimed to restart the peace process with the rebels, generate employment and intensify counter-narcotics activities, has been complemented since 2003 by the Plan Patriota military strategic programme, which aims for the reoccupation of areas under rebel control.<sup>61</sup> One of the advantages that the Colombian military has over the rebels is air power, hence the need to maintain a capable air force.<sup>62</sup> In 2006 the Colombian Congress approved a new law securing funds for modernization programmes, starting in 2007.<sup>63</sup> However, most of the funds will finance an upgrade of 20 combat aircraft bought in the 1970s for conventional defence purposes. This contradicts the previous preference of the Colombian Government for counter-insurgency equipment over conventional war weaponry.<sup>64</sup>

For the second consecutive year, in 2006 Venezuela had the highest rate of increase in military spending in South America: 20 per cent in real terms, resulting in a 35 per cent increase since 2004. Venezuela thereby overtook Argentina to become the fourth biggest spender in Latin America. While Venezuela's arms acquisitions are part of a modernization strategy, they are also in response to a perceived major regional threat. Arguing that Venezuela needs to be prepared for an eventual invasion from the USA, the government of President Hugo Chávez is acquiring heavy equipment—such as SU-30 combat aircraft—as well as production licences for AK-47 (Kalashnikov)

<sup>58</sup> Bitencourt, L., '¿Liderazgo brasileño en seguridad hemisférica?' [Brazilian leadership in hemispheric security?], eds Tulchin, Benítez Manaut and Diamint (note 51), p. 388.

<sup>59</sup> E.g. 'El Ejecutivo renovará el armamento de las FFAA' [The government will renew the armament of the armed forces], *La Razón* (La Paz), 13 Feb. 2007; and 'Bolivian military to modernize force structure', Forecast International, Newtown, Conn., 21 Feb. 2007, URL <<http://emarketalerts.forecast1.com/mic/eabstract.cfm?recno=132732>>.

<sup>60</sup> Baranauskas, T., 'Bolivian military to get additional funding to finance revitalization', Forecast International, Newtown, Conn., 7 Dec. 2006, URL <<http://emarketalerts.forecast1.com/mic/eabstract.cfm?recno=130742>>; and Associated Press, 'Bolivia: recursos del gas para las FFAA' [Bolivia: gas resources for the armed forces], *La República* (Lima), 15 Nov. 2006.

<sup>61</sup> On Plan Patriota see Veillette, C., *Plan Colombia: A Progress Report*, US Library of Congress, Congressional Research Service (CRS) Report for Congress RL32774 (CRS: Washington, DC, 22 June 2005), URL <<http://fpc.state.gov/c13800.htm>>, p. 9.

<sup>62</sup> McDermott, J., 'No end in sight', *Jane's Defence Weekly*, 26 July 2006, pp. 28–29.

<sup>63</sup> The law, Ley de reforma tributaria [Tributary reform law], Law 1111 of 27 Dec. 2006, is available at URL <[http://www.presidencia.gov.co/prensa\\_new/leyes/](http://www.presidencia.gov.co/prensa_new/leyes/)> (in Spanish).

<sup>64</sup> 'Más plata para la guerra' [More money for war], *Semana* (Bogotá), 28 Oct. 2006, URL <[http://www.semana.com/wf\\_InfoArticulo.aspx?IdArt=97836](http://www.semana.com/wf_InfoArticulo.aspx?IdArt=97836)>.

rifles.<sup>65</sup> Another reason for the purchases is to reduce the country's dependence on the USA as a provider of military equipment.<sup>66</sup>

### Asia and Oceania

In 2006 military expenditure in Asia and Oceania increased by \$9 billion, or 5 per cent in real terms, reaching \$185 billion in constant (2005) dollars. This represents a continuation of a long-term regional trend of rapidly increasing military expenditure, only slightly moderated by the Asian financial crisis in 1997–98. Since 1997 the region's military expenditure has increased by \$54 billion or 41 per cent.

China and India together account for 40 per cent of the region's total spending, and their high rates of increase—China's military expenditure grew by 12 per cent in 2006 and India's by 7 per cent—also dictate the overall trend of regional spending. This effect on the regional trend is somewhat offset by the stability of Japan's military spending, which is the second largest in the region after China's. South Korea and Australia also increased their military spending significantly in 2006, by \$1520 million (or 7 per cent) and \$672 million (or 5 per cent), respectively. Only a few countries in the region reduced their military spending to any considerable extent in 2006, including three countries—Japan, Taiwan and Malaysia—that decreased their spending by more than \$100 million—by \$464 million, \$389 million and \$124 million, respectively.

