# Highlights By Indicator

## Military Expenditures

**World military spending rose to $842 billion in 1997**, an increase of $32 billion or 2% over the previous year. **This may represent the beginning of an upturn in the world trend following a 1995-96 low** that was down 40% from the 1987 peak level of $1,360 billion (1997) dollars.

**Spending in the developed countries is now $610 billion and 72% of the world total. It rose slightly in 1997 and may have bottomed out in 1996** at 54% of its 1987-88 peak. This spending has declined moderately since 1992, after dropping sharply in the previous four years.

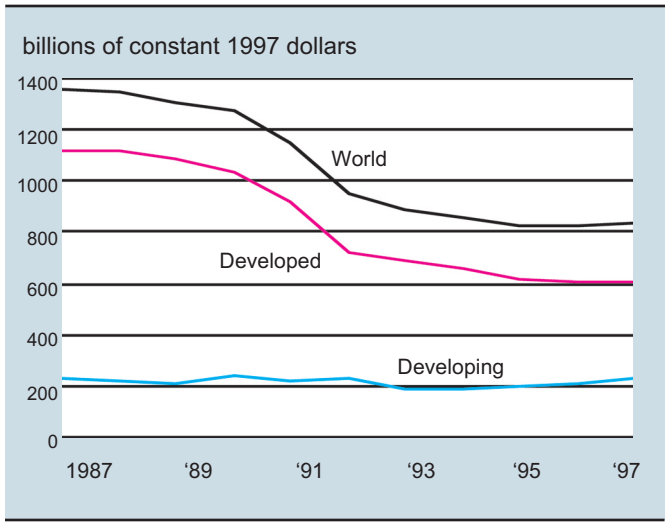
**Spending in developing countries has reached a new historic high at $232 billion**. It has grown slowly but steadily after dropping by 19% from 1990 to a 1993-94 low. **The developing countries' share of world spending reached 28% in 1997, up from 17% in 1987**.

**Changes in regional shares of world spending over the entire 1987-97 period reflect the collapse of the Soviet Union and Warsaw Pact**, as Eastern Europe's share plummeted from 35% to 8% (Table 1).

At the same time, **East Asia's world share more than doubled, from 9 to 21%, as did South Asia's**, from .9 to 2%**. North America's share grew** from 29 to 34%, **Western Europe's**, 16 to 22%, and **South America's**,1.6 to 2.4%.

**The OECD countries accounted for 62% of world military spending in 1997**, up from 48% in 1987, while the **NATO share** rose from 44 to 54%.

**Figure 1. World Military Expenditures: 1987-1997**




**Spending trends by region* in the 1993-97 half-decade show that the main drop was in Eastern Europe, especially in Russia.**

**Also declining, though more moderately, were North America, Western Europe, Central Africa, and Central Asia, while the Middle East, Oceania, and Southern Africa fell at modest rates**.

**On the other hand, rising trends appeared in East Asia, South America, South Asia, and North Africa** in that period.

* See "Regional Trends: 1987-1997," pp. 31-37, for charts comparing military spending and other indicators in 16 major groups and regions. The countries in each region are listed in Main Table III, pp. 165-170, and in Statistical Notes, Coverage and Country Groups, llp. 201.

**Table 1**
**Military Expenditures: Shares and Growth**
(in percent)

| | World Share | | Real Growth Rate* | |
|---|---|---|---|---|
| | 1987 | 1997 | Decade 87-97 | 2nd Half 93-97 |
| **World** | 100.0 | 100.0 | -6.0 | -1.4 |
| Developed | 82.7 | 72.5 | -7.3 | -3.2 |
| Developing | 17.3 | 27.5 | -.9 | 4.3 |
| **Region** | | | | |
| North America | 28.7 | 34.2 | -3.3 | -3.8 |
| Western Europe | 16.1 | 22.1 | -1.9 | -1.5 |
| East Asia | 8.9 | 20.7 | 3.2 | 5.1 |
| Eastern Europe | 34.8 | 7.6 | -22.6 | -9.3 |
| Middle East | 6.8 | 6.2 | -6.9 | -.8 |
| South America | 1.6 | 3.4 | 2.5 | 8.6 |
| South Asia | .9 | 2.0 | 3.1 | 6.8 |
| Oceania | .6 | 1.1 | 1.9 | -1.1 |
| North Africa | .4 | .7 | -1.9 | 6.8 |
| Southern Africa | .5 | .6 | -4.3 | -1.0 |
| Central Africa | .3 | .5 | .9 | -3.4 |
| Central Asia & Cauc. | — | .5 | — | -7.2 |
| Central Amer. & Car. | .2 | .2 | -7.8 | 1.1 |
| Europe, all | 50.9 | 29.8 | -12.1 | -3.7 |
| Africa, all | 1.2 | 1.8 | -2.1 | .7 |
| **Organization / Reference Group** | | | | |
| OECD | 47.7 | 62.3 | -2.4 | -2.6 |
| OPEC | 6.0 | 5.4 | -7.7 | .7 |
| NATO, all | 43.5 | 54.2 | -2.9 | -3.1 |
| Warsaw Pact (fmr) | 34.4 | 7.6 | -22.5 | -9.9 |
| NATO Europe | 15.0 | 20.5 | -2.0 | -1.6 |
| Latin America | 2.0 | 4.1 | 1.9 | 8.7 |
| CIS | — | 6.1 | — | -12.2 |

* Average annual rate, calculated as a compound rate curve fitted to all points (see Statistical Notes for details).

**Military spending in North America, the largest spending region, fell at a -3.3% rate over the decade, and a -3.9% rate in the second half**.

United States military spending is of course dominant in the region, making up 95% of the region in 1997. Spending by country was:

| | Bil. $ | Growth rate (%) | |
|---|---|---|---|
| | 1997 | 87-97 | 93-97 |
| **North America** | **288.4** | **-3.3** | **-3.9** |
| United States | 276.3 | -3.4 | -3.9 |
| Canada | 7.8 | -2.8 | -6.7 |
| Mexico | 4.3 | 6.3 | 13.3 |

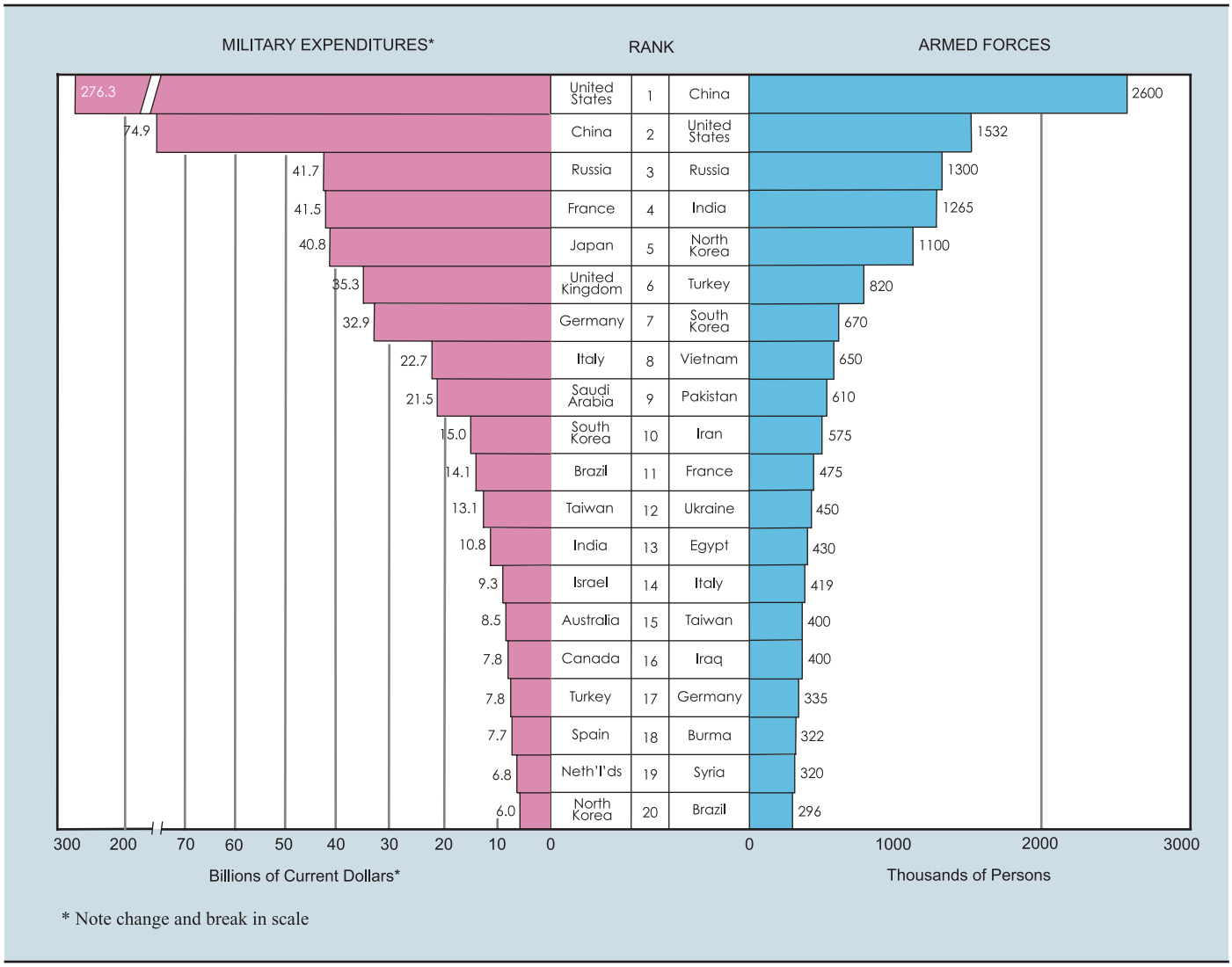
**United States spending made up 33% of the world total in 1997**, compared to 27% in 1987 and a high of 36% in 1993, shortly after the Soviet collapse. **Mexico's** growth rate reached over 10% in the latter half-decade.

**In Western Europe** as a whole, **military spending declined moderately**, particularly in the 1993-1997 period, with an equal number of countries having falling and rising trends. **Turkey and Greece** are notable among the latter. Countries spending over $1 billion were:

| | Bil. $ | Growth rate (%) | |
|---|---|---|---|
| | 1997 | 87-97 | 93-97 |
| **Western Europe** | **186.4** | **-1.9** | **-3.8** |
| France | 41.5 | -0.9 | -1.6 |
| United Kingdom | 35.3 | -3.1 | -3.4 |
| Germany | 32.9 | -4.0 | -3.1 |
| Italy | 22.7 | -1.0 | .4 |
| Turkey | 7.8 | 7.3 | 5.6 |
| Spain | 7.7 | 2.4 | 1.4 |
| Netherlands | 6.8 | 2.3 | 1.2 |
| Sweden | 5.6 | 0 | -.9 |
| Greece | 5.5 | .6 | 3.4 |
| Switzerland | 3.8 | -3.1 | -1.9 |
| Belgium | 3.7 | -4.9 | -1.5 |
| Norway | 3.3 | -.2 | -2.8 |
| Denmark | 2.8 | -.5 | .3 |
| Portugal | 2.4 | 1.2 | .5 |
| Finland | 2.0 | 1.9 | -1.3 |
| Austria | 1.8 | -.8 | -.5 |

**East Asia grew at a sizable 5.1% rate in 1993-97**. Of East Asia's top 12 spending countries, 10 had positive spending growth rates over

**Figure 2. Leading Military Spenders and Armed Forces: 1997**




the 1987-1997 decade and 8, over the last half decade:

| | Bill. $ | Growth rate (%) | |
|---|---|---|---|
| | 1997 | 87-97 | 93-97 |
| **East Asia** | **174.4** | **3.2** | **5.1** |
| China—Mnlnd | 74.9* | 3.0 | 7.0 |
| Japan | 40.8 | 2.3 | 1.9 |
| South Korea | 15.0 | 4.8 | 6.2 |
| China—Taiwan | 13.1 | 6.0 | 2.7 |
| North Korea | 6.0* | -2.3 | 1.4 |
| Singapore | 5.7 | 9.9 | 10.4 |
| Indonesia | 4.8 | 10.9 | 24.6 |
| Vietnam | 3.4 | -2.0 | 12.4 |
| Thailand | 3.4 | 6.1 | -0.1 |
| Burma | NA | 10.2 | -1.0 |
| Malaysia | 2.1 | 5.4 | -.5 |
| Philippines | 1.3 | .1 | -4.1 |

**Eastern Europe's military spending dropped sharply, especially early in the decade**. The regional rate continued to drop in 1993-97, although as many countries had rising trends as falling, and some smaller ones

*** Very rough estimates of spending are used for** some countries, notably **China—Mainland, Iran, Iraq, North Korea, and Russia**, for lack of adequate information.

(Slovenia, Estonia, Macedonia, Serbia) grew rapidly.

The top 12 spenders were:

| | Bil. $ | Growth rate (%) | |
|---|---|---|---|
| | 1997 | 87-97 | 93-97 |
| **Eastern Europe** | **64.6** | **-12.1** | **-9.3** |
| Russia | 41.7* | — | -13.8 |
| Poland | 5.6 | -13.7 | 5.2 |
| Ukraine | 4.3 | — | 4.2 |
| Romania | 2.3 | -16.0 | 2.3 |
| Czech Republic | 2.0 | — | -5.4 |
| Croatia | 1.5 | — | -2.5 |
| Hungary | 1.3 | -15.7 | .3 |
| Slovenia | 1.2 | — | 38.1 |
| Serbia & Monten. | 1.2 | — | 9.0 |
| Bulgaria | .9 | -23.0 | -4.5 |
| Slovakia | .9 | — | 6.1 |
| Belarus | .8 | — | -7.7 |

**Middle East spending fell at a -7.0% rate in 1987-997, but only at a .9% rate in 1993-97**, though most of the main spenders declined in the latter period:

| | Bil. $ | Growth rate (%) | |
|---|---|---|---|
| | 1997 | 87-97 | 93-97 |
| **Middle East** | **52.4** | **-7.0** | **-.9** |
| Saudi Arabia | 21.1 | -.8 | -.7 |
| Israel | 9.3 | 1.6 | 2.3 |
| Iran | 4.7* | -8.2 | -2.8 |
| Syria | 3.4 | -2.6 | -3.3 |
| Kuwait | 2.8 | 2.7 | -4.3 |
| United Arab Emir. | 2.3 | -.1 | 0 |
| Egypt | 2.2 | -4.5 | -.6 |
| Oman | 1.8 | .2 | -3.4 |
| Iraq | 1.3* | -33.2 | -10.6 |
| Qatar | NA | -10.7 | 3.2 |

**South America's spending has grown rapidly, at an 8.6% rate in the latter half of the decade. Several of the largest spenders have grown at over 10% rates**.

| | Bil. $ | Growth rate (%) | |
|---|---|---|---|
| | 1997 | 87-97 | 93-97 |
| **South America** | **28.7** | **2.5** | **8.6** |
| Brazil | 14.5 | 4.5 | 14.8 |
| Argentina | 3.7 | -2.6 | -5.0 |
| Colombia | 3.5 | 9.6 | 11.8 |
| Chile | 2.9 | 7.1 | 8.5 |
| Venezuela | 1.9 | -1.8 | 3.9 |
| Peru | 1.4 | -2.2 | 11.0 |
| Ecuador | .7 | 6.8 | 6.7 |

**South Asia's spending grew at a rapid 6.8% rate in 1993-97, and its share of world military spending more than doubled, rising from .9% in 1987 to 2.0% in 1997**.

| | Bil. $ | Growth rate (%) | |
|---|---|---|---|
| | 1997 | 87-97 | 93-97 |
| **South Asia** | **16.3** | **3.1** | **6.8** |
| India | 10.9 | 3.0 | 8.5 |
| Pakistan | 3.4 | 2.1 | -1.7 |
| Afghanistan | NA | NA | NA |
| Sri Lanka | .8 | 9.2 | 12.3 |
| Bangladesh | .6 | 5.3 | 6.6 |

**Oceania's spending declined moderately** in the 1993-97 period:

| | Bil. $ | Growth rate (%) | |
|---|---|---|---|
| | 1997 | 87-97 | 93-97 |
| **Oceania** | **9.3** | **1.9** | **-1.1** |
| Australia | 8.4 | 2.7 | -1.1 |
| New Zealand | .8 | -4.5 | -1.5 |
| Papua New Guinea | .06 | 5.0 | -5.5 |
| Fiji | .05 | 3.4 | 7.4 |

**North Africa's spending has recently shown rapid increases in Libya and Algeria**:

| | Bil. $ | Growth rate (%) | |
|---|---|---|---|
| | 1997 | 87-97 | 93-97 |
| **North Africa** | **5.5** | **-1.9** | **6.8** |
| Libya | NA | -5.9 | 12.5 |
| Algeria | 1.8 | 3.5 | 8.7 |
| Morocco | 1.4 | -1.1 | .7 |
| Tunisia | .4 | 1.4 | -1.8 |

**Other regions (Central and Southern Africa, Central Asia and Caucasus) had falling spending trends in 1993-97, while Central America and Caribbean had a small rising trend rate**.

