

10. International arms transfers

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I. Introduction

The recent global trend in transfers of major conventional weapons shows clear signs of change.¹ Since 2003–2004 there has been a consistent upward trend of the level of arms transfers. This is markedly different from the trend between 1986 and 2003, when there was a near consistent downward trend. However, the current level of arms transfers is still just half of that in the mid-1980s at the height of the cold war.

The SIPRI Arms Transfers Project collects data on international transfers of major conventional weapons. These data form the basis of the analysis presented in section II of this chapter. Section II also presents an estimate of the financial value of the global arms trade and focuses particularly on transfers to the Middle East, including acquisitions of long-range strike weapons. Section III examines how countries cope with the fact that modern weapons have become too costly for individual countries to develop, leading to dependency on imported weapons and technology. Section IV discusses arms transfers to non-state actors such as rebel forces, an issue highlighted in 2006 by the supply of arms to Hezbollah and to the different factions in Somalia. Section V gives an overview of developments in transparency in arms transfers. Section VI presents the conclusions.

Appendix 10B outlines the methodology of the data collection and the SIPRI trend indicator value (TIV) calculation. As part of an ongoing review process, several limited changes have been made to the methodology: for example, a greater number of components and some smaller weapons have been added to the SIPRI Arms Transfers Database. In previous editions of the SIPRI Yearbook, data on specific deals were included as an appendix to this chapter. These data are now available on the SIPRI website in two formats: a

¹ SIPRI data on arms transfers refer to actual deliveries of major conventional weapons. To allow comparison between the data on deliveries of different weapons and identification of general trends, SIPRI uses a *trend-indicator value* (TIV). These data are only an indicator of the volume of international arms transfers and not of the actual financial values of such transfers. The method used to calculate the TIV is described in appendix 10C and a more detailed description is available on the SIPRI Arms Transfers Project website at URL <<http://www.sipri.org/contents/armstrad/atmethods.html>>. The figures in this chapter may differ from those in previous editions of the SIPRI Yearbook because the Arms Transfers database is constantly updated.

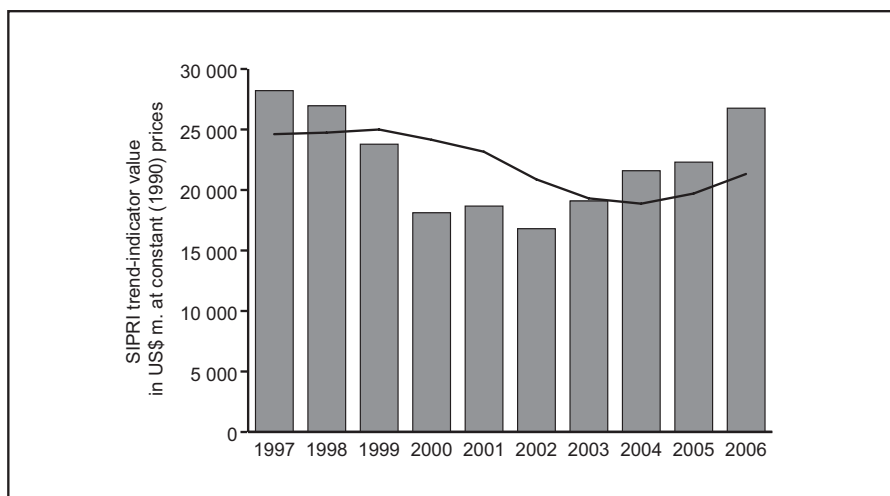


Figure 10.1. The trend in transfers of major conventional weapons, 1997–2006

Note: The bar graph shows annual totals and the line graph shows the five-year moving average. Five-year averages are plotted at the last year of each five-year period.

register of the data used for the analysis presented in this chapter, and a more flexible, searchable database with the most recent data.²

Appendix 10C discusses a proposal for a global, legally binding arms trade treaty that was introduced in the United Nations General Assembly only months after the UN small arms and light weapons (SALW) control process suffered a major setback in mid-2006.

II. International arms transfers 2002–2006

SIPRI measures trends in transfers of major conventional weapons in two ways. First, it identifies the volume of transfers using a unique methodology resulting in a unique SIPRI TIV. The TIV is the main analytical tool used in this chapter to describe trends. Second, for several years SIPRI has used the information that is available on the financial value of the arms trade to provide an additional statistical overview. Although these two data sets measure arms transfers in contrasting ways, both reveal a similar picture of an upward trend (see figure 10.1).

The trend in arms transfers

As figure 10.1 shows, the upward trend in arms transfers since 2003 continued in 2006. In 2002 transfers reached their lowest level since 1960. In 2006 they were almost 50 per cent higher than in 2002. Five-year averages also show a

² The data in the register are valid as of 19 Feb. 2007. SIPRI's online database is continually updated. See the SIPRI Arms Transfers Project website, URL <<http://www.sipri.org/contents/armstrad/>>.

consistent upward trend of the level of arms transfers since 2004.³ After the United States and Russia (by far the largest exporters), Germany, France and the United Kingdom were the largest exporters of major conventional weapons. Since 1950 these countries have been the five main global arms exporters. In terms of imports more fluctuation is evident, but even here the list of the largest recipients remained more or less stable, with China being by far the largest importer, followed by India, Greece and the United Arab Emirates (UAE) (see tables 10A.1 and 10A.2 in appendix 10A). This fairly static major exporter ranking and more fluid major importer ranking has been the normal picture for as long as SIPRI has analysed international arms transfers. However, what is far more meaningful than ranking is the often changing relations between suppliers and recipients, as well as the impact of arms deliveries on regional stability, economies and countries' internal politics.

The financial value of the international arms trade

As noted above, the SIPRI TIV was not developed to assess economic aspects of the arms trade. In order to make such assessments data are needed on the financial value of weapon sales. By combining national data on the value of arms exports, generally released by supplier governments in reports or public statements, it is possible to give a rough estimate of the financial value of the arms trade (see table 10A.3 in appendix 10A for the aggregated data from each report). The value in 2005, the most recent year for which data are available, is estimated at \$39–56 billion.⁴ This is a slight change from 2004 when the estimate was \$42–55 billion. In 2004 this accounted for 0.5–0.6 per cent of total world trade and for 2005 for 0.4–0.5 per cent.⁵ The financial data are incomplete and do not provide an answer to most research questions; thus, the TIV is the main analytical tool used in this chapter to describe trends.⁶

Significant arms transfers

The USA was the largest exporter of major conventional weapons in the period 2002–2006. It accounted for 30 per cent of total transfers of major conven-

³ Because yearly delivery schedules may vary, a single year period is often too short for reliable conclusions. To reduce short-term fluctuations, SIPRI calculates a 5-year-average trend indicator value.

⁴ SIPRI estimates that the countries that produce national export data account for over 90% of total arms exports. Because some governments present several sets of data, the estimate is presented as a range between the aggregate of the lowest and the aggregate of the highest reported values. It should be noted that official arms export data are not entirely reliable or comparable between years. See the SIPRI Arms Transfers Project website, URL <http://www.sipri.org/contents/armstrad/at_gov_ind_data.html>.

⁵ Total world trade in 2004 and 2005 amounted to \$9085 and \$10 354 billion, respectively. International Monetary Fund, International Financial Statistics online, URL <<http://ifs.apdi.net/imf/>>.

⁶ For more on the usefulness of different types of data see Wezeman, S., *The Future of the United Nations Register of Conventional Arms*, SIPRI Policy Paper no. 4 (SIPRI: Stockholm, Aug. 2003); Bauer, S. and Bromley, M., *The European Union Code of Conduct on Arms Exports*, SIPRI Policy Paper no. 8 (SIPRI: Stockholm, Nov. 2004)—all SIPRI Policy Papers are available at URL <<http://www.sipri.org/>>; and Hagelin, B. et al., 'Transparency in the arms life cycle', *SIPRI Yearbook 2006: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2006), pp. 245–67.

tional weapons and delivered to 68 countries. Almost 39 per cent of these deliveries went to the Middle East (including Turkey), 26 per cent to the Asia–Pacific region and 26 per cent to Europe (almost all to other members of the North Atlantic Treaty Organization, NATO).

The heightened tension in North-East Asia owing to the North Korean nuclear test on 9 October 2006 is likely to lead to increased arms acquisitions by South Korea and Japan, much—but certainly not all—of which will come from the USA.⁷ Soon after the test Japan stated that it would accelerate the deployment of an anti-ballistic missile (ABM) system estimated to cost up to \$9.3 billion that consists mainly of PAC-3 and SM-3 missiles from the USA. The first PAC-3 missiles were delivered in 2006.⁸ In mid-2006 Japan agreed to export components and technology for ABM systems to the USA as part of a joint programme to further develop the PAC-3 and SM-3.⁹

The US decision to sign agreements with other countries for the final development and pre-production (production, sustainment and follow-on development, PSFD) phase of the Joint Strike Fighter (JSF, also called the F-35) combat aircraft was probably of greater significance in 2006 than actual deliveries of weapons. The JSF programme has major implications for Euro-Atlantic relations and the global market for combat aircraft. In recent years the programme has been heavily criticized by its European partners,¹⁰ and in early-2006 some of these partners still had serious doubts over whether they should remain committed to the JSF or find (European) alternatives. The main problems remained the restrictions that the US Administration of George W. Bush imposed on access to JSF technology, the low level of involvement of non-US industries and the increasing cost. The technology transfer restrictions would make it hard or impossible for non-US users to modify the aircraft (and especially its software) to use non-US weapons and other non-US equipment. However, by mid-2006 the USA had become more flexible and seemed to have agreed to full transfer of technology.¹¹ On the issue of industry involvement, several countries remained sceptical but in general, non-US companies seemed satisfied they would get a fair chance to compete for work.¹²

⁷ On North Korea's nuclear test see appendix 12B in this volume.

⁸ Grevatt, J., 'Japan considers missile options in face of North Korean threat', *Jane's Defence Industry*, vol. 23, no. 11 (Nov. 2006), p. 11.

⁹ In principle agreement had already been reached in 2004. See Japanese Ministry of Foreign Affairs, 'Exchange of notes concerning the transfer of arms and military technologies to the United States of America', Press release, 23 June 2006, URL <<http://www.mofa.go.jp/announce/announce/2006/6/0623-2.html>>.

¹⁰ European countries involved in the JSF are Denmark, Italy, the Netherlands, Norway, Turkey and the UK. See Sköns, E., Bauer, S. and Surry, E., 'Arms production', *SIPRI Yearbook 2004: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2004), p. 414, note 107.

¹¹ 'UK signs up to herald next phase of the JSF', *Preview*, Jan. 2007, pp. 1–2; 'US–UK JSF dispute resolved', *Air Forces Monthly*, no. 220 (July 2006), p. 6; and 'Australia wins technology transfer assurances on JSF', *Asian Defence Journal*, Sep. 2006, p. 52.

¹² Except for BAE Systems (UK), non-US company participation in the JSF programme is not based on fixed shares but on 'best value for money', with companies in partner countries bidding for selected parts of the JSF work. Lake, J., 'Joint Strike Fighter and the UK', *Air Forces Monthly*, no. 227 (Feb. 2007), pp. 28–29.