In Japan, the level of military expenditure—specifically, the appropriate share of GDP to spend on the military—has become an increasingly contested issue in the past few years. This is partly a consequence of external pressure for Japanese participation in international humanitarian operations and partly owing to the perceived increased threat from China and North Korea. Following North Korea's missile tests in July 2006 and its nuclear test in October, some in Japan called for a more typical role for their country in the international community.<sup>67</sup> The new Japanese prime minister, Shinzo Abe, reinforced the efforts of his predecessor, Junichiro Koizumi, to revise the constitution to allow Japan to possess armed forces and to regain the right to use force to solve international disputes.<sup>68</sup> The constitution currently allows the use of force only in response to an attack on the country. North Korea's mis-

<sup>65</sup> See chapter 10 in this volume.

<sup>66</sup> Malamud, C. and García Encina, C., '¿Rearme o renovación del equipamiento militar en América Latina?' [Rearmament or renovation of military equipment in Latin America?], Working Paper no. 31/2006, Real Instituto Elcano, Madrid, 15 Dec. 2006, URL <<http://www.realinstitutoelcano.org/documentos/278.asp>>.

<sup>67</sup> On North Korea's missile and nuclear tests see chapter 12 and appendix 12B in this volume.

<sup>68</sup> Kyodo News, 'Abe vows bold departure from postwar Japan's constitution, education', Tokyo, 26 Jan. 2007, URL <[http://www.findarticles.com/p/articles/mi\\_m0XPQ/is\\_2007\\_Jan\\_29/ai\\_n17156594](http://www.findarticles.com/p/articles/mi_m0XPQ/is_2007_Jan_29/ai_n17156594)>; and Pilling, D., 'Japan gives defence agency ministry status', *Financial Times*, 9 Jan. 2007, p. 5. The Japanese Constitution, promulgated on 3 Nov. 1946, is available in English translation at URL <<http://www.sangiin.go.jp/eng/law/>>. It was largely drafted by US officials during the post-World War II occupation of Japan and is commonly referred to as the 'peace constitution' because of its renunciation of 'war as a sovereign right of the nation and the threat or use of force as means of settling international disputes' (Article 9).

sile and nuclear tests also sparked a media debate over whether Japan should acquire nuclear weapons and capabilities for offensive strikes. Before being elected prime minister, Abe was quite frank about his view that Japan needs an offensive strike capability,<sup>69</sup> but he has recently denied that Japan has any nuclear ambitions.<sup>70</sup> In a strong indication of changing sentiments within the Japanese leadership, on 9 January 2007 the Japan Defense Agency, a part of the prime minister's office, was promoted to full ministry status.<sup>71</sup>

Although Japan's military spending has traditionally been capped at 1 per cent of GDP (excluding military pensions), its economy is so large that the country's military expenditure was the biggest in Asia and Oceania and the fourth largest in the world for many years. The large absolute level of Japanese military expenditure, together with a very capable arms industry, has been of concern for many of Japan's neighbours, in spite of the constitutional limitations. With a large and growing public debt, an ageing population and large costs expected to arise from the realignment of US forces in Japan, the Japanese Government has reduced military spending since 2003 by 2.5 per cent in real terms.<sup>72</sup> This reduction has occurred at the same time as the government expects the self-defence forces to take on new and more demanding tasks.<sup>73</sup> One priority for 2007 is the development and deployment of a ballistic missile defence system, which received a 30 per cent nominal increase in spending in the draft budget for 2007, while total military spending is proposed to decrease by 0.2 per cent in nominal terms.<sup>74</sup>

For the first time, China's military expenditure exceeded that of Japan in 2006, with the result that China became the biggest spender in the region and the fourth largest in the world. The precise level of Chinese military expenditure is disputed, with estimates ranging from the official Chinese figure of \$35 billion, via SIPRI's estimate of \$49.5 billion to the US Defense Intelligence Agency's estimate of \$80–115 billion.<sup>75</sup> What is undisputed is the very rapid increasing trend in Chinese military expenditure, with an increase of

<sup>69</sup> Matsumura, M., 'Prudence and realism in Japan's nuclear options', Brookings Institution, Washington, DC, 10 Nov. 2006, URL <<http://www.brookings.edu/views/op-ed/fellows/matsumura20061110.htm>>; and Blumenthal, D., 'America and Japan approach a rising China', Asian Outlook no. 4, American Enterprise Institute, Washington, DC, 11 Dec. 2006, URL <[http://www.aei.org/publications/pubID.25257,filter.foreign/pub\\_detail.asp](http://www.aei.org/publications/pubID.25257,filter.foreign/pub_detail.asp)>.