**The world's top 15 military spenders in 1997 were**:

| | |
|---|---|
| United States | $276 billion |
| China—Mainland | 75* |
| Russia | 42* |
| France | 42 |
| Japan | 41 |
| United Kingdom | 35 |
| Germany | 33 |
| Italy | 23 |
| Saudi Arabia | 22 |
| South Korea | 15 |
| Brazil | 14 |
| China—Taiwan | 13 |
| India | 11 |
| Israel | 9 |
| Australia | 8 |

**Countries whose military expenditures in 1993-1997 have risen most rapidly** (by an average 10% or more annually) **include**: **Angola, Armenia, Brazil, Colombia, Estonia, Indonesia, Kyrgyzstan, Libya, Mexico, Namibia, Peru, Singapore, Slovenia, Sri Lanka, Turkmenistan, Uganda, and Vietnam**.

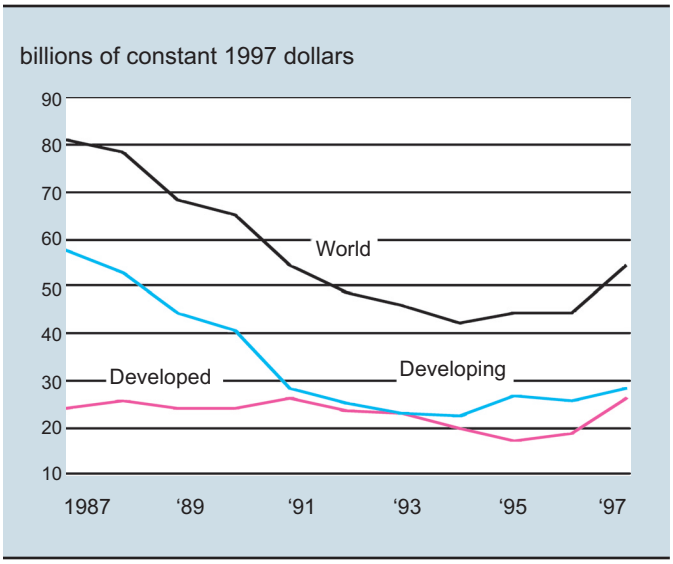
**Countries with notably falling rates of spending** in the same period **include**: **Albania, Azerbaijan, Iraq, Kazakhstan, Laos, Mozambique, Russia, and Tajikistan**.

# Arms Transfers

The **world arms trade took a sharp upturn in 1997 to $54.6 billion**, rising 23% over the previous year and 26% over the post-Cold-War low that occurred in 1994.

The **arms trade had dropped precipitously by nearly one half** between the 1987 all-time high of $81.5 billion and the 1994 bottom of $42.2 billion (in 1997 prices). A low trough occurred in 1992-1996 (Figure 3, Main Table II).

**Figure 3. World Arms Imports: 1987-1997**




## Arms Import Trends

**The 1997 upturn in arms imports occurred in both developing and developed countries**, though more so in the latter group. The earlier declines had occurred mainly in the developing countries, where the 1994 bottom was less than 40% of the 1987 peak.

**Developed country imports, on the other hand, had been fairly steady** from 1987 to 1993. They dropped by one third from a small 1991 high to a low in 1995, then rose by 50% to the 1997 level.

As a result, **the two groups have been roughly even since 1991**. The developing/developed ratio of arms imports went from about 70:30 in 1987 to about 52:48 in 1997 (Table 2).

**Three importing regions—the Middle East, East Asia, and Western Europe—accounted for over 80% of world trade in 1997**. This concentration is much increased from 1987, when their share was under two-thirds. (See Regional Trends: 1987-1997, pp.31-37, for charts of the arms trade in 16 major groups and regions. Pie charts for the years 1987 and 1997 are in Figure 4 below.)

The **Middle East alone had over a one-third** share in both years. **East Asia's world share more than doubled** to reach 30% in 1997 and its imports have risen by 19% annually since 1993. **Western Europe's imports have been declining** moderately, but more slowly than the world's.

**South America had a rapidly rising trend** in the latter half-decade (averaging 20% annually), which raised its world share to 2.7%. **North America's** share grew to 3.7% despite a mildly declining trend. **Eastern Europe's arms imports dropped sharply** in the first half-decade, as did **South Asia's, Central America's** and those of the **African** regions. For the decade

Note:

- Total arms imports are equal to total arms exports at the world level (only).
- Initial estimates of non-US totals for the latest year are based on incomplete data and tend to rise when reestimated in subsequent editions.
- US arms exports are estimated by use of a new interim method, beginning with WMEAT 1997, and are substantially higher than previously reported (see Statistical Notes).

as a whole, all the major regions had declining trends except East Asia.

Rising arms import trends in the 1993-97 period were also shown by **OPEC** and the Commonwealth of Independent States **(CIS)** country groupings; both grew an average 11% annually.

Besides the decade, another perspective on the arms trade is the three-year 1995-1997 period, for which cumulative data linking major suppliers or groups and individual recipient countries is shown in Main Table III.

**In 1995-1997 regional arms imports and their share of the total were** (in millions of current dollars):

| | | |
|---|---|---|
| Middle East | $53,085 | 38% |
| East Asia | 35,460 | 25 |
| Western Europe | 25,770 | 18 |
| North America | 5,290 | 4 |
| South America | 4,225 | 3 |
| Oceania | 4,020 | 3 |
| Africa, all | 3,305 | 2 |
| South Asia | 3,290 | 2 |
| Eastern Europe | 2,750 | 2 |
| Cent. Amer. & Asia | 1,295 | 1 |
| World | 141,260 | 100 |

The three leading importing regions —the Middle East, East Asia, and Western Europe— accounted for the main volume of imports, 81% of the world total.

In the 1995-1997 period, **Saudi Arabia was the leading arms importer with a $31.3 billion** cumulative total. (See Figure 7.) **Other top 10 importers** were:

| | |
|---|---|
| China—Taiwan | $12.5 billion |
| Japan | 6.8 |
| Egypt | 5.3 |
| Kuwait | 5.0 |
| Turkey | 4.9 |
| United Kingdom | 4.5 |
| South Korea | 4.2 |
| United States | 3.8 |
| United Arab Emir. | 3.8 |

**The United States was the main supplier for the top eight arms importers and for 12 of the top 15**, in that period.

**Table 2**
**World Arms Imports: Shares and Growth**
(in percent)

| | World Share | | Real Growth Rate* | |
|---|---|---|---|---|
| | 1987 | 1997 | Decade 87-97 | 2nd Half 93-97 |
| **World** | 100.0 | 100.0 | -5.8 | 4.1 |
| Developed | 29.5 | 48.1 | -2.1 | 2.3 |
| Developing | 70.5 | 51.9 | -8.1 | 5.7 |
| **Region** | | | | |
| Middle East | 38.1 | 36.4 | -4.8 | 4.2 |
| East Asia | 12.1 | 30.2 | 2.7 | 19.0 |
| Western Europe | 12.6 | 16.4 | -3.3 | -2.8 |
| North America | 1.9 | 3.7 | -1.5 | -1.6 |
| South America | 1.9 | 2.7 | -1.9 | 19.6 |
| South Asia | 7.8 | 2.1 | -23.5 | .7 |
| Oceania | 1.6 | 1.9 | -1.7 | -4.5 |
| Eastern Europe | 8.5 | 1.7 | -19.6 | -.6 |
| North Africa | 2.8 | 1.3 | -19.2 | 39.0 |
| Central Africa | 3.1 | .8 | -21.7 | 8.9 |
| Southern Africa | 5.4 | .3 | -23.3 | -30.2 |
| Central Asia & Cauc. | — | .3 | — | 3.8 |
| Central Amer. & Car. | 4.1 | .1 | -34.5 | -22.0 |
| Europe, all | 21.1 | 18.1 | -6.7 | -2.9 |
| Africa, all | 11.2 | 2.3 | -20.5 | -1.4 |
| **Organization / Reference Group** | | | | |
| OECD | 17.7 | 26.7 | -1.8 | .3 |
| OPEC | 28.3 | 32.5 | -4.0 | 10.6 |
| NATO, all | 13.1 | 17.7 | -3.8 | -1.6 |
| Warsaw Pact (fmr) | 7.5 | 1.5 | -18.1 | 1.4 |
| NATO Europe | 11.3 | 14.2 | -4.1 | -1.2 |
| Latin America | 6.1 | 3.0 | -12.3 | 12.3 |
| CIS | — | .3 | — | 11.3 |

* Average annual rate, calculated as a compound rate curve fitted to all points (see Statistical Notes fordetails).