At the end of 2006 there were still unresolved financial problems. The eventual cost of the programme largely depends on how many JSF aircraft are actually bought, in particular by the USA. However, not uncommonly for large arms programmes, the original cost estimates have already more than doubled.¹³ Since the development costs as well as the total production run are still not clear, costs are likely to increase even more.

Despite this uncertainty, by the end of 2006 most partner countries had signed up for the PSFD phase, starting from 2007, in which a few JSF will be ordered for final evaluation. The decision to actually order operational aircraft will not be made before 2008 or 2009, and full production is expected to start in 2013.¹⁴ While it is generally accepted that the JSF is technologically a low-risk project,¹⁵ most JSF partners remain uneasy about the issues of access to technology and cost, and in some cases have a 'plan B' in case the JSF does not work out politically or financially.¹⁶ However, countries signing up for the PSFD phase will have probably invested too much to withdraw from the final acquisition.

Comprising some 4500 aircraft and worth an estimated \$500 billion, the JSF project is often reported to be the largest-ever arms deal and is expected to take a major part of the global combat aircraft market for the coming 25 years.¹⁷ This swallows a significant part of the procurement budget of the countries buying the JSF, partly committing them to a specific type of force structure for many years to come.¹⁸ It also gives smaller producers of combat

¹³ The current cost estimate for the JSF aircraft programme is based on plans for 4500 aircraft. In 2002 the estimate was based on 6000, and this number could be reduced still further. In 2002 the unit cost of 3000 JSF aircraft for the UK and the USA was expected to be \$37–48 million, with the price of the simplest, most numerous version of the JSF, the F-35A, estimated at \$37 million. Current US procurement plans include 2443 JSF aircraft at just over \$110 million each. An Oct. 2006 Dutch audit report estimated that the F-35A aircraft would cost \$81 million each against a 1999 estimate of \$43 million. Merret, N., 'F-35 moves into production mode', *Asia-Pacific Defence Reporter*, vol. 32, no. 8 (Oct. 2006), p. 22; 'Netherlands concerned over spiralling JSF costs', *Air Forces Monthly*, no. 225 (Dec. 2006), p. 11; Dutch General Accounting Office, 'Monitoring verwerving Joint Strike Fighter' [Dutch], 11 Oct. 2006, URL <<http://www.rekenkamer.nl/>>; Fabey, M., 'High initial JSF costs to drop after 2014', *Defense News*, 12 June 2006. The JSF project illustrates that the costs (and economic or technical 'spin-offs') of large weapon acquisition programmes are hard to determine, partly because the process of calculating the costs is often not transparent. See Hagelin et al. (note 6), pp. 245–67.

¹⁴ Australia, Canada, the Netherlands, Turkey and the UK had signed by the end of 2006. Denmark, Italy and Norway signed in early 2007. 'F-35 Joint Strike Fighter: events and contracts 2007', *Defense Industry Daily*, 18 Apr. 2007, URL <<http://www.defenseindustrydaily.com/2007/04/f35-joint-strike-fighter-events-contracts-2007-updated/>>; Merret, N., 'Australia's commitment to JSF programme deepens', *Asia-Pacific Defence Reporter*, vol. 32, no. 10 (Dec. 2006/Jan. 2007), p. 12; and Lake (note 12), p. 30.

¹⁵ Merret (note 13). However, from early 2006 to early 2007 the US Government Accountability Office (GAO) produced 3 reports concluding that technological risks did still exist because final development of the JSF would overlap with the start of production, thus increasing the price. It advised that production should be delayed until the design was mature. GAO, *Joint Strike Fighter: Progress Made and Challenges Remain*, GAO-07-360 (GAO: Washington DC, Mar. 2007) URL <<http://www.gao.gov/docsearch/>>; and Lake, J., 'Facing a "bomber gap"', *Air Forces Monthly*, no. 217 (Apr. 2006), p. 32.

¹⁶ Lake (note 12), p. 28.

¹⁷ Fabey, M., 'High initial JSF costs to drop after 2014', *Defense News*, 12 June 2006,.

¹⁸ Niccoli, R., 'One fighter or two?', *Air Forces Monthly*, no. 227 (Feb. 2007), pp. 33–36. Combat aircraft are one of the largest procurement costs for countries. The JSF will consume some 90% of the

Table 10.1. Local consumption of conventional arms compared with exports of conventional arms in the five largest arms-exporting countries, 2002–2006.

The first figure for each country represents units ordered for local use, the second represents units exported. Figures are approximate and refer only to newly produced equipment.

System	Country					
	USA	Russia	Germany	France	UK	EU ^a
Combat aircraft	260/301	3/293	45/0	55/57	55/16	260/58
ASW/combat helicopter	5/148	1/45	0/0	17/23	7/0	45/23
Large surface ship	19/0	2/5	3/10	3/3	3/0	20/11
Submarine	3/0	1/8	4/8	1/2	0/0	8/9
Tank	0/330	50/630	0/124	110/49	10/0	275/56
Armoured vehicle	750/747	20/827	0/8	0/5	0/84	1750/350
SAM system	20/6	5/72	3/0	0/52	0/10	6/62

ASW = anti-submarine warfare; SAM = surface-to-air missile.

^aThe EU is included as a distinct entity to show its position if it were a single exporter. ‘Local use’ figures for the EU include intra-EU transfers; export figures from the EU are exports from all EU members to non-EU members.

Sources: SIPRI Arms Transfers Database and archives.

aircraft (e.g. France and India) little room for exports, leaving them without an economy of scale.

In the period 2002–2006 *Russia* was the second largest exporter of major conventional weapons, with 28 per cent of total transfers and exporting to 46 countries. Despite repeated plans for more acquisitions by the Russian armed forces, the Russian arms industry has remained largely dependent on exports: many more units of major conventional weapons are exported than are bought for the Russian armed forces. While export dependency can be seen as normal for all major arms producers, Russia’s export dependency is unusually high and without exports there would be little left of its arms industry (see table 10.1). Russian has plans for massive acquisitions from its own industry (e.g. over 1000 new aircraft between 2007 and 2015¹⁹), but it remains to be seen how many of these plans will be realized.

In 2002–2006 China and India remained the main customers for Russian weapons, accounting for 45 and 25 per cent, respectively, of total Russian deliveries, and they are expected to remain among Russia’s biggest arms markets in the near future. Both countries have in recent years emphasized their regional power status and are interested in acquiring equipment for power projection, such as aircraft carriers; long-range strike, tanker and transport aircraft; and ship-launched land-attack missiles. The Chinese and

total US budget for combat aircraft from around 2012. Fabey (note 17); Government Accountability Office (note 15).

¹⁹ Silent, J., ‘Russian procurement 2007–2015’, *Air Forces Monthly*, no. 221 (Aug. 2006), p. 27.

Indian arms industries are still unable to produce most of these systems, but Russia has been keen to fill the gap.

In 2005 China ordered 38 Il-76 long-range transport aircraft and Il-78 tanker–transport aircraft from Russia. Originally it was planned that these would be produced in Uzbekistan (with many major components produced in Russia), but in late 2006 Russia decided to set up a new production line within its borders and supply the majority of the aircraft itself. This was done not only because Russia felt that the Uzbek factory was unreliable and because Russian industry would benefit more from the sale and the almost certain new orders from China and other buyers, but also in order to possess a complete Russian production line for large military transport aircraft.²⁰

China also showed strong interest in acquiring weapons and technology linked to aircraft carriers. At the end of 2006 China was close to signing an order for two Russian Su-33 aircraft with an option to buy up to 48 more.²¹ Russia is also reportedly helping China to complete construction of an aircraft carrier acquired in 2000 from Ukraine (from which the Su-33 can be operated), and with the production of three Chinese-designed aircraft carriers.²² In 2006 Russia finished the latest Chinese orders of complete major combat ships: eight Project-636 (Kilo Class²³) submarines and two Sovremenny Class destroyers. However, in December 2006 the President of China, Hu Jintao, again strongly underlined China's need for a strong and modern navy.²⁴ While China has during the last decade developed its own major combat ships, these are often equipped with air-defence systems and other key equipment supplied by Russia.²⁵ There have also been new reports about plans for additional orders of ships from Russia.²⁶

²⁰ Abdullaev, N., 'Russia transfers work on China's Ilyushins', *Defense News*, 15 Jan. 2007, p. 10. After the break-up of the Soviet Union the two Soviet production lines for large military transport aircraft were located outside Russia in Ukraine and Uzbekistan. Efforts to develop and produce the An-70 in cooperation with Ukraine have been delayed, leaving the Soviet-era Il-76 as the only large military transport aircraft available for Russian use.

²¹ 'Chinese Navy to buy up to 50 Su-33', *Air Forces Monthly*, no. 225 (Dec. 2006), p. 5. Buying Su-33 aircraft for land-based operations would not make sense because the only difference from the Su-30 combat aircraft already used by China is their specific equipment for carrier operations.

²² Construction of the aircraft carrier *Varyag* was started by the Soviet Union. The ship was inherited by Ukraine, which in 2000 sold it unfinished to a Hong Kong-based company for use as a floating casino in Macau. However, in late 2005 it was reported that the vessel was at a naval shipyard in Dalian, China. In 2005 Chinese delegations toured Russian and Ukrainian producers of aircraft carriers, carrier equipment and carrier aircraft. 'Chinese Navy to buy up to 50 Su-33', *Air Forces Monthly*, no. 225 (Dec. 2006), p. 5; Butowski, P., 'Porte-avions chinois' [Chinese aircraft carrier], *Air & Cosmos*, no. 1996 (9 Sep. 2005), p. 9; and Farrer, M., 'PLA(N) training carrier on way?', *Asia-Pacific Defence Reporter*, vol. 31, no. 6 (July/Aug. 2005), pp. 44–46.

²³ Soviet and Russian weapons often have a Western (NATO and/or US) as well as a Russian designation. In this chapter the Russian designation is primarily used. Western designations are given in parentheses.

²⁴ 'Chinese president calls for strengthened, modernized navy', *People's Daily*, 27 Dec. 2006, URL <http://english.people.com.cn/200612/27/eng20061227_336273.html>.

²⁵ Saunders, S. (ed.), *Jane's Fighting Ships 2006–2007* (Jane's Information Group: Coulsdon, 2006), pp. 126–29.

²⁶ Fong, K., 'Asian submarine force development update', *Asian Defence Journal*, 9 Sep. 2006, p. 26.

India bought additional Su-30MKI combat aircraft and a large number of T-90S tanks from Russia. However, European and US companies are very active in the Indian market and issues like diversification of suppliers, access to advanced technology, offsets and especially Indian co-production of weapons may lead to a stronger interest from India in non-Russian weapons.