<sup>70</sup> Abe, S., Policy speech to the 166th Session of the Diet, Tokyo, 26 Jan. 2007, URL <[http://www.kantei.go.jp/foreign/abespeech/2007/01/26speech\\_e.html](http://www.kantei.go.jp/foreign/abespeech/2007/01/26speech_e.html)>.

<sup>71</sup> Pilling (note 68).

<sup>72</sup> Agence France-Presse, 'Japan considering further cut in foreign aid, defense spending: report', *Defense News*, 22 May 2006. On US basing policy in Japan and elsewhere in Eurasia see Lachowski, Z., *Foreign Military Bases in Eurasia*, SIPRI Policy Paper no. 18 (SIPRI: Stockholm, June 2007), URL <<http://www.sipri.org/>>

<sup>73</sup> Minnick, W. and Masaki, H., 'Japan's military copes with larger role, smaller budget', *Defense News*, 2 Jan. 2007.

<sup>74</sup> Japanese Ministry of Defense, [(Proposed) national defence budget: 2007 budget summary], URL <<http://www.mod.go.jp/j/library/archives/yosan/2007/yosan.pdf>>, pp. 4–5; Abe (note 70); and Fish, T., 'China increases hi-tech capabilities whilst Japan increases its missile defence budget', *Asia-Pacific Defence Reporter*, vol. 32, no. 7 (Sep. 2006), p. 8.

<sup>75</sup> Maples, M. D., 'Current and projected national security threats to the United States', Statement for the record, US Senate Select Committee on Intelligence, Washington, DC, 11 Jan. 2007, URL <<http://www.dia.mil/publicaffairs/Testimonies/statement26.html>>.

195 per cent over the decade 1997–2006. There are several reasons for the large increase. The most frequently offered official explanation is that military salaries have needed to rise to stay in line with non-military pay levels, and this is certainly one contributing factor to the increasing trend. Military spending is also said to be increasing as improved economic conditions allow the People's Liberation Army (PLA) to be compensated for the years in the 1980s when spending was cut.<sup>76</sup>

On 29 December 2006 China released its biennial Defence White Paper.<sup>77</sup> This document does not make any secret of the fact that major procurement programmes are also a cause of the increased military expenditure. It explicitly names 'opposing and containing the separatist forces for "Taiwan independence" and their activities' as one of the aims of these acquisitions but also expresses a wish to keep abreast with the 'revolution in military affairs' including an ambition to 'informationize' the PLA (i.e. improve its network capabilities).<sup>78</sup> The White Paper reports extensively on what the Chinese leadership perceives as the main threats against the country, but few facts and figures are provided.<sup>79</sup> Nor is there any serious discussion on how military plans relate to the assessed threats. In spite of this, the White Paper is a clear improvement in transparency compared to earlier editions.<sup>80</sup>

Ongoing programmes for modernization and transformation of the armed forces in several Asian countries point towards continued increases in military expenditure in Asia and Oceania in the coming years.<sup>81</sup> This trend might be exacerbated by renewed fighting in Sri Lanka between the government and the Liberation Tigers of Tamil Eelam as well as a clear ambition from the interim military government in Thailand to increase military spending.<sup>82</sup>

As in many other regions, military expenditure in Asia is sensitive to the general economic situation. Before the Asian financial crisis in 1997–98, the military expenditure of Asian countries was increasing rapidly, following and even surpassing the high growth rates of the national economies. The financial crisis changed this and forced many Asian countries to reduce military spending and to cancel or postpone major procurement deals. Spending started to increase faster again after 2000 and many countries resumed procurement plans that had been cancelled or deferred.<sup>83</sup> Some countries remained cautious,

<sup>76</sup> Chinese State Council, *China's National Defence in 2006* (Information Office of the State Council of the People's Republic of China: Beijing, Dec. 2006), URL <<http://www.china.org.cn/english/features/book/194421.htm>>, chapters IV and IX.

<sup>77</sup> Chinese State Council (note 76).

<sup>78</sup> Chinese State Council (note 76), chapter II.

<sup>79</sup> Chinese State Council (note 76), chapter I.

<sup>80</sup> The defence white papers of July 1998, Oct. 2000, Dec. 2002 and Dec. 2004 are available in English at URL <<http://www.china.org.cn/e-white/>>.

