Chapter Two: Comparative defence statistics

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Chapter Two
Comparative defence statistics

Top 15 defence budgets 2017† US$bn

1. United States 602.8
2. China 150.5
3. Saudi Arabia 76.7
4. Russia 61.2
5. India 52.5
6. United Kingdom 50.7
7. France 48.6
8. Japan 46.0
9. Germany 35.7
10. South Korea 35.7
11. Brazil 29.4
12. Australia 25.0
13. Italy 22.9
14. Israel b 21.6
15. Iraq 19.4

* Under NATO defence-spending definition; † Includes US Foreign Military Assistance

Note: US dollar totals are calculated using average market exchange rates for 2017, derived using IMF data. The relative position of countries will vary not only as a result of actual adjustments in defence-spending levels, but also due to exchange-rate fluctuations between domestic currencies and the US dollar. The use of average exchange rates reduces these fluctuations, but the effects of such movements can be significant in a number of cases.

2017 top 15 defence and security budgets as a % of GDP*

<table>
<thead>
<tr>
<th>Country</th>
<th>US$bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oman</td>
<td>12.1%</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>11.3%</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>10.3%</td>
</tr>
<tr>
<td>Iraq</td>
<td>10.1%</td>
</tr>
<tr>
<td>Israel</td>
<td>6.2%</td>
</tr>
<tr>
<td>Republic of Congo</td>
<td>6.2%</td>
</tr>
<tr>
<td>Algeria</td>
<td>4.9%</td>
</tr>
<tr>
<td>Jordan</td>
<td>4.8%</td>
</tr>
<tr>
<td>Kuwait</td>
<td>4.4%</td>
</tr>
<tr>
<td>Bahrain</td>
<td>4.3%</td>
</tr>
<tr>
<td>Mali</td>
<td>4.2%</td>
</tr>
<tr>
<td>Russia</td>
<td>4.0%</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>3.9%</td>
</tr>
<tr>
<td>Armenia</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

* Analysis only includes countries for which sufficient comparable data is available. Notable exceptions include Cuba, Eritrea, Libya, North Korea, Qatar, Syria and the UAE.

Planned global defence expenditure by region 2017†

- Latin America and the Caribbean: 4.8%
- Sub-Saharan Africa: 1.1%
- Middle East and North Africa: 10.9%
- Asia and Australasia: 24.0%
- Russia and Eurasia: 4.3%
- Europe: 16.3%
- North America: 39.3%

Planned defence expenditure by country 2017†

- United States: 38.2%
- Other NATO: 7.2%
- Germany: 2.6%
- France: 3.1%
- Other Non-NATO Europe: 1.2%
- China: 9.5%
- South Korea: 2.3%
- Other Asia: 6.0%
- Other Eurasia: 0.4%
- Other Middle East and North Africa: 6.0%
- Saudi Arabia: 4.3%
- Russia: 3.9%

* At current prices and exchange rates
Composition of real defence-spending increases 2016–17

- China, 24.8%
- Germany, 11.3%
- France, 12.4%
- United Kingdom, 11.4%
- Other Latin America, 3.44%
- Brazil, 10.1%
- Other Europe & Canada, 11.1%
- Middle East and North Africa, 0.94%

Total increases 2016–17:
US$25.4bn

Composition of real defence-spending reductions 2016–17

- Saudi Arabia, 34.3%
- Israel, 8.4%
- Other MENA, 3.63%
- Algeria, 4.8%
- United States, 7.2%
- Mexico, 3.1%
- Other Asia, 5.2%
- Indonesia, 5.8%
- Other Latin America, 2.33%

Total reductions 2016–17:
US$26.1bn

Selected European defence research and development (R&D) budgets in 2017 and planned European Union defence R&D spending