The extensive dependency on the somewhat uncertain Chinese and Indian markets makes Russia anxious to diversify and it is actively seeking other markets, often in countries to which Western companies are unwilling to deliver.²⁷ For example, an order from Venezuela was signed despite strong US opposition. The deal is politically significant since it clearly shows how difficult it is even for a superpower like the USA to restrict arms transfers to recipients that it does not favour, even in a region considered by many as a US 'backyard'. Aside from blocking any direct sale of US military technology to Venezuela, since 2005 the USA has also blocked sales of non-US military equipment containing US components and has made clear that even sales of weapons without a US component to Venezuela may have repercussions for the companies involved. European and other countries are willing to sell equipment, but most of their weapons have US components and many non-US companies have more to lose on the US market than to gain in Venezuela.²⁸ An order signed by Venezuela with Spain in 2005 for transport and maritime patrol aircraft was cancelled in 2006 because the aircraft contained US technology. Similarly, planned orders for combat aircraft from Brazil and modernization of Venezuela's F-16 combat aircraft by Israel were abandoned.²⁹ This has left Venezuela with few sources of military equipment, but Russia has stepped into the gap by selling \$3.4 billion worth of arms to the country, including 24 Su-30 combat aircraft for around \$1 billion as well as transport and combat helicopters. Venezuela is also interested in Russian air-defence systems, submarines and other weapons worth a further \$3 billion.³⁰ However, while portrayed by the US Government and sections of the US

²⁷ There have been recent signs that China is more interested in technology from Russia and elsewhere than in Russian weapons. Its main non-Russian source would be European, most likely France, which has long favoured ending the EU arms embargo on China, holding adoption of the new legally binding version of the EU Code of Conduct on Arms Exports hostage to lifting the embargo. In 2006 Greece and Italy joined France in advocating an end to the ban. 'Greece to continue working for lifting EU arms embargo against China', *People's Daily*, 20 Jan. 2006, <http://english.people.com.cn/200601/20/eng20060120_236856.html>; 'Italy prone to lift arms sales ban against China', *People's Daily*, 19 Sep. 2006, URL <http://english.people.com.cn/200609/18/eng20060918_303851.html>; Rettman, A., 'France blocking plan for EU Code on arms exports', *EUObserver*, 18 Jan. 2007, URL <<http://euobserver.com/9/23296>>; and Yu-li, L. and Wu, S., Overseas Office Republic of China (Taiwan), 'EU not to tackle issues regarding lifting of China arms ban', Press release, Taipei, 24 Mar. 2006, URL <<http://www.roc-taiwan.org/fp.asp?xItem=10686&ctNode=463&mp=1>>.

²⁸ The Swedish company Saab, which has much to lose on the US market, cancelled all its contracts with Venezuela, even for systems without US components such as RBS-70 surface-to-air missile systems. See 'Saab stops Venezuela arms sales', BBC News, 3 Aug. 2006, URL <<http://news.bbc.co.uk/2/5243880.stm>>.

²⁹ Higuera, J., 'Spain seals Venezuela deal in face of opposition', *Jane's Defence Weekly*, 7 Dec. 2005, p. 4; and 'Love on the rocks: CASA's \$600m Venezuelan plane sale in heavy turbulence', *Defense Industry Daily*, 14 Feb. 2006, URL <<http://www.defenseindustrydaily.com/2006/02/love-on-the-rocks-casas-600m-venezuelan-plane-sale-in-heavy-turbulence/index.php>>.

³⁰ Gentile, C., 'Venezuela bolsters military against US', *Washington Times*, 19 Feb. 2007.

media as destabilizing, and while relatively large for Latin America, these deals are not of exceptional size, especially when it is understood that Venezuela probably has to replace most of its inventory with new weapons that do not contain any US components.

In 2006 the largest single deal signed for Russian weapons since the break-up of the Soviet Union was agreed with Algeria.³¹ With a value of up to \$10.5 billion, it includes mainly weapons for inter-state use, such as combat aircraft, tanks and air-defence systems. At the same time, Russia is selling weapons to Morocco (the country most likely to feel threatened by the Russia–Algeria deal) and offering to sell more.³²

Russia has started to offer potential customers credits to pay for weaponry bought from Russia. While this is a common arms export-promoting measure for Western countries and was also common for the Soviet Union, it had not been used by Russia until 2006.³³ This new policy may partly be the result of Russia finally having the financial room to offer credits instead of insisting on payment before or on delivery.³⁴

In January 2007 President Vladimir Putin, who at first opposed the idea, issued a decree making Rosoboronexport Russia's only arms export agency from March 2007, stripping four companies—accounting for some 10 per cent of Russia's total exports—of their right to independently export complete systems.³⁵ Officially, this was done to prevent Russian companies from competing with each other on foreign markets. However, it will also increase the income of Rosoboronexport, and thus of the Russian state, since companies that use it pay between 5 and 15 per cent of the contract price for its services.³⁶ The decree also stipulates that Rosoboronexport's profits are to be used for research and development (R&D), thus ensuring greater state control over R&D as well as over exports generally. In general, Russia's use of—often insecure—credits, its willingness to ignore US pressure and the better coordination of its marketing efforts underline that the global arms market is a buyers' market, with strong competition among suppliers to win orders. It also

³¹ However, as 'reward' Russia had to cancel some \$4.5 billion in debt that Algeria still owed from the Soviet period. 'Russian–Algerian deal', *Military Technology*, vol. 30, no. 1 (2006), p. 248; and Vatanka, A. and Weitz, R., 'Russian roulette', *Jane's Intelligence Review*, Jan. 2007, p. 39.

³² Vatanka and Weitz (note 31).

³³ Credits of up to \$1 billion were also offered to Indonesia. See Guerin, B., 'Indonesia–Russia: arms, atoms and oil', *Asia Times*, 1 Dec. 2006, URL <http://www.atimes.com/atimes/Southeast_Asia/HL12Ae02.html>. For more on export credits see Evans, P. C., 'The financing factor in arms sales: the role of official export credits and guarantees', *SIPRI Yearbook 2003: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2003), pp. 539–60.

³⁴ In Soviet times credits were used to promote exports. However, several large credits (now inherited by Russia) are still outstanding. Russia recently wrote off a large part of the debts Algeria and Syria had as a result of Soviet credit arrangements linked to arms deals.

³⁵ The Presidential Decree on several issues concerning military-technical cooperation between the Russian Federation and foreign states, Decree no. 54, was signed on 18 Jan. 2007. The text of the decree is available at URL <<http://document.kremlin.ru/doc.asp?ID=037563>> (in Russian). See also chapter 9 in this volume.

³⁶ Internal Russian power politics probably also influenced the decree. 'Sergey Chemezov scores a monopoly', *Kommersant*, 15 Dec. 2006, URL <http://www.kommersant.com/p730496/r_529/Rosoboronexport_Arms_Exporter/>.

shows the eagerness or even desperation with which Russia is trying to diversify its major customers.

The member states of *the European Union* (EU) combined accounted for 31 per cent of global arms transfers in the period 2002–2006.³⁷ While some of the EU exporters are very dependent on markets outside the EU, a significant proportion of the transfers take place between EU countries. Exports by EU members to non-EU recipients accounted for some 68 per cent of the combined total exports of EU members, making the EU the third largest exporter of major conventional weapons.³⁸ Six EU members—Germany, France, the UK, the Netherlands, Italy and Sweden (in order of quantity of exports)—were among the top 10 suppliers of major conventional weapons in 2002–2006. Among the most important developments in 2006 were the memoranda of understanding (MOU) signed by the UK and France with Saudi Arabia for major deals (see below), demonstrating the renewed importance of the Middle East as a market. These events also illustrate the competitiveness of European products in sensitive markets, or rather of European export policies, which are less restrictive and less prone to change than US policies.

Supplying the Middle East

The international tension related to suspicion that Iran intends to develop nuclear weapons,³⁹ the armed conflict between Israel and Hezbollah (with Iranian and Syrian involvement), and the war in Iraq were the major security concerns in the Middle East in 2006. Arms transfers played an important role in all these issues.⁴⁰

The Middle East (including Egypt and Turkey) has long been one of the most important destinations for arms exports, having accounted for almost a quarter of all imports between 1950 and 2006. Since 1967 it has repeatedly had the dubious distinction of being the region with the world's largest arms imports. In the early and mid-1990s the Middle East's level of arms imports decreased, but in recent years most countries in the region have again pursued large arms acquisitions, almost all from abroad. Although most of the countries in the region have tried to develop an indigenous arms production capability, only Israel has significant development and production capabilities and none has achieved anything close to self-sufficiency. Iranian claims of major progress in its production of a range of advanced weapons have been given ample media attention worldwide. However, most systems that are labelled as made in Iran are actually Chinese, Russian, or North Korean

³⁷ This figure includes the combined deliveries of all 25 EU members (by 31 Dec. 2006; not including Romania and Bulgaria, which joined on 1 Jan. 2007) for the 5-year period 2002–2006.

³⁸ The intra-EU market may hold some surprises in the near future. Pressure is increasing to open up the EU arms market for intra-EU competition and some preliminary agreements have been reached. See chapter 9 in this volume.

³⁹ On Iran and its nuclear programme see chapter 12 in this volume.

⁴⁰ On arms transfers to Iraq since 2003 see Hagelin, B., Bromley, M. and Wezeman, S., 'International arms transfers', *SIPRI Yearbook 2006* (note 6), pp. 465–68.

designs and rely heavily on imported components. The few entirely local products use simple technology or are only produced in small numbers, probably for propaganda use.⁴¹

Much attention has recently been given to arms imports by Iran. Russia has supplied substantial amounts of arms, the bulk of which consist of armoured vehicles of older designs such as T-72 tanks and BMP-2 infantry fighting vehicles (IFVs).⁴² Only Belarus, China, North Korea and Ukraine have in the past 10 years delivered more than a handful of weapons to Iran, but these are relatively simple (e.g. some small combat ships from China). In 2006 the USA objected to Russia's agreement to sell 29 Tor-M1 (SA-15) air-defence systems to Iran, one of the small number of truly advanced weapons it has managed to obtain in many years. Discussions are also ongoing between Russia and Iran on the sale of S-300 (SA-10) air-defence systems.⁴³ These systems would form one of the few effective military obstacles to air attacks on sites where the USA suspects Iran is developing a nuclear weapon capacity. While the sale of Tor-M1 systems took place prior to the December 2006 UN embargo, when trading arms with Iran was legal, for most suppliers Iran is not a legitimate recipient of weapons.⁴⁴

The USA has put strong pressure on foreign companies not to sell military equipment to Iran. In 2006, for example, it placed an embargo on dealings between US entities and Rosoboronexport because of an alleged connection with suspected Iranian nuclear weapon activities.⁴⁵

However, Iranian imports were dwarfed by acquisitions by the Gulf Cooperation Council (GCC) members and Israel (see table 10.2),⁴⁶ and this disparity is unlikely to change in the near future. Saudi Arabia, the UAE and Israel have major ongoing or new arms acquisition programmes while Iran and Syria have almost none. Unlike Iran, the GCC countries are seen as legitimate and attractive clients by a great diversity of suppliers and the GCC countries have been able to obtain more and better weapons. For example, the 80 F-16E combat

⁴¹ Johnson, R., 'Iran strives for self-sufficiency in conventional weapons', *Jane's Intelligence Review*, Dec. 2006, p. 44–46

⁴² For more data on Iranian arms imports see the SIPRI Arms Transfers Project website (note 2). The T-72 in particular has been outclassed by more modern tanks—such as the US M-1 tank used by Saudi Arabia and Kuwait and the French Leclerc used by the United Arab Emirates—since the 1991 Gulf War.

