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The arms trade in the 1990s: changing patterns, rising dangers

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Analysts of the conventional arms traffic have long understood that international trading patterns are closely related to developments in the world security environment, with changes in the global correlation of forces producing corresponding shifts in the worldwide flow of arms. It should not be surprising, then, to find that the end of the Cold War and the break-up of the Soviet Union have been accompanied by dramatic changes in the character and direction of the global arms traffic. Whereas arms once flowed in great plenty from the USSR to its allies in Eastern Europe and the developing world, today the outflow from the former Soviet Union (FSU) is significantly reduced. Other cold-war trade patterns have also been disrupted, producing a generalised decline in the dollar value of international arms transfers. At the same time, however, we have seen the emergence of new arms trade patterns that reflect the altered power relationships of the post-cold war era. As these new power relationships transform world politics in the years ahead, the arms traffic will continue its own evolution, resulting ultimately in a complete transformation of global trading patterns.

To appreciate the extent of this transformation fully, it is first necessary to review the arms trade system of the cold-war era. For much of this period, from the early 1960s to the late 1980s, the global arms traffic was largely governed by the competitive practices of Washington and Moscow. Eager to establish and maintain close military ties with the rising powers of the Third World, the two superpowers offered increasingly sophisticated arms to those regimes willing to align themselves with one or the other of the major blocs. As a result, arms supplied by the two superpowers (and by their close allies) constituted a large share of the global weapons flow: according to the US Arms Control and Disarmament Agency (ACDA), US and Soviet arms accounted for 65% of the total worldwide weapons traffic in 1972–88 (when measured in dollars), while those provided by all NATO and Warsaw Pact countries combined accounted for around 90% of the traffic during this period.[1]

The Cold War competition between Washington and Moscow also governed the direction and composition of the arms flow during this period. In their pursuit of Third World allies, the superpowers concentrated their arms-supply activities in a number of major areas considered pivotal to the global correlation of forces—most notably the Middle East, South Asia and East Asia. As a result, the

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great bulk of the weapons transferred internationally during this period as delivered to a number of key states in each of these regions, including Algeria, Egypt, Ethiopia, India, Iran, Iraq, Israel, Libya, Pakistan, Saudi Arabia, Syria, Taiwan, Turkey and the two Koreas. Together, these key states (along with favoured allies like Cuba and Vietnam) accounted for some three-quarters of all arms transfers during this period. In seeking to maintain their friendly ties with these states, moreover, the superpowers provided them with major combat systems—tanks, fighter planes, missiles, and so forth—of increasing sophistication, thus generating the high dollar values for global arms transfers in the late 1970s and the 1980s.[2]

Cold-war patterns influenced other aspects of the global arms traffic. As part of their efforts to gain influence and retain allies in the Third World, Washington and Moscow often took sides in regional conflicts, supplying their local partners and surrogates—which could be states or insurgent forces—with immense quantities of modern weapons. This accounts for the prominence in arms transfer statistics of such recipients as Angola, Afghanistan, Cuba, El Salvador, Ethiopia, Mozambique, Nicaragua, North and South Korea, and North and South Vietnam—all of which figured significantly in the overseas military and political activities of the two superpowers. In some cases, the competitive arms-supply behaviour of Washington and Moscow also fuelled local arms races, with each side in these rivalries turning to their superpower patrons for arms of increasing lethality and sophistication.[3] As a result, the arms inventories of such states as Egypt, India, Iran, Iraq, Israel, Pakistan, Saudi Arabia and Syria increasingly came to resemble those of the front-line powers in NATO and the Warsaw Pact.

Together, these various patterns constituted what might be called the cold-war paradigm of global arms trafficking. To summarise, this paradigm entailed: (1) the overwhelming dominance of the two superpowers (and their respective allies) over the global arms flow; (2) the primacy of ideological and geopolitical factors in determining the recipients of arms; (3) the emergence and acceleration of regional arms rivalries in key Third World areas; and (4) a preference, on the part of leading recipients, for transfers of sophisticated front-line combat systems. The durability and vitality of this paradigm is clearly evident in the statistics on arms trafficking, which show a more-or-less continuous increase in the quantity and quality of weapons supplied by the superpowers to their respective allies during the four decades of the Cold War.

It is now evident, however, that this paradigm has largely dissipated. The USSR/Russia has seen its arms export orders drop from about $18 billion per year in the late 1980s to $3 billion in the early 1990s (in constant 1993 dollars), a decline of 83%.[4] Even more striking, a number of major arms recipients in the 1980s, including Afghanistan, Angola, Cuba and Vietnam, have virtually dropped off the charts of major recipients in the 1990s.[5] Statistics on the arms trade also show a sharp decline in transfers of major combat systems, especially tanks, heavy artillery pieces and supersonic combat planes. As a result of these, and related developments, total world arms transfers (as tallied by the ACDA) dropped from an average of $66 billion per year in the

late 1980s to $50 billion in 1990, $32 billion in 1991, $25 billion in 1992 and $22 billion in 1993 (in current dollars).[6]

Some analysts have chosen to interpret this data as a simple contraction in the arms trade, with deliveries proceeding more-or-less as before but at reduced levels of arms and dollars. However, such analyses miss the main point: the arms trade has not simply evolved into a smaller version of its old self, but has changed into something new, producing a new paradigm of arms trafficking. This new post-cold war paradigm is not yet as fully delineated as was the cold-war paradigm, but its essential features are gradually becoming evident. These include: (1) the unrivaled dominance of the USA in the global arms traffic; (2) the primacy of economic (as against ideological and geopolitical) motives for arms exports; (3) the emergence of new arms rivalries in East Asia and the expansion of existing markets in a number of other areas; (4) a focus on internal (as against external) defence in the selection of arms by many states; (5) the growing salience in the arms trade of sectarian militias, insurgent groups, black-market dealers and other non-state actors.[7]

These factor are evident, to some degree, in the publicly available data on global arms transfers. The sharp decline in Soviet/Russian exports has already been noted, but this must now be juxtaposed to the growing prominence of US exports in the global supply picture. While the USA and the USSR accounted for 21% and 37%, respectively, of total Third World arms orders in the 1987–90 period, the US share jumped to 48% in 1991–94.[8] The growing prominence of East Asia in the global arms traffic is also evident in the statistics: according to the Congressional Research Service (CRS) of the US Library of Congress, Taiwan, South Korea, China, Malaysia and Singapore all figured among the Third World's top ten arms recipients in the 1991–94 period (ranked numbers 2, 5, 6, 7 and 10, respectively), while *none* of them appeared on this list in the 1987–90 period.[9] Information on the particular arms requirements of major recipients is less easily acquired, since the principal sources of data on arms transfers (including ACDA and CRS) list exports of major weapons only; however, anecdotal evidence suggests an increased demand for internal security and counter-insurgency systems in countries experiencing ethnic and insurgent conflict.