**Figure 4. Regional Shares of the World Arms Import Market: 1987 and 1997**

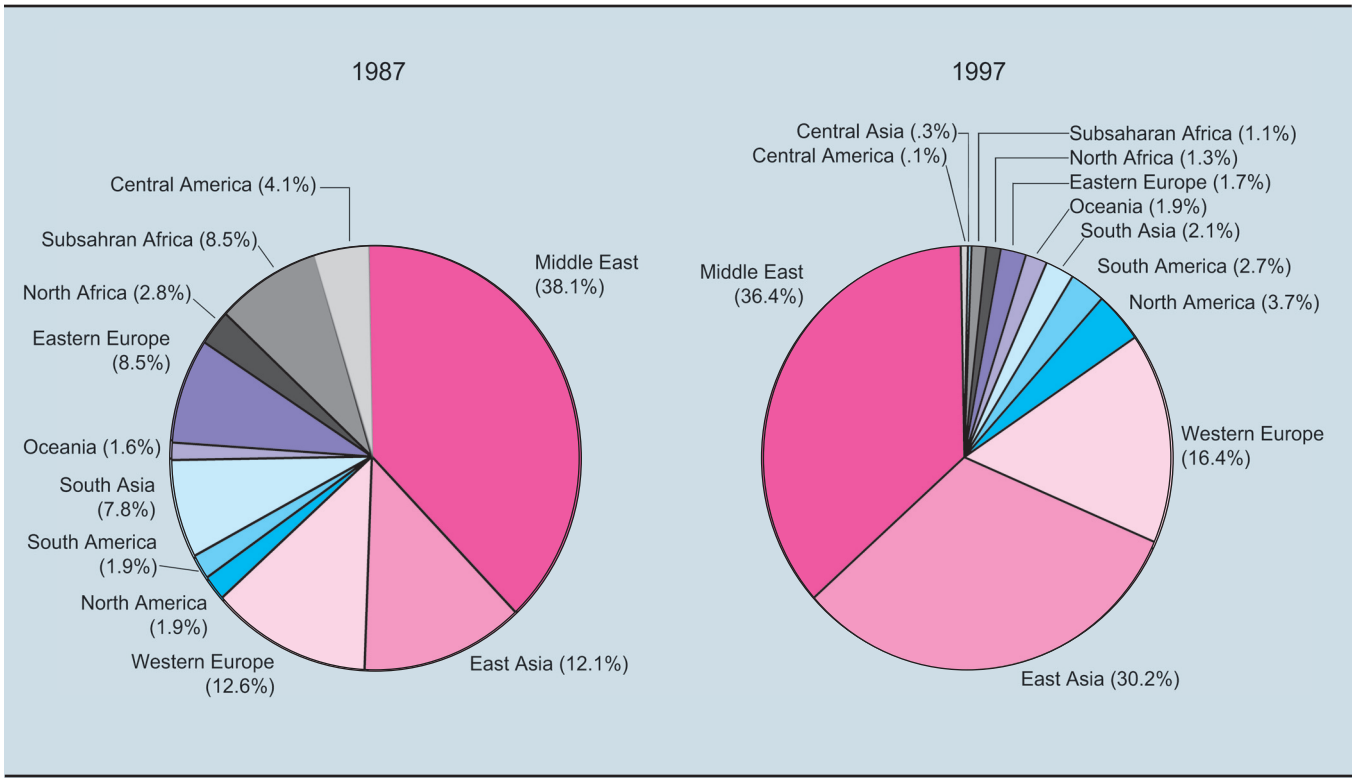



**Figure 5. Middle East Arms Import Market: 1997**

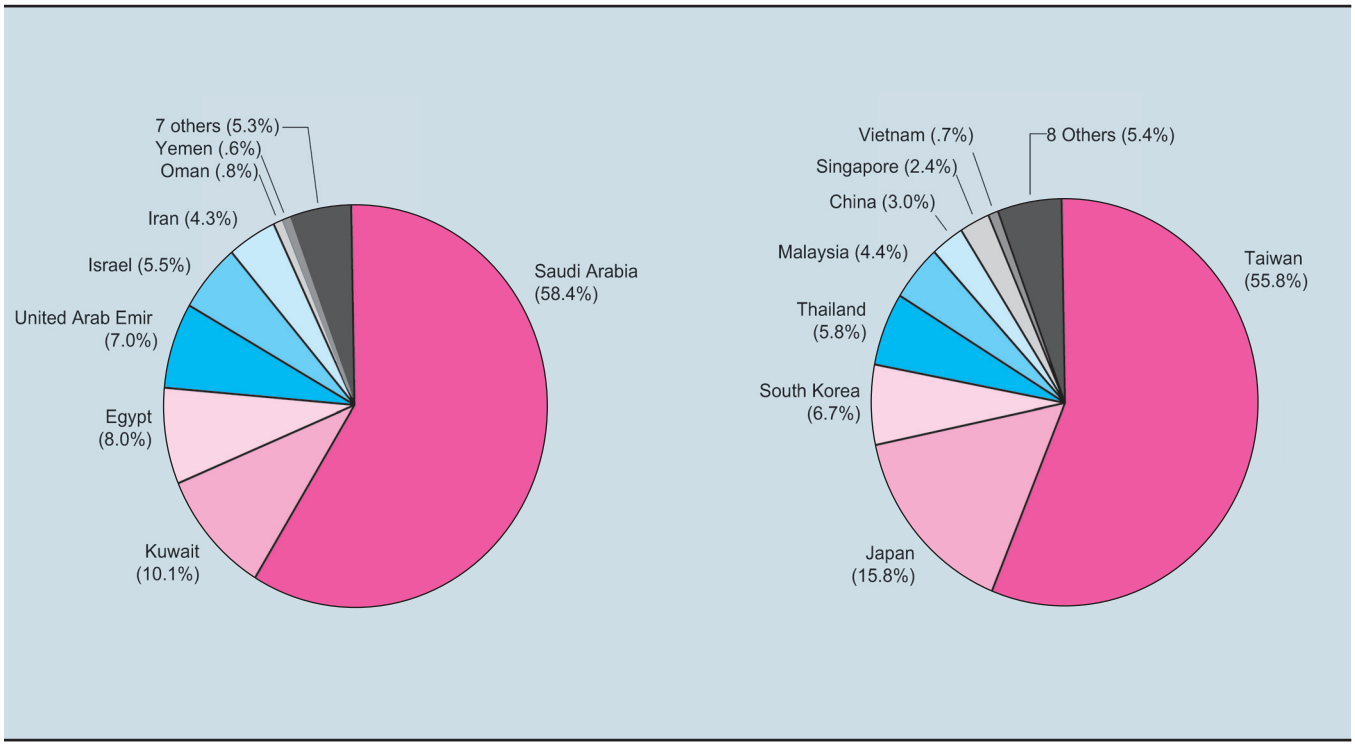
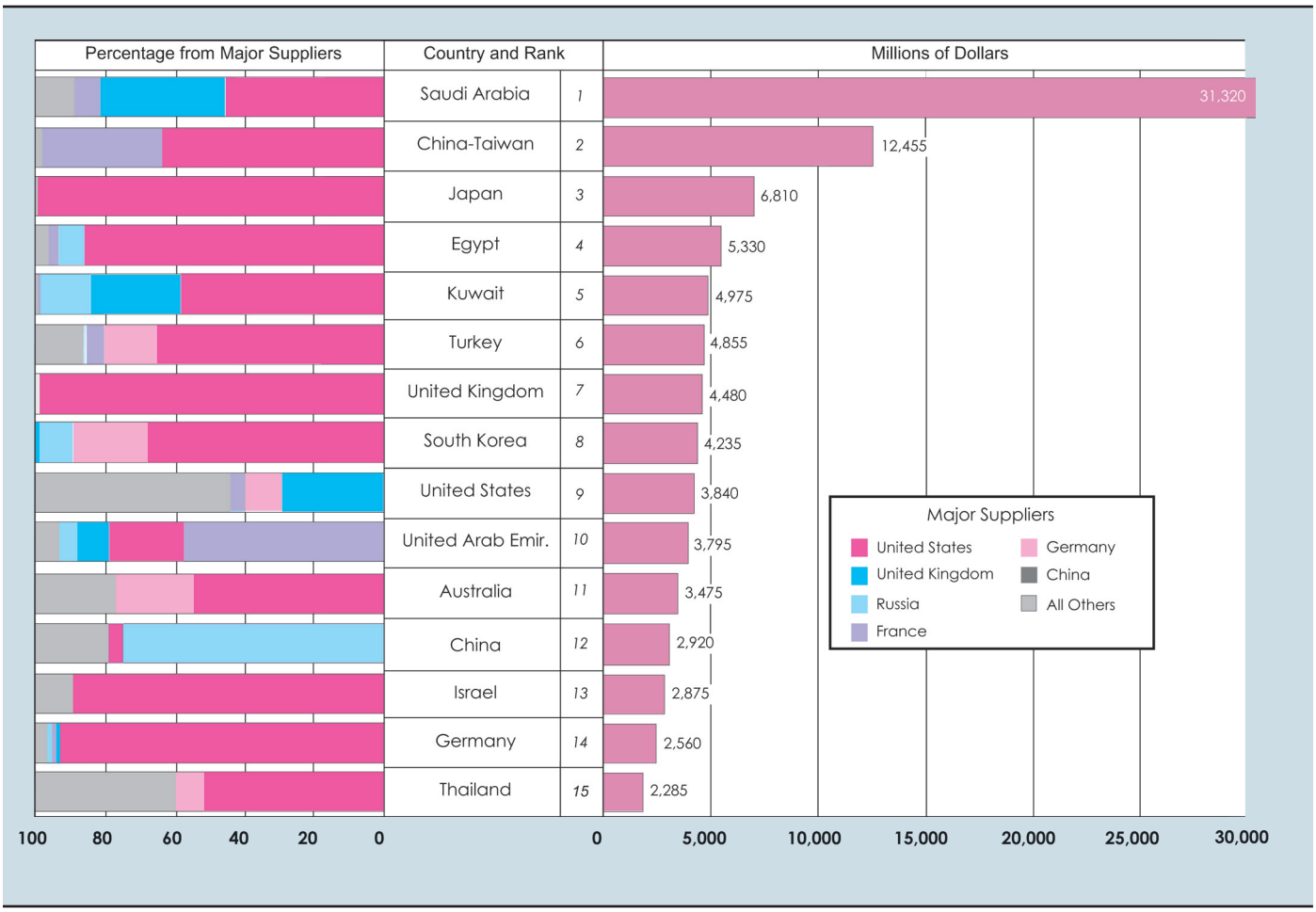



**Figure 6. East Asian Arms Import Market 1997**

**Figure 7. Leading Arms Importers and Their Major Suppliers: 1995-1997**




**In 1995-1997, eight developed countries are among the top 15 arms importers: China—Taiwan, Japan, United Kingdom, South Korea, United States, Australia, Israel, and Germany**, (including several recently reclassified from the developing group) .

**The leading Middle East arms importers in 1997 were Saudi Arabia, Kuwait, Egypt, the United Arab Emirates, Israel, and Iran**. (See Figure 5)

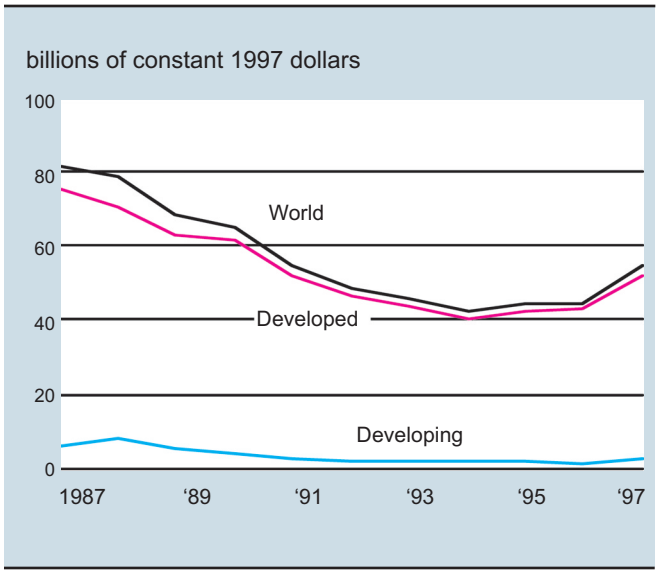
**The leading East Asian importers in 1997 were China—Taiwan, Japan, South Korea, Thailand, Malaysia, China—Mainland, and Singapore**. (see Figure 6).

After the "big three" arms importing regions in the 1995-1997 period come **North America** (of which the US was 73%) and **South America**. The latter became the fifth largest importing region, due primarily to the imports of Brazil (over $1 billion), **Peru, Chile, Venezuela, and Ecuador** (Main Table III).

## Arms Export Trends

**World arms exports** (the equivalent of world arms imports) **took a sharp 23% upturn in 1997 to $54.6 billion**. This continued the rising trend begun in 1995, which in turn followed the precitous drop by nearly one half from the 1987 all-time high of $81.5 billion (in 1997 prices). A low trough in 1992-1996 bottomed in 1994 at $42.2 billion.

**Figure 8. World Arms Exports: 1987-1997**




**The rise in exports went mainly to East Asia and the Middle East, with South America and North Africa also rising**.

**Developed countries raised their overwhelming share of world exports over the decade to 95%**, while the developing share fell from 7.5 % in 1987 to 5% in 1997.

**In 1997, one exporting region was dominant— North America (mainly the US), with a 59% share—while Western Europe had 30% and Eastern Europe (mainly Russia), 7%**. North America and all Europe accounted for 96% of world arms exports.

**Table 3**
**World Arms Exports: Shares and Growth**
(in percent)

| | World Share | | Real Growth Rate* | |
|---|---|---|---|---|
| | 1987 | 1997 | Decade 87-97 | 2nd Half 93-97 |
| **World** | 100.0 | 100.0 | -5.8 | 4.1 |
| Developed | 92.5 | 95.1 | -5.3 | 4.0 |
| Developing | 7.5 | 4.9 | -12.6 | 4.5 |
| **Region** | | | | |
| North America | 29.2 | 59.3 | 1.7 | 2.8 |
| Western Europe | 19.4 | 29.6 | -.6 | 9.7 |
| Eastern Europe | 44.1 | 6.8 | -23.5 | 1.4 |
| East Asia | 3.9 | 2.5 | -15.8 | -3.0 |
| Middle East | 1.6 | .8 | -7.1 | -12.5 |
| Southern Africa | 0 | .7 | 19.7 | 17.0 |
| South Asia | 0 | .2 | -.3 | 14.0 |
| Central Asia & Cauc. | — | .1 | — | 68.9 |
| South America | 1.4 | 0 | -32.2 | -56.2 |
| Central Africa | 0 | 0 | -13.3 | 0 |
| Central Amer. & Car. | 0 | 0 | -12.9 | -28.6 |
| North Africa | .1 | 0 | -43.7 | 0 |
| Oceania | .1 | 0 | .8 | -5.0 |
| Europe, all | 63.5 | 36.4 | -11.2 | 7.6 |
| Africa, all | .1 | .7 | 7.2 | 17.0 |
| **Organization / Reference Group** | | | | |
| OECD | 48.9 | 89.0 | .8 | 4.9 |
| OPEC | .2 | .2 | 1.1 | -10.8 |
| NATO, all | 46.6 | 87.0 | .9 | 5.1 |
| Warsaw Pact (fmr) | 43.6 | 6.9 | -23.3 | 1.8 |
| NATO Europe | 17.5 | 27.8 | -.5 | 10.8 |
| Latin America | 1.5 | 0 | -27.6 | -47.3 |
| CIS | — | 6.3 | — | 3.7 |

* Average annual rate, calculated as a compound rate curve fitted to all points (see Statistical Notes for details).

**This compares with 1987, when Eastern Europe (mainly the Soviet Union) led with 44% of the world arms market**, while North America had 29% and Western Europe, 19%. They totaled 93%.

**The world market shares of smaller exporting regions fell over the decade**: East Asia, from 3.9 to 2.5%, Middle East, 1.6 to 0.8%, and South America, 1.4 to 0%.

**North America was the only significant arms exporting region with a rising trend for the decade as a whole**.

**The US share of world arms exports grew from 29% in 1987 to 58% in 1997**. (See Table 4). Over the same period, the **Soviet/Russian share fell from 37% to 4%**.

**Table 4**
**Share of World Arms Exports: 1987-1997**
(in percent)

| | | SU | | | | Other | | | |
|---|---|---|---|---|---|---|---|---|---|
| | US | Russ. | UK | Fran. | Germ. | NATO | China | Isr. | Other |
| 1987 | 29 | 37 | 8 | 4 | 2 | 4 | 3 | 1 | 12 |
| 1988 | 29 | 36 | 7 | 3 | 3 | 4 | 5 | 1 | 12 |
| 1989 | 31 | 35 | 9 | 4 | 2 | 3 | 5 | 2 | 9 |
| 1990 | 40 | 26 | 8 | 9 | 3 | 3 | 4 | 1 | 6 |
| 1991 | 54 | 13 | 10 | 4 | 5 | 3 | 3 | 2 | 6 |
| 1992 | 57 | 6 | 14 | 5 | 3 | 5 | 3 | 1 | 6 |
| 1993 | 60 | 8 | 11 | 4 | 4 | 4 | 3 | 1 | 5 |
| 1994 | 56 | 4 | 13 | 7 | 4 | 4 | 2 | 2 | 8 |
| 1995 | 52 | 9 | 12 | 6 | 4 | 4 | 2 | 2 | 9 |
| 1996 | 53 | 7 | 14 | 8 | 3 | 4 | 1 | 2 | 8 |
| 1997 | 58 | 4 | 12 | 11 | 1 | 4 | 2 | 1 | 7 |

The **UK** share attained 10% in 1991 and has remained in the 10-14% range since then. **France's** share has varied in the single digits until 1997, when it reached 11%. **Germany, China, Israel**, and other arms exporters have generally not exceeded 5 % of world exports.

The **market for US arms exports** over the entire decade has been p**rimarily the developed countries (63%)**, whereas for all **other suppliers** combined, it was mainly the **developing countries (78%)**.

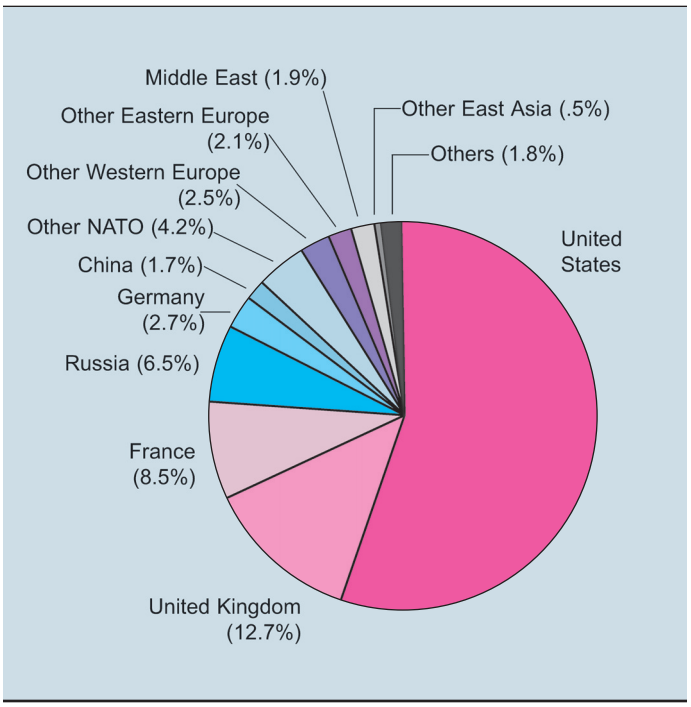
***Supplier-Recipient Ties, 1995-1997***

Supplier-recipient relationships are shown in Main Table III, below, which presents data on exports from major supplier countries and groups to individual recipient countries for the cumulative 3-year period 1995-1997.