- France (est.), 15.0%
- United Kingdom (est.), 9.8%
- Germany, 8.0%
- EU post-2020, 2.0%
- Turkey (est.), 1.4%
- Slovakia (est.), 1.4%
- Spain, 0.8%
- Sweden (est.), 0.4%
- Poland, 0.4%
- Netherlands (est.), 0.4%
- Italy (est.), 0.4%
- Finland, 0.4%
- Norway, 0.4%
- Czech Republic, 0.4%
- Belgium, 0.4%
- Bulgaria, 0.4%
- Austria, 0.4%
- Romania, 0.4%
- Denmark, 0.4%
- Estonia, 0.4%
- Hungary, 0.4%
- Portugal, 0.4%
- Luxembourg (est.), 0.4%
- Croatia (est.), 0.4%
- Cyprus, 0.4%
- Greece, 0.4%
- Ireland, 0.4%
- Latvia, 0.4%
- Lithuania, 0.4%
- Malta, 0.4%

In June 2017, the European Commission announced the creation of a European Defence Fund (EDF). This package includes a ‘research window’ which, if voted for, is expected to begin post-2020 through a dedicated EU programme under the next Multiannual Financial Framework (MFF). The estimated budget will be €500m (US$564m) per annum throughout the MFF covering the years 2021–27. If this plan is implemented, the European Commission will become the fourth-biggest defence R&D spender in Europe, after France, the United Kingdom, and Germany.
In recent years, armed unmanned aerial vehicles (UAVs) have proliferated, despite US efforts to limit their sale. Domestic developments, and imports, have provided an increasing number of countries with the ability to operate weaponised systems. The most significant producers of armed UAVs are the US and China. The US, however, has so far pursued a cautious approach to the export of armed systems, while China has been less restrained. The US has supplied the armed variant of the MQ-9 Reaper to the United Kingdom, a close ally, but declined to do so to other partners such as Saudi Arabia. China has grasped this opportunity, and has now supplied armed UAVs to a number of countries, including Egypt, Nigeria, Pakistan, Saudi Arabia and the United Arab Emirates, among others. The increased interest in such systems has also led other states to pursue their own programmes (Russia, Iran, India and South Africa, for example) or to consider arming systems already in service. Israel operates a variety of armed UAVs, but as yet there are no identified exports of such systems, although Israel has widely exported intelligence, surveillance and reconnaissance UAVs.

**Selected combat-capable UAVs and manufacturers**

- **CH-3** – China Aerospace Science and Technology Corp. (CASC)
- **CH-4** – China Aerospace Science and Technology Corp. (CASC)
- **Shahed 129** – Aerospace Industries Organization
- **MQ-9 Reaper** – General Atomics Aeronautical Systems Inc. (GA-ASI)

**States currently producing and operating armed UAVs:** China, Iran, Israel, Turkey, United States

**States that have acquired armed UAVs:** Egypt, Iraq, Kazakhstan, Myanmar, Nigeria, Pakistan, Saudi Arabia, Turkmenistan, United Arab Emirates, United Kingdom

**States that have acquired US UAVs and have been given US approval to arm them:** France, Italy

**States that currently have development programmes for armed UAVs:** India, Russia, South Africa

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Key defence statistics

- **Main battle tanks** (1,000 per unit):
  - China: 74
  - France: 10
  - India: 18
  - Russia: 6
  - UK: 11
  - US: 44

- **Armoured infantry fighting vehicles** (1,000 per unit):
  - China: 70
  - France: 313
  - India: 400

- **Tactical aircraft** (500 per unit):
  - China: 3,097
  - France: 3,090
  - India: 227
  - Russia: 2,831
  - UK: 3,860
  - US: 629

- **Attack helicopters** (250 per unit):
  - China: 3,097
  - France: 3,090
  - India: 227
  - Russia: 2,831
  - UK: 3,860
  - US: 629

- **Heavy/medium transport helicopters** (500 per unit):
  - China: 3,097
  - France: 3,090
  - India: 227
  - Russia: 2,831
  - UK: 3,860
  - US: 629

- **Artillery** (1,000 per unit):
  - China: 262
  - France: 70
  - India: 207
  - Russia: 313
  - UK: 629
  - US: 637