To some extent, these shifts in trading patterns reflect structural factors inherent in the demise of the Cold War itself. The sharp decline in Soviet/Russian exports, for instance, is a direct consequence of the fact that Moscow no longer possesses the resources or the inclination to subsidise massive arms shipments to its overseas allies. By the same token, once significant recipients like Afghanistan, Angola, Cuba, Mozambique and Vietnam can no longer count on heavily subsidised arms deliveries from the Soviet bloc. The collapse of the Soviet system has also allowed former allies like Poland, the Czech Republic and Hungary to shop in the West for major military systems. Likewise, the end of cold-war procurement patterns within NATO (which had generated a steady stream of domestic orders for US and Western European military contractors) has forced many arms firms to seek new markets in Eastern Europe and the Third World.

Alongside these structural factors, however, one can see the impact of deeper

shifts in the international system—shifts that have been described as 'tectonic' by some analysts because of the profound and long-lasting nature of their effects. These include (but are not limited to): the globalisation of the market economy; a pronounced shift in the centre of gravity of global economic activity from the North Atlantic region to East Asia and the Pacific; a generalised decline in the ability of most nation-states to satisfy the rising expectations of growing populations and to balance the competing demands of various groups within the population; the growing vigour and importance of political movements based on ethnic, religious, tribal and linguistic ties; and a growing imbalance between resources and population in many underdeveloped areas.[10] While the full effects of these phenomena may not be apparent yet, it is already evident that they are having a substantial impact on world politics—and, in particular, on the global flow of weapons.

Of these effects, the most significant can be attributed to economic factors. On one hand, many Third World nations that were conspicuous buyers of sophisticated arms in the 1970s and 1980s now find themselves encumbered with mountains of debt and, as a result, have been forced to cut back on government spending of all types, including military spending. On the other hand, growing prosperity in East and Southeast Asia has been accompanied by an increase in military spending throughout the region, along with increased investment in imported arms. A decline in the international price of many raw materials—including oil—has also affected the arms trade, as states that rely on exports of such products as a major source of income have had to cut back on military purchases.

Long-term political trends have also had an impact on the arms trade. The decline in the state's ability to satisfy popular expectations, along with the growing assertiveness of ethnic, religious and tribal forces, has led to an increase in political and sectarian disorder in many countries—and this, in turn, has led many governments to beef up their internal security and counter-insurgency capabilities. As a result, spending on imported tanks, planes, and other front-line systems has declined in many areas, while purchases of infantry weapons, counter-insurgency gear and anti-riot devices have increased. By the same token, stepped-up military activity by insurgents, separatists and private militias has led to an increase in black-market arms trafficking, as such groups are normally excluded from normal trade channels and must rely on illicit, underground sources.[11]

These phenomena, along with other manifestations of global tectonic pressures, are systematically transforming the conventional arms trade. As the nature of conflict has changed in response to the new international environment of the post-cold war era, so, too, has the nature of the arms flow to areas of warfare and tension. This transformation is not always evident in the arms trade statistics published by various organisations, but its effects can be seen in media coverage of the various conflicts now raging around the world. To assess the contemporary arms trade fully, therefore, it is necessary to draw on a wide range of sources. This approach is employed in the following discussion, which examines three key parameters of this trade: the suppliers of arms, the various recipients and the commodities most in demand.[12]

TABLE 1
Arms transfers to the Third World by major suppliers, 1987–1994 (millions of constant 1994 US dollars)

	1987–1990		*1991–1994*	
Supplier	*Value of arms transfers*	*% of total 3W transfers*	*Value of arms transfers*	*% of total 3W transfers*
USA	40 831	21	50 726	48
USSR/Russia	70 266	37	13 694	13
France	11 997	6	22 466	21
UK	28 026[a]	15	5 300	5
China	13 418	7	2 193	2
Germany	3 688	2	2 756	3
Other European	11 612	6	4 708	4
All others	10 565	6	4 599	4
Totals	190 403	100	106 442	100

[a]Includes the $15 billion 'Al-Yamanah' contract with Saudi Arabia, covering many weapons to be delivered over a 10-year period.
Source: Congressional Research Service, *Conventional Arms Transfers to Developing Nations, 1987–1994*, Washington, DC 1995, p 50.

Suppliers

Until 1990 the USA and the USSR jointly dominated the global trade in arms, with the USSR sometimes in first place and the USA sometimes ahead; together, the two superpowers usually accounted for about 60% of the total world arms traffic. Following somewhat behind them, with about 5%–10% of the traffic each, were the UK, France and West Germany. Significant contributions to the arms flow were also made by a number of other European nations, including Czechoslovakia, East Germany, Hungary, Italy, the Netherlands, Poland, Spain, Sweden, Switzerland and Yugoslavia. In the 1980s, moreover, sizeable quantities of arms were contributed by Brazil, China and Israel. Together, these countries supplied most of the arms transferred internationally in the cold-war era, including virtually all the aircraft, tanks, missiles and warships.[13]

Today, in the post-cold war era, we see a very different picture. As noted earlier, Russia and the other successor states of the Soviet Union now account for a much smaller share of the arms traffic, while the USA claims a significantly larger share. According to the CRS, Soviet/Russian sales to the developing nations declined from $70.3 billion in 1987–90 to $13.7 billion in 1991–94 (in constant 1994 dollars), a decline of 80%; by contrast, US sales rose during this period from $41 billion to $51 billion, an increase of 24%. With total orders by the developing countries in 1991–94 amounting to an estimated $106.5 billion, this means that the USA controlled 48% of the Third World market during this period, while the USSR/Russia claimed only 13% (see Table 1).[14]

Many factors account for this shift in the relative market position of the USA and the USSR/Russia. Russian sales have suffered because of Moscow's loss of a captive market in Eastern Europe and its inability to continue subsidising sales to cash-poor allies in the Third World. Russia has also had difficulty in securing

new orders from more affluent countries because of widespread doubts over the ability of its disintegrating military–industrial complex to provide spare parts and specialised maintenance for the weapons it sells. The USA, on the other hand, has reaped considerable benefit from its status as the victor in both the Cold War and the Persian Gulf conflict. Nations that seek the latest in military technology—and that possess the necessary funds or credits—have tended to acquire US weapons whenever possible. This is particularly true of Saudi Arabia, Kuwait, the United Arab Emirates (UAE) and other nations that were allied with the USA during Operation Desert Storm and continue to rely on US troop support for defence against Iran and Iraq.[15]