**Of the $142 billion in world arms exports in 1995-1997, the main exporters were** (in billions of current dollars—see Figure 9):

| | | |
|---|---|---|
| United States | $77.8 | 55% |
| United Kingdom | 18.0 | 13 |
| France | 12.0 | 8 |
| Russia | 9.2 | 7 |
| Germany | 3.8 | 3 |
| Sweden | 3.1 | 2 |
| China | 2.4 | 2 |
| Israel | 2.0 | 1 |

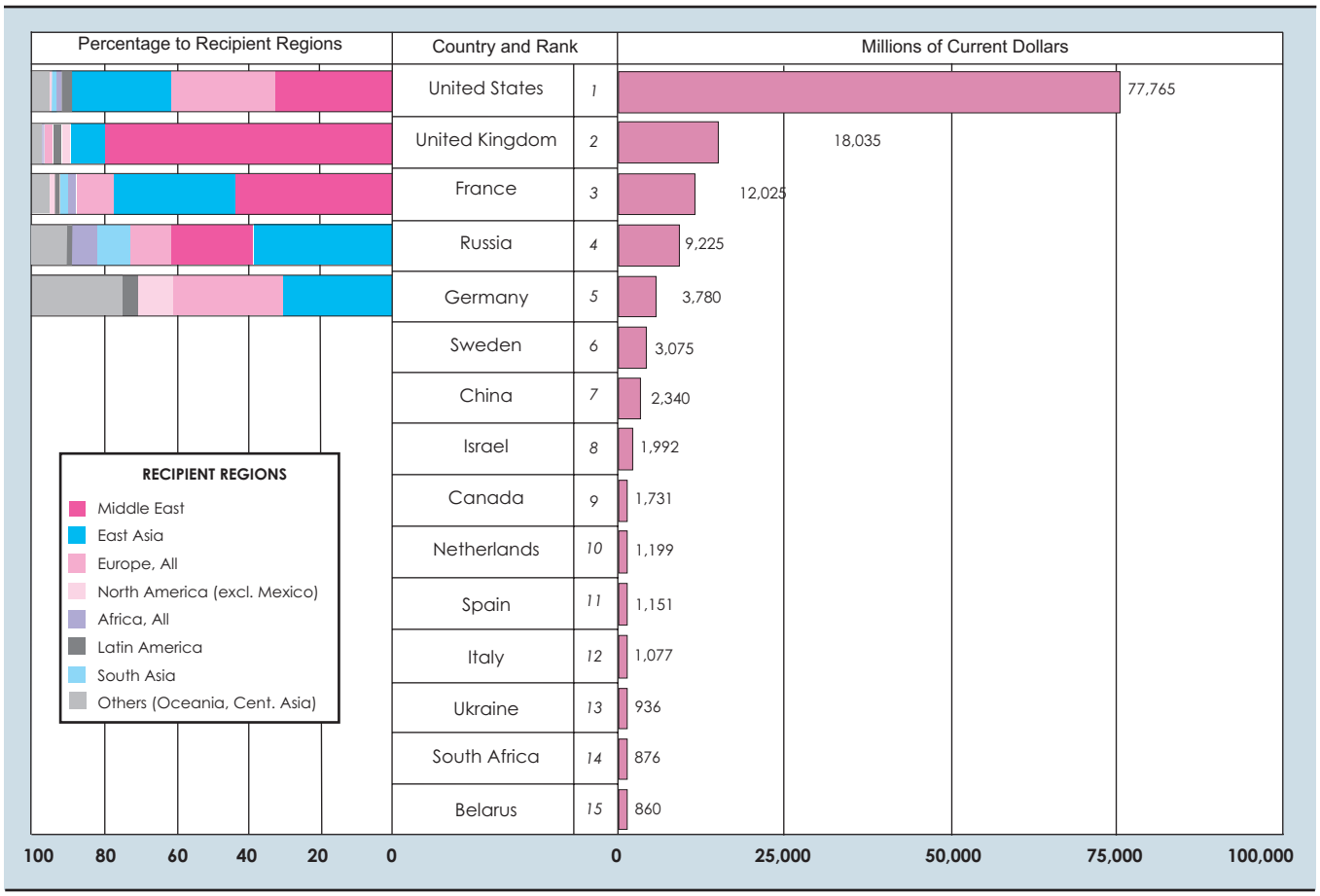
**Figure 9. World Arms Exports Shares: 1995-1997**




**US exports in the 1995-1997 period went mainly (58%) to developed countries, and 24% went to NATO countries**. The percentage shares of US exports by recipient region were:

| | |
|---|---|
| Middle East | 33% |
| Europe | 28 |
| East Asia | 27 |
| The Americas | 4 |
| Oceania | 3 |
| Africa | <1 |
| South Asia | <1 |
| Non-regional | 4 |

**Figure 10. Leading Arms Exporters and Their Major Recipients: 1995-1997**




**The main recipients of US arms exports in 1995-1997 were** (in billions of current dollars—see Main Table III):

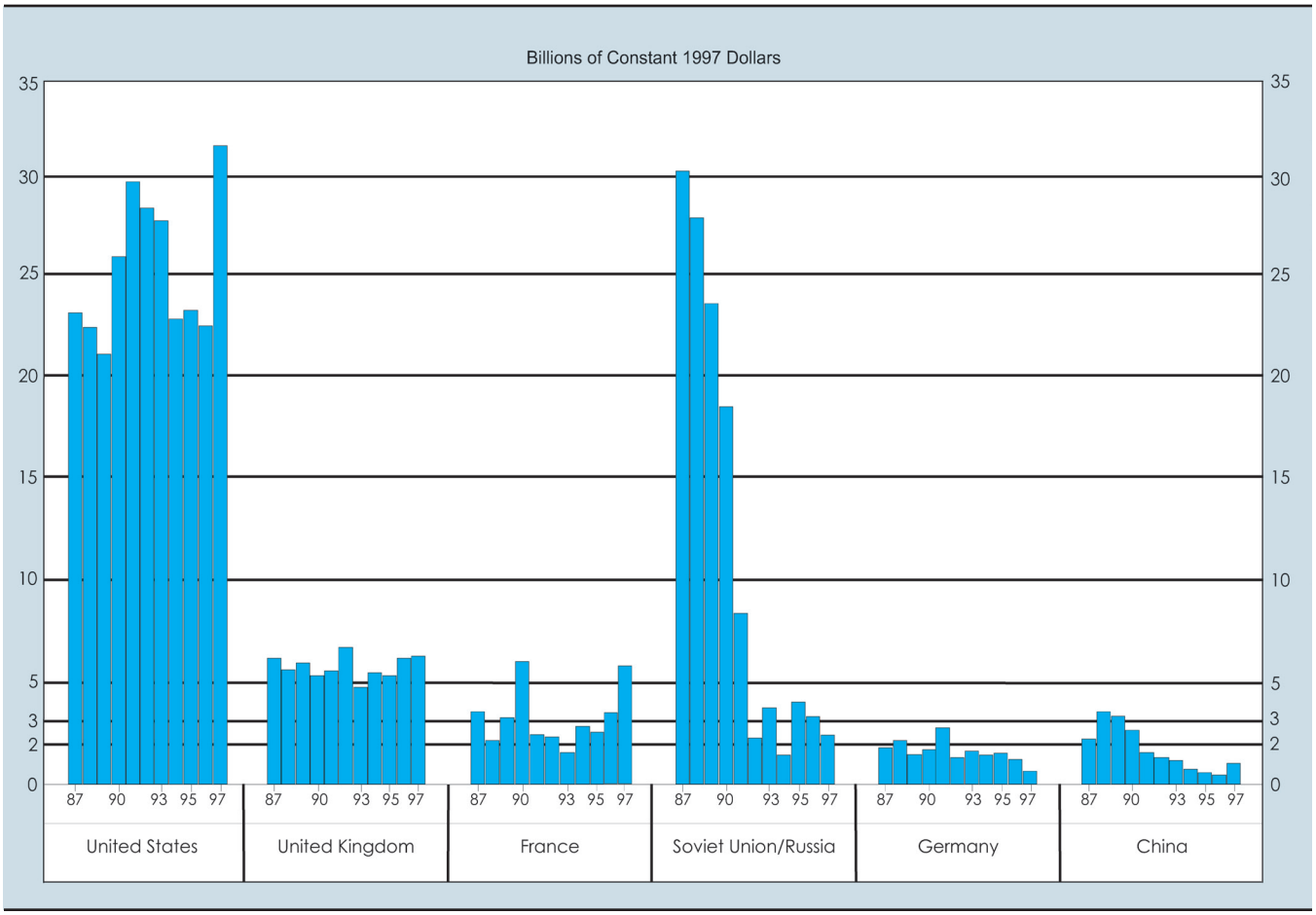
| | | | |
|---|---|---|---|
| Saudi Arabia | $13.7 | Germany | 2.4 |
| China—Taiwan | 8.1 | Australia | 1.9 |
| Japan | 6.8 | Greece | 1.5 |
| Egypt | 4.6 | Netherlands | 1.5 |
| United Kingdom | 4.4 | Finland | 1.4 |
| Turkey | 3.1 | Spain | 1.4 |
| Kuwait | 2.9 | Italy | 1.2 |
| South Korea | 2.9 | Thailand | 1.2 |
| Israel | 2.6 | | |

**The US was the dominant supplier (over 50%) for** these groups or regions in 1995-1997, in terms of actual deliveries: **World, Developed, East Asia, Western Europe, Oceania, and Central America.** In terms of agreements, the **Middle East** also is included (see Table 5).

**Table 5**
**US Share of Recipient Regions' Arms Imports: 1995-1997** (in percent)

| | Deliveries | Agreements |
|---|---|---|
| World | 55 | 63 |
| Developed | 74 | 84 |
| Developing | 40 | 37 |
| Africa | 15 | 26 |
| North America (NAFTA) | 21 | 34 |
| South America | 35 | 46 |
| Central America | 97 | 100 |
| Central Asia & Caucasus | 10 | 11 |
| East Asia | 60 | 67 |
| Middle East | 48 | 55 |
| South Asia | 15 | 6 |
| Western Europe | 83 | 86 |
| Eastern Europe | 25 | 39 |
| Oceania | 53 | 71 |

**Figure 11. Leading Arms Exporters by Country and Year: 1987-1997**




The main recipients of the **United Kingdom's** arms exports in 1995-1997 were (in millions of current dollars):

| | | | |
|---|---|---|---|
| Saudi Arabia | $11,900 | Brazil | 410 |
| Indonesia | 1,300 | Qatar | 340 |
| Kuwait | 1,200 | United Arab Emi. | 260 |
| United States | 1,100 | Poland | 160 |
| Oman | 625 | Malaysia | 160 |

Similarly, **France's** main arms export recipients were:

| | | | |
|---|---|---|---|
| China—Taiwan | $4,200 | Austria | 220 |
| Saudi Arabia | 2,300 | Canada | 200 |
| United Arab Emi. | 2,200 | Morocco | 190 |
| Pakistan | 390 | Switzerland | 170 |
| Qatar | 330 | United States | 160 |
| Turkey | 310 | Egypt | 130 |
| Belgium | 230 | Norway | 110 |

**Russia's** main arms recipients in the period were:

| | | | |
|---|---|---|---|
| China—M'nl'nd | $2,200 | Algeria | 310 |
| Iran | 780 | Slovakia | 240 |
| Kuwait | 775 | United Arab Emi. | 200 |
| India | 700 | Finland | 200 |
| Kazakhstan | 650 | Hungary | 160 |
| Malaysia | 550 | Angola | 160 |
| South Korea | 370 | Bulgaria | 150 |
| Egypt | 360 | North Korea | 130 |
| Vietnam | 320 | | |

**Germany's** main recipients were:

| | | | |
|---|---|---|---|
| South Korea | $900 | Greece | 340 |
| Australia | 750 | Thailand | 200 |
| Turkey | 650 | Brazil | 110 |
| United States | 390 | | |

**Table 6**
**Share of Major Suppliers' Arms Exports Going to Developing Countries** (in percent)

| | US | UK | FR | RS SU | CH | GM | Other NATO | Other W.Eur. |
|---|---|---|---|---|---|---|---|---|
| 1987 | 39 | 87 | 88 | 89 | 100 | 67 | 58 | 67 |
| 1988 | 32 | 82 | 63 | 91 | 100 | 52 | 59 | 57 |
| 1989 | 29 | 82 | 64 | 90 | 100 | 33 | 50 | 64 |
| 1990 | 32 | 83 | 88 | 94 | 100 | 19 | 47 | 20 |
| 1991 | 33 | 78 | 71 | 98 | 100 | 48 | 23 | 40 |
| 1992 | 37 | 89 | 48 | 100 | 91 | 33 | 45 | 29 |
| 1993 | 41 | 78 | 50 | 71 | 91 | 12 | 31 | 60 |
| 1994 | 38 | 90 | 81 | 100 | 100 | 19 | 53 | 46 |
| 1995 | 46 | 92 | 69 | 87 | 100 | 35 | 61 | 58 |
| 1996 | 41 | 94 | 69 | 90 | 100 | 23 | 65 | 60 |
| 1997 | 38 | 89 | 39 | 83 | 100 | 38 | 72 | 90 |
| '87-97 | 37 | 86 | 67 | 91 | 99 | 35 | 54 | 72 |

**Table 7**
**Major Suppliers' Share of Developing Country Arms Imports** (in percent)

| | US | UK | FR | RS SU | CH | GM | Other NATO | Other W.Eur. |
|---|---|---|---|---|---|---|---|---|
| 1987 | 16 | 9 | 5 | 47 | 4 | 2 | 3 | 1 |
| 1988 | 14 | 9 | 2 | 47 | 7 | 2 | 3 | 1 |
| 1989 | 14 | 11 | 4 | 48 | 8 | 1 | 2 | 1 |
| 1990 | 20 | 11 | 13 | 48 | 7 | 1 | 2 | 0 |
| 1991 | 34 | 15 | 6 | 39 | 6 | 5 | 1 | 0 |
| 1992 | 41 | 24 | 4 | 25 | 4 | 2 | 4 | 1 |
| 1993 | 50 | 17 | 4 | 11 | 5 | 1 | 2 | 1 |
| 1994 | 40 | 22 | 10 | 12 | 3 | 1 | 4 | 1 |
| 1995 | 40 | 19 | 7 | 8 | 3 | 2 | 4 | 1 |
| 1996 | 37 | 23 | 10 | 13 | 2 | 1 | 4 | 1 |
| 1997 | 43 | 21 | 9 | 11 | 4 | 1 | 6 | 1 |
| '87-97 | 29 | 15 | 7 | 28 | 5 | 2 | 3 | 12 |

**China—Mainland's** main recipients were:

| | | | |
|---|---|---|---|
| Iran | $725 | Sri Lanka | 180 |
| Burma | 460 | Thailand | 110 |
| Pakistan | 210 | Yemen | 110 |

***Shifting Trade Patterns***

Of the leading arms exporters **since 1993**, **the United States, the United Kingdom, and France have shown rising trends** in their arms exports, while Russia, Germany, and China-Mainland have been declining (see Figure 11).

The **direction of trade has tended to shift over the decade** from the developing to the developed countries for some of the leading exporters (France, Germany), while for others (UK, Other NATO and Other Western Europe) it has shifted toward the developing countries. For the US, Russia, and China it has remained fairly constant. (See Table 6)

**The main source of developing country arms imports** was primarily the Soviet Union at the beginning of the decade, but they **have come increasingly from the United Sates, the United Kingdom, France, and other NATO** (Table 7). Another measure of the arms trade, besides dollar value, is the number of major weapons transferred.