⁴³ Grimmett, R. F., *Conventional Arms Transfers to Developing Nations, 1998–2005*, US Library of Congress, Congressional Research Service (CRS) Report for Congress RL33696 (CRS: Washington, DC, Aug. 2006), updated annually, available at URL <<http://openncrs.cdt.org/>>; US Department of State, Daily press briefing, Washington, DC, 16 Jan. 2007, URL <<http://www.state.gov/r/pa/prs/dpb/2007/78707.htm>>; and 'USA may impose against Russia for selling 29 Tor-M1 complexes to Iran', *Pravda*, 25 Jan. 2007, URL <<http://english.pravda.ru/world/americas/25-01-2007/86770-TorM1-0>>.

⁴⁴ Even before the UN embargo EU countries did not generally sell weapons to Iran, but no law prevented it, as Austria's sale of anti-materiel rifles in 2004 showed. APA–OTS, 'Steyr Mannlicher wehrt sich gegen US-verdächtigungen' [Steyr Mannlicher defends itself against US accusations], 13 Feb. 2007, URL <http://www.ots.at/presseaussendung.php?schluesel=OTS_20070213_OTS0156&ch=wirtschaft>. Discussions on a general EU arms embargo on Iran had by mid-Jan. 2007 led to no more than a reaffirmation of the EU's opposition to selling arms to Iran. Dombey, D. and Fidelius, S., 'Germany proposes wider Iran sanctions', *Financial Times*, 18 Jan. 2007.

⁴⁵ Baev, P. K., 'Moscow outraged by US sanctions against two Russian companies', *Eurasia Daily Monitor*, 7 Aug. 2006, URL <<http://www.jamestown.org/edm/>>.

⁴⁶ The GCC members are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE.

Table 10.2. Transfers of major conventional weapons by supplier to Iraq, Iran, Israel, Syria and the countries of the Gulf Cooperation Council, 1997–2006

Data are SIPRI trend-indicator values expressed in US\$m. at constant (1990) prices.

Recipient	Supplier					Total
	USA	Russia	China	EU	Others	
Iraq	63	68	0	131	135	397
Iran	0	3 437	840	10	237	4 524
Israel	5 503	0	0	1 121	0	6 624
Syria	0	512	0	0	92	604
<i>GCC countries^a</i>	9 972	404	89	10 576	496	21 537
Saudi Arabia	5 253	0	0	3 274	108	8 635
United Arab Emirates	3 220	310	0	5 519	314	9 363
Other GCC	1 499	94	89	1 783	74	3 539

Note: The SIPRI data on arms transfers relate to actual deliveries of major conventional weapons. To permit comparison between the data on such deliveries of different weapons and identification of general trends, SIPRI uses a *trend-indicator value*. The SIPRI values are only an indicator of the volume of international arms transfers and not the actual money values of such transfers, Thus they are not comparable to economic statistics such as gross domestic product or export/import figures.

^a The member states of the Gulf Cooperation Council (GCC) are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

Source: SIPRI Arms Transfers Database.

aircraft that the UAE has received from the USA and the 72 Eurofighter Typhoon combat aircraft that Saudi Arabia is about to order from the UK are not only several times superior in number to Iranian aircraft, but are among the most advanced combat aircraft available.

Within the GCC the UAE and Saudi Arabia are by far the largest arms importers. The UAE in particular has acquired large numbers of naval, air and land weapons over the past 10 years. Saudi Arabia's arms imports were high in the 1990s but have been more limited in the past five years due to financial problems. However, since 2005 Saudi Arabia has been gaining financial strength, partly because of increased oil revenues, and orders for arms worth at least \$50 billion are being negotiated.⁴⁷ In late 2005 Saudi Arabia signed a £10 billion (\$19 billion) MOU with the UK, which included 72 Eurofighter Typhoon combat aircraft and long-range air-to-surface missiles (ASM).⁴⁸

⁴⁷ On Saudi military expenditure see chapter 8 in this volume.

⁴⁸ The deal was controversial because of the willingness of the British Government to stop an ongoing investigation for bribery connected to earlier arms deals with Saudi Arabia. The government claimed the investigation was cancelled for reasons of national security since it would 'damage the intelligence relation' with Saudi Arabia. However, the British intelligence services denied such damage would be likely. The Organisation for Economic Cooperation in Development (OECD) criticized the UK for breaking the OECD anti-corruption rules that it had agreed to. Peel, M., 'People could die: how the inquiry into BAE's Saudi deals was brought to earth', *Financial Times*, 26 Feb. 2006, p. 13. The deal also has military implications for the UK since the Saudi aircraft would partly come from Typhoon

Another deal, potentially worth up to \$10 billion, was agreed with France for a border protection system including combat and transport helicopters and other weapons. Requests to purchase arms worth over \$8.7 billion were made to the USA, including 373 tanks and 724 armoured vehicles.⁴⁹ As with earlier major Saudi agreements, it remains to be seen how many of the MOUs and requests will be turned into actual orders. However, even if only a proportion similar to earlier MOUs lead to deliveries, Saudi Arabia will in a few years become the largest arms importer in the region.

Saudi Arabia carefully balances its purchases between suppliers and seeks to buy what it cannot get from one supplier from another source. For example, since 1992 the USA has repeatedly refused to supply the country with long-range ASMs for its 72 US-supplied F-15S long-range combat aircraft, but the UK has been a willing supplier of such weapons (to be used on UK-supplied Tornado combat aircraft). Since the early 1990s the UAE has diversified its sources of supply even more than its neighbour, for example buying combat aircraft from both France and the USA and Pantzyr-S1 surface-to-air missiles (SAMs) from Russia.

Supplying long-range strike systems to the Middle East

Of the several armed conflicts in the Middle East in modern times most have been ground wars and proved to be expensive, relatively futile affairs resulting in stalemates. Recent battlefield experience seems to have demonstrated the capacity of air power to deliver quicker, comparatively cheap and more decisive results. The delivery of long-range strike systems is giving several Middle Eastern states a capability to attack 'strategic' targets (e.g. oil installations, waterworks or nuclear installations) over a long distance; a new and potentially much more dangerous phenomenon than earlier supplies of large numbers of tanks and other equipment for ground war.

While much attention is focused on the Iranian missile acquisitions, many other Middle Eastern countries have acquired long-range strike systems (see table 10.3). Next to its aspiration to be a regional power, Iran's suspected nuclear weapon ambitions may be rooted in a perception of its own vulnerability caused in part by its poorly equipped conventional armed forces. Since 1979 Iran has not been able to procure enough new and advanced equipment to replace or modernize its largely outdated military equipment, which leaves it at a considerable disadvantage in defensive and offensive capabilities vis-à-vis its potential adversaries: the USA, Israel and the Gulf states. Although Iran has not been able to obtain a modern conventional capability, it appears to have been more successful in alarming its likely adversaries by obtaining an

production earmarked for the UK. This would leave the UK with a combat aircraft gap for several years. Lake, J., 'Facing a "bomber gap"', *Air Forces Monthly*, no. 217 (Apr. 2006), p. 32; and 'Saudi shopping spree: Eurofighter flying off with \$10b Saudi contract (updated)', *Defense Industry Daily*, 18 Dec. 2006, URL <<http://www.defenseindustrydaily.com/>>.

⁴⁹ 'Saudi shopping spree' (note 48).

Table 10.3. Long-range strike systems delivered to the Middle East, 1997–2006

Table includes systems with a range of 300 km or more, delivered or ordered after 1997. Data in italics are not certain.

Country	Designation	Type	No.	Range	Source
Iran	Scud Mod-C	SSM	..	500	North Korea (produced in Iran as Shahab-1)
	Scud Mod-D	SSM	..	700	North Korea (produced in Iran as Shahab-2)
	No-dong	SSM	..	1300+	North Korea (produced in Iran as Shahab-3)
	<i>BM-25</i>	<i>SSM</i>	<i>18</i>	<i>2000+</i>	<i>North Korea</i>
	<i>SS-N-27 (Club)</i>	<i>SSM</i>	<i>..</i>	<i>300</i>	<i>Russia, for use on Project-877 (Kilo) submarines; on order</i>
	<i>Zelzal-3</i>	<i>SSM</i>	<i>..</i>	<i>400</i>	<i>Local design and production</i>
Israel	F-15I	Aircraft	25	..	USA (1998–99)
	F-16I	Aircraft	102	..	USA (from 2004)
	<i>Jericho-3</i>	<i>SSM</i>	<i>..</i>	<i>3 500</i>	<i>Local design and production; on order (with nuclear warhead)</i>
	<i>STAR-1</i>	<i>ASM</i>	<i>..</i>	<i>400</i>	<i>Local design and production</i>
	<i>Gabriel-4LR</i>	<i>SSM</i>	<i>..</i>	<i>..</i>	<i>Local design and production (possibly for use on Dolphin submarines)</i>
Saudi Arabia	F-15S	Aircraft	72	..	USA (1995–99)
	Tornado	Aircraft	100	..	Modernization of Saudi aircraft by UK (on order)
	Typhoon	Aircraft	72	..	UK (on order)
	Black Shaheen	ASM	..	300	UK (on order)
Syria	Scud Mod-C	SSM	..	500	North Korea and Iran
	<i>Scud Mod-D</i>	<i>SSM</i>	<i>..</i>	<i>700</i>	<i>North Korea and Iran</i>
UAE	Black Shaheen	ASM	600	300	France (from 2003)
	Mirage-2000-5	Aircraft	62	..	France (from 2003)
	ATACMS-ER	SSM	202	300	USA; on order
	F-16E	Aircraft	80	..	USA (2004–2006)

ASM = air-to-surface missile; SSM = surface-to-surface missile; UAE = United Arab Emirates.

^a Ranges for aircraft are not given since they depend on a range of factors such as fuel and weapons carried, flight altitude etc. All aircraft listed have an in-flight refuelling capability that extends ranges to several 1000 km at least.

Source: SIPRI Arms Transfers Database and archives.

unknown but limited number of ballistic missiles. The types of missile acquired are too inaccurate to be of significant use with conventional warheads, so it is widely suspected that the missiles are evidence of Iran's nuclear weapon ambitions. However, Iran may have acquired the missiles for reasons of regional and international prestige, as the only credible (if poor quality) option available for hitting long distance targets, or for their internal propaganda value. The exact range of the most capable of these missiles, called the Shahab-3 in Iran, is not known precisely, but it is estimated to be up

to 2500 kilometres.⁵⁰ Iran claims it builds the Shahab-3 indigenously, but it is generally accepted that it is no more than a version of the North Korean Nodong, and that Iran's missile programme is dependent on technology and components from North Korea and possibly elsewhere.⁵¹

In 2006 it was reported that Iran had obtained from North Korea 18 ballistic missiles of a new type, referred to as BM-25, with an estimated range of over 2000 km.⁵² Iran also has a small number of long-range strike aircraft, most notably the Su-24. An order for modernization has been placed with Russian companies and the aircraft have been used more actively in training for long-range attack and air-to-air refuelling.⁵³ Supplying Iran with ballistic missiles or other potential delivery systems for nuclear weapons was banned by the December 2006 UN Security Council Resolution 1737, which as well as establishing sanctions against Iran, banned both export to and import from the country of items and technology potentially related to nuclear weapons.⁵⁴ While conventional arms are not explicitly included, technologies that can be used in both conventional and nuclear military applications are covered, as are goods and technology that could contribute to the development of nuclear weapon delivery systems. Missiles are specifically mentioned as such goods.