With domestic US military spending undergoing a significant decline as a result of the Cold War's demise, US arms producers have worked assiduously to increase their sales to overseas markets. Aided, in many ways, by the federal government, these firms have lined up major sales to traditional customers in Europe, Asia and the Middle East, and begun to attract new customers in these and other areas.[16] According to the Arms Control Association, the United States sold at least $1 billion worth of arms in the 1990–95 period to 18 countries, including Egypt (total purchases: $4 billion), Greece ($3.8 billion), Israel ($4.7 billion), Japan ($2.8 billion), Kuwait ($8.2 billion), Malaysia ($1.6 billion), Saudi Arabia ($33 billion), Singapore ($3.5 billion), South Korea ($5.8 billion), Taiwan ($9.8 billion), Thailand ($2.2 billion), Turkey ($5.7 billion) and the UAE ($1 billion).[17] In addition, Washington has begun to attract new customers in Eastern Europe, once the exclusive preserve of the Soviet Union.[18] Moscow, on the other hand, has seen a significant contraction in its list of major recipients: only India, Iran and Syria among its traditional customers have placed major orders for Soviet/Russian equipment in the post-cold war era, while its only new customers have been China (which resumed buying Russian equipment in 1993, after a 30-year hiatus) and Malaysia (which ordered 18 Mig-29 fighters in 1994).[19]

A similar picture has governed sales by the major arms suppliers of Europe: the Western European powers, benefiting from their participation on the winning side in the Cold War and the Gulf War, have largely prospered in the post-Cold War era; the Eastern European countries, as with the FSU, have experienced a significant decline in military sales.

The two most conspicuous European exporters have been Britain and France. Both of these countries produce weapons of the types used in quelling Iraq, and both have vigorously promoted foreign sales to make up for a post-cold war decline in domestic military spending. The two have met with particular success in the Persian Gulf area, securing major orders for ships, aircraft, missiles and armoured vehicles with Saudi Arabia, Oman, Qatar and the UAE. France has also sold submarines to Pakistan and Mirage jet fighters to Taiwan, while Britain has sold Hawk fighters to Indonesia and Malaysia.[20] As a result of these and other sales, these two countries jointly account for about one-quarter of all arms sales to the developing nations.[21]

Germany has also prospered in the new political and economic climate of the post-cold war era. Noted especially for its sales of submarines and frigates, it emerged as a major supplier of advanced military systems in the 1990–94

period; however, as many of its sales were to other European nations, it does not rank as high as Britain and France in sales to the developing nations.[22] Several other Western European countries, including Italy, the Netherlands, Spain, Sweden and Switzerland, have also secured considerable income from military exports in the 1990s, although generally at lower levels than in the 1980s. Canada—a NATO member and a close ally of the USA—has also performed relatively well in the 1990s.

Many other suppliers, however, have suffered in the new environment. The Eastern European countries—no longer bound together in the Warsaw Pact—have experienced a particularly sharp drop in military exports, with sales by Bulgaria, the Czech and Slovak republics, Hungary, Poland and Romania down by as much as 90% (or more) from their cold-war levels. China has also experienced a sharp drop in arms exports: according to the CRS, its sales to the developing nations dropped from $13.4 billion in 1987–90 to $2.2 billion in 1991–94, a decline of 84%.[23] Much of the slump in Chinese sales can be attributed to the loss of two key customers, Iran and Iraq. Iran, which relied on China for much of its military equipment during the 1980–87 war with Iraq, has since turned to Russia for needed supplies; Iraq, which also relied on China in the 1980s, is still subject to a UN trade embargo. China has also had difficulty in finding new customers for its military products, which tend to be less sophisticated than those offered by Russia and the major Western suppliers.[24]

In general, the smaller military producers have experienced a decline in their military exports since the end of the Cold War. Suppliers like Argentina, Austria, Belgium, Brazil, Chile, Egypt, Israel and North Korea have found fewer customers for their products in the new era, or have been hurt by competition with the major suppliers. In response, many of these countries have scaled back or abandoned efforts to produce major weapons systems like tanks and aircraft, and have chosen instead to concentrate on the manufacture of counter-insurgency systems and other light weapons that remain in demand in many parts of the world. This has often resulted in a sharp drop in the dollar value of their exports, but has provided continuing business for at least some of their arms-producing companies.[25]

One distinct group of small military suppliers that has *not* suffered in the post-Cold War era is that comprised of black-market dealers. With the demand for illicit arms growing in many war-torn areas, especially those (like Bosnia) subject to UN arms embargoes, the world's black-market suppliers have been working overtime to provide the desired equipment. According to *The Economist*, the belligerents in Bosnia obtained some $2 billion worth of arms through black-market channels in 1993,[26] and such sales continued at a brisk pace in 1994 and 1995.[27] Insurgent forces in Angola, Colombia, Liberia, Burma, Rwanda, Somalia, Sri Lanka, Sudan, Tajikistan and elsewhere have also added to the demand for black-market arms.[28]

Recipients

The demand side of the arms trade equation has also experienced considerable realignment since the Cold War's demise. For most of the cold-war era, a large

share of the global arms traffic was accounted for by a dozen or so Third World countries with close ties to one or the other of the two superpowers: Egypt, Iran, Israel, Kuwait, Saudi Arabia, South Korea, South Vietnam, Taiwan, Thailand and Turkey in the case of the USA; Afghanistan, Algeria, Angola, Cuba, India, Iraq, Libya, North Korea, North Vietnam and Syria in the case of the Soviet Union. Together, these countries generally received about three-quarters of all arms transferred to Third World countries during these decades. Another large portion of the arms trade was accounted for by intra-alliance transfers between members of NATO and the Warsaw Pact.[29]

Two major systems of finance sustained the arms trade during this period: the military aid programmes of the two superpowers and the newly acquired wealth of the Middle Eastern oil producers. In their mutual efforts to attract and retain allies in strategically important areas of the Third World, both superpowers provided billions of dollars' worth of arms and military services to favoured allies and clients. According to the US Department of Defense (DoD), total US military assistance (grants and credits) to foreign governments between 1950 and 1989 amounted to $128 billion (in current dollars);[30] no such data is available on Soviet military grants and credits, but it is reasonable to assume that such aid reached similar proportions. Of equal importance to the financing of military sales was the vast increase in arms purchases by the oil producers of the Middle East, beginning after the OPEC price rises of the early 1970s. According to the ACDA, total arms imports by the OPEC countries rose from $370 million in 1970 to $10.3 billion in 1979 and $20 billion in 1984 (in current dollars).[31]