- **Bomber aircraft** (25 per unit):
  - China: 162
  - France: 139
  - India: 157
  - Russia: 198
  - UK: 82
  - US: 628

- **ICBM (Launchers)** (25 per unit):
  - China: 4
  - France: 4
  - India: 13
  - Russia: 4
  - UK: 14

- **Cruisers, destroyers and frigates** (25 per unit):
  - China: 51
  - France: 11
  - India: 11
  - Russia: 11
  - UK: 11
  - US: 11

- **Attack/guided missile submarines** (25 per unit):
  - China: 22
  - France: 27
  - India: 27
  - Russia: 19
  - UK: 96
  - US: 62

- **Principal amphibious ships** (25 per unit):
  - China: 5
  - France: 5
  - India: 5
  - Russia: 5
  - UK: 5
  - US: 5

- **Tanker and multi-role tanker/transport aircraft** (100 per unit):
  - China: 50
  - France: 50
  - India: 50
  - Russia: 50
  - UK: 50
  - US: 50

- **Airborne early-warning and control aircraft** (100 per unit):
  - China: 82
  - France: 22
  - India: 27
  - Russia: 19
  - UK: 96
  - US: 62

- **Heavy/medium transport aircraft** (100 per unit):
  - China: 628
  - France: 628
  - India: 628
  - Russia: 628
  - UK: 628
  - US: 628

- **ICBM (Launchers)** (25 per unit):
  - China: 4
  - France: 4
  - India: 13
  - Russia: 4
  - UK: 14

- **Bomber aircraft** (25 per unit):
  - China: 162
  - France: 139
  - India: 157
  - Russia: 198
  - UK: 82
  - US: 628

- **Active personnel** (100,000 per unit):
  - China: 2,027,000
  - France: 202,700
  - India: 900,000
  - Russia: 1,396,100
  - UK: 150,250
  - US: 1,348,400

- **Reserve personnel** (100,000 per unit):
  - China: 510,000
  - France: 32,300
  - India: 1,156,000
  - Russia: 82,650
  - UK: 857,950
  - US: 2,035,000

- **Armoured infantry fighting vehicles** (1,000 per unit):
  - China: 3,860
  - France: 9,684
  - India: 2,500
  - Russia: 6,160
  - UK: 623
  - US: 3,336

- **Main battle tanks** (1,000 per unit):
  - China: 200
  - France: 139
  - India: 157
  - Russia: 162
  - UK: 198
  - US: 628

- **Artillery** (1,000 per unit):
  - China: 262
  - France: 139
  - India: 157
  - Russia: 162
  - UK: 198
  - US: 628

- **Attack/guided missile submarines** (25 per unit):
  - China: 6
  - France: 14
  - India: 49
  - Russia: 4
  - UK: 3
  - US: 6

- **Aircraft carriers** (10 per unit):
  - China: 1
  - France: 1
  - India: 1
  - Russia: 1
  - UK: 1
  - US: 1

- **Ballistic-missile nuclear-powered submarines** (10 per unit):
  - China: 4
  - France: 4
  - India: 13
  - Russia: 4
  - UK: 14

Comparative defence statistics

Cruisers, destroyers and frigates (25 per unit)

- China: 22
- France: 27
- India: 33
- Russia: 19
- UK: 96
- US: 82

Principal amphibious ships (25 per unit)

- China: 4
- France: 3
- India: 1
- Russia: 6
- UK: 31

Tactical aircraft (500 per unit)

- China: 1,112
- France: 1,966
- India: 188
- Russia: 785
- UK: 3,424

Attack helicopters (250 per unit)

- China: 246
- France: 82
- India: 19
- Russia: 376
- UK: 50
- US: 793

Heavy/medium transport helicopters (500 per unit)

- China: 383
- France: 168
- India: 67
- Russia: 375
- UK: 108
- US: 2,645

Heavy/medium transport aircraft (100 per unit)

- China: 84
- France: 46
- India: 36
- Russia: 177
- UK: 44
- US: 658

Tanker and multi-role tanker/transport aircraft (100 per unit)

