

Background Quality Report: International Defence Statistics

Section 1: Introduction

1.1 Overview of the statistical output

The International Defence Finance Bulletin 1.02 provides comparisons between the UK and other nations spending on Defence.

History

International comparison statistics have been included in UK Defence Statistics (UKDS) for 11 years in various guises. They complete Chapter 1 in setting the resource context for the rest of UKDS and help to place UK military expenditure in a global context. This section comprises of: NATO countries' expenditure (in real terms and as a % of GDP); top world-wide military spenders (spend, spend per capita); and graphs comparing the UK and some key NATO allies against a set of key comparators (%GDP, spend per capita, spend per serviceman, military personnel per thousand population).

The majority of these statistics are sourced from external bodies such as NATO and the Stockholm International Peace Research Institute (SIPRI), so the associated tables are not badged as National Statistics as Defence Economics has no control over the quality of the data. Defence Economics perform the conversion from current to constant prices and to US dollars. They also perform the conversion using Purchasing Power Parities (PPP).

In 2014 the first International Defence Finance Bulletin 1.02 was published with the historic UKDS Chapter 1 International Section now being contained within this Bulletin.

Limitations of International Defence data

When undertaking international comparisons of defence it is important to consider some well documented issues relating to the comparability and granularity of the international source data. Making direct comparisons will never be straightforward because:

- Defence expenditure data are merely input measures which give them only limited usefulness as an indicator of military strength, capability or burden.
- Whilst there are standardised definitions of defence spending and accounting conventions used by international organisations, principally the UN and NATO, not all countries record and publish their defence spending in accordance with such definitions and conventions.
- Some countries actual defence expenditure may be very different from their budgeted expenditure.
- Differences in national tax regimes and the treatment of pension contributions can lead to significant distortions in expenditure.
- Departments other than defence departments may be deemed to contribute to defence whilst some spending by defence departments can be categorised as supporting other activities.

- The choice of conversion method (e.g. Market Exchange Rates (MER) or Purchasing Power Parity (PPP) rates) used to convert to a common currency or from current to constant (real terms) prices can result in significantly different rankings of global defence spending. Using MER for instance tends to undervalue the currency and hence the scale of expenditure of lower income countries. Attempts are often made to circumvent this problem using PPP rates. These use currency conversion rates which equalise the overall price of a bundle of goods and services in each country. However PPP rates can be highly inaccurate because of the difficulty of allowing for differences in quality and devising appropriate and relevant "weighting" of individual goods and services. Civilian based PPPs may also not be representative of defence goods and services. [Click here](#) for more information on the measurement and uses of Purchasing Power Parity (PPP) rates.

Strengths and Weaknesses

The strengths of these statistics include the clarity of presentation and context, commentary, clear signposting relating to data limitations and footnotes which include links to data sources and the graphs which show how the UK compares to some of its allies.

Weaknesses are that we have no control over the quality of the data and that they are a measure of inputs not outcomes or capabilities.

Latest Publications

1. [Finance Bulletin 1.02 - International Defence 2014](#)

1.2 Producer Information

These statistics are produced by the Defence Expenditure Analysis area within Defence Economics, which is part of the Ministry of Defence (MOD). The responsible statistician for these statistics can be contacted by emailing DefStrat-Econ-ESES-DEA-Hd@mod.uk.

Further details about how to contact Defence Economics and Defence Statistics can be found [here](#).

1.3 Summary of method and processes used to compile outputs

We source the data underlying Tables 1.02.01 and 1.02.02, and the associated Chart, from NATO and the data for Table 1.02.03 from the Stockholm International Peace Research Institute (SIPRI). We use deflators from the IMF World Economic Outlook database to convert data into constant prices and we use PPP rates published by the International Monetary Fund (IMF). All data sources are fully signposted in the footnotes to the tables.

1.4: Other Documentation

- [Defence Statistics Pre-Release Access lists](#)
- [Defence Statistics confidentiality policy](#)
- [Defence Statistics revisions policy](#)
- [Statement of Administrative Data Sources](#)

Section 2: Quality Dimensions

2.1 Relevance: The degree to which the statistical product and underlying data meet user needs for both coverage and content.

These statistics are often used within the MOD to provide context in papers, press lines and briefings. They were recently used to underpin benchmarking work for the UK Strategic Defence and Security Review (as well as for the Australian SDSR) and to influence the recent Spending Review settlement. The production of the tables has placed the Defence Expenditure Analysis branch in a position to offer guidance on the use of these statistics to others within the Department and they have formed the basis of several international collaboration projects.

Externally to the MOD, policy think tanks such as the Royal United Services Institute (RUSI) and International Institute for Strategic Studies (IISS) have used the data for policy papers and think pieces. We occasionally receive contextual questions from academics and interested parties.

Unmet User Needs

We have received some internal requests for performance metrics measuring international defence capabilities.