The end of the Cold War and the new economic realities of the post-cold war era have produced significant changes in the financing and distribution of arms transfers. The FSU stopped providing military aid to its overseas allies in 1990, and since then there has been a sharp drop in arms imports by states such as Angola, Cuba, North Korea and Vietnam that had long been dependent on Moscow for their military hardware. The transition to non-communist rule and general economic adversity have also constrained arms purchases by the former Warsaw Pact countries. Similarly, the decade-long decline in oil prices has significantly inhibited arms spending by the OPEC countries, including Algeria, Iran, Libya and Saudi Arabia.[32] This, plus the defeat in 1991 of Iraq (one of the world's leading arms importers in the 1980s), has led to a significant decline in arms transfers to the Middle East, from an estimated $92.7 billion in 1987–90 to $58.1 billion in 1991–94 (in current dollars).[33]

Economic hardship, declining levels of superpower aid, and mounting levels of debt have also inhibited arms transfers to other regions. Sub-Saharan Africa has been particularly hard hit by economic adversity, producing a sharp decline in arms imports. According to the CRS, arms transfers to the region fell from $12.5 billion in 1987–90 to $2.1 billion in 1991–94, a decline of 84%. Latin America has not suffered quite so severely, but efforts to stimulate investments in the private sphere through cutbacks in government outlays—prompted, in large part, by structural adjustment programmes imposed by the World Bank and the International Monetary Fund—have also taken their toll on military spending, with total arms imports dropping from $12.1 billion in 1987–90 to $3.5 billion in 1991–94.[34]

TABLE 2
Leading recipients of conventional arms in the Third World, 1987–1994 (millions of current US dollars)

Rank order	*1987–1990*		*1991–1994*	
	Recipient	*Arms orders*	*Recipient*	*Arms orders*
1	Saudi Arabia	45 700	Saudi Arabia	30 200
2	Afghanistan	10 900	Taiwan	8 100
3	Iraq	10 500	Kuwait	5 700
4	Iran	10 200	Egypt	4 800
5	Egypt	6 500	South Korea	4 800
6	Cuba	6 000	China	4 500
7	Angola	5 800	Malaysia	2 800
8	Vietnam	5 700	Iran	2 700
9	Syria	5 600	Pakistan	2 200
10	India	5 400	Singapore	1 700

Source: Congressional Research Service, *Conventional Arms Transfers to Developing Nations, 1987–1994*, Washington, DC, 1995, p 58.

In East and Southeast Asia, however, economic and political conditions have proved largely favourable to the arms traffic. With growing income from foreign trade, and a new commitment to military modernisation, the nations of the area have invested large sums in the acquisition of modern weapons—particularly high-tech conventional weapons of the sort used by the USA and its allies to subdue Iraq in the Gulf War of 1991. Continuing tensions between China and Taiwan, China and its southern neighbours, and the two Koreas have also contributed to the demand for arms. According to the CRS, total arms spending by the nations of Asia remained at cold-war levels in the 1990s—the only area where this has proved to be the case.[35] Many of these countries, moreover, have risen to the top ranks of arms recipients in the post-cold war era (see Table 2).

Particularly striking is the increase in arms spending by China and its neighbours to the south and east. Despite growing trade and cultural contacts between China and Taiwan, officials in Beijing continue to threaten military action in response to any future moves by Taipei to assert Taiwan's sovereign independence from the mainland. Beijing has also threatened to employ military force in asserting its control over the Paracel and Spratly archipelagos—a group of small islands in the South China Sea that are subject to competing claims by Brunei, China, Malaysia, the Philippines, Taiwan and Vietnam. These threats, coupled with China's continuing investment in modern military systems, have produced a vigorous arms race in the region, involving all the countries mentioned above plus Indonesia, Singapore and Thailand (see Table 3).[36]

The growing demand for modern military systems in East and Southeast Asia has produced what some observers have termed an 'arms boom' in the region.[37] 'Due to the complex interaction of geography, politics, and economics', William Schneider of the State Department's Defense Trade Advisory Group noted in 1994, 'the Asia–Pacific region is a particularly strong market for aerospace defense products.'[38] Anticipating steady increases in military spending by the newly-industrialised countries (NICS) of Southeast Asia, US and European arms

TABLE 3
Selected major arms purchases by East Asian countries since 1990

Recipient	*Quantity and item*	*Supplier*
Burma	24 A-5M Fantan fighters	China
	10 F-7M Airguard fighters	China
China	26 Su-27 'Flanker' fighter planes (plus 24 more ordered in 1995)	Russia
	7 Il-76 'Candid' transport planes	Russia
	(4) 'Kilo'-class submarines	Russia
Indonesia	39 ex-East German warships of various types	Germany
	24 Hawk 100/200 trainer/ground attack aircraft	Britain
Malaysia	18 MiG-29 'Fulcrum' fighters	Russia
	28 Hawk 100/200 fighter/trainers	UK
	2 Leiku class frigates	UK
	8 F/A-18D fighters (with option on 10 more)	USA
Singapore	18 F-16C Falcon fighters	USA
	(48) Hawk missile systems	USA
South Korea	120 F-16 fighter planes	USA/local[a]
	8 P-3C Orion maritime patrol planes	USA
	80 UH-60 Blackhawk helicopters	USA/local[a]
	3 Type 209 submarines	Germany/local[a]
Taiwan	60 Mirage 2000-5 fighters	France
	6 LaFayette-class frigates	France
	150 F-16 Falcon fighter planes	USA
	12 C-130H Hercules transport planes	USA
	4 E-2C Hawkeye early-warning aircraft	USA
	6 FFG-7 Perry-class frigates	USA/local[a]
Thailand	2 Naresuan-class frigates	China
	6 G-222 transport planes	Italy
	18 F-16 Falcon fighters	USA
	3 E-2C Hawkeye early-warning planes	USA

Note: Parentheses indicate estimate; [a] indicates some local production
Source: SIPRI *Yearbook 1995* plus newspaper articles

producers have flocked to the Asian Aerospace exposition in Singapore and to other regional 'arms bazaars' to exhibit and sell their products. To assist US firms in their marketing efforts, the DoD also sent some of its weapons to the 1994 and 1996 Singapore expositions, including B-2 bombers, F-16 fighters and AH-1 attack helicopters.[39]

Aside from the East and Southeast Asian nations, several other countries have emerged as major arms recipients in the post-cold war era. Particularly noteworthy is the arms build-up in Greece and Turkey, a product of growing friction between the two over Cyprus and the control of contested islands in the Aegean Sea. Using data collected by the United Nations (through its Register of Conventional Arms), the British–American Security Information Council reported in 1994 that the two countries together had acquired 2 822 tanks and 1 084 armoured troop carriers from the USA and Germany in 1992–93, along with large numbers of artillery pieces, helicopters, ships and missiles.[40] Another ascending recipient is Pakistan, which seeks to compensate for its numerical inferiority *vis-à-vis* India by acquiring a host of modern weapons from foreign

suppliers—including Mirage jets, Exocet missiles and Agosta submarines from France. This, in turn, is prompting fresh weapons purchases by India, which until recently had sought to curb its arms spending in order to release funds for other purposes.[41]