<sup>81</sup> The armed forces of Australia, China, India, Indonesia, South Korea and Taiwan are all going through major modernization or transformation programmes involving costly procurement of military equipment. Ratnam, G., 'Asia is top arms destination', *Defense News*, 12 Sep. 2005.

<sup>82</sup> Associated Press, 'Sri Lanka expands military in "marked shift"', *LankaNewspapers.com*, 17 Nov. 2006, URL <<http://www.lankanewspapers.com/news/2006/11/9355.html>>; and 'Winai: military budget may be given big boost', *Asian Defence Journal*, Dec. 2006, p. 41.

<sup>83</sup> 'Asia's land forces equipment requirements', *Asian Defence Yearbook 2006* (Syed Hussain Publications: Kuala Lumpur, 2006), p. 5.

however. Indonesia, for example, has only slowly resumed the procurement of combat aircraft that was cancelled in 1999.<sup>84</sup> Malaysia reactivated shelved procurement plans in its 2001–2005 Eighth Malaysia Plan. It was more conservative, however, when drafting the subsequent Ninth Malaysia Plan, for 2006–2010, reducing planned military spending by almost a quarter from what was requested.<sup>85</sup> At the end of the Eighth Plan, about half of the procurement budget was accounted for by equipment orders carried over from the previous plan. The Ninth Plan focuses more on internal security and the police than on the military.<sup>86</sup>

In Oceania, Australia has committed itself to annual real-terms increases in military expenditure of 3 per cent each year until 2016. This major commitment is part of the Defence Capability Plan 2006–2016 in which all branches of the armed forces are to receive new and upgraded equipment, with the aim of achieving network-centric warfare capabilities.<sup>87</sup> This drive for modernization and increased capabilities is explained partly by Australia's perception of itself as a major regional power with responsibility for maintaining order and upholding humanitarian values, primarily in South-East Asia, and partly by the long-standing economic growth which allows for extra allocations to the military.<sup>88</sup>

## Europe

Military expenditure in Europe rose by \$1.5 billion or 0.5 per cent in 2006, continuing an unbroken regional trend of slowly increasing military spending since 1998 (see table 8.1). This small overall increase was the net result of large increases in Russia, in particular, and also in Spain and Turkey together with decreases in Germany, Italy and the UK. Azerbaijan and Belarus, with increases of 82 and 56 per cent, respectively, stand out as the countries with the world's highest relative increases in military expenditure in 2006. Five other countries—Croatia, Estonia, Latvia, Slovenia and Russia—also increased their military expenditure by more than 10 per cent. Two coun-

<sup>84</sup> 'News briefs', *Air Forces Monthly*, Feb. 2006, p. 25; and 'Indonesia's Sukhoi: promise or problem', *Asia-Pacific Defence Reporter*, vol. 32, no. 1 (Feb. 2006), pp. 26–27.

<sup>85</sup> 'Budget pressures slow Malaysian spending', *Asia-Pacific Defence Reporter*, vol. 32, no. 4 (May 2006), p. 13; and Malaysian Prime Minister's Department, Economic Planning Unit, *Ninth Malaysia Plan 2006–2010* (Prime Minister's Department: Putrajaya, 2006), URL <<http://www.epu.jpm.my/tm9/html/english.htm>>.

<sup>86</sup> Mahmud, B., 'The Malaysian Army: adapting to new concepts and technologies', *Asian Defence Journal*, Mar. 2006, pp. 10–15; and Mahmud, B., 'Overview of the Ninth Malaysia Plan', *Asian Defence Journal*, Apr. 2006, pp. 12–17.

<sup>87</sup> La Franchi, P., 'Australia increases defence spending for another five years' and '53 percent growth in defence capital spend to 2016', *Asia-Pacific Defence Reporter*, vol. 32, no. 4 (May 2006), pp. 6, 20–21; 'Australia', *Asian Defence Yearbook 2006* (note 83), pp. 36–37; and Australian Department of Defence, *Defence Capability Plan 2006–2016: Public Version* (Defence Materiel Organisation: Canberra, 2006), URL <<http://www.defence.gov.au/dmo/id/dcp/dcp.cfm>>.

<sup>88</sup> Australian Department of Defence (DOD), *Australia's National Security: A Defence Update 2005* (DOD: Canberra, 15 Dec. 2005), URL <<http://www.defence.gov.au/update2005/>>; and Ferguson, G. and Lee-Frampton, N., 'Australian defense budget grows, New Zealand meets program goals', *Defense News*, 11 May 2006.

tries—Hungary and Italy—decreased their military spending by more than 10 per cent.