It is disturbing that, while many suppliers acknowledged after the August 1990 Iraqi invasion of Kuwait that the Middle East was a region exceptionally prone to destabilizing build-ups of weapons,⁵⁵ some of these same suppliers have since shown little restraint in delivering new and potentially even more destabilizing long-range strike weapons. The export constraints aimed at preventing an uncontrolled arms race in the region seem to be undermined by supplier competition. The main capability the USA did not want to include in the F-16E deal with the UAE was, as with Saudi Arabia, long-range ASMs. The UAE subsequently turned to France, which supplied a package of 62 Mirage-2000-5 combat aircraft equipped with Black Shaheen missiles with a range of 300 km.

Israel has received a steady supply of advanced weapons, predominantly from—and partly financed by—the USA.⁵⁶ Israel is largely dependent on US supplies for major platforms, which are usually customized by Israel with

⁵⁰ *Jane's Strategic Weapon Systems*, no. 45 (Jane's Information Group: Coulsdon, July 2006), pp. 68–71. The missile has until now only been tested to a range of 1200–1300 km.

⁵¹ See Wezeman, S., 'Suppliers of ballistic missile technology', *SIPRI Yearbook 2004: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2004), pp. 544–56. Further deliveries of any ballistic missile components or technologies are banned by the UN Security Council.

⁵² Ben-David, A., 'EROS-B1 boosts Israeli surveillance capability', *Jane's Defence Weekly*, 3 May 2006, p. 6; and Ben-David, A., 'Iran acquires ballistic missiles from DPRK', *Jane's Defence Weekly*, 4 Jan 2006, p. 5.

⁵³ Hughes, R., 'Iran eyes long-range air strike capability', *Jane's Defence Weekly*, 7 Feb. 2007, p. 11.

⁵⁴ UN Security Council Resolution 1737, 23 Dec. 2006. All UN resolutions in this chapter can be found at URL <<http://www.un.org/documents/>>. On the background to the sanctions see chapter 15 in this volume.

⁵⁵ The UN Register of Conventional Arms was set up mainly to prevent new build-ups of weapons in the Middle East.

⁵⁶ In 2006 the USA provided Israel with at least \$2.3 billion in aid for arms procurement. Since 1992 the USA has given over \$40 billion to Israel in such aid. Murphy, J., 'US reveals FMF packages', *Jane's Defence Weekly*, 7 Dec. 2005.

local electronics and armaments. Currently, Israel's most significant arms imports are F-16I combat aircraft from the USA. These aircraft increase the already substantial long-range strike capabilities which Israel has built up over many years and which feature in repeated speculation about possible pre-emptive attacks on Iranian nuclear facilities.⁵⁷

Despite Syria being a major actor in the conflict in Lebanon and having serious ongoing problems with Israel,⁵⁸ its arms imports have been modest in the past 15 years compared with the major arms recipients in the region. As in the case of Iran, its main long-range strike procurement was an unknown quantity of Scud Mod-D ballistic missiles from North Korea, with a range of about 700 km. There are no indications that Syria could develop nuclear weapons in the near future, but the USA maintains that Syria has both chemical and biological weapon programmes linked to missile delivery systems.⁵⁹

The GCC and Israel have built up extensive and well-equipped conventional forces with imported weapons, including long-range strike systems, while Iran and Syria have been less successful. As a result, the qualitative and quantitative gap between Iranian and Syrian conventional military equipment and that of other major actors in the region is growing. Israel and several of the GCC members have acquired a capability to attack targets at long range with much more precision than the surface-to-surface missiles (SSMs) or any other weapon that Iran (or Syria) possesses. This could well put pressure on countries like Iran and Syria to seek counterbalancing capabilities. These could take the form of advanced defensive measures (e.g. air defence systems) that are generally—but not widely—available to both countries; conventional but asymmetric options; or (despite existing obligations not to acquire them) weapons of mass destruction (WMD).

III. Import dependency or import substitution

The process of developing technologically complex major conventional weapons and integrating them into a military system or network has become a major challenge, demanding substantial financial resources and a highly skilled workforce. This has created a situation where few states are able to develop even a limited range of weapons on their own, let alone develop the complete range that is sought. With the possible exceptions of Russia and the USA, all countries are dependent on imports of foreign weapon technology for indigenously developed weapons. Often such dependency is extensive and deepening, and there is a serious possibility that the USA will soon become

⁵⁷ In 1982 Israel used an earlier F-16 version to attack Iraq's near-complete Osirak nuclear reactor.

⁵⁸ To put these problems in the context of Israel's long-range strike capabilities: Israeli aircraft have repeatedly violated Syrian airspace, attacked a Palestinian camp in Syria in 2003 and flew low over the summer residence of the Syrian President in June 2006, all with impunity. Federman, J., 'Home fly-by sends message to Syrian leader', Associated Press, 28 June 2006.

⁵⁹ Statement by Lieutenant General Michael D. Maples, US Army Director, Defense Intelligence Agency, before the US Senate Select Committee on Intelligence, Current and Projected National Security Threats to the United States, 11 Jan. 2007, URL <<http://www.dia.mil/publicaffairs/Testimonies/statement26.html>>.

the only country able to fund development of advanced weapons and technologies on its own, creating a US monopoly of key technologies.

While some countries may accept dependency, others may find it politically embarrassing, economically disadvantageous or militarily threatening. As a remedy for one-sided dependency, countries launch cooperative weapon development programmes creating not only a larger market and pool of R&D funds and technological resources, but also interdependence. Such interdependence seems to work best when there is an existing cultural and political affinity, as between European states, or military and economic interdependence, as in NATO or the European Communities. Alternatively, countries may develop niche technology that, while not included in cooperative programmes, still creates interdependence. The third option, self-sufficiency, involves substituting imports for local development and production of weapons.

Since 1945 both dependency and self-sufficiency have been practised by European countries. While most NATO countries produced their own weapons, most also accepted a high level of dependency on the USA. However, some countries—either out of national pride or extensive national responsibilities that were not fully compatible with US policies (as with France) or in the framework of neutrality (as with Sweden and Switzerland)—tried to develop self-sufficiency. Only France came close to achieving it, and even today it is able to provide many of its weapons needs on its own. Switzerland and Sweden quickly found that they were not able to develop all their weapon requirements unaided, and were often dependent on imports of complete weapons and even more so on the import of major components such as engines and electronics.

By the 1960s it had become apparent to European countries that pan-European cooperative programmes would be the solution to coping with the escalating costs of major weapons, particularly aircraft. Today many major European weapons are the result of European cooperation and it is certain that this trend will increase in the future. However, increased US–European cooperation and interdependence may be much slower in coming. The recent troubles over access to US technology in the JSF programme (see above) have reinforced the concern that some European countries have expressed about being dependent on the USA. The fact that the European Defence Agency is specifically trying to fill equipment-capability gaps with products from the European arms industry (and not by import from non-EU producers) may indicate a desire to remain independent.

Three ‘regional powers’ outside Europe—Japan, South Korea and Australia—have long accepted dependence on the USA. However, in recent times they have tried to decrease this one-sided dependence, or to modify it to interdependence through cooperation with the USA or the supply of niche products. For all three countries, the existence of close security ties with the superpower has provided a secure basis for dependency and for a US willingness to become partly dependent on them.

Japan has made some attempts to reduce its dependency on the USA through small acquisitions from Europe and several more extensive local weapon-development programmes. On the one hand, these programmes have generally been of limited success, and the most ambitious of them, the F-2 (or FSX) combat aircraft, was terminated in 2004 for technical and financial reasons.⁶⁰ On the other hand, Japan's electronics industry produces cutting-edge military and dual-use products. The USA has for some time been keen to access these products for military use, but Japan's constitution limits its military exports. However, this has recently begun to change and it is now willing to export military technology to the USA, starting with technology for advanced anti-ballistic missile systems.⁶¹ Japan is still largely dependent on US weapons, but the advanced—and in some cases probably unique—Japanese technology to be used in cooperative systems is likely to make the dependency two-sided, perhaps irreversibly so.

South Korea has been more direct in its attempts to reduce dependency on the USA by acquiring European weapons and developing indigenous systems based on European, Russian, US and local technology.⁶² Unlike Japan, South Korea actively markets its weapons abroad.⁶³ South Korea has a highly advanced arms industry and its access to the European and US markets means it does not need to export elsewhere: most recently it has been discussing sales of advanced trainer aircraft to the USA and of tanks to Turkey.⁶⁴ South Korean designs are still dependent on imported components, however.

The Chinese military build-up, reductions in the US presence in South Korea and Japan, and North Korea's nuclear test and continued development of ballistic missiles, may combine to increase Japanese and South Korean interest in developing indigenous weapons. South Korea has already reacted to the July 2006 North Korean missile tests by announcing the development of a long-range cruise missile, and in Japan the acquisition of offensive missile capabilities has been hotly debated.⁶⁵

In most parts of the world a dependable regional cooperative environment is generally either underdeveloped or completely lacking. Thus, cooperation in development of arms is not yet an option for most non-European states. *Russia* has largely maintained the self-sufficiency of the Soviet era, but there are serious doubts as to whether this is sustainable. While it has inherited the key parts of the Soviet arms industrial base it has spent little on R&D since 1990,

⁶⁰ 'Japan to end F2 production early', *Air Forces Monthly*, no. 199 (Oct. 2004), p. 14; and Global Security.org, 'F-2 support fighter/FSX', 14 Nov. 2006, URL <<http://www.globalsecurity.org/military/world/japan/f-2.htm>>.

⁶¹ Japanese Ministry of Foreign Affairs (note 9).

⁶² South Korea has a long-term plan for the development of a high-tech arms industry and in 2006 budgeted some \$30 billion for R&D over the next 5 years. The entire \$150 billion is to 'establish a more advanced domestic defence industrial capability'. 'ROK increases spending', *Asia-Pacific Defence Reporter*, vol. 32, no. 6 (July/Aug. 2006), p. 12.

⁶³ 'South Korea responds', *Asia-Pacific Defence Reporter*, vol. 32, no. 6 (July/Aug. 2006), p. 12.

⁶⁴ 'South Korea responds' (note 63).

⁶⁵ 'Japanese missiles', *Asia-Pacific Defence Reporter*, vol. 32, no. 6 (July/Aug. 2006), p. 12. See also chapter 8 in this volume, pp. 290–91

leaving its technology trailing behind that of other major arms producers. However, Russia is unwilling to accept dependence on imports or even cooperation on weapons. Instead it remains committed to national development and production of the full spectrum of weapons and has set up facilities to replace those lost to former Soviet republics with the break-up of the Soviet Union (e.g. for large transport aircraft; see above). The Russian solution for now is to keep the inherited industrial base and development skills as intact as possible by ordering ‘silver bullets’ (one-off prototypes or operational systems). Since Russia has limited funds for R&D it is under pressure—but also willing—to sell as many weapons as possible abroad, using the income to pay for R&D and to keep the production line ‘warm’. Such sales are sometimes described as cooperative or joint projects, but in general these terms mean only that the so-called partner country pays for complete development of weapons in Russia, by Russian companies.⁶⁶

Other countries also feel dependency to be a problem. Most Arab states and China, Israel, India, Iran and Pakistan, have all at one point stated an aim to be self-sufficient. *Israel* has a unique relationship with the USA that includes a strategic–military element, and while it produces many weapon designs locally it generally accepts dependency on the USA.⁶⁷ Despite being one of the largest markets for military equipment and having ample funds to support an arms industry, the efforts of *Arab states* in the 1960s and 1970s to organize a pan-Arab arms industry have failed. Only Egypt has established a rudimentary arms industry. The arms industries of *Iran* and *Pakistan* have developed somewhat in parallel. Both have recently undergone expansion but are far from self-sufficient and, despite propaganda to the contrary, largely rely on foreign designs and components. *China* is working hard to develop its arms industry. Having learned from and partly absorbed the foreign technology it has acquired in the past two decades—mainly from Russia, but also from European, Israeli and US systems—China seems confident that it can soon develop and produce most weapons on its own.