## Number of Weapons Delivered

A summary view of the number of weapons delivered to all countries of the world by major type and three-year sub-period is as follows (in units; from Main Table V):

| | 1986-88 | 89-91 | 92-94 | 95-97 |
|---|---|---|---|---|
| *LAND ARMAMENTS* | | | | |
| Tanks | 6,481 | 5,199 | 3,333 | 3,045 |
| Artil., Field & Anti-Air | 26,254 | 14,533 | 11,751 | 6,342 |
| Armored Pers. Carriers | 11,586 | 6,796 | 6,863 | 10,356 |
| *NAVAL CRAFT* | | | | |
| Major Surface Comb. | 47 | 49 | 51 | 85 |
| Other Surface Comb. | 322 | 297 | 204 | 377 |
| Missile Attack Boats | 5 | 5 | 20 | 27 |
| Submarines | 28 | 13 | 11 | 11 |
| *AIRCRAFT* | | | | |
| Combat Aircraft, Supers. | 1,556 | 1,630 | 680 | 750 |
| Combat Aircraft, Subs. | 267 | 233 | 231 | 162 |
| Other Aircraft | 2,263 | 2,213 | 665 | 650 |
| Helicopters | 1,354 | 929 | 681 | 783 |
| *MISSILES* | | | | |
| Surface-to-Air | 25,665 | 11,645 | 9,291 | 12,177 |
| Surface-to-Surface | 1,140 | 2,170 | 170 | 40 |
| Anti-Ship | 1,213 | 1,054 | 343 | 512 |
| Total, all types | 78,181 | 46,766 | 34,294 | 35,317 |

**The *total number of major weapons delivered* indicator for the world as a whole follows a trend roughly similar to that of the *dollar volume of total arms trade* indicator described above**.

| | Indexes of World Arms Trade | |
|---|---|---|
| | Dollar Value of All Arms* | Number of Major Weapons |
| 1986-88 | 100 | 100 |
| 1989-91 | 79 | 60 |
| 1992-94 | 58 | 44 |
| 1995-97 | 60 | 45 |

* In constant dollars, total for the period.

While the two indexes are generally similar, the index of major weapon quantities declined more steeply and shows only minimal signs of recovery.

The ratio of the two arms trade indicators over time—that is, the number of major weapons imported per billion dollars of total arms imports, by period—is as follows:

| | World | Developed | Developing |
|---|---|---|---|
| 1986-88 | 330 | 435 | 283 |
| 1989-91 | 249 | 180 | 294 |
| 1992-94 | 251 | 154 | 343 |
| 1995-97 | 246 | 172 | 303 |

**The movement of this ratio of major weapons to total arms imports has been strikingly different between the developed and developing country goups. After the 1986-1988 period, the developed group ratio fell by about 60%, while the developing group ratio rose by about 10%**, with a reversal of their relative size.

**This indicates that a significant shift has taken place in the content of developed country arms imports, from major weapons towards other items**, such as parts, accessories, upgrades, small arms and light weapons, or services. The proportion of major weapons in developing country imports, on the other hand, tended to grow somewhat over the period.

**(It should be cautioned that a simple quantity measure such as the number of major weapons by broad type can obscure the large variability** in size, complexity, and military effectiveness—and thus, in value—that can exist within each weapon type, between suppliers and/or recipients, and over time.)

The data on leading suppliers show that **over the last 12 years, the Soviet Union/ Russia combination was the largest single supplier of major weapons**, with 29% of total deliveries (Table 8). France was the second largest with 26%, followed by the United Sates (13%), China (4%), and the UK and Germany (3%).

**Table 8**
**Suppliers of Major Weapons to the World: 1986-1997**

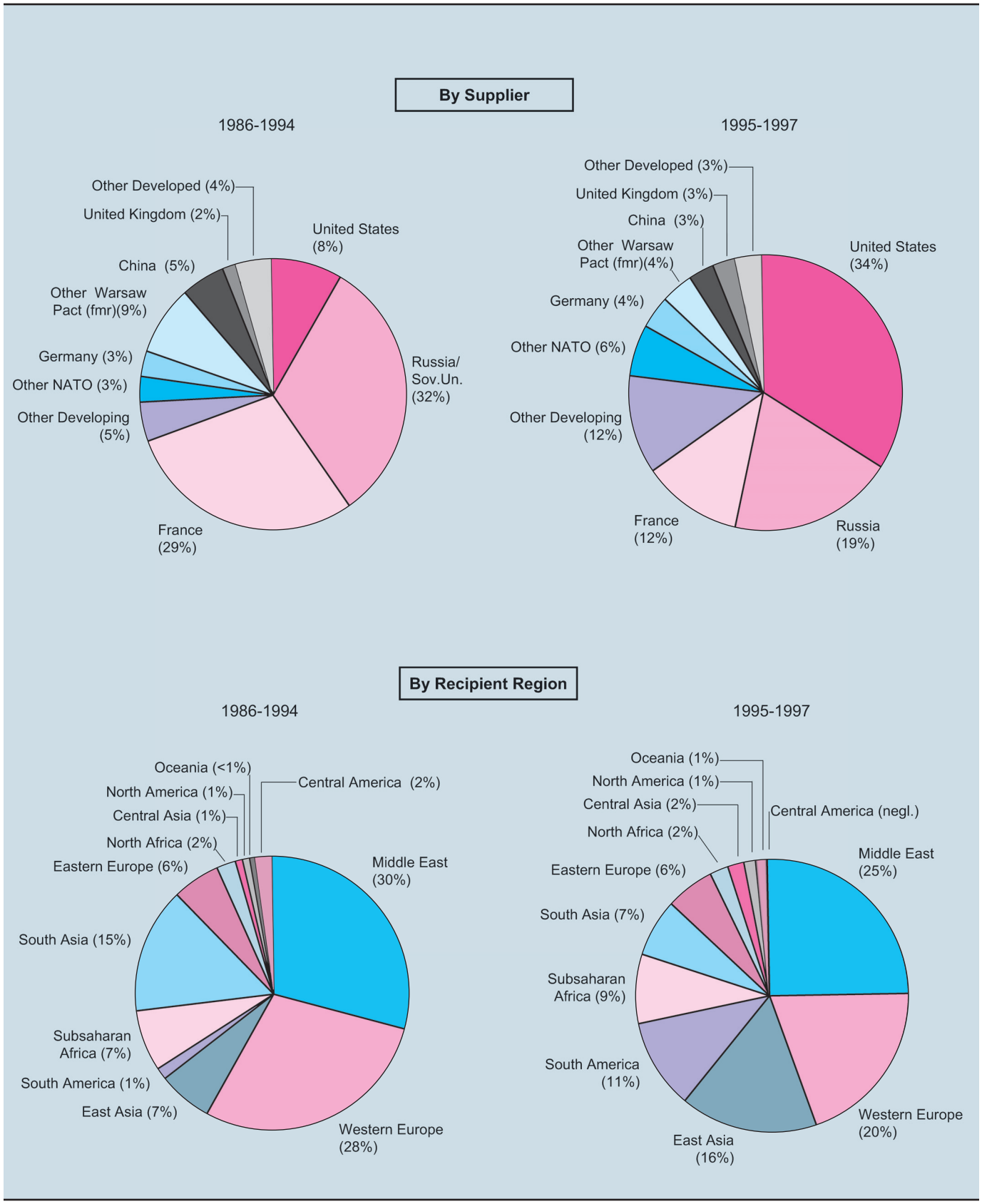
| Major Weapon Type | Total | Sov.Un. / Russia | Other Warsaw Pact | United States | United K'dom | France | Germany | Other NATO | China | Other Dev'ed | Other Dev'ing |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | In Units | In Percent (Total=100) | | | | | | | | | |
| *LAND ARMAMENT* | | | | | | | | | | | |
| Tanks | 18,058 | 40 | 16 | 19 | — | 2 | 8 | 2 | 5 | — | 8 |
| Artil., Field and Anti-Air | 58,880 | 17 | 2 | 8 | — | 54 | 2 | 2 | 8 | 3 | 4 |
| Armored Pers. Carriers | 35,601 | 34 | 18 | 18 | 2 | 3 | 7 | 11 | 3 | 1 | 3 |
| *NAVAL CRAFT* | | | | | | | | | | | |
| Major Surface Combatants | 232 | 27 | 12 | 6 | 13 | 4 | 21 | 9 | 4 | 3 | 1 |
| Other Surface Combatants | 1,200 | 24 | 2 | 11 | 3 | 7 | 7 | 9 | 5 | 14 | 18 |
| Missile Attack Boats | 57 | — | — | — | 11 | 7 | 22 | — | 47 | 11 | 2 |
| Submarines | 63 | 40 | — | — | 2 | — | 38 | 15 | — | — | 5 |
| *AIRCRAFT* | | | | | | | | | | | |
| Combat Aircraft, Supers. | 4,616 | 31 | — | 31 | 2 | 5 | 4 | 4 | 8 | 5 | 10 |
| Combat Aircraft, Subsonic | 893 | 26 | — | 26 | 27 | 1 | 5 | 6 | 1 | 2 | 6 |
| Other Aircraft | 5,791 | 8 | 30 | 6 | 2 | 2 | 2 | 9 | 3 | 25 | 13 |
| Helicopters | 3,747 | 38 | 10 | 19 | 1 | 16 | 4 | 6 | 1 | 1 | 4 |
| *MISSILES* | | | | | | | | | | | |
| Surface-to-Air | 58,778 | 35 | 5 | 12 | 4 | 26 | 1 | 1 | 3 | 5 | 8 |
| Surface-to-Surface | 3,520 | 69 | — | — | — | 2 | — | — | 8 | — | 21 |
| Anti-Ship | 3,122 | 26 | — | 25 | 1 | 17 | — | 1 | 17 | 12 | 1 |
| (Total, all types) | (194,558) | (29) | (8) | (13) | (3) | (26) | (3) | (4) | (4) | (4) | (6) |
| TOTALS BY PERIOD | | | | | | | | | | | |
| 1986-88 | 78,181 | 35 | 11 | 6 | 3 | 29 | 1 | 1 | 5 | 4 | 5 |
| 1989-91 | 46,766 | 36 | 6 | 11 | 1 | 26 | 1 | 2 | 6 | 7 | 4 |
| 1992-94 | 34,294 | 18 | 4 | 12 | 1 | 30 | 11 | 9 | 6 | 3 | 6 |
| 1995-97 | 35,317 | 19 | 4 | 34 | 3 | 12 | 4 | 6 | 3 | 3 | 12 |

**In the most recent period, 1995-1997, the US was the primary supplier of major weapons with 34%**, followed by Russia with 19% and France with 12%, while the other three main suppliers retained similar shares as above. France was the largest supplier in the 1992-1994 period.

In terms of types of major weapons transferred, the Soviet Union until its demise in 1991 was the main world supplier for most types of weapons, with the exception of artillery, in which France predominated. Russia retained the lead in 1992-94 for tanks, armored personnel carriers and cars, and helicopters.

**By the 1995-97 period, the US was the leader in tanks, artillery, armored vehicles, aircraft of all types, and anti-ship missiles, while France led in surface-to-air and surface-to-surface missiles** (see Main Table V).

**Figure 12. Number of Arms Delivered by Supplier and Recipient Region**



The numbers of all types of major weapon transfers by recipient region and period were as follows:

| | 1986-88 | '89-91 | '92-94 | '95-97 |
|---|---|---|---|---|
| Middle East | 21,722 | 13,080 | 12,329 | 13,081 |
| West. Europe | 24,446 | 12,009 | 8,593 | 5,917 |
| East Asia | 4,138 | 2,599 | 3,606 | 4,727 |
| South Amer. | 544 | 649 | 1,015 | 3,229 |
| SubSahar. Afr. | 5,048 | 2,727 | 3,921 | 2,572 |
| South Asia | 8,984 | 13,519 | 1,692 | 2,067 |
| East. Europe | 7,585 | 817 | 340 | 1,734 |
| North Africa | 2,630 | 685 | 325 | 686 |
| Central Asia | — | — | 1,060 | 573 |
| North America | 224 | 100 | 928 | 411 |
| Oceania | 376 | 114 | 77 | 361 |
| Central Amer. | 2,544 | 547 | 398 | 39 |

**After the initial 1986-88 sub-period, major weapons imports fell in all regions except South Asia and South America, where they rose**.

**The Middle East remains the leading destination for major weapon transfers**, a role it took over in 1989-1991as the Cold War waned and the Persian Gulf War flared. Armored vehicles have recently been important as imports (Main Table V).

**Western Europe led at the start of the decade and is still the second leading recipient region**, with about one-fourth the number of weapons imports as at the beginning of the decade. SAM missiles and armored vehicles are leading weapon imports.

**East Asia's inflow of major weapons has increased steadily since the end of the Cold War** and now exceeds that of early in the decade. The wide variety of types includes land armaments, aircraft, and missiles.

**South America has experienced a sharp increase in its weapons inflow, now nearly six times the low level obtaining at the end of the Cold War, making the region the fourth largest in weapon imports**.

**Subsaharan Africa persists as a large weapon importer**, though at about half the level at the beginning of the decade and fifth among regions.

**South Asia's weapon imports peaked at the end of the Cold War and dropped sharply thereafter**. The region is now sixth largest importer.

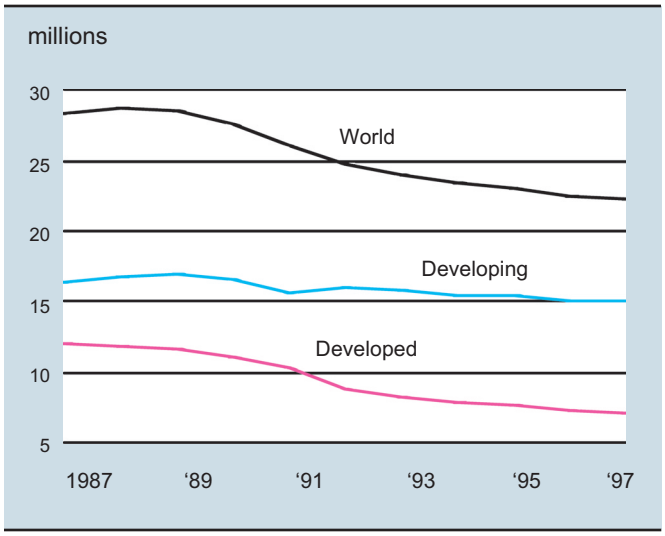
**Several regions—Eastern Europe, North Africa, and Central America—have had relatively low levels of major weapon imports** following sharp declines from the beginning of the decade. E**astern Europe's imports revived somewhat** in 1995-97 from a very low level in 1992-94 after being fourth largest in 1986-88. **Central America's fell to under 2% of their initial decade mark**.

Other regions—North America, Central Asia, and Oceania—are the lowest weapons importers (besides Central America).

# Armed Forces

**The size of the world's armed forces has continued to decline**, although more slowly than military spending. **The world's 1997 total of 22.3 million soldiers** represented a 1% drop from the previous year and **was 22% below the 1988-89 peak of 28.7 million** (Main Table I). The annual rate of decline was 3% over the decade and 2% over the latter half.

**Figure 13. World Armed Forces: 1987-1997**




As with spending, **most of the decline was in developed countries, particularly in 1991-1992**. Forces of developed countries, numbering 7.2 million in 1997, fell at a 6% rate over the decade and 3% over the latter half.

Developing country forces, totaling 15.1 million in 1997, fell only slightly, at an average rate of slightly over 1% over both periods. As a result of the differing trends, the developing country forces rose to 68% of the world total in 1997, from 58% in 1987 (Table 9).