The 1990s have also witnessed the emergence of another group of major arms recipients: the growing number of states threatened by ethnic, insurgent or criminal violence. These states—among them, Afghanistan, Angola, Sri Lanka, Georgia, India, Indonesia, Burma, Peru, Sri Lanka and Sudan—have acquired large quantities of small arms, light infantry weapons, helicopters, and other systems intended for internal security operations. The government of Sri Lanka, for instance, has sought additional weapons for its continuing campaign against the Liberation Tigers of Tamil Elam (LTTE), while Indonesia has sought new arms for operations against independence forces in East Timor, and the Sudanese have geared up for a fresh drive against anti-government forces in the south. These, and other such endeavours, have generated a continuing demand for light and medium weapons.

Although, in general, the weapons flow generated by internal and ethnic conflict has not significantly affected the annual figures on global arms trafficking, it has, in some instances, had a significant impact on regional trade patterns. Angola provides a particularly salient case in point. In the 1970s and 1980s, the country was torn by a civil war in which the major belligerents—the Popular Movement for the Liberation of Angola (MPLA) and the National Union for the Total Independence of Angola (UNITA)—received substantial military aid from the two superpowers and their allies; in 1989, however, the superpowers agreed to disengage from the Angolan conflict and then persuaded the MPLA and UNITA to negotiate a peace accord and hold unsupervised elections. In line with these developments, the arms flow to Angola experienced a sharp decline, dropping from $2.2 billion per year in the late 1980s to $53 million in 1991 and $10 million in 1992.[42] When, however, the 1992 elections resulted in a victory for the MPLA, UNITA reverted to armed combat and the MPLA-led government commenced a major expansion of its military forces—ordering an estimated $3.5 billion in new weapons in 1993–94 and making Angola the leading recipient of arms in sub-Saharan Africa during this period.[43]

The impact of internal conflict on regional arms statistics in also evident in Latin America, where Colombia has intensified its fight against the drug cartels, and in Southeast Asia, where Burma has launched repeated offensives against ethnic separatists and local drug lords. According to the ACDA, Colombia received $344 million worth of arms in 1991–93, more than any other nation in South America, while Burma acquired $675 million in arms, more than any other country in the region save Thailand.[44]

Internal conflicts of this sort have also enhanced the relative importance in the arms traffic of non-state actors, including such groups as UNITA, Turkey's Kurdistan Workers Party (PKK), the Tamil Tigers and Colombia's narco-traffickers. Although no data is available on the dollar value of these groups' arms acquisitions—most of which are conducted through black-market channels—they can be quite substantial. UNITA, for instance, is believed to have spent hundreds of million dollars on black-market arms in 1992–94, using income

derived from illicit diamond sales.[45] The PKK is also thought to have acquired large stockpiles of light weapons from black-market sources, using cash generated by the sale and transit of illegal narcotics.[46] In Liberia, the forces of Charles Taylor seized a large swathe of rural territory and used funds obtained through the sale of lumber and other natural resources to procure substantial quantities of arms and ammunition.[47] These, and other forces of this type, are likely to remain major recipients of small arms and light weapons in the late 1990s and early years of the 21st century.

Commodities

In accordance with the various shifts noted above, there has been a significant transformation in the composition of the arms trade, in terms of the types of weapons and combat systems sought by major recipients. Previously, in the 1970s and 1980s, the arms flow was composed to a large extent of major weapons systems—notably tanks, armoured infantry combat vehicles (AICVS), fighter planes, gunships and combat ships. Other types of equipment were also delivered during these years, but the preference for major weapons systems is a distinctive feature of this period—accounting, in large measure, for the high dollar value of global arms deliveries.

Although some states still seek—and can afford—large numbers of major combat systems, the trade in such items has declined significantly since the end of the Cold War. According to the CRS, Third World countries acquired only 3 577 tanks and self-propelled guns in 1991–94, as compared to 5 602 in the 1987–90 period. Similarly, deliveries of AICVS and armoured cars dropped from 9 328 to 4 659, of supersonic combat aircraft from 1 273 to 660, and of combat vessels (surface ships and submarines) from 368 to 176.[48] Transfers of other major systems, including heavy artillery pieces and surface-to-air missiles (SAMS), have also declined since 1990. This, in turn, has contributed to the sharp decline in the dollar value of international arms transfers.

Several factors have been responsible for the decline in deliveries of major combat systems. Especially significant, of course, is the cessation of Soviet military assistance and the deterioration of economic conditions in many arms-seeking Third World countries. The fact that so many countries added to their arms inventories in the 1970s and 1980s—satisfying basic requirements for many types of weapons—also mitigates against the acquisition of similar systems in the 1990s. But other key factors are also at work. The growing cost of advanced weapons systems—many of which incorporate costly new materials and components not available until the late 1980s—has made it difficult for even the wealthiest of nations, including the USA and the major European powers, to replace older models with equal numbers of new weapons. Instead, governments seek to compensate for a decline in the total number of weapons through acquisition of fewer numbers of more capable systems. The USA, for instance, will replace existing F-15 Eagle fighters with the more advanced F-22 on a roughly one-for-two basis, hoping that the greater stealth, speed and sophistication of the F-22 will endow the Air Force with gross combat power equivalent to that of the existing fleet of older planes. Similar calculations govern the

procurement plans of other states in the market for new combat systems, leading to a diminished demand for new tanks, aircraft and ships.

The growing cost of new weapons systems has also made it attractive for states to retain existing military platforms (that is, tank chassis, aircraft frames, ship hulls and so forth) and to upgrade them with new guns, radars, communications and fire-control systems. Because platforms are generally made to last for several decades (while their armaments and electronics often become obsolete in a much shorter period), it is often possible to increase the effectiveness of existing systems by replacing outmoded components with newer and more capable variants. Indeed, enterprising arms firms in a number of countries, especially Israel and Singapore, have developed a specialisation in the 'retrofitting' and modernisation of older US and Russian/Soviet combat systems. This, naturally, has depressed the demand for new weapons platforms but also generated a strong demand for advanced guns, radars and components of all types.[49]

Despite all this, a number of well-off countries in the Middle East and Asia continue to seek major systems of various types, including jet aircraft, armoured vehicles, warships and guided missiles. To the degree that their finances allow, these countries tend to seek late-model systems of the sort used by the USA and its allies to defeat Iraq in the Persian Gulf conflict of 1991. Kuwait, for instance, has ordered 218 M-1A2 Abrams tanks, five Patriot SAM missile systems (plus 210 Patriot missiles) and six Improved Hawk SAM batteries (with 342 Hawk missiles) from the USA; Saudi Arabia has ordered 72 F-15S Strike Eagle fighter/bombers, 465 M-1A2 tanks and 21 Patriot missile batteries (plus 1 145 Patriot missiles) from the same source. Saudi Arabia has also ordered two LaFayette-class missile frigates from France and 48 Tornado fighter/bombers from the UK.[50] These, and other purchases of advanced weapons by the Persian Gulf countries, are largely responsible for the continued prominence of the Middle East in the annual tallies of worldwide arms trafficking.