- China: 18
- France: 14
- India: 6
- Russia: 15
- UK: 14
- US: 530

Airborne early-warning and control aircraft (100 per unit)

- China: 27
- France: 7
- India: 4
- Russia: 18
- UK: 6
- US: 111

Heavy unmanned aerial vehicles (50 per unit)

- China: 15
- France: 10
- India: 13
- Russia: Some
- UK: 10
- US: 628
Although Russia and the United States both maintain substantial numbers of main battle tanks in store, China’s People’s Liberation Army (PLA) currently has the world’s largest active-service tank fleet. The volume and cost involved in producing sufficient modern tank designs to equip this force has, however, proved to be a significant challenge for the PLA, and it is only recently that the percentage of the tank force so-equipped has risen above 50%.

The original ZTZ-59 remains in service with a significant proportion of the PLA, despite being effectively obsolete, even in its upgraded forms. Early indigenous Chinese tank designs, such as the ZTZ-79 and ZTZ-88, had limited production runs and are now only in the inventory of a small number of units in northern and western China. The reorganisation of PLA manoeuvre units into combined-arms brigades in 2017 may result in these second-generation designs being removed from service altogether as the overall size of the PLA’s tank fleet shrinks again.

The latest ZTZ-99A appears to have been produced in relatively small numbers, and issued to strategic-reserve units near Beijing, possibly because of its relatively high cost. The majority of China’s third-generation tanks are still versions of the late 1990s ZTZ-96 design. The PLA’s new ‘light’ tank, believed to have entered production with the ZTQ-15 designation, weighs almost as much as a ZTZ-59, but may nonetheless help fill the requirement for modern armour in southern China, where the terrain is not suitable for heavier modern designs such as the ZTZ-99.
In 2015, the People’s Liberation Army Air Force (PLAAF) introduced the PL-10 imaging infrared-guided short-range air-to-air missile (AAM) into service. It could be followed in 2018 by the PL-15 extended-range active radar-guided missile. Furthermore China may have at least three other medium and very-long-range AAMs in various stages of development. China is in the midst of a near-unprecedented scale and pace of development that will improve considerably its air-to-air weapons inventory, and provide the defence industry with increasingly credible products for the export market. The PL-10 was advertised for export very shortly after its entry into service with the PLAAF.

**Maximum notional engagement ranges**

- **PL-XX very-long-range AAM**
  - 400km+
  - Large, non-manoeuvring targets

- **PL-15 and PL-XX ramjet-powered active-radar AAMs**
  - 150km
  - All targets

- **PL-12 active-radar AAM**
  - 70km
  - All targets

**Notional PL-XX very-long-range AAM engagement**

- Possible mid-course updates during missile fly-out
- Initial target-track data and updates via KJ-2000 AWACS aircraft
- Terminal-engagement seeker
  - Active radar: 40km
  - Infrared: 10–20km

**PL-XX maximum kinematic range potentially 400km+**
China’s naval-shipbuilding output since 2000 has been remarkable both for its scale and breadth, with an industrial base centred on seven major shipyards. For some time, it has been engaged in considerable series production of large and small surface combatants. In the sub-surface arena, the production of a total of 38 new units, including ballistic-missile submarines, is also significant. In terms of submarine, destroyer, frigate and corvette production, China has either exceeded or nearly matched the collective outputs of the next three principal regional navies, whose own naval programmes have themselves been significant by global standards. China has also produced nine new under-way-replenishment vessels and it has launched its first home-built aircraft carrier and first modern cruiser, filling two major capability gaps. Over the time period, the United States has built more carriers (3), nuclear-attack submarines (14), destroyers (33) and large amphibious ships (15) than China, but not as many small surface combatants. There is still uncertainty over how robust Chinese warship designs are relative to their competitors, as well as their systems integration and weapons performance. The critical issue now is China’s ability to sustain this level of output and address weaknesses, such as in submarine design and amphibious capacity.