India is probably the best documented case of a country trying to achieve military self-sufficiency. It provides a good illustration of the problems inherent in attaining it. Since the 1950s India has had the goal of establishing an arms industry capable of fulfilling most of its military requirements. However, while it has succeeded in building a large military–industrial base, India has failed to achieve self-sufficiency: its designs depend largely on imported components and most of its arms are imported, including almost all major weapons.

In recent years India has tried to further involve its arms industry in producing for the Indian armed forces and for export. A 2005 report by the Kelkar Committee, an independent body set up in May 2004 to provide ideas

⁶⁶ Normal direct arms sales are now called ‘military-technical cooperation’ in Russia.

⁶⁷ Part of the reason for this dependency is that the Israeli procurement budget consists in large part of US aid, which the USA stipulates should generally only be used to buy US-produced weapons. Israel maintains self-sufficiency in development and production of nuclear weapons and some related delivery systems. See appendix 12A in this volume on Israel’s nuclear capability.

for improving Indian industrial performance, presented a 15-year arms acquisition plan. It was highly critical of the state-owned arms production facilities and included suggestions for an offset policy, greater private industry involvement and more arms exports. Critics of the report claimed that the suggestions were not new, and that the entrenched powers (i.e. the state-owned arms producers) at the Indian Ministry of Defence would probably block most of its proposals.⁶⁸ Despite this, the Indian Government remains committed to the goal of procuring 70 per cent of its military equipment from Indian sources by 2010.⁶⁹

However, because many indigenous projects have faced technical difficulties and been delayed or even cancelled, India has repeatedly been forced to buy foreign equipment, including frigates, submarines, tanks, surface-to-air systems, combat aircraft, and engines for tanks and combat aircraft.⁷⁰ India has often tried to involve its own industry in such foreign acquisitions, mainly through licensed production, but it has encountered serious problems in the process. Official Indian reports are often highly critical of industrial performance. A May 2006 report on the Indian production of 140 Su-30MKI combat aircraft bought from Russia (the largest current Indian arms programme), criticized the fact that deliveries are delayed and aircraft are delivered without several 'critical' systems. It also pointed out that the projected cost of the deal had increased by some 90 per cent, from \$4.9 billion when ordered in 2000 to \$8.6 billion by mid-2005 when production was still barely underway. Cost increases are more the rule than the exception in arms production, and in this case it made the aircraft so much more expensive than if it were imported directly that by late-2006 India had given up the goal of producing large parts of the Su-30 aircraft locally and chose instead to import them from Russia as near-complete kits.⁷¹ India has also abandoned some of the flagships of its arms industry after many years of trial and a good deal of error. The Arjun tank programme has been replaced by licensed production of up to 1000 Russian T-90 tanks, but somewhat optimistically India still plans to produce 75–95 per cent of the components itself (except for the first 640 tanks, which will be delivered complete or as kits for assembly in India). The domestically produced rifle has been scrapped; the Trishul SAM system has been at least

⁶⁸ Bedi, R., 'Report urges kick-start to Indian defence sector', *Jane's Defence Weekly*, 20 Apr. 2005, p. 21.

⁶⁹ Suman, M., 'Defence offsets and technology transfer', *Indian Defence Review*, vol. 21, no. 3 (July–Sep. 2006), pp. 57–61.

⁷⁰ Anderson, G., 'India may purchase globally in order to "counter security threats"', *Defence Industry*, July 2005, p. 5; and Anderson, G., 'India faces calls to reduce military imports', *Defence Industry*, Aug. 2005, p. 11.

⁷¹ In addition to lowering the price this will also speed up production. The last of the 140 aircraft is now scheduled to be finished in 2014, instead of 2017 as was earlier planned. 'Costs and time kill full SU-30MKI production in India', *Defence Industry Daily*, 26 Sep. 2006, URL <<http://www.defenseindustrydaily.com/>>; Raghuvanshi, V., 'India's Su-30 costs double', *Defence News*, 28 Aug. 2006; and 'Indian Su-30MKI production costs escalate', *Air Forces Monthly*, no. 220 (July 2006), p. 22.

temporarily replaced by the Israeli Barak; and India's light combat aircraft has been partly replaced by the MiG-29 and other acquisitions from abroad.⁷²

In mid-2006 the Indian Government introduced new procurement rules for military equipment. These rules demand a 30 per cent offset worth over 3 billion Indian rupees (about \$65 million) from any foreign supplier of military equipment.⁷³ While the offsets do not have to be specifically military, it is hoped that they will include military technology transfers, orders from Indian arms producers (directly, involving the production of the acquired product, and, indirectly, as counter-trade) and foreign investment in the Indian arms industry, which in 2001 was opened to private investment.⁷⁴ India intends that its offsets policy will promote self-reliance by increasing the content of Indian-developed technology in weapons acquired from abroad and by providing Indian private industry with better opportunities to compete with the much-criticized state-owned producers.⁷⁵ However, critics point out that—as with most offset policies—the new rules will make arms acquisitions more complicated and unclear unless the offsets are limited to direct involvement in the production of the weapons acquired.⁷⁶

Two possible problems can follow from the pursuit of self-sufficiency in the production of advanced conventional weapons: a failure to achieve it, leading to a search for non-conventional alternatives; or a strong need to export. To a large extent a policy of self-sufficiency stands or falls by having adequate finances to back it. A big internal market (e.g. the USA) or strong economy (e.g. the USA, the EU, or Japan) can bear R&D costs without resorting to exports to establish economies of scale. Exports are therefore optional and can, at least potentially, be governed by moral considerations. Other states have to export. Russia and China are clear examples of countries without the internal market or the financial resources to sustain the necessary R&D: therefore they must rely on income from exports. Such a situation can force countries to supply weapons to controversial destinations.

If the example of India is a yardstick, efforts to achieve self-sufficiency are doomed to failure. Realistically, most countries can aspire only to interdependence.⁷⁷ However, if they are unwilling to accept dependency, and

⁷² 'Tanks for India', *Asia-Pacific Defence Reporter*, vol. 36, no. 6 (July/Aug. 2006), p. 12; and Novichkov, N., 'Russia signs new contract with India for MBTs', *Jane's Defence Weekly*, 18 Oct. 2006, p. 6.

⁷³ Offsets are arrangements whereby purchasers, instead of just paying cash for a product, offset some of the cost through counter-trade (barter) or by being directly involved in production. Offsets may also take the form of technology transfers that can be used in development of indigenous products.

⁷⁴ Suman (note 71), pp. 57–61.

⁷⁵ Bedi, R., 'India revises procurement procedures', *Jane's Defence Weekly*, 6 Sep. 2006, p. 20.

⁷⁶ Suman (note 71).

⁷⁷ It is claimed that the much discussed 'revolution in military affairs' offers countries the chance to bypass 1970s and 1980s 'legacy' technologies. While 'piggybacking' on concepts and technologies developed elsewhere (as China does) provides the potential to advance more quickly and with less risk, countries must still acquire large quantities of legacy materiel to meet their military aims. Fish, T., 'Insurgents apply NCW concepts faster than the West', *Asia-Pacific Defence Reporter*, vol. 32, no. 7 (Sep. 2006), p. 18. *Asia-Pacific Defence Reporter*, vol. 32, no. 5 (June 2006), p. 11; and Gompert, D., Lachow, I. and Perkins, J., *Battle-Wise* (National Defense University Press: Washington, DC, 2006), URL <<http://www.ndu.edu/ctnsp/battlewise.htm>>, p. 44.

interdependence is unattainable, they may pursue alternative weapons (e.g. WMD, even when generally accepted as prohibited) or strategies (e.g. asymmetric strategies like terrorism, guerrilla tactics and cyber-warfare) that provide independence as well as a major military impact.

IV. State supplies of arms to rebels

The war between Israel and Hezbollah in Lebanon, the civil war in Somalia and the discussions in the UN on small arms and light weapons and an arms trade treaty all underline the important role that rebel forces play as combatants and as recipients of weapons. SIPRI has for many years recorded supplies of major conventional weapons to rebels and has consistently found that such supplies are marginal in volume or value.⁷⁸ Transfers of SALW to rebels have probably been more extensive but are nevertheless marginal in volume and value in a global, or even regional, context. However, as many past and ongoing conflicts prove, even limited supplies to rebels can have a major impact on local and regional security.⁷⁹ The repeated and often gross violations of mandatory UN arms embargoes show how difficult the issue is to solve.

The supply of arms (and other support) to rebels is not a new phenomenon. It has taken place for as long as there have been arms transfers and played an important role in the proxy wars fought between East and West during the cold war (e.g. US supplies in the 1980s to the mujahedin in Afghanistan and the Contras in Nicaragua, or Soviet deliveries in the 1960s and 1970s to the Vietcong in South Viet Nam).

As with supplies to state recipients, governments often have political or ideological reasons for delivering weapons to rebels, although the prospect of long-term economic gain (e.g. after the rebels gain power) play a role too. However, private suppliers (known as brokers or arms dealers) and some countries mainly have a more immediate profit motive.

The Liberation Tigers of Tamil Eelam in Sri Lanka and many of the rebel forces in West Africa clearly get most of their weapons from unscrupulous private dealers on the 'open market' (paid in some cases with money from private supporters around the world). In some cases rebels get their supplies from a mix of political supporters and profit-seeking brokers. The two most obvious cases of arms supplies to rebels in 2006—to Hezbollah and in Somalia—mainly involved states as suppliers.

The legal status of supplying rebel groups with weapons is debated. Obviously from the point of view of the government against which a rebel group operates, supplies to those groups are illegal. However, the fact that the UN Security Council establishes specific arms embargoes against rebel groups

⁷⁸ Between 1950 and 2006 SIPRI identified 39 rebel groups as recipients. Such transfers accounted for less than 0.1% of all transfers in that period, but are often badly documented in open sources.

⁷⁹ There are also major economic effects. To deal with the rather limited, mainly foreign-supplied inventory of Hezbollah, Israel had to launch an expensive military operation costing an estimated \$6.6 billion, while the cost of disruption of the Israeli economy was estimated to be \$5.5 billion. Ben-David, A., 'Israel revives plan for anti-rocket laser system', *Jane's Defence Weekly*, 6 Sep. 2006, p. 18.