Several of the rising powers of Asia have also made major purchases of advanced weapons systems. Malaysia, for instance, has purchased MiG-29 jet fighters from Russia plus F/A-18D Hornet fighters from the USA; Taiwan has ordered F-16 fighters from the United States plus Mirage fighters and LaFayette-class frigates from France.[51] However, such purchases are likely to become increasingly rare in East Asia as the countries of the region pursue plans to become self-sufficient in the production of basic combat systems. These countries are prepared to order completed weapons systems on some occasions, but prefer to import the plans and equipment to manufacture needed weapons rather than the weapons themselves.[52] Thus, in a major bid to enhance its aerospace capabilities, China has acquired the rights and know-how to manufacture the Su-27 fighter from Russia; similarly, South Korea will assemble the bulk of the F-16 fighters and UH-60 helicopters it has ordered from the USA, while Taiwan has incorporated US and Israeli technology into its family of air-to-air and surface-to-surface missiles.[53] Other nations in the region, including Indonesia, Singapore, Malaysia and Thailand, have also sought foreign technology for domestic arms-production endeavours; outside East Asia, a similar approach can be seen in the arms procurement strategies of Brazil, India and Turkey.[54]

The procurement of weapons technology will have an increasingly significant impact on the dynamics of the conventional arms trade. As the NICs become more proficient in the manufacture of arms, their imports of finished weapons systems is likely to decrease—except in the case of highly advanced or specialised systems that cannot be easily or economically produced in domestic factories. At the same time, they will continue to seek advanced powerplants, radars, gun systems, and other high-tech components from the traditional suppliers. The result will be a significant and abiding change in the composition of the international arms flow, with sales of components, production equipment, and technological know-how gradually overshadowing transfers of finished weapons systems. And because the former are much harder to track and quantify than the latter, it is likely that dollar measurements of the arms trade will continue to show a decline over earlier levels—even if the net contribution of the arms flow to major recipients' military capabilities is quite substantial.

The composition of the arms flow is also being affected by the growing emphasis, in many areas, on internal warfare and counter-insurgency. As noted, several Third World countries have stepped up their arms spending in response to growing danger from insurgents, ethnic separatists and criminal undergrounds. Typically, these states seek basic infantry weapons, helicopters, anti-riot gear, surveillance equipment and other counter-insurgency-type systems. The government of Mexico, for instance, acquired new anti-riot vehicles and other light weapons following the uprising in Chiapas, while the government of Sri Lanka has sought a wide range of counter-insurgency systems for its continuing campaign against the Tamil Tigers.[55]

Unfortunately, none of the basic reference works on the conventional arms trade provides detailed information on transfers of small arms and light weapons. Although the ACDA and CRS include such munitions in their dollar totals, neither includes light weapons in their tables on transfers of specific weapons systems; SIPRI (The Stockholm International Peace Research Institute) supplies data on deliveries of major weapons only. This means that analysts of the arms trade must rely on fragmentary and anecdotal information to chart the flow of light weapons. For instance, the US Department of Commerce has reported a steady increase in the sale of police equipment and anti-riot devices from the USA to other countries, from an average of $10 million per year in the 1980s to $27.7 million in 1991, $40.1 million in 1992, $54.8 million in 1992 and $58.7 million in 1993.[56] To give another example, the government of Colombia will spend an estimated $180 million to reequip its entire military, about 200 000 strong, with new assault rifles of 5.56-mm calibre, believing that such arms are better suited to counter-insurgency operations (because of the light weight of their ammunition) than its existing inventory of 7.62-mm calibre guns.[57] These, and other such transactions, suggest that there is widespread demand for light weapons of various types, and that such systems will constitute a significant—perhaps growing—component of the international arms flow in the years ahead.

Consequences

As in the past, the conventional weapons trade will continue to have a substantial

impact on the world security environment. Arms transfers will continue to fuel regional arms races, supply potential belligerents with the means to initiate and sustain armed combat and exacerbate tensions in areas of conflict. However, the nature of the arms trade's impact is changing, as the weapons flow itself has experienced profound transformation.

In the 1970s and 1980s, the arms trade was a critical factor in the superpowers' competitive efforts to secure and retain allies and influence in key areas of the developing world. Through this process, arms transfers fuelled regional arms races in several areas, particularly the Middle East and South Asia, and sustained a series of local conflicts that pitted the chosen allies of the superpowers against one another. With the end of the Cold War, however, these patterns have begun to dissipate. Superpower competition no longer fuels regional arms races in the Middle East or elsewhere, nor does it propel arms transfers to areas of conflict. But dangerous new patterns of arms trafficking have begun to form, supplanting those of the cold-war era. Driven largely by economic considerations, the USA, Russia and the major European suppliers are battling with one another to line up new weapons contracts with the rising powers of Asia, igniting a new arms race in the region. Increased levels of arms deliveries have also helped to inflame relations between Greece and Turkey, and to provoke fresh tensions between India and Pakistan.

Several other emerging patterns are cause for serious concern. The growing transfer of weapons technology to the East Asian NICs is contributing to the development of major military industries in the region, leading both to an accelerating arms race there and to a long-term increase in the world's arms-making capabilities. Whether these capabilities will someday be used to sustain major conflicts in Asia or elsewhere cannot, of course, be foreseen at this time; it is likely, however, that the NICs will become major suppliers of modern weapons in the early 21st century, greatly complicating future efforts to curb the global arms trade.

The growing flow of small arms and light weapons to both states and non-state actors is another source of concern. While ethnic and civil conflicts within states usually have deep roots—often involving longstanding disputes over contested territories and the control of resources—the expanding worldwide availability of light weapons is making it increasingly easy for militias, insurgent groups and separatist forces to conduct wars of great scope and duration. An estimated 200 000 people died during the fighting in Bosnia, and many thousands more have died in Afghanistan, Angola, Kashmir, Mozambique, Burma, Rwanda, Somalia, Sri Lanka, Sudan and other countries torn by internecine warfare. With light weapons of all types available in such great abundance, it is likely that such conflicts will continue to generate high levels of death and destruction.