Over the 10-year period 1997–2006, European military expenditure has increased by \$28 billion or almost 10 per cent. In absolute terms, Russia and the UK are the two countries that increased their military expenditure most over the decade—by \$13.4 billion and \$10.9 billion, respectively. Germany and Turkey are the two states that have decreased their military spending most, by \$3.9 and \$2.4 billion, respectively. In relative terms, the three former-Soviet states Azerbaijan, Latvia and Georgia stand out with increases of 537, 487 and 316 per cent, respectively, over the decade. Croatia, Cyprus and Moldova all decreased their military spending by more than half over the same period.

### *NATO Europe and the European Union*

The annual reiteration by NATO Secretary General Jaap de Hoop Scheffer that there is a need for increased military spending in Europe received a rebuff in 2006. His predecessor in the post, Javier Solana, now High Representative for the EU's Common Foreign and Security Policy, said in June that current spending would be enough to cover EU member states' defence needs if it were better allocated and more efficiently spent.<sup>89</sup> Indeed, the idea behind the EU's creation in 2004 of the European Defence Agency (EDA) was to coordinate military procurement and research and development efforts in order to reduce duplication and to bring economies of scale.<sup>90</sup>

Four main interacting factors lie behind the trends in the military expenditure of the European members of NATO, the members of the EU and states aspiring to join either of these organizations. The first factor is foreign military operations. Many of the countries contributing troops to NATO or EU military operations in, for example, Afghanistan, Bosnia and Herzegovina, Iraq and Kosovo cover the cost of these operations from the ordinary defence budget. Thus, as a result of participation in such missions, either total military expenditure has to be increased or, as is the case in Germany, spending on routine military activities and procurement has to be reduced.<sup>91</sup> In other countries, such as Italy, the cost of foreign operations is not included in the annual defence budget but is instead funded through extra allocations or from a contingency fund.<sup>92</sup> The SIPRI figures for 2006 for these countries include data on such spending as far as they are known.

The second factor, which affects all European NATO members, EU members and aspirant members, is the transformation of the armed forces to

<sup>89</sup> Solana, J., 'Europa profitiert vom neuen Markt für Verteidigungsgüter' [Europe profits from the new market for defence goods], *Handelsblatt*, 30 June 2006, p. 7. See also Agence France-Presse, 'EU defense spending poorly allocated: Solana', *Defense News*, 30 June 2006. For De Hoop Scheffer's calls for increased spending see e.g. Agence France-Presse, 'NATO chief embarrassed by low defense spending', *Defense News*, 29 Sep. 2006.

<sup>90</sup> On recent developments in the EDA see chapters 1 and 9 in this volume.

<sup>91</sup> Agence France-Presse, 'German military will not get more money because of Lebanon: minister', *Defense News*, 19 Sep. 2006.

<sup>92</sup> Kington, T., 'Italy may cut international military exercises by half', *Defense News*, 27 Feb. 2006.

enable them to address new security threats.<sup>93</sup> The aim is to convert part or all of the traditional territorial defence forces into forces able to cooperate with partners in foreign military operations such as peacekeeping and humanitarian military intervention. For many countries, transformation has meant increasing military expenditure. In France, for example, the 2003 Law on Military Planning provides for annual increases in military spending until 2008 in order to have a fully professional force able to take the lead in extra-European operations.<sup>94</sup> In advance of the elections of April–June 2007, the French defence minister, Michèle Alliot-Marie, has pushed major procurement projects beyond the point where they can be cancelled.<sup>95</sup> In other countries, such as Germany and Italy, transformation has been funded within a declining military budget and priority has been given to keeping debt and budget deficits within the rules of the EU Stability and Growth Pact.<sup>96</sup>

The third factor driving European military expenditure is NATO's enlargement of its membership and the pressure for increased spending that the alliance has put on all aspiring and new members. In individual membership action plans, the required minimum military expenditure is set at 2 per cent of GDP, a level that very few of the current member states reach.<sup>97</sup> Only five of the pre-1999 NATO member states—France, Greece, Portugal, Turkey and the UK—meet the requirement and only two of the new member states—Bulgaria and Romania. De Hoop Scheffer has even said that he feels ashamed by this contrast.<sup>98</sup> In spite of this pressure to spend a certain amount on the military, the absolute level of military spending or its share of GDP is not a good measure of a state's military capability or of its willingness to contribute to an alliance's common security and operations. Italy is a clear example of a NATO member state that contributes considerably to the alliance's activities while spending less than the 2 per cent threshold. According to NATO figures, Italy decreased its military spending from 2.0 per cent of its GDP in 2004 to only 1.7 per cent in 2006.<sup>99</sup> Yet it contributes to, and takes a leading role in, many EU and NATO operations and has over 10 000 troops stationed abroad.<sup>100</sup>

<sup>93</sup> See Sköns, E., 'Financing security in a global context', *SIPRI Yearbook 2005: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2005), pp. 285–306.