**Of the world's twenty largest armies in 1997, 13 belonged to developing countries** (Figure 2 and Country Rankings). China (1st), India (4th), and North Korea (5th) had forces of over 1 million soldiers each in 1997. Turkey, Vietnam, and Pakistan, ranked 6th, 8th, and 9th respectively, had forces of about 600-800 thousand. Iran, Ukraine, Egypt, Iraq, Burma, Syria, and Brazil-with forces of about 300-600 thousand-rounded out the top twenty.

**Table 9**
**Armed Forces: Shares and Growth**
(in percent)

| | World Share | | Real Growth Rate* | |
|---|---|---|---|---|
| | 1987 | 1997 | Decade 87-97 | 2nd Half 93-97 |
| **World** | 100.0 | 100.0 | -2.9 | -1.8 |
| Developed | 42.1 | 32.3 | -5.8 | -3.3 |
| Developing | 57.9 | 67.7 | -1.1 | -1.1 |
| **Region** | | | | |
| East Asia | 28.4 | 31.2 | -1.9 | -2.6 |
| Western Europe | 13.7 | 13.6 | -2.4 | -1.6 |
| Eastern Europe | 20.0 | 12.6 | -7.6 | -3.3 |
| Middle East | 9.5 | 11.1 | -2.7 | .4 |
| South Asia | 6.9 | 9.8 | -.9 | .3 |
| North America | 8.9 | 8.3 | -3.7 | -3.8 |
| South America | 4.2 | 4.2 | -.8 | .5 |
| Central Africa | 2.9 | 3.2 | -1.4 | .4 |
| North Africa | 1.8 | 1.9 | -1.0 | -1.0 |
| Southern Africa | 1.5 | 1.6 | -2.5 | -5.1 |
| Central Asia & Cauc. | — | 1.3 | — | 12.9 |
| Central Amer. & Car. | 1.9 | .8 | -11.8 | -16.2 |
| Oceania | .3 | .4 | -.7 | -.7 |
| Europe, all | 33.6 | 26.1 | -5.2 | -2.4 |
| Africa, all | 6.2 | 6.7 | -1.6 | -1.4 |
| **Organization / Reference Group** | | | | |
| OECD | 23.6 | 23.2 | -2.8 | -2.0 |
| OPEC | 7.6 | 8.4 | -3.0 | .9 |
| NATO, all | 21.2 | 19.8 | -3.3 | -2.6 |
| Warsaw Pact (fmr) | 18.8 | 12.5 | -7.3 | -2.1 |
| NATO Europe | 12.9 | 12.6 | -2.6 | -1.7 |
| Latin America | 6.6 | 6.1 | -2.9 | 1.7 |
| CIS | — | 9.5 | — | -2.0 |

* Average annual rate, calculated as a compound rate curvefitted to all points (see Statistical Notes for details).

Among developed countries, **the armed forces of the United States (1.5 million) and Russia (1.3) ranked second and third in the world**.

The top five armies, with over a million each, made up 35% of the world total in 1997.

**Regional Trends**

While all regions trended downward over the entire decade, **Eastern Europe declined the most, falling from 20% of the world to 13%**, at an annual 7% rate. Central America posted the fastest rate of decline, 12%. Most regions had downward or relatively flat trends over the latter half of the decade as well, with only Central Asia (13%) posting a sizable rise.

**East Asia's total strength of roughly 7 million soldiers in 1997 made up 31% of the world total**, compared to 28% a decade earlier. **The dominant army—Mainland China's—had 2.6 million soldiers in 1997, 12% of the world's** and over 37% of East Asia's. Chinese forces continued their downward trend, falling some 50,000 in 1997 and bringing the level 26% below their 3.9 million peak in 1989. The average rate of decline was 3.8% over the decade and 4% over the latter half.

**China's army is roughly 2.5 times North Korea's, the next largest regional army with 1.1 million soldiers in 1997**. The North Korean army has held steady at this level over the latter half of the decade, after a small drop from the early 1990s. The next three largest armies in East Asia in 1997 were **South Korea** (ranked 7th in the world with 670 thousand solders), **Vietnam** (ranked 8th with 650 thousand soldiers), and **Taiwan** (15th, 400 thousand). These forces have been falling in the half-decade by 3%, 6%, and 3% rates, respectively.

Total **European forces, which dropped steadily over the entire decade, numbered 5.8 million soldiers in 1997**. Their share of world armed forces has fallen from just under 34% in 1987 to 26% in 1997.

Reductions **in Eastern Europe** accounted almost entirely for this dramatic shift. **Russia has the largest army in Europe, with 1.3 million soldiers in 1997**, 46% of the regional total and 22% of Europe as a whole. Still the world's third largest, Russian forces have fallen by 32% since 1992. **Ukraine** has the second largest army in the region and 12th largest in the world, with 450 thousand soldiers in 1997. **Poland** followed with 230 thousand (ranked 25th) and **Romania**, with 200 thousand (28th).

**In Western Europe, Turkey has claim to the largest army with 820 thousand soldiers in 1997, the world's 6th largest**, 4% of world armed forces and 27% of Western Europe's. Over the decade, Turkey's armed forces trended downward to a low of 686 thousand in 1993 and has risen steadily since.

**France**, with 475 thousand soldiers, **Italy** (419), and **Germany** (335), maintained the next largest armies in Western Europe in 1997, together making up an additional 41% of total regional strength. Each of these had steady declines over the decade, with Germany's being the most rapid (4% over the latter half-decade). France's forces in 1997 were the 11th largest in the world, followed by Italy (14th) and Germany (17th).

**European members of NATO make up 13% of the world's total strength**, 48% of Europe's, 64% of NATO's, 93% of the Western European.

**In the Middle East are four of the world's largest armies: Iran** (10th), **Egypt** (13th), **Iraq** (16th), and **Syria** (19th). The region as a whole totaled slightly under 2.5 million in 1997, 11% of world armed forces, 1.6 percentage points highter than in 1987.

**Iranian** armed forces (575 thousand soldiers in 1997) are up 31% from the 1990 decade-low. Of the others in the region, only Lebanon (57,000) and Kuwait (28,000) experienced sizable growth.

**Iraqi** armed forces in 1997 fell by some 50,000 solders from 1996, to the lowest level of the decade, 400 thousand. Prior to this drop, levels had posted consecutive rises during the 1992-1995 period. Of the larger sized armed forces in the region, the Egyptian (430 thousand), Syrian (320), Israeli (185), Saudi Arabian (180), and Jordanian (102) stayed fairly constant.

**South Asian armed forces totaled almost 2.2 million soldiers in 1997, 10% of the world total**, continuing a period of moderate growth that began in 1989. The region contains two of the world's largest armies—India (4th) and Pakistan (9th).

**India's** army makes up 58% of the region's total strength and 6% of the world's. Force levels have remained constant at 1.26 million soldiers over nearly the entire decade. In contrast, **Pakistan's** smaller armed forces, totaling 610 thousand soldiers in 1997 or 28% of the region's, have risen steadily at an average 2.2% rate over the entire decade and 1% over the latter half. Bangladesh's army, 110 thousand soldiers strong, ranked 36th in the world in 1997.

**North America's armed forces are dominated by the United States with a 1997 level of over 1.5 million, now the world's second largest army**. The size of US armed forces has fallen steadily over the entire decade by 750 thousand from its peak level in 1987, a total of 33% or an annual rate of 4.5%. The 1997 level was a drop of 40,000 soldiers from 1996. In 1997, US forces accounted for 83% of the North America region, 21% of the developed countries total, and 7% of the world strength. **Mexico's** army totaled 250 thousand soldiers in 1997, a rise of 75,000 from its 1996 level, and ranked 24th in the world. **Canada's** army ranked 58th, with 61,000 soldiers.

The remaining six developing regions of the world—Africa, South and Central America, Central Asia, and Oceania—accounted for 13% of the world's total armed forces in 1997. Of the armies in these regions, only **Brazil's** (296 thousand soldiers) ranked in the top twenty. **Morocco's**, with 195 thousand, rank in the top thirty.

**Force Ratios**

The ratio of a country's armed forces to its population provides a useful indicator of national military burden and effort. A comparison of trends in armed forces, population, and the resulting "force ratio" shows some significant differences between developed and developing countries and sharp differences among regions.

World and regional comparisons of this indicator are shown in:

- Table 10 below (ratios and growth rates);
- Figure14, col. 1, page 23 (bar chart, 1997);
- "Regional Trends, 1987-1997", pages 31-37 (decade line graphs).

**The world force ratio has declined steadily over the decade, as armed forces diminished while population grew. The 1997 world ratio was under four soldiers per thousand people, compared with 4.5 in 1993 and nearly six in 1987**. The rate of decline fell by an average 4.3% annual rate over the decade and by 3.1% during the 1993-1997 period.

Viewed from the perspective of developed versus developing countries, the picture becomes more diverse. **While the aggregate armed forces of developed countries are smaller than those of developing, as noted above, they represent a larger burden in terms of the force ratio. The 1997 developed country force ratio of 6.2 soldiers per 1,000 population was nearly twice the developing country ratio of 3.2**. The 1997 comparison shows greater equality than obtained a decade earlier, when the developed ratio was more

than twice the developing ratio. While the armed forces of the developed countries fell faster (tending to reduce the difference), the population of the developing countries grew faster (countering that tendency).

**In 1997, the Middle East had the highest force ratio of any region with just over 11 soldiers per thousand people**, followed by Eastern and Western Europe with 8.2 and 6.7, respectively, North Africa with 5.9, North America with 4.7, Central Asia with 4.1, and East Asia with 3.6.

**The Middle East region had ten nations ranking in the top twenty in terms of this measure. Four were in the top five—Israel** (second in the world with 33.4 soldiers per thousand people), **United Arab Emirates** (3rd, with 26.5), **Jordan** (4th, with 23.6), and **Syria** (5th, with 19.8). Iraq ranked 7th with a ratio of 19. Five others—Oman and Lebanon (16.5 soldiers), Qatar (16.4), Kuwait (15.3), and Bahrain (14.9)—ranked among the top twenty (see Country Rankings).

East Asia's **North Korea continues to have the world's largest army relative to its population, with over 51 soldiers per thousand people**. Four other countries in the region—Taiwan (18.4), Brunei (16.3), Singapore (16), and South Korea (14.6)—were also leading countries in terms of this ratio, though only Taiwan ranked in the world's top ten, at 8th.

**Countries with large populations tend to have small force ratios**, of course, even if they have large armies. **China**, for example, with the world's largest army, had a force ratio of 2.1 in 1997, ranking 122nd. **India**, with the fourth largest armed forces, had a ratio of 1.3 and ranked 145th.

**Table 10**
**Force Ratio Trends**

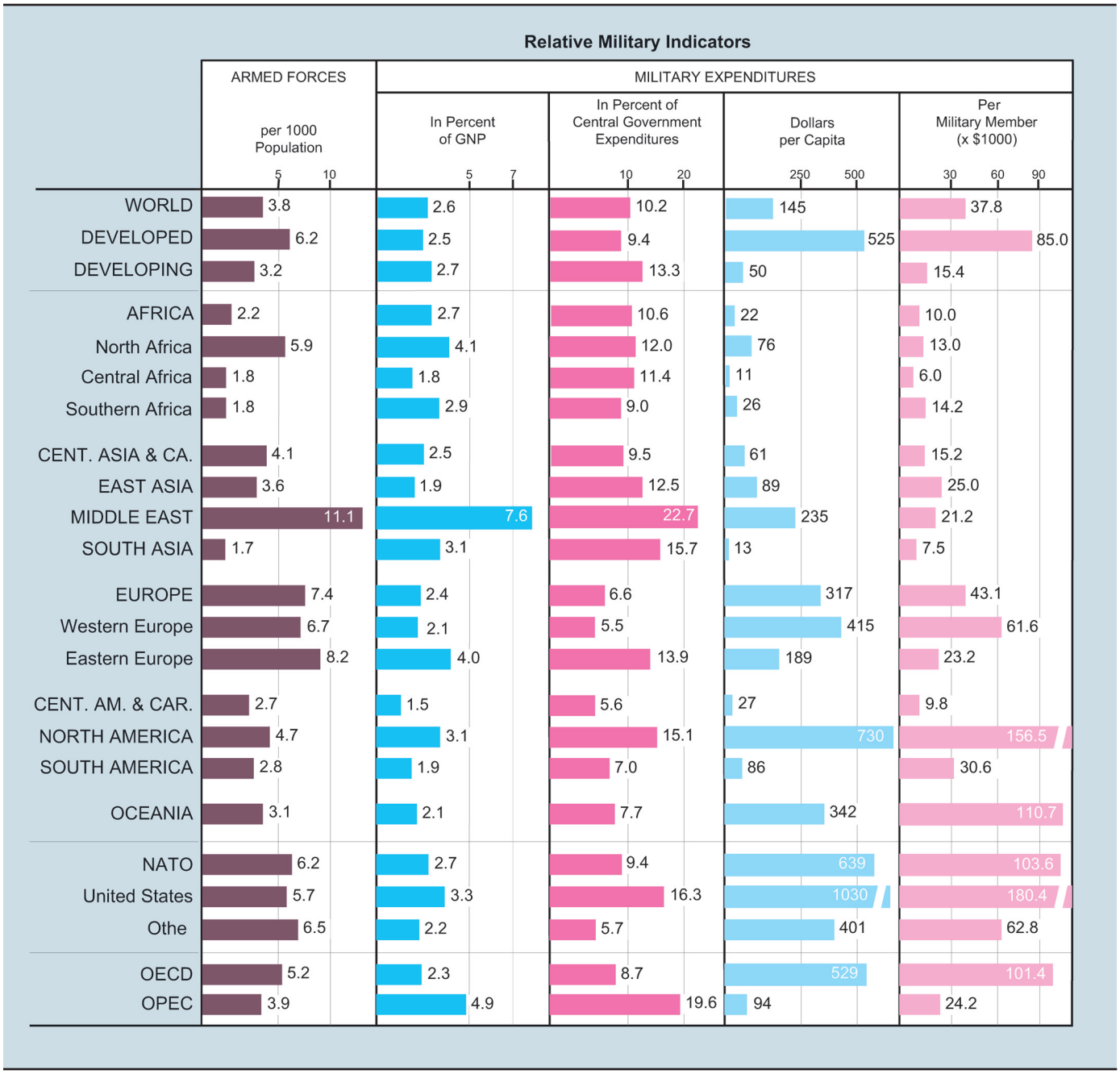
| | Amount | | | Growth Rate* | |
|---|---|---|---|---|---|
| | 1987 | 1993 | 1997 | Decade 87-97 | 2nd Half 93-97 |
| **Armed Forces:** | (In millions) | | | | |
| World | 28.3 | 24.0 | 22.3 | 2.8 | -1.8 |
| Developed | 12.0 | 8.2 | 7.1 | -5.7 | -3.3 |
| Developing | 16.4 | 15.8 | 15.1 | -1.1 | -1.7 |
| **Population:** | (In billions) | | | | |
| World | 5.0 | 5.5 | 5.8 | 1.5 | 1.4 |
| Developed | 1.2 | 1.1 | 1.1 | -1.0 | .4 |
| Developing | 3.7 | 4.3 | 4.6 | 2.2 | 1.6 |
| **Force Ratio:** | (In soldiers per 1000 pop.) | | | | |
| World | 5.7 | 4.4 | 3.8 | -4.3 | -3.1 |
| Developed | 9.7 | 7.2 | 6.2 | -4.7 | -3.8 |
| Developing | 4.3 | 3.6 | 3.2 | -3.3 | -2.6 |
| Middle East | 15.7 | 12.1 | 11.1 | -5.1 | -1.8 |
| Eastern Europe | 13.4 | 9.3 | 8.2 | -4.8 | -3.1 |
| Western Europe | 9.5 | 7.3 | 6.7 | -3.4 | -2.1 |
| North Africa | 8.4 | 6.6 | 5.9 | -2.9 | -3.0 |
| North America | 7.2 | 5.5 | 4.7 | -4.9 | -4.1 |
| East Asia | 4.7 | 4.2 | 3.6 | -3.2 | -3.7 |
| Central Asia & Cauc. | — | 2.7 | 4.1 | — | 12.2 |
| Central Amer. & Car. | 10.2 | 6.0 | 2.7 | -13.3 | -17.6 |
| Oceania | 3.7 | 3.4 | 3.1 | -2.1 | -1.9 |
| South America | 4.3 | 2.9 | 2.8 | -2.5 | -1.0 |
| Southern Africa | 2.9 | 2.5 | 1.8 | -5.0 | -7.4 |
| South Asia | 1.8 | 1.8 | 1.7 | -.9 | -1.5 |
| Central Africa | 2.7 | 1.9 | 1.8 | -4.2 | -2.2 |
| Europe, all | 11.5 | 8.2 | 7.4 | -4.4 | -2.6 |
| Africa, all | 3.4 | 2.6 | 2.2 | -4.1 | -3.9 |
| OECD | 7.5 | 5.8 | 5.2 | -3.8 | -2.7 |
| OPEC | 5.6 | 4.1 | 3.9 | -5.1 | -1.1 |
| NATO, all | 9.3 | 7.1 | 6.2 | -4.3 | -3.3 |
| Warsaw Pact (fmr) | 13.5 | 7.9 | 7.2 | -6.9 | -2.0 |
| NATO Europe | 9.7 | 7.4 | 6.8 | -3.7 | -2.2 |
| Latin America | 4.6 | 3.1 | 2.8 | -4.7 | -3.4 |
| CIS | — | 8.2 | 7.4 | — | -2.0 |

