Article

# Trade in goods, country-by-commodity experimental data: 2011 to 2016

Introduction of a new trade in goods country-by-commodity experimental dataset produced as part of planned improvements to our trade statistics.

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# 1 . Introduction

This article introduces an experimental dataset looking at trade in goods by country and commodity on a balance of payments basis (BOP), produced as part of planned improvements to our trade statistics, as described in section 3.3 of the trade development plan.

In response to user needs, one of our main priorities is to publish detailed trade figures across more dimensions than we do currently; for example, across industries, geographic trade partners and commodities. A big focus for the trade development plan is also making improvements to the quality of the trade figures.

While we currently publish trade in goods by country and trade in goods by commodity, as part of the monthly UK trade bulletin, we have been unable to publish these two dimensions together until now.

The experimental data being released alongside this article are an early, closely aligned, but not fully consistent, subset of the statistics we are planning to publish monthly alongside the UK trade bulletin from July 2018. The data in this release are annualised data covering the period 2011 to 2016, whereas from July 2018 we will publish data by month for the period 1998 to the latest period released in each monthly trade bulletin.

# 2 . Important things to note about these statistics

It is important to emphasis these are experimental statistics. The data is produced by our new trade in goods system, which we will be using to publish UK trade monthly figures from July 2018. There are a number of caveats that users of the data should be aware of.

## Users should note the following

The data is not consistent with currently published UK trade statistics, such as the UK trade bulletin or the Quarterly National Accounts, for example.

The data is broadly in-line with figures that will be in the forthcoming Blue Book 2018-consistent Quarterly National Accounts (June 2018). However, as the data has been produced outside of current processing of the national accounts, the data will be revised prior to inclusion in Blue Book 2018.

These data are published on balance of payments (BoP) terms using the Standard International Trade Classification (SITC).

Production of the data on a BoP basis is new and we are keen to share what we have with users, but being "experimental", it means we have not resolved every minor issue with the dataset. Due to rounding issues the sum of all countries does not exactly match the sum of all commodities and the sum of countries by commodity does not match world trade. Differences in the data when comparing at these total aggregate levels range from 1.5% to 4.0%.

In most cases data are published at SITC two- or three-digit level (see Table 1 in section 5). SITC 9, however, is published at the one-digit aggregate only owing to disclosure rules.

# 3 . Explore the new trade data with our interactive tools

What goods does the UK trade with the rest of the world? For the first time, our data breaks down UK trade in goods with 234 countries by commodity.

Use our map to get a better understanding of UK trade in goods with a particular country. Select a country by hovering over it or using the drop-down menu.

**UK trade in goods by commodity with the rest of the world, imports and exports, 2011 to 2016**

Download the data

What about trade in a particular commodity? What percentage of UK car exports goes to the EU? Where does the UK's imported tea and coffee come from?

Use our interactive tools to understand UK trade of a particular commodity.

Select a commodity from the drop-down menu, or click through the levels to explore the data.

**UK exports, 2016**

Download the data

**UK imports, 2016**

Download the data

What questions do you have about the new data? Do you find these tools helpful? Please email  trade@ons.gov.uk with your comments.

# 4 . Background

As laid out in the trade development plan, we have been developing new IT systems that will enable us to both improve the quality of our UK trade statistics and also publish data at a more detailed level than we do currently.

The balance of payments (BoP) trade in goods statistics that we publish are derived principally from administrative data collected by HM Revenue and Customs (HMRC). The administrative data covers physical goods exported and imported to and from the UK. HMRC currently publish the dimensions of trade in goods by country and commodity monthly, which can be found at  UK trade info.

The data HMRC publish, however, are on a different basis from that required for BoP statistics that we produce. To conform to the International Monetary Fund (IMF) definition of trade in goods statistics, we apply adjustments to certain transactions that are not reported to, or collected by, HMRC. We also exclude certain transactions that, although contained in HMRC data, do not represent change in economic ownership. For more information about BoP statistics please refer to the following Summary of the balance of payments. More information about the HMRC administrative data source can be found in the UK trade QMI.

Our new trade system will also introduce some methodological and processing changes that will result in some revisions through the timeseries back to 1998. The experimental dataset published alongside this article will provide an indication of the revisions, however, further changes are expected as trade data is worked through the national accounts process. More information on these changes and expected revisions will be made available in the upcoming publication Impact on GDP current price and chained volume measure annual and quarterly estimates: 1997 to 2016. As a result, the data released alongside this article are not consistent with any currently published trade figures.

The launch of published data is currently scheduled to take place in June 2018 when we will publish Blue Book 2018-consistent Quarterly National Accounts data on 29 June 2018. This will be followed by an article titled UK trade data impact assessment from new developments 1998 to 2016 scheduled for 8 May 2018, and finally in the Blue Book on 31 July 2018.

# 5 . Statistics available in this experimental release

## Commodity

The experimental data are published by Standard International Trade Classification (SITC) on a balance of payments (BOP) basis, which follows the classification and terms consistent with data regularly published in the UK trade release and Pink Book. SITC is a United Nations (UN) classification and information about this can be found via the UN's detailed structure explanatory notes. We have also produced a guide to the SITC for the data specifically included in this release.

The data covers the period 2011 to 2016 on an annual basis by SITC commodity groups at a 1-digit level and then is further broken down to a three-digit level in some cases. The hierarchy published is shown in Table 1.

**Table 1: Commodity hierarchy example**