<sup>94</sup> The text of Loi relative à la programmation militaire pour les années 2003 à 2008 [Law on military planning for the years 2003 to 2008], Law no. 2003-73 of 27 Jan. 2003, is available at URL <<http://www.legifrance.gouv.fr/WAspad/UnTexteDeJorf?numjo=DEFX0200133L>> (in French).

<sup>95</sup> Tran, P., 'French industry offers plan for aircraft carrier', *Defense News*, 2 Jan. 2007; and Tran, P., 'French defense minister: maintain modernization momentum', *Defense News*, 29 Sep. 2006.

<sup>96</sup> The Stability and Growth Pact was adopted in July 1997 to ensure budgetary discipline by the EU member states participating in Economic and Monetary Union. See the website of the EU Directorate General for Economic and Financial Affairs, URL <[http://europa.eu.int/comm/economy\\_finance/about/activities/sgp/sgp\\_en.htm](http://europa.eu.int/comm/economy_finance/about/activities/sgp/sgp_en.htm)>.

<sup>97</sup> Agence France-Presse, 'NATO chief embarrassed by low defense spending' (note 89).

<sup>98</sup> Agence France-Presse, 'NATO chief embarrassed by low defense spending' (note 89).

<sup>99</sup> North Atlantic Treaty Organization (NATO), 'NATO–Russia compendium of financial and economic data relating to defence', Press release (2006)159, 18 Dec. 2006, URL <<http://www.nato.int/docu/pr/2006/p06-159e.htm>>, table 3.

<sup>100</sup> Valpolini, P., 'More budget cuts hit Italy's forces', *Jane's Defence Weekly*, 15 Feb. 2006, p. 14.

A major reason for Italy not adhering to the NATO level of military spending is the problem of financial balances and controlling budget deficits, which is the fourth factor affecting European military expenditure. Germany has also chosen to prioritize abiding by the rules of the EU Stability and Growth Pact rather than trying to attain the 2 per cent military spending level. In 2005 Germany allocated 1.4 per cent of its GDP to the military and in 2006 its spending decreased by 2.8 per cent, continuing a trend that started in 2002.<sup>101</sup> Hungary and Slovakia have also stated that sound state finances have a higher priority than reaching the 2 per cent military expenditure level, with the Slovak defence minister expecting no increase in his country's military expenditure before 2016.<sup>102</sup>

### *Russia and Eastern Europe*

Russian military expenditure in 2006 is estimated to have been \$34.7 billion in constant (2005) dollars. Russia was the fourth largest spender in Europe and accounted for 11 per cent of total European military spending. Russian military spending increased by almost 12 per cent in 2006, following on from a 19 per cent increase in 2005. Since the start of this increasing trend in 1998, Russia's spending has increased by 155 per cent, but, because there have been several changes in Russia's budgetary system during this period, it is not possible to follow the exact movements in this trend.<sup>103</sup> According to the Russian Defence Minister, Sergei Ivanov, spending on national defence should be kept at about 2.6–2.9 per cent of GDP in order not to repeat the mistakes of over-spending made by the Soviet Union during the cold war arms race.<sup>104</sup>

Many of the other states of Eastern Europe (that is, the European members of the Commonwealth of Independent States) have followed Russia's example of increasing military expenditure. In the past two years some of the highest rates of increase in military expenditure have been in countries in Eastern Europe. In 2005 Georgia increased its spending by 185 per cent and in 2006 Azerbaijan increased its spending by 82 per cent. Armenia and Belarus also increased their spending at a considerable rate in 2006, with increases of 17 and 56 per cent, respectively.

<sup>101</sup> According to NATO figures, Germany spent 1.3% of its GDP on the military in 2006. North Atlantic Treaty Organization (note 99).

<sup>102</sup> Hungarian News Agency (MTI), 'Defence minister's talks in Brussels', Hungarian Ministry of Defence, Budapest, 17 July 2006, URL <[http://www.honvedelem.hu/news/defence\\_minister8217s\\_talks\\_in\\_brussels](http://www.honvedelem.hu/news/defence_minister8217s_talks_in_brussels)>; and Czech News Agency (CTK), 'Slovak military budget frozen for nine years: minister', Prague, 16 May 2006.