Despite all this, there is no evidence that the major powers are prepared to impose significant controls on the worldwide flow of conventional weapons. Some hesitant steps were taken in this direction in 1991, following the Persian Gulf conflict, but no real progress has been made since then. The five permanent members of the UN Security Council (the 'P-5' countries) agreed in October 1991 to consider the adoption of mutual restraints on the transfer of major

weapons to areas of conflict, but this effort collapsed when China withdrew from the P-5 talks in retaliation for the US sale of 150 F-16 fighters to Taiwan. The United Nations also agreed in 1991 to establish a voluntary 'register' of conventional arms transfers, but this—despite its utility as a transparency measure—has no arms restraint provisions.[58] More recently, in 1995, the major industrial powers agreed to establish a 'New Forum' in which states could consult with one another on sensitive arms transactions; whether or not this will have any restraining effect, however, remains to be seen.

It appears, then, that the arms trade will continue to flourish in the years ahead, with few barriers to its continued development and growth. While other developments—major wars, the formation and break-up of alliances, changing governments, and so on—are likely to have a greater impact on the evolution of the world security environment, the arms trade will continue to affect the nature and incidence of armed conflict in the years ahead. It is essential, therefore, that analysts and peace researchers chart its continuing transformation, and that international policy makers take steps to alleviate its most harmful consequences.

Notes

[1] US Arms Control and Disarmament Agency (ACDA), *World Military Expenditures and Arms Transfers 1989*, (hereafter cited as ACDA, *WME&AT*). Washington, DC: US Government Printing Office, 1990, Table II.
[2] *Ibid.* For background on the arms trade patterns of the cold-war era, see Edward J Laurance, *The International Arms Trade*, New York: Lexington Books, 1992, chs 5–6; and Andrew J Pierre, *The Global Politics of Arms Sales*, Princeton, NJ: Princeton University Press, 1982.
[3] For discussion of these patterns, see Pierre, *The Global Politics of Arms Sales*, Part III. On the relationship between the superpower competition and local arms races in the Middle East, see Stephen M Walt, *The Origins of Alliances*, Ithaca, NY: Cornell University Press, 1987.
[4] Richard F Grimmett, *Conventional Arms Transfers to the Third World, 1986–1993*, Washington, DC: US Library of Congress, Congressional Research Service, 29 July 1994, p 50.
[5] *Ibid*, p 58.
[6] ACDA, *WME&AT 93–94*, p 91.
[7] The author first discussed these points in 'The global trade in light weapons and the international system in the post-cold war era' in Jeffrey Boutwell, Michael T Klare, & Laura W Reed, eds, *Lethal Commerce: The Global Trade in Small Arms and Light Weapons*, Cambridge, MA: American Academy of Arts and Sciences, 1985, pp 31–43. For further discussion of these shifts, see Stephanie G Neuman, 'The arms trade, military assistance, and recent wars: change and continuity,' *Annals of the American Academy of Political and Social Science*, No 541, 1995, pp 47–74.
[8] Grimmett, *Conventional Arms Transfers 87–94*, p 50.
[9] *Ibid*, p 58.
[10] For discussion of these points, see Lawrence Freedman, 'Order and disorder in the world', *Foreign Affairs*, Vol 71, No 1, 1992, pp 20–37; Stanley Hoffmann, 'A new world and its troubles', *Foreign Affairs*, Vol 69, No 4, 1990, pp 115–22; Robert Jervis, 'The future of world politics', *International Security*, Vol 16, No 3, 1991–92, pp 39–73; William H McNeill, 'Winds of change', *Foreign Affairs*, Vol 69, No 4, 1990, pp 152–75; and James N Rosenau, 'Security in a turbulent world', *Current History*, 94, No 592, 1995, pp 193–200.
[11] On black-market trafficking, see Aaron Karp, 'The rise of black and gray markets', *Annals of the American Academy of Political and Social Science*, No 535, 1994, pp 175–89; and Michael T Klare, 'The subterranean arms trade', in Andrew J Pierre, ed, *Cascade of Arms*, Washington, DC: Brookings Institution Press, forthcoming 1997.
[12] For an earlier assessment of this sort, see Michael T Klare, 'The arms trade: changing patterns in the 1980s', *Third World Quarterly*, Vol 9, No 4, 1987, pp 1257–1281.
[13] For profiles of the major suppliers during this period, see Pierre, *The Global Politics of Arms Sales*, Part II.