(7 out of 12 UN embargoes in force by 31 December 2006 were specifically against non-state actors) implies that such supplies are not outlawed by default.⁸⁰

Supplying Hezbollah

One of the biggest surprises of the war between Israel and Hezbollah in southern Lebanon in July and August of 2006 was that Hezbollah had over the years built up a much better-armed conventional force than was previously thought.⁸¹ Most of the weapons appear to have been supplied by Iran and Syria. It is argued that Iran supplies Hezbollah because it is in Iran's interest to fight a war by proxy against Israel; either to keep Israel busy, or to be true to the goals of the Islamic Revolution. Iran might also wish to play the role of leader of the Islamic world, either by showing how to deal with the 'Israeli problem' or by standing up for victims of Israeli 'aggression'.⁸²

The 1989 Taif Agreement and several subsequent UN Security Council resolutions have tried to prevent the flow of arms to Hezbollah and other non-governmental forces in Lebanon. However, these were not precisely worded and left room to allow transfers to Hezbollah. For example, in September 2004 the UN Security Council called for the 'disbanding and disarmament of all Lebanese and non-Lebanese militias'.⁸³ Iran, Syria and several Lebanese ministers claimed that Hezbollah was not a 'militia' and that arms transfers to it were therefore not prohibited.⁸⁴ Table 10.4 lists the suppliers of Hezbollah's weapons.

Hezbollah built up its arsenal with systems (mainly rockets) that could be used to attack Israel indiscriminately, and with weapons such as anti-tank missiles and man portable air defence systems (MANPADS)⁸⁵ to deal with the inevitable Israeli counter-attack.⁸⁶ According to Israeli sources, Hezbollah fired 4228 unguided rockets from single- or multiple-rocket launchers against Israel between 12 July and 14 August 2006. Of these, almost 4000 were 122-millimetre rockets with a range of 20–35 km (often called Katyusha) and some 250 larger and longer-range rockets, mostly 220-mm and 320-mm rockets produced in Syria (but probably based on or copies of Russian/Soviet and Chinese designs). The 122-mm rockets could have come from a number

⁸⁰ For a list of United Nations and other internationally agreed embargoes see the SIPRI Arms Transfers Project website (note 2). The issue of legality played a prominent role in UN discussions on small arms and light weapons and the arms trade treaty initiative. See appendix 10C.

⁸¹ For more on this conflict see chapter 2 in this volume.

⁸² Fish, T., 'The long arm of Tehran stirs trouble in Lebanon', *Asia-Pacific Defence Reporter*, vol. 32, no. 6 (July/Aug 2006), p. 5.

⁸³ UN Security Council Resolution 1559, 2 Sep. 2004.

⁸⁴ Schiff, Z., 'Lebanon admits it approved weapons transfer to Hezbollah', *Haaretz*, 26 Feb. 2006.

⁸⁵ For more on MANPADS see appendix 14A in this volume.

⁸⁶ Sand, B., 'After Lebanon, Israel learns new and old lessons', *Asia-Pacific Defence Reporter*, vol. 32, no. 7 (Sep. 2006), pp. 14–16.

Table 10.4. Origin of major conventional weapons used by Hezbollah in 2006

Supplier	Designation	Type	Number	Comment
Iran	C-802	AShM	Few	
	BGM-71 TOW	ATM	..	Including Iranian-produced version
	QW-1	Portable SAM	Few	Iranian-produced Misagh-1 version
	SA-7	Portable SAM	Few	
	SA-14	Portable SAM	Few	
	SA-16	Portable SAM	Few	
	BM-21	Rocket	±4000 used	
	Fajr-3	Rocket	..	
	Fajr-5	Rocket	..	
	Zelzal-2	SSM	..	
Mirsad-1	UAV	Few	Mohajer-4 or Ababil; used in armed role as cruise missile	
Iran/Syria	Metis/AT-13	ATM	100s	
	Konkurs/AT-5	ATM	100s	Including Iranian-produced Towsan-1 version
Syria	AT-3	ATM	100s	Iranian-produced Ra'ad version
	Fagot/AT-4	ATM	100s	
	Kornet/AT-14	ATM	100s	
	..	Rocket (220 mm)	..	Called Ra'ad by Hezbollah; probably a copy or based on the Russian BM-22 (Uragan)
	..	Rocket (302 mm)	..	Called Khaibar-1 by Hezbollah; probably a copy or based on the Chinese WS-1
Unknown	Milan	ATM	Few	

ATM = anti-tank missile; AShM = anti-ship missile; SAM = surface-to-air missile; SSM = surface-to-surface missile; UAV = unmanned aerial vehicle.

Sources: SIPRI Arms Transfers Database and archive.

of suppliers since it is probably the most used and produced artillery rocket worldwide. Despite earlier reports of major deliveries of Iranian rockets to Hezbollah, Israel claims that only one Iranian Fajr-3 rocket could be identified. However, it came as a surprise—not least to the Israeli Navy—when Hezbollah fired what were almost certainly C-802 anti-ship missiles against Israeli naval ships off the Lebanese coast.⁸⁷

There has long been a fear that non-state actors could acquire long-range missiles or other 'strike' systems, allowing them to threaten 'strategic' targets.

⁸⁷ 'Hezbollah'stic examination' [English], *Kommersant*, 23 Aug. 2006, URL <<http://www.kommersant.com/page.asp?id=698954>>; Darling, D., 'Hezbollah's arsenal', *Weekly Standard*, 31 July 2006, URL <<http://www.weeklystandard.com/Content/Public/Articles/000/000/012/481ydesv.asp>>; and Gambill, G., 'Hezbollah's strategic rocket arsenal', *Middle East Intelligence Bulletin*, Nov./Dec. 2002, URL <http://www.meib.org/articles/0211_12.htm>.

In 2006 Hezbollah tried to use several long-range strike systems capable of reaching almost every part of Israel, but these proved militarily ineffective (although they may have had propaganda value). Hezbollah claimed it was in possession of (Iranian delivered) Zelzal-2 surface-to-surface missiles with a range of 300 km, and this was certainly a matter of concern to Israelis living in possible target areas, but only one was reported as used.⁸⁸ Before the conflict Israel had shot down several Hezbollah reconnaissance unmanned aerial vehicles (UAV), and during the conflict Israel claimed to have shot down an armed UAV 'en route to a strategic target'.⁸⁹ However, it only carried an insignificant 10 kilogram explosive warhead, making it a fairly ineffectual weapon.⁹⁰

The USA singled out China for criticism because several of the weapons that Hezbollah received from Iran are produced in China (e.g. the C-802). Some of the equipment that Hezbollah received from Iran and Syria was only recently delivered to these countries, and included Kornet and RPG-29 anti-tank weapons delivered in 1990–1999 by Russia to Syria, and British night-vision equipment supplied in 2003 to Iran for anti-narcotic-smuggling operations.⁹¹ Such diversions of equipment highlight the difficulties in properly administering export controls when post-delivery controls and sanctions for diversion are apparently weak or non-existent.⁹²

During and after the fighting in mid-2006 Iran is reported to have continued supplying weapons to Hezbollah, including portable SAMs.⁹³ However, UN Security Council Resolution 1701 established an embargo on arms transfers to all non-government or non-UN groups in Lebanon, making it illegal to supply Hezbollah.⁹⁴ The embargo forms part of a set of measures to help the Lebanese Government extend full sovereignty over its territory following the conflict in 2006. Disarming Hezbollah and establishing Lebanese Government control over Hezbollah-controlled areas was one of the key Israeli conditions for agreeing to a ceasefire and withdrawal from Lebanon.

Syria has committed itself to curbing the flow of arms over the Lebanon–Syria border to the rebel group.⁹⁵ However, the Lebanese Government, the UN, the USA and other states claim that arms continue to cross the border; charges that Hezbollah admits to be true.⁹⁶

⁸⁸ Blanford, N., 'Hizbullah set for long-term operation', *Jane's Defence Weekly*, 2 Aug. 2006, p. 5.

⁸⁹ 'Accident report updates', *Air Forces Monthly*, no. 224 (Nov. 2006), p. 77.

⁹⁰ Another UAV may have carried a (still insignificant) warhead of up to 50 kg, but it exploded on launch. Opall-Rome, B., 'Israeli missiles down armed Hizbollah UAVs', *Defence News*, 2 Oct. 2006, p. 6.

⁹¹ Sand (note 88), p. 16; King, O. and Sturcke, J., 'Pressure on Beckett over Hizbullah's "British equipment"', *The Guardian*, 21 Aug. 2006.

⁹² On export controls see chapter 15 in this volume.

⁹³ Hughes, R., 'Iran answers Hizbullah call for SAM systems', *Jane's Defence Weekly*, 9 Aug. 2006.

⁹⁴ UN Security Council Resolution 1701, 11 Aug. 2006.

⁹⁵ Williamson, H. and Peel, Q., 'EU to debate arms control call', *Financial Times*, 15 Sep. 2006, p. 5; and UN News Service, 'Syria agrees to help enforce arms embargo on its border with Lebanon, says Annan', 1 Sep. 2006, URL <<http://www.un.org/apps/news/story.asp?NewsID=19697&Cr=Leban&Cr1=#>>.

⁹⁶ 'Bolton: Syria, Iran arming Hizbullah', *Jerusalem Post*, 31 Oct. 2006; Gresh, A., 'Reconcontre avec Hassan Nasrallah' [Meeting with Hassan Nasrallah], *Carnets du Diplo* (Le Monde Diplomatique blog), 7 Apr. 2007, URL <<http://blog.mondediplo.net/2007-04-07-Rencontre-avec-Hassan-Nasrallah>>;

Breaking the Somalia embargo

Prior to December 2006 Somalia was under a complete UN arms embargo. However, there were repeated reports of states supplying weapons to one or more of the Somali factions and all factions also managing to buy supplies on the black market. UN reports from May and November 2006 suggested that these supplies had increased.⁹⁷ The November report alleged that Eritrea, Iran, Libya, Saudi Arabia and Syria, had supplied the Islamic Courts Union (ICU) with arms, while the Transitional Federal Government (TFG) was receiving arms from Ethiopia, Uganda and Yemen. The report noted increases in the number of suppliers, the volume of weapons transferred, and the sophistication of the equipment involved. Transfers from Eritrea, Iran and Syria to the ICU were alleged to include MANPADS; 122-mm, 130-mm and 152-mm artillery systems; anti-aircraft guns; guided anti-tank weapons; and even sophisticated SA-6 SAMs. Not surprisingly, all accused countries denied involvement in any embargo violation.⁹⁸

Other reports claimed large-scale breaches of the embargo and also accused the USA of providing support to the Alliance for the Restoration of Peace and Counter-Terrorism (ARPCT), a loose coalition of warlords formed in February 2006 to counter the growing strength of the ICU.⁹⁹ The USA denied the allegations, but US officials reportedly admitted to providing financial support to the ARPCT, and this may have been used to buy arms.¹⁰⁰ The President of Somalia, Abdullahi Yusuf Ahmed, who is head of the TFG, boasted that despite the embargo he was able to procure weapons for his forces to attack some of the warlords. Moreover, Ethiopian forces have moved into Somalia to support the TFG.¹⁰¹

On 6 December 2006, under pressure from certain regional states,¹⁰² the UN Security Council partially lifted the 1992 UN arms embargo on Somalia to allow for the deployment of a regional intervention force to protect the TFG and for the arming and training of the TFG security forces.¹⁰³ The matter became urgent at the end of 2006 when the ICU had taken control of most of Somalia and seemed poised to overrun even the last strongholds of the TFG. At the same time the USA accused the ICU of harbouring al-Qaeda members.

and Khoury, J., 'Nasrallah admits Iran supplies Hezbollah with arms', *Haaretz*, 4 Feb. 2007 URL <<http://www.haaretz.com/hasen/spages/821548.html>>.