* Average annual rate, calculated as a compound rate curve fitted to all points (see Statistical Notes for details).

# Military Burden and Other Relative Indicators

In order to give perspective to the basic military indicators, namely, military expenditures, arms transfers and armed forces, several basic economic indicators for each country are also presented in the main tables, including population, gross national product (GNP), central government expenditures (CGE), and total trade. These make it possible to place the military measures in socio-economic context, both within one country and among other countries. Figure 14 presents 10 such relative indicators for 1997, averaged for major groupings of countries and regions, in a way that permits their comparison both across the world for a single indicator and across a given

**Figure 14. Relative Indicators: 1997**

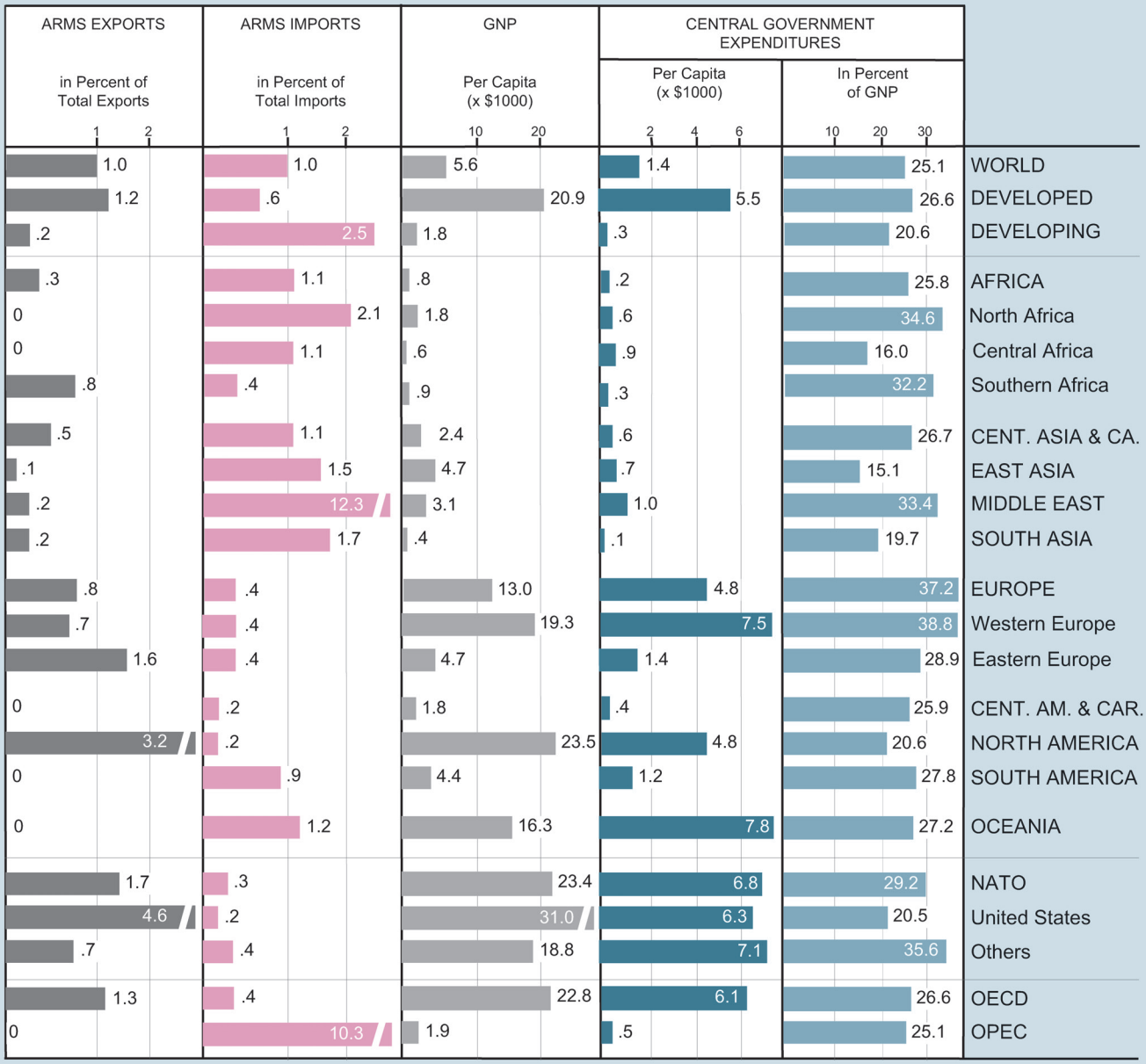


## Average Relative Indicators

The ten average ratios for the world, regions, and other country groupings in Figure 18 are based on data for basic military and economic variables by country in Main Statisitcal Tables I and II, below. In the Country Rankings tables, all countries in 1997 are ranked by these relative indicators as well as for the main absolute measures.

The average indicators in Figure -- are calculated as the ratio of the group total of the numerator variable to the group total of the denominator variable. Such a ratio is equivalent to the weighted average of individual country ratios, with the denominator variable serving as the weighting factor. The weighted average of individual country ratios can differ considerably from the simple average , particularly when a very large country (e.g., China, Russia, US) is in the group. Also, when the denominator is a value measure such as GNP, the relative weights of the countries can shift from edition to edition of this report due to the change in the base year for currency conversion and changes in relative average exchange rates that occur from year to year. See Statistical Notes, Conversion . . . to dollars, for futher discussion of the impacts of changes in exchange rates.

**Relative Arms Trade and Economic Indicators**



group for all the indicators. In the Country Rankings tables, countries are ranked in terms of both relative and absolute indicators in 1997.

## The ME/GNP Ratio

**A common measure of "military burden" is the ratio of military expenditures to GNP**, or ME/GNP (column 2 of Figure 14, which measures the extent to which a country's annual product is devoted to its military effort. **The relative level of military effort exerted by a country can be influenced by a variety of factors**, such as involvement in civil or external war, military threats from neighbors, and political or historico-cultural emphasis on military power.

**One factor that does not seem to be a critical determinant of military effort is the country's stage of economic development or income**

**Figure 15. Relative Burden of Military Expenditures: 1997**

| ME/GNP* (%) | GNP PER CAPITA (1997 DOLLARS) | | | | | |
|---|---|---|---|---|---|---|
| | Under $200 | $200-499 | $500-999 | $1,000-2,999 | $3,000-9,999 | $10,000 and over |
| 10% and over | | | Angola | North Korea | Oman<br>Saudi Arabia<br>Bahrain | |
| 5-9.99% | Burundi<br>Sierra Leone<br>Congo (Kinshasa) | Yemen<br>Eritrea<br>Pakistan | Sri Lanka | Jordan<br>Burma+<br>Bosnia & Herzegov. | Croatia<br>Russia<br>Syria<br>Libya+<br>Botswana | Israel<br>Qatar+<br>Kuwait<br>United Arab Emir<br>Cyprus<br>Singapore<br>Slovenia |
| 2-4.99% | Mozambique<br>Liberia+ | Sudan<br>Rwanda<br>Uganda<br>Cambodia<br>Central African Rep.<br>Gambia<br>Laos<br>India<br>Burkina Faso<br>Chad<br>Mauritania<br>Kenya<br>Togo<br>Guinea Bissau | Congo (Brazzaville)<br>Zimbabwe<br>Afghanistan+<br>Cameroon | Serbia & Monteneg.<br>Iraq<br>Turkmenistan<br>Morocco<br>Djibouti<br>Ecuador<br>Algeria<br>Uzbekistan+<br>Ukraine<br>Colombia<br>Armenia<br>Iran<br>Egypt<br>Vietnam<br>Namibia<br>Macedonia<br>Fiji<br>Cuba+<br>Thailand<br>Swaziland<br>China<br>Peru | Turkey<br>Chile<br>South Korea<br>Lebanon<br>Bulgaria<br>Romania<br>Poland<br>Malaysia<br>Venezuela<br>Slovakia<br>Gabon | Greece<br>Brunei<br>Taiwan<br>United States<br>France<br>United Kingdom<br>Sweden<br>Portugal<br>Australia<br>Norway<br>Italy |
| 1-1.99% | Ethiopia<br>Niger | Mongolia<br>Mali<br>Senegal<br>Madagascar<br>Haiti+<br>Nicaragua<br>Guinea<br>Bangladesh<br>Benin<br>Tanzania<br>Somalia+<br>Zambia<br>Malawi | Lesotho<br>Indonesia<br>Honduras+ | Tunisia<br>Azerbaijan<br>Bolivia<br>South Africa<br>Tajikistan<br>Kyrgystan<br>Equatorial Guinea+<br>Philippines<br>Nigeria<br>Albania<br>Georgia<br>Papua New Guinea<br>Paraguay<br>Dominican Republic<br>Guatemala+ | Hungary<br>Brazil<br>Belarus<br>Trinidad & Tobago<br>Estonia<br>Uruguay<br>Panama<br>Kazakstan<br>Suriname<br>Argentina | Netherlands<br>Czech Republic<br>Finland<br>Denmark<br>Germany<br>Belgium<br>Spain<br>Switzerland<br>Canada<br>New Zealand<br>Ireland |
| Under 1% | Bhutan+ | Sao Tome & Princ.<br>Nepal<br>Ghana | Guyana<br>Ivory Coast | Moldova<br>El Salvador<br>Cape Verde<br>Jamaica<br>Costa Rica<br>Belize | Mexico<br>Malta<br>Latvia<br>Lithuania<br>Barbados+<br>Mauritius | Japan<br>Austria<br>Luxembourg<br>Iceland |

* Countries are listed within blocks in descending order of ME/GNP.

\+ Ranking is based on a rough approximation of one or more variables, for which 1995 data or a reliable estimate is not available.

**level**. This is indicated by a cross-classification of the world's countries in 1997 by their ME/GNP ratio and GNP per capita, shown in Figure 15, and the widespread scatter of countries over the entire matrix. **Countries at each level of GNP per capita have a wide range of burden ratios**.

**Over the past decade, the world's average ME/GNP ratio has fallen in half, from 5.2 to 2.6%** (Table 11). The ratio for developed countries has fallen somewhat more and continues to decline in recent years. For developing countries, the fall was by a smaller 45%, from 4.9 to 2.7%, and the average ratio has remained unchanged for the last 4 years.

**Table 11**
**The Burden Ratios: ME/GNP**
(in percent)

| | 1987 | 1995 | 1996 | 1997 |
|---|---|---|---|---|
| **World** | 5.2 | 2.7 | 2.6 | 2.6 |
| Developed | 5.3 | 2.7 | 2.6 | 2.5 |
| Developing | 4.9 | 2.7 | 2.7 | 2.7 |
| **Region** | | | | |
| Middle East | 17.6 | 7.9 | 7.7 | 7.6 |
| North Africa | 5.6 | 4.1 | 3.9 | 4.1 |
| Eastern Europe | 11.9 | 4.1 | 3.8 | 4.0 |
| North America | 5.6 | 3.5 | 3.2 | 3.1 |
| South Asia | 4.0 | 2.9 | 3.2 | 3.1 |
| Southern Africa | 4.9 | 3.1 | 3.1 | 2.9 |
| Central Asia & Cauc. | — | 1.6 | 2.0 | 2.5 |
| Oceania | 2.5 | 2.2 | 2.2 | 2.1 |
| Western Europe | 3.2 | 2.3 | 2.2 | 2.1 |
| East Asia | 2.3 | 1.9 | 1.9 | 1.9 |
| South America | 1.9 | 1.8 | 1.9 | 1.9 |
| Central Africa | 2.2 | 2.0 | 1.9 | 1.8 |
| Central Amer. & Car. | 3.0 | 1.4 | 1.5 | 1.5 |
| Europe, all | 6.4 | 2.5 | 2.5 | 2.4 |
| Africa, all | 4.0 | 2.9 | 2.8 | 2.7 |
| **Organization / Reference Group** | | | | |
| OECD | 3.7 | 2.5 | 2.4 | 2.3 |
| OPEC | 12.1 | 4.9 | 4.7 | 4.9 |
| NATO, all | 4.6 | 3.0 | 2.8 | 2.7 |
| Warsaw Pact (fmr) | 12.1 | 3.8 | 3.6 | 3.8 |
| NATO Europe | 3.3 | 2.3 | 2.3 | 2.2 |
| Latin America | 1.8 | 1.6 | 1.7 | 1.7 |
| CIS | — | 4.5 | 4.4 | 4.8 |

**The ME/GNP ratio fell in all regions of the world, particularly in the Middle East, Eastern Europe, and Central America and Caribbean**, where it dropped 2½ times or more. **South America, with one of the lowest average ratios, is the only region whose ratio has not exhibited an appreciable decline over the decade**.

**In 1997, the 13 regions exhibited a mixed pattern**; in 3 (North Africa, Eastern Europe, and Central Asia), the average ratio rose, in 3 (East Asia, South America, and Central America), it stayed level, and in the remaining 7 regions, it fell. **The Middle East ratio, consistently the highest, was 7.6% in 1997, while Central America's 1.9% was the lowest**.