<sup>103</sup> On the changes in the Russian budgetary system introduced in 2004 see Cooper, J., 'Military expenditure in the 2005 and 2006 federal budgets of the Russian Federation', Research note, SIPRI, Stockholm, Jan. 2006, URL <[http://www.sipri.org/contents/milap/cooper\\_russia\\_20060130](http://www.sipri.org/contents/milap/cooper_russia_20060130)>.

<sup>104</sup> Agence France-Presse, 'Russian military spending to remain steady: minister', *Defense News*, 11 May 2006.

## The Middle East

Military expenditure in the Middle East increased by 2.8 per cent in real terms in 2006, amounting to \$72.5 billion in constant (2005) dollars. Saudi Arabia continued to have the largest annual increase in the region, with a 14 per cent rise in 2006. However, the impact of Saudi Arabia's increase on the regional trend was offset by decreases in other countries.

Military spending in the Middle East increased by 57 per cent in real terms over the 10-year period 1997–2006. The trend in military spending during this decade does not correlate with security needs and instead tends to follow the fluctuations in oil revenue.<sup>105</sup> For instance, in 2005 high oil prices were mirrored in increases in the military expenditure of most Middle Eastern countries and an increase in the regional total of 12 per cent. In 2006 the increase in military spending was more moderate. Oil prices—and thus the income of many Middle Eastern governments—fell in the second half of the year, partly as a result of the drop in the value of the US dollar.<sup>106</sup>

The Middle East has the highest military expenditure burden in the world, and in 2005 it remained at the 1997–2005 average of 6 per cent of GDP. High military spending in the Middle East goes hand in hand with a lack of transparency and accountability in military budgets.

Israel is one of the few democracies in the region, but even there military expenditure remains for the most part secret. International organizations together with the State Comptroller's office and public opinion have demanded greater transparency in the Israeli military budgeting processes.<sup>107</sup> In 2006 Israel for the first time published a public report on its military expenditure, giving information on plans for 2007. However, the report only gives details for 2 per cent of the approved budget while providing an aggregated figure for defence spending and stating that details of the rest of the expenditure remain secret.<sup>108</sup> Detailed information is given for the costs of constructing the barrier between the Palestinian territories and Israel and for civil defence, and welfare outlays such as pensions. The Israeli Ministry of Defence explained that these specific accounts were chosen in order to reveal the contribution that military spending makes to social welfare.<sup>109</sup> Security strategy, force structure and modernization plans are not described.

<sup>105</sup> Omitoogun, W., 'Military expenditure in the Middle East after the Iraq war', *SIPRI Yearbook 2004* (note 57), p. 381.

<sup>106</sup> 'Oil price dips below \$62 a barrel', BBC News, 11 Dec. 2006, URL <<http://news.bbc.co.uk/2/616/9629.stm>>; and 'Oil in biggest fall in two years', BBC News, 2 Jan. 2007, URL <<http://news.bbc.co.uk/2/6231879.stm>>.

<sup>107</sup> E.g. International Monetary Fund (IMF), *Israel: Report on Observance of Standards and Codes—Fiscal Transparency Module*, Country Report no. 04/112 (IMF: Washington, DC, Apr. 2004), URL <<http://www.imf.org/external/pubs/cat/longres.cfm?sk=17344>>; and Korin-Lieber, S., 'Taming the defense budget', *Globes online*, 31 Aug. 2006, URL <<http://www.globes.co.il/serveen/globes/DocView.asp?did=1000128681>>.

<sup>108</sup> Israeli Ministry of Defence (MOD), [Proposed security budget financial year 2007: subjects not categorized] (MOD: Jerusalem, 30 Oct. 2006). See also Opall-Rome, B., 'Israel MoD inches toward budget transparency', *Defense News*, 13 Nov. 2006.

<sup>109</sup> Opall-Rome (note 108).