⁹⁷ United Nations, Report of the Monitoring Group on Somalia pursuant to Security Council Resolution 1676 (2006), S/2006/913, 22 Nov. 2006; and Report of the Monitoring Group on Somalia pursuant to Security Council Resolution 1630 (2005), S/2006/229, 4 May 2006. UN documents on the Somali embargo are available at URL <<http://www.un.org/sc/committees/751/index.shtml>>.

⁹⁸ The Nov. 2006 report has been criticized because it depends too much on unidentified 'intelligence sources'. It also includes named weapons such as '2nd generation IR-guided anti-tank weapons' that do not exist.

⁹⁹ Wax, E. and DeYoung, K., 'US secretly backing warlords in Somalia', *Washington Post*, 17 May 2006; and 'Terror in Mogadishu', *Africa Confidential*, vol. 47, no. 11 (26 May 2006), pp. 3–4

¹⁰⁰ 'Terror in Mogadishu' (note 102).

¹⁰¹ On the conflict in Somalia in 2006 see chapter 2 in this volume.

¹⁰² 'Somalia: a threat to the Horn and beyond', *Africa Confidential*, vol. 47, no. 18 (8 Sep. 2006).

¹⁰³ UN Security Council Resolution 1725, 6 Dec. 2006.

By that time Ethiopian troops had already moved into Somalia to support the TFG. The partial lifting of the embargo legalized this presence and allowed US armed actions against the ICU from late-2006. The Arab League as well as a number of non-governmental organizations (NGOs) criticized the move. They argued that the Security Council, by taking the side of the TFG, was prolonging the conflict and damaging the chance of a negotiated settlement (TFG–ICU peace talks had already been scheduled for mid-December 2006), and possibly even causing the conflict to spread to other countries in the region.¹⁰⁴

V. Official arms transfer transparency¹⁰⁵

Official and publicly accessible data on arms transfers are important for assessing the policies of exporters and importers and for holding to account those who are responsible for those policies. However, making data on arms sales and acquisitions publicly available is a sensitive point for nearly all states. Several global and regional mechanisms for the reporting arms sales and arms acquisitions have been in force since the early 1990s, but transparency remains limited.

The UN Register of Conventional Arms

The UN Register of Conventional Arms (UNROCA) remains the key international mechanism of official transparency on arms transfers,¹⁰⁶ and in 2006 there was little change in terms of reporting.¹⁰⁷ As in previous years about 120 countries responded, and substantial information gaps remained in those regions where destabilizing build-ups of weapons through imports might be expected: Africa, the Middle East (where almost all countries never report) and North-East Asia (where China has not reported since 1998, North Korea has never reported and Taiwan is not asked to report). Discrepancies between exporter and importer reports remained as large as ever, while some reports, even from prominent advocates of transparency (e.g. the USA), continued to

¹⁰⁴ Associated Press, 'UN Security Council OKs Somalia forces', 6 Dec. 2006, URL; and Shabelle Media Network, 'Arab League warns the US-backed draft resolution will spark civil war', 5 Dec. 2006, URL <<http://www.shabelle.net/news/ne1815.htm>>.

¹⁰⁵ This section covers official reports on arms transfers available to the public. On intergovernmental exchanges of information, such as occur within the Organization for Security and Co-operation in Europe, the Organization of American States, the Economic Community of West African States and the Wassenaar Arrangement see chapters 14 and 15 in this volume.

¹⁰⁶ The only other global public reporting mechanism where arms transfers are reported to any degree is the UN Commodity Trade Statistics Database (UN Comtrade).

¹⁰⁷ Data reported to UNROCA since 1992 is available at URL <<http://disarmament.un.org/cab/register.html>>. Interestingly, especially with regard to the discrepancies in reporting resulting from the unclearly defined 7 UNROCA categories, the UNROCA was used to define the scope of the UN arms embargo against North Korea, established on 14 Oct. 2006. This embargo covers only UNROCA-defined major conventional weapons, unlike previous embargoes that cover all weapons and equipment intended for use by the military. UN Security Council Resolution 1718, 14 Oct. 2006. On the embargo on North Korea see chapter 15 in this volume.

be sloppy. Nonetheless, the Register again revealed significant information, mainly on countries where official or unofficial open source information is hard to come by. For example, most of the data reported by Ukraine in 2006 was not available in unofficial sources.

The future of the UNROCA was once again discussed by a group of government experts, the fifth review since its inception. As before it was agreed that countries should provide more detailed reports and that more categories of weapons and support systems should be added, as well as acquisitions from national production and data on holdings. However, as with the earlier reviews, reaching consensus on significant changes was held hostage to discussions on the status of WMD in the UNROCA.

The final recommendations were limited, but included changing the weight threshold at which ships must be reported from 750 to 500 tonnes.¹⁰⁸ The fifth review also decided to provide a separate standardized form for SALW reporting,¹⁰⁹ whereas previously countries were simply encouraged to supply data. Lastly, it was agreed that only transfers to or from other UN members should be reported. This should encourage China to resume reporting: since 1998 it has used US reporting of transfers to Taiwan as a justification for not reporting.

The EU Annual Report

In October 2006 the EU published its eighth annual report on the implementation of the EU Code of Conduct on Arms Exports.¹¹⁰ Published on 16 October 2006, the eighth annual report arrived more than two months earlier than previous editions.¹¹¹ In another boost to transparency, information on transfers to countries under an EU arms embargo were placed in a separate section with specific explanations of why exports were approved to these destinations. A table was also provided showing the number of consultations carried out per destination country.¹¹²

EU member states have agreed to submit data to the EU annual report on the value of licences granted, and on actual exports broken down by destination

¹⁰⁸ The original threshold proposed in 1991 was 500 tonnes, but was amended to 750 tonnes in the final resolution that established the UNROCA.

¹⁰⁹ This report, and earlier reports, are available at URL <<http://disarmament.un.org/cab/register.html#item3>>. For a broader discussion of the problems related to improving UNROCA reporting see Wezeman (note 6), p. 5.

¹¹⁰ Council of the European Union, 'Eighth annual report according to operative provision 8 of the European Union Code of Conduct on Arms Exports', *Official Journal of the European Union*, C250 (16 Oct. 2006), p. 3.

¹¹¹ The previous 2 reports were published on 21 Dec. 2004 and 23 Dec. 2005, respectively. All EU annual reports are available at URL <http://www.sipri.org/contents/armstrad/atlinks_gov.html>.

¹¹² Consultations occur when a member state is considering granting an export licence for a transaction which is 'essentially similar' to one which has been blocked by another EU member in the past 3 years. In such cases, the member state which is considering the licence is obliged to consult with the member state that blocked the earlier deal and obtain information about their reasons for doing so.

and EU Military List category.¹¹³ The number of states submitting these data continues to increase. While only five states submitted these data to the sixth annual report (2004), 18 states submitted such data to the 2006 report. Older EU member states (including some with a record of pushing for greater transparency) continue to submit incomplete data. For example, Belgium, Italy, Sweden and the UK all failed to submit data on either export licences or actual exports disaggregated by the categories of the EU Military List. In contrast, all 10 states that joined the EU in 2004 managed to submit these data. This is mainly because the newer member states have recently updated their systems of export control and data collection to comply with the demands of EU accession.

In an effort to harmonize methodologies in the collection and processing of data submitted to the EU annual report, a confidential survey was conducted among member states of current national practices in this area.¹¹⁴ Increases in the amount of data submitted to the annual report represent a significant improvement to the comprehensiveness and comparability of data. Nonetheless, questions remain about the usefulness of financial data for assessing how states are interpreting and applying the criteria of the EU Code of Conduct, the initial rationale behind the annual report.¹¹⁵

Developments in national transparency

Individual reports or official statements from states are another significant source of public information on arms transfers.¹¹⁶ In 2006 28 states produced such reports or statements, including three countries that did so for the first time.

EU membership continues to act as an important driver for increased arms export transparency at the national level. In March 2006, *Slovenia*, a new member of the EU, published its first annual report on arms exports. The report gives information on export and import licences for military equipment, detailing the category of goods involved, the number of items exported, their financial value and their destination. *Bulgaria* published its first report on arms transfers in February 2007 after its accession to the EU in January. The report covers activities in 2005 and provides information on the number of export and import licences granted and used, their financial value, and the categories of equipment covered, broken down by recipient or supplier country. The aspiration of future EU membership also encourages greater transparency. *The Former Yugoslav Republic of Macedonia* (FYROM) published its first annual report on arms exports in June 2006. It contains detailed

¹¹³ 'Common Military List of the European Union (equipment covered by the European Union Code of Conduct on Arms Exports) adopted by the Council on 27 February 2006', *Official Journal of the European Union*, C66 (17 Mar. 2006), pp. 1–28.

¹¹⁴ Council of the European Union (note 114), p. 3.

¹¹⁵ See Bauer and Bromley (note 6).

¹¹⁶ All publicly available national reports on arms transfers are available at URL <http://www.sipri.org/contents/armstrad/atlinks_gov.html>.

information on all arms export and transit licences, including a description of exported goods, the number of units exported, the recipients and the type of end-user.

Aside from EU member states, few countries produce national reports on their arms exports. In 2006 Australia published its first such report since February 2003, providing arms export data for the period July 2002 to June 2004. However, Canada and South Africa again failed to release arms export reports, meaning that for both states the most recent available data covers arms exports during 2002.

VI. Conclusions

The trend of increasing transfers of major conventional weapons first visible in the early 2000s continued in 2006. Despite this growing demand, the market remains a buyers' market where importers are able to play-off different suppliers against one another, not only to get better financial arrangements but, more significantly, to obtain advanced weapons and technology. This seems to undermine efforts to prevent the spread of certain types of weapons that are viewed as more 'aggressive' and destabilizing.

European-US arms trade relations took a turn for the better with the resolution of technology transfer issues related to the JSF. The US agreed in principle to share with all JSF partners much or all of the advanced US technology involved, taking the sting out of a heated European-US debate and boosting trust in Euro-Atlantic cooperation and interdependence.

Russia managed—despite continuing doubts over its ability to develop new generations of weapons—to land several large contracts in new and existing markets. However, in general these were still based on technology and designs from the cold war period. Russia's willingness to supply arms to Iran and Venezuela despite strong US pressure not to do so should also be noted.

Several states in the Middle East have during the past ten years imported large amounts of weapons, including many long-range strike weapons. Oil-producing countries, in particular in the Middle East, could—thanks to continuing high oil and gas prices—afford the luxury of additional major equipment acquisitions.

While much attention has been given to Russian arms sales to Iran and Syria, the Gulf states and Israel have imported much more, and Saudi Arabia has signed major deals with France, the UK and the USA, dwarfing Russian sales. All this weaponry is once more accumulating in a region considered to be extremely volatile.

At the global level, public transparency on arms transfers is still patchy and inconsistent. Many recipient states in areas of conflict or tension are not transparent to any degree about their arms acquisitions. Reports or statements on arms transfers or acquisitions still come mainly from Western states. However, most of these focus on financial data and often do not provide information on the types of equipment or weapons transferred, meaning that they

are not the most useful data when analysing the impact of arms transfers. Transparency is, however, slowly on the increase and may benefit from discussions on an arms trade treaty.¹¹⁷

¹¹⁷ See appendix 10C.