As shown in Figure 15, **Middle East countries were prominent among those with ratios over 5%, and had 9 of the 12 highest ratios in 1997** (see also Country Rankings, below).

It should be noted that the ME/GNP ratios or rankings for a number of countries are based on rough estimates and should be used with particular caution; these include North Korea, Iraq, Iran, Russia, and China (see Main Table I for data quality annotations).

## The ME/CGE Ratio

Another useful measure of military effort, **the ratio of military expenditures to total central government expenditures, can reveal a different comparative burden level, since ratios of CGE to GNP vary considerably among countries and regions** (see Figure 18, last column, and Country Rankings for CGE/GNP). For example, in 1997 South Asia ranked fifth among regions in ME/GNP, but second (to the Middle East) in ME/CGE.

**The decline of the world average ME/CGE ratio, from 18.4% in 1987 to 10.2%**

**in 1997, has been relatively less than for ME/GNP** (Table 12). The developed group of countries, which had a higher ratio than the developing in 1987, fell more rapidly and had a lower ratio in 1997.

Table 12 shows that **in the three years 1995-1997, the ME/CGE ratio in the main has been fairly steady in most groups and regions**. Notable exceptions have been rising ratios for Central Asia and Caucasus and, over the decade, for South America and Central Africa.

**Illustrative of the difference in the two measures of military burden is the fact that in 1997 only 3 Middle East countries (United Arab Emirates, Oman, and Saudi Arabia) were among the top 12 in ME/CGE, as compared to 9 in ME/GNP**. **CGE may take better account of a country's capacity for financing its military effort**. The Middle East military burden in 1997 in terms of ME/CGE was still heavy, as 8 of its countries were in the top 20 (see Country Rankings).

Other top ME/CGE countries in 1997 were Burma, Sudan, Congo (Kinshasa), Angola, Sierra Leone, North Korea, Russia, Liberia, and Central African Republic.

**Table 12**
**The Burden Ratios: ME/CGE**
(in percent)

| | 1987 | 1995 | 1996 | 1997 |
|---|---|---|---|---|
| **World** | 18.4 | 10.5 | 10.3 | 10.2 |
| Developed | 18.6 | 9.8 | 9.5 | 9.4 |
| Developing | 17.4 | 13.1 | 13.4 | 13.3 |
| **Region** | | | | |
| Middle East | 45.1 | 23.8 | 22.7 | 22.7 |
| South Asia | 17.8 | 14.8 | 16.0 | 15.7 |
| North America | 24.5 | 16.2 | 15.3 | 15.1 |
| Eastern Europe | 38.8 | 13.8 | 12.9 | 13.9 |
| East Asia | 12.4 | 13.0 | 12.7 | 12.5 |
| North Africa | 15.0 | 12.1 | 12.0 | 12.0 |
| Central Africa | 8.4 | 11.9 | 12.4 | 11.4 |
| Central Asia & Cauc. | — | 5.9 | 6.8 | 9.5 |
| Southern Africa | 16.2 | 10.0 | 9.7 | 9.0 |
| Oceania | 8.5 | 7.9 | 8.0 | 7.7 |
| South America | 5.2 | 6.2 | 7.2 | 7.0 |
| Central Amer. & Car. | 10.9 | 5.8 | 5.9 | 5.6 |
| Western Europe | 8.3 | 5.6 | 5.6 | 5.5 |
| Europe, all | 17.9 | 6.6 | 6.5 | 6.6 |
| Africa, all | 13.2 | 11.2 | 11.2 | 10.6 |
| **Organization / Reference Group** | | | | |
| OECD | 13.3 | 9.1 | 8.8 | 8.7 |
| OPEC | 37.6 | 20.8 | 19.7 | 19.6 |
| NATO, all | 15.2 | 9.8 | 9.5 | 9.4 |
| Warsaw Pact (fmr) | 38.7 | 13.0 | 12.2 | 13.4 |
| NATO Europe | 8.5 | 5.7 | 5.7 | 5.7 |
| Latin America | 5.0 | 5.9 | 6.7 | 6.8 |
| CIS | — | 19.0 | 18.0 | 20.3 |

## ME Per Capita

**The ME per capita indicator in a way is the most general measure of how efficiently the world is maintaining its security**. If it can be considered that in a general sense the world's security over the decade has at least remained constant, if not improved, **the average cost per world inhabitant dropped by nearly half, from $271 in 1987 to $145 in 1997** (Main Table I).

On the other hand, **the benefits of greater efficiency attributable to the Cold War's end appear to have been achieved by about 1995, after which time the world ME per capita indicator has remained about level**. Future changes in this measure will indicate whether the world is becoming more or less efficient in its efforts to maintain security.

**The ME-per-capita measure of burden shows a wide, 13-fold gap between the developed country average ($580) and that of the developing ($44)** (Figure 14, fourth column).

**The steady decline in this measure over the decade ended for the world in 1996 and for the developing countries in 1994, while for the developed countries it leveled off in 1997**.

**In terms of individual regions in 1997, the picture suggests a rising trend may be immi-**

**nent. The ME per capita measure declined in 4 regions** (North America, West Europe, South Africa, and Oceania), **but showed an increase in all other regions, except for Central Africa** where there was no change.

In terms of individual countries, **this measure again shows the high level of militarisation in the Middle East**, which provided 7 of the top 10 countries in 1997 ME per capita:

| | | |
|---|---|---|
| 1 | Israel | $1,687 |
| 2 | Singapore | 1,646 |
| 3 | Kuwait | 1,505 |
| 4 | Qatar | NA |
| 5 | Brunei | 1,216 |
| 6 | Saudi Arabia | 1,053 |
| 7 | United States | 1,031 |
| 8 | United Arab Emir. | 1,019 |
| 9 | Bahrain | 883 |
| 10 | Oman | 795 |

**The disparity between the extremes in this indicator are probably the greatest of any measure of burden. The 1997 average for the top ten countries ($1,157) was some 550 times that for the lowest ten countries ($2)**.

## The ME/AF Ratio

Rather than burden, military expenditures per member of the armed forces (ME/AF) is a measure of operational and investment-type outlays per serviceman and can serve as a rough overall indicator of the military technological level. The movement of this ratio over time can indicate changes in security concerns and felt needs to adjust the technological level.

The data in Table 13 show average ME/AF ratios at the ends of the decade as well as at their decade peak and nadir, for each group and region. **The 1997 world average at $38,000 per serviceman compares with the developed country ratio of $85,000, which was 5.5 times the developing group figure of $15,400**.

**The regions as ranked in 1997 are led by North America at $156,000 per serviceman**, followed in rather large steps by Oceania and West Europe. **Surprisingly, South America has become the fourth-ranked region**, higher than East Asia, East Europe, and the Middle East. **At the low end was Central Africa, whose $6,000 ratio was 1/26th of North America's**.

**The movement of the average ratio for the groups and regions over the decade has followed several disparate patterns**. **One pattern**—from an early peak to a recent bottom and an upturn in the last year or two—**was shown by the world as a whole, the developed group, Eastern Europe, and Southern Africa**. **A zigzag pattern**—an early high followed by a dip, a mid-decade or recent peak, and another dip at the end, with relatively little change overall—**was followed by the more developed regions of North America, Oceania, and Western Europe**.

**A third pattern**—a consistent climb from an initial low in 1987 to a high in 1997—**applied to South America and East Asia. A similar pat-**

**Table 13**
**ME/AF** (in thousands of 1997 dollars)

| Group/ Region | 1987 | **High** or *Low* and Year | | | | 1997 |
|---|---|---|---|---|---|---|
| World | **48.1** | | | *35.8* | 95 | 37.8 |
| Developed | 93.3 | **99.1** | 88 | *80.3* | 95 | 85.0 |
| Developing | 14.3 | *12.5* | 93 | | | **15.4** |
| North Amer. | 154.9 | *138.2* | 91 | **161.7** | 94 | 156.4 |
| Oceania | 97.8 | *87.9* | 88 | **114.3** | 96 | 110.7 |
| West Europe | 56.3 | *56.0* | 88 | **61.7** | 93 | 61.6 |
| South Amer. | *18.6* | | | | | **30.6** |
| East Asia | *15.0* | | | | | **25.0** |
| East Europe | 83.5 | **85.6** | 88 | *21.1* | 96 | 23.2 |
| Middle East | 34.1 | **36.2** | 92 | *20.6* | 96 | 21.2 |
| Cent.Asia&C | — | *11.9* | 95 | | | **15.2** |
| South. Africa | 16.2 | **16.6** | 89 | *11.5* | 93 | 14.2 |
| North Africa | 11.6 | *9.8* | 93 | | | **13.0** |
| Cent.Amer&C | 5.7 | *4.5* | 93 | | | **9.8** |
| South Asia | 6.1 | *5.4* | 91 | | | **7.5** |
| Central Africa | *4.2* | | | **8.7** | 91 | 6.0 |

**tern**, except for a dip early in the decade, **was taken by the developing group, South Asia, Central America and the Caribbean, and Central Asia and the Caucasus. The Middle East showed** a mid-decade peak and a drop to a recent level below the initial one, while **Central Africa had a similar pattern with a higher final level**.

**While these varying patterns make prediction difficult**, it is noteworthy that the world trend has been up for the last two years, and that of the 13 regions, 7 showed decade highs in 1996 or 1997, while the three regions with the highest ratios had a roughly level decade trend. **This suggests that a recent upward trend may be underway in most parts of the world and that a period of transition from the Cold War end may have ended**.

The ranking of **the top 15 countries in 1997 in terms of the ME/AF ratio** was as follows (see Country Rankings—in thousands of dollars):

| | | |
|---|---|---|
| 1 | United States | $180.4 |
| 2 | Japan | 163.4 |
| 3 | United Kingdom | 161.9 |
| 4 | Luxembourg | 134.1 |
| 5 | Australia | 130.2 |
| 6 | Canada | 121.8 |
| 7 | Slovenia | 121.8 |
| 8 | Netherlands | 120.0 |
| 9 | Saudi Arabia | 117.5 |
| 10 | Singapore | 103.0 |
| 11 | Switzerland | 98.9 |
| 12 | Kuwait | 98.6 |
| 13 | Norway | 98.6 |
| 14 | Germany | 98.1 |
| 15 | Denmark | 96.7 |

Of these, **10 were NATO members or close US allies**. Notable are the **high ranks of Slovenia, Saudi Arabia, Singapore, and Kuwait**.

**In sharp contrast, the ratios for the lowest ranked countries (with available data) were on the order of $1,000 per serviceman or less**. While the appropriate size of this indicator should be responsive to a country's regional and military threat contexts, **an ME/AF ratio of this order raises questions of sufficiency to sustain viable and effective armed forces**.

## Arms Trade/Total Trade

The ratio of arms trade to total trade depends on whether the ratio refers to arms exports or imports and applies to developed or developing countries. In terms of these four main components, the ratio over the decade has been as follows (in percent—see Main Table II):

| | Developed | | Developing | |
|---|---|---|---|---|
| Arms imports/total imports (AI/TI): | | | | |
| 1987 (high) | .9 | | 11.5 | |
| (low) | .4 | 96 | 1.0 | 96 |
| 1997 | .6 | | 1.2 | |
| Arms exports/total exports (AE/TE): | | | | |
| 1987 | 2.8 | | 1.2 | |
| (high) | 2.8 | 87 | 1.5 | 88 |
| (low) | 1.0 | 95-96 | .2 | 94-97 |
| 1997 | 1.2 | | .2 | |

**All four indicators fell heavily during the decade, but three of the four have taken an upturn in the last year, 1997**. For the developed countries, the declines were more moderate, on the order of 33% and 60%. **The indicators for the developing countries dropped more sharply, by about 90-80%**.

By region, the patterns of change in the arms imports/total imports (AI/TI) ratios are shown in Table 14. **The Middle East had the highest AI/TI ratio in 1987 (27%) and retained that dis-**

**Table 14**
**The Burden Ratios: Arms Trade/Total Trade**
(in percent)

| | Imports | | Exports | |
|---|---|---|---|---|
| | 1987 | 1997 | 1987 | 1997 |
| **World** | 2.5 | 1.0 | 2.5 | 1.0 |
| Developed | .9 | .6 | 2.8 | 1.2 |
| Developing | 11.5 | 2.5 | 1.2 | .2 |
| **Region** | | | | |
| Eastern Europe | 2.6 | 0.4 | 12.8 | 1.6 |
| North America | .2 | .2 | 4.8 | 3.2 |
| Southern Africa | 14.8 | .4 | .1 | .8 |
| Western Europe | .7 | .4 | 1.1 | .7 |
| Central Asia & Cauc. | — | 1.1 | — | .5 |
| Middle East | 27.2 | 12.3 | 1.1 | .2 |
| South Asia | 16.8 | 1.7 | .1 | .2 |
| East Asia | 2.1 | 1.5 | .5 | .1 |
| Central Africa | 8.9 | 1.1 | 0 | 0 |
| Central Amer. & Car. | 12.9 | .2 | 0 | 0 |
| North Africa | 9.4 | 2.1 | .3 | 0 |
| Oceania | 2.6 | 1.2 | .2 | 0 |
| South America | 2.4 | .9 | 1.5 | 0 |
| Europe, all | 1.0 | .4 | 2.9 | .8 |
| Africa, all | 11.2 | 1.1 | .1 | .3 |
| **Organization / Reference Group** | | | | |
| OECD | 0.6 | 0.4 | 1.7 | 1.3 |
| OPEC | 19.8 | 10.3 | .1 | 0 |
| NATO, all | .5 | .3 | 2.2 | 1.7 |
| Warsaw Pact (fmr) | 2.5 | .3 | 13.4 | 1.7 |
| NATO Europe | .7 | .4 | 1.1 | .8 |
| Latin America | 4.6 | .5 | .9 | 0 |
| CIS | — | .2 | — | 2.7 |

**tinction in 1997 (12%)**. Other regions with sharp declines were **Southern Africa, South Asia, Central America and Caribbean, and North Africa**.

**Countries with AI/TI ratios over 10% in 1997** were the following (Country Rankings):

| | | | |
|---|---|---|---|
| Saudi Arabia | 40.4% | Qatar | 14.3 |
| Kuwait | 24.3 | Burma | 13.6 |
| Eritrea (est.) | NA | Egypt | 12.1 |
| Burundi | 16.5 | The Gambia | 11.9 |

In terms of the ratio of arms exports to total exports (AE/TE), **most notable is the drastic decline of the Eastern Europe indicator, from 12.8% to 1.6% over the decade**. North America, with the second highest ratio, fell moderately from 4.8% to 3.2, as did other significant exporting regions—Western Europe, and the Middle East.

**Countries with high AE/TE ratios in 1997** included the following:

| | | | |
|---|---|---|---|
| North Korea | 8.1% | Russia | 2.6 |
| Moldova | 7.9 | Bulgaria | 2.4 |
| Belarus | 6.7 | United Kingdom | 2.3 |
| United States | 4.5 | Armenia | 2.2 |
| Ukraine | 3.5 | France | 2.0 |

**Heavily represented in this list are countries of Eastern Europe as well as the top exporting countries in the world**.

## Other Indicators

Other relative indicators and where they are shown in the report are:

**GNP per capita:**
Figure 14, p. 24 (1997)
Country Rankings, p. 47 (1997)
Main Table I, p. 61 (annual)

**CGE/GNP (**Central Gov't Expenditures/GNP):
Country Rankings, p. 48 (1997)