2.2 Accuracy: The closeness between an estimated result and the (unknown) true value, and the accuracy of the raw data.

There are a number of issues surrounding the accuracy of NATO and SIPRI data which include compliance with definitions, different treatment of pension contributions and tax regimes, and conversion methods. This is explained further in the section [Limitations of International Defence data](#). In addition, as some countries do not provide returns to SIPRI, some of their figures are estimates. Defence Economics has no control over the quality, reliability and coverage of the data contained in Tables 1.02.01 to 1.02.04.

Revisions

We reflect any revisions made by the statistics producers using r markers. We follow the [Defence Statistics revisions policy](#).

2.3 Timeliness and Punctuality: Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the time lag between the actual and planned dates of publication.

The publication date for Statistical Bulletin 1.02 is determined by Defence Economics and approved by the UK Statistics Authority. We publish the latest available data which is determined by the publication schedules of NATO and SIPRI. Defence Economics aims to publish the Bulletin in August and the statistics refer to the previous Calendar Year.

No bulletin was published in 2013 covering 2012, because NATO did not publish their expenditure information externally. They did publish an external publication on defence expenditure in early 2014 and Bulletin 1.02 was published for the first time in August 2014. It included both 2012 and 2013 expenditure figures.

2.4 Accessibility and Clarity: Accessibility is the ease with which users are able to access the data output, also reflecting the format(s) in which the output is available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.

Defence Economics publish this data through Statistical Bulletin 1.02 – International Defence which is freely available on the GOV.UK website. The data can be downloaded in several formats (e.g. Excel and PDF) and is accompanied by commentary to provide supporting information, along with links to relevant publications.

The level of detail in these tables is limited by the available data but we have chosen the formats to be clear and understandable. We have been working to improve the clarity of these statistics and to this end, since 2011 UK Defence Statistics has included some additional graphs and maps to illustrate the data.

We have received no feedback relating to accessibility and clarity. If you have feedback please [contact us](#).

2.5 Coherence and Comparability: Coherence is the degree to which data that are derived from different sources or methods, but which refer to the same phenomenon, are similar. Comparability refers to the degree to which data can be compared over time and domain.

The statistics in Tables 1.02.01, 1.02.02, 1.02.03 and 1.02.04 is consistent with that published by NATO and SIPRI, and where Defence Economics has converted data into US dollars or to constant prices, this has been with the agreement of NATO statistical experts.

NATO and SIPRI have different definitions of military expenditure which, additionally, differ from the definition of Defence Expenditure used to compile the MOD's accounts and Table 1.03.01 of Statistical Bulletin 1.03 – Departmental Resources. It is not therefore possible to compare spending figures from these different sources.

The current NATO definition of defence expenditure differs from national definitions so the figures quoted may diverge considerably from those presented in national budgets. Expenditure is included for countries that provide Military Assistance: expenditure is not included for countries receiving assistance.

More information relating to the revised NATO definition can be found on the [NATO website](#). More information relating to the SIPRI definition of military expenditure can be found on the [SIPRI website](#).

Since 2011, the sourcing of long run time series data from NATO has allowed the presentation of data in Charts 1.02.04a-d to be more comparable. All four countries are now presented on a consistent basis using the NATO definition for military spending.

2.6 Trade-offs between Output Quality Components: Output quality components are not mutually exclusive in the sense that there are relationships between the factors that contribute to them. There are cases where the factors contributing to improvements with respect to one component lead to deterioration with respect to another.

There are no trade offs which are relevant to these statistics.

2.7 Assessment of User Needs and Perceptions: Users are provided with products and services that meet their needs. The articulated and non-articulated needs, demands and expectations of external and internal users should guide the department.

Users are encouraged to provide feedback on Statistical Bulletins. The further information page contained within each bulletin provides details on how to contact the responsible statistician and there is also the opportunity to do so through the feedback pages on the GOV.UK website. Users can be informed of the latest changes to statistics through the GOV.UK website and through consultation exercises where significant change is proposed.

More informally, we monitor the requests for information that we receive from within the MOD and from outside, and respond accordingly.

Our current assumptions about users and uses of these statistics are contained in [Section 2.1 - Relevance](#). If you use these statistics in another way please [contact us](#).

2.8 Performance, Cost and Respondent Burden: Resources must be effectively used. The desired outcome must be produced cost effectively. Respondent burden should be proportional to the needs of users and not excessive for respondents.

These tables are produced purely using data collected by external organisations. The bulletin published by MOD placed no additional burden on the respondents.

2.9 Confidentiality, Transparency and Security: The privacy of data providers (e.g. administrations, enterprises and others), the confidentiality of the information they provide and its use only for statistical purposes must be absolutely guaranteed. The department must produce and disseminate statistics respecting scientific independence and in an objective, professional and transparent manner in which all users are treated equitably.

In producing these statistics, we adhere to the [Defence Statistics confidentiality policy](#)

We adhere to the principles and protocols laid out in the Code of Practice for Official Statistics and comply with pre-release access arrangements. The [Defence Statistics Pre-Release Access lists](#) are available on the GOV.UK website.

We maintain good links with policy colleagues to ensure that these statistics are understood and prevent misuse. Statistical Bulletin 1.03 – International Defence contains commentary explaining these statistics.