[14] CRS, *Conventional Arms Transfers 87–94*, p 50.
[15] For further discussion of the new supplier patterns, see Michael Brzoska & Frederic S Pearson, 'Developments in the global supply of arms: opportunity and motivation', *Annals of the American Academy of Political and Social Science*, No 535 September 1994, pp 58–72.
[16] For discussion of the Bush and Clinton Administrations' role in promoting US arms exports, see William D Hartung, *And Weapons for All*, New York: HarperCollins, 1994, pp 130–54; Hartung, 'Welcome to the US Arms Superstore', *Bulletin of the Atomic Scientists*, September 1993, pp 20–26; and David Isenberg, 'We arm the world', *Washington Post*, 18 February 1996.
[17] Arms Control Association, 'ACA Register of US Arms Transfers', Fact Sheet, Washington, DC, October 1995. Figures are in current dollars.
[18] See Dana Priest & Daniel Williams, 'US allows arms sales to 10 in ex-east bloc', *Washington Post*, 18 February 1995.
[19] Stockholm International Peace Research Institute (SIPRI), *SIPRI Yearbook 1995*, Oxford: Oxford University Press, 1995, pp 513–553.
[20] *Ibid.*
[21] CRS, *Conventional Arms Transfers 87–94*, p 50. See also discussion on pp 9–10.
[22] Germany's major sales are tallied in SIPRI, *SIPRI Yearbook 95*, pp 513–553.
[23] CRS, *Conventional Arms Transfers 87–94*, p 50.
[24] For a discussion, see *ibid*, pp 8–9.
[25] For a discussion, see Brzoska & Pearson, 'Developments in the global supply of arms', pp 64–67. On the experiences of the Latin American suppliers, see Don Podesta, 'Latin weapons industries slip in post-cold war chill', *Washington Post*, 25 June , 1993.
[26] 'The covert arms trade', *The Economist*, 12 February, 1994, p 21.
[27] See Roger Cohen, 'Arms trafficking to Bosnia goes on despite embargo', *New York Times*, 5 November 1994; and Michael T Klare, 'The guns of Bosnia', *The Nation*, 22 January 1996, pp 23–24.
[28] See Aaron Karp, 'Arming ethnic conflict', *Arms Control Today*, September 1993, pp 8–13; Daniel N Nelson, 'Ancient enmities, modern guns', *Bulletin of the Atomic Scientists*, December 1993, pp 21–27.
[29] For profiles of major arms recipients during this period, see Pierre, *The Global Politics of Arms Sales*, Part III.
[30] US Defense Security Assistance Agency (DSAA), *Foreign Military Sales, Foreign Military Construction Sales, and Military Assistance Facts*, as of 30 September 1990, Washington, DC: DSAA, nd, pp 31, 63, 69, 83.
[31] ACDA, *WME&AT 89*, p 77, and earlier editions.
[32] ACDA, *WME&AT 93–94*, Table II. On the decline in Saudi arms purchases, see Clay Chandler, 'Desert shock: Saudis are cash-poor', *Washington Post*, 28 October 1994; and Thomas W Lippman, 'Low oil prices trouble Saudi economy', *Washington Post*, 14 December 1993.
[33] Grimmett, *Conventional Arms Transfers 87–94*, p 52.
[34] *Ibid.* (All figures in current dollars.)
[35] *Ibid.* Total sales for 1991–94 were $41 billion, compared with $42 billion in 1987–90 (in current dollars).
[36] For a discussion, see Michael T Klare, 'The next great arms race', *Foreign Affairs*, Vol 72, No 3, 1993, pp 136–152. See also David A Fulghum, 'Experts see $5 billion in Asian fighter sales', *Aviation Week and Space Technology*', 14 March 1994, pp 54–55; David A Fulghum, "Regional conflicts, power shifts leading to arms races concern Asian specialists", *Aviation Week and Space Technology*, 24 February 1992, pp 96–102; Paul Mann, 'East Asia's focus on external threats', *Aviation Week and Space Technology*', 7 March 1994, pp 56–58; and R Jeffrey Smith, 'East Asian nations take up slack in world's arms purchases', *Washington Post*, 6 March 1992.
[37] See Barbara Opall, 'Industry jockey's for ASEAN arms boom', *Defense News*, 14–20 February 1994, pp 1, 14.
[38] William Schneider, Jr, 'The growth potential of the defense market in the Pacific rim: an American perspective', presentation at the Asia–Pacific Defense Conference, Singapore, 24 February 1994 (mimeo), p 1.
[39] See: 'DoD will directly participate in Singapore airshow', *Defense Daily*, 10 January 1994, p 36; Paul Majendie, 'Military plane makers set eyes on Asia', *Washington Times*, 9 February 1996; and Smith, "East Asian nations".
[40] Many of these items were provided at little or no cost under NATO's Equipment Transfer and Equipment Rationalization Program (generally known as 'Cascade'), the redeployment of certain arms from Central Europe to other areas in accordance with the 1990 Treaty on Conventional Forces in Europe. See Bruce Clark, 'NATO arms pour into Greece and Turkey', *Financial Times*, 7 June 1994. See also William Drozdiak, 'Greece, Turkey amassing arms', *Washington Post*, 30 September, 1993; 'Turkey becomes top arms importer for the first time', *Arms Control Today*, May 1995, p 31. For a list of major weapons acquired by Greece and Turkey since 1990, see SIPRI, *SIPRI Yearbook 1995*, pp 522–524, 548–551.
[41] On Pakistan, see SIPRI, *SIPRI Yearbook 95*, p 537; and 'Pakistan plans to buy 40 mirage jets from France', *Times of India*, 27 October 1995. On India, see Pushpinder Singh, 'Upgraded Indian MiGs to get modern

weapons', *Aviation Week and Space Technology*, 1 May 1995, p 26; and 'MiG-29, Su-30 buy planned for India', *Aviation Week and Space Technology*, 10 April 1995, p 26.

[42] ACDA, *WME&AT 93–94*, p 99.

[43] Human Rights Watch Arms Project (HRWAP), *Angola: Arms Trade and Violations of the Laws of War Since the 1992 Elections*, New York, Human Rights Watch, 1994, pp 2, 35–47.

[44] ACDA, *WME&AT 93–94*, Table II.

[45] HRWAP, *Angola: Arms Trade and Violations*, pp 3–4, 47–59.

[46] HRWAP, *Weapons Transfers and Violations of the Laws of War in Turkey*, New York: Human Rights Watch, 1995, pp 141–145.

[47] See William Reno, 'Reinvention of an African patrimonial state: Charles Taylor's Liberia', *Third World Quarterly*, Vol 16, No 1, 1995, pp 109–120.

[48] CRS, *Conventional Arms Transfers 87–94*, p 75.

[49] See John J Fialka, 'Fixed-up fighters: old warplanes get brand new electronics, live to fight again', *Wall Street Journal*, 19 September 1991; and 'Refeathering the Falcons: upgrade market for older F-16s looms large', *Armed Forces Journal*, November 1994, p 28.

[50] SIPRI, *SIPRI Yearbook 95*, pp 532, 540–541.

[51] *Ibid*, pp 532–533, 545.

[52] For discussion of these plans, see US Congress, Office of Technology Assessment (OTA), *Global Arms Trade*, Washington, DC: OTA, 1991, pp 123–140, 163–73. See also Barbara Amouyal, 'Taiwan aims for military self sufficiency by 2000', *Defense News*, 15 October 1990, pp 1, 82; Dong Joon Hwang, 'Industry: into a new era', *Jane's Defence Weekly*, 16 November 1991, pp 965–969 (on South Korea).

[53] On China, see David A Fulghum, 'China buys Su-27 rights from Russia', *Aviation Week and Space Technology*, 12 February 1996; p 60; on Taiwan, see Robert Karniol, 'Taiwan's space and missile programs', *International Defense Review*, August 1989, pp 1077–1078.

[54] See OTA, *Global Arms Trade*, pp 143–159, 165–170. On Turkey, see SIPRI, *SIPRI Yearbook 93*, pp 521–532.

[55] On Mexico, see John McCormack & Carmina Danini, 'Mexico importing riot-control vehicles', San Antonio *Express News*, 27 April 1994; on Sri Lanka, see 'Sri Lanka sends arms buyers out', from Xinhua News Service, as carried by *Current News* (US Department of Defense), 8 April 1994.

[56] From computer printouts on exports of product categories OA82, OA84 and OA86, as supplied by the US Department of Commerce to the Federation of American Scientists in accordance with the Freedom of Information Act.

[57] Daniel García-Peña Jaramillo, 'Light weapons and internal conflict in Colombia', in Boutwell *et al*, *Lethal Commerce*, p 104.

[58] For background on these efforts and the texts of the relevant documents, see SIPRI, *SIPRI Yearbook 92*, pp 291–307.