The availability of detailed information on military expenditure is even poorer in other states in the region. In the member states of the Gulf Cooperation Council (GCC) in particular, most defence-related decisions are made by members of the royal families.<sup>110</sup> The distribution of power between Shiite and Sunni communities within the region and its countries often influences political choices.<sup>111</sup> The potential Shiite threat to the established Sunni monarchies of the GCC states has been one reason for the GCC governments' maintaining high levels of military expenditure since the 1980s. The establishment of a Shiite-dominated government in Iraq and the growing influence of Iranian supported Shiite groups there and in Lebanon has revived this argument.<sup>112</sup> In order to counter Iran's influence in the region, Saudi Arabia has changed its defence doctrine since 2005.<sup>113</sup>

Since 2002 Saudi Arabia has maintained an increasing trend in military expenditure. Not only is this country the biggest spender in the Middle East by far, with 40 per cent of the region's total military spending in 2006, but it is also the world's largest oil exporter. The country's decision to prioritize spending on the military has been influenced by the emergence of new threats. These threats include the porous northern border with Iraq, domestic terrorism and the potential non-conventional warfare capabilities of Iran and Syria.<sup>114</sup> In addition, the country feels the need to build a defence capability independent of the USA since, following the attacks of September 2001, there has been a cooling and growing complexity in US–Saudi relations.<sup>115</sup> With this in mind, the Saudi Government continues to modernize military equipment and aims to increase troop numbers by around 25 per cent.<sup>116</sup>

Access to military expenditure data from other countries in the Middle East is even more limited or entirely impossible. Qatar is an example of a country that does not make military expenditure data publicly available. Iran does give limited access to, and thus the opportunity to evaluate, military spending information. It was the region's third biggest spender in 2006, after Saudi Arabia and Israel. This follows a decade in which Iran increased its military spending by 231 per cent, which represents by far the largest increase in the region (followed by Saudi Arabia with an increase of 64 per cent in 1997–2006). In the past few years, Iran has focused on expanding its defence capabilities to bolster its national security in a volatile regional environment.<sup>117</sup> The Iranian

<sup>110</sup> On the GCC see the glossary in this volume. The members of the GCC are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

<sup>111</sup> Hasbani, N., 'The geopolitics of weapons procurement in the Gulf states', *Defense & Security Analysis*, vol. 22, no. 1 (Mar. 2006), pp. 73–88.

<sup>112</sup> Nasr, V., 'When the Shiites rise', *Foreign Affairs*, vol. 85, no. 4 (July/Aug. 2006), pp. 66–67.

<sup>113</sup> 'Saudi military spending rising', *International Air Letter*, 27 July 2006, p. 5; and Susser, A., 'The war in Lebanon and the new Middle East', *RUSI Journal*, vol. 151, no. 4 (Aug. 2006), p. 34.

<sup>114</sup> Susser (note 113), p. 35.

<sup>115</sup> Hasbani (note 111), p. 85.

<sup>116</sup> 'Saudi military spending rising' (note 113); and Kahwaji, R., 'More arms deals seen in turbulent Middle East', *Defense News*, 12 Nov. 2006.

<sup>117</sup> See e.g. Islamic Republic News Agency (IRNA), 'Iranian daily calls for increased military spending', Tehran, 4 Apr. 2006. See also chapter 10 in this volume.

threat perception is affected by the presence of US troops in the region and the tension with the international community over its nuclear programme.<sup>118</sup>

For the first time in decades data are available on military expenditure in Iraq. The available figures are for salaries and pensions for both defence and interior forces. The extent to which US allocations for the restructuring of Iraqi armed forces are included is unknown.

## VI. Conclusions

World military expenditure continued to increase during 2006. This upward trend is attributable primarily to the USA, which accounted for 62 per cent of the total increase in world military expenditure and 46 per cent of total world military spending in 2006. The increase in US military expenditure has to a large extent been driven by supplemental allocations for those operations and policies associated with the ‘global war on terrorism’. In Europe total military expenditure has been relatively stable in recent years. In both East Asia and the Middle East, increasing financial resources has been decisive in driving military expenditure upwards. China is the prime example of a country where a booming economy, amongst other factors, has allowed a steep rise in military expenditure. In both South America and Eastern Europe, military expenditure has been increasing partly because of modernization and re-equipment of the armed forces.

Government policymakers will always have to choose how to allocate their scarce resources and whether to prioritize security or social goals. At least in the short term, however, there seems to be little chance of there being a rapid decline in world military expenditure, which could allow governments to give higher priority to social expenditure. A decline in military expenditure is a possibility in some regions, but the data presented in this chapter show a strong upward trend in the world total, which is unlikely to be reversed while the world’s largest military spender remains at war. The world trend is likely to be driven for the foreseeable future by the defence and security choices and policies pursued by the USA.

<sup>118</sup> Hafezi, P., ‘Iran says it needs strong army to deter aggressors’, *Defense News*, 20 Sep. 2006. For more on nuclear issues see chapter 12 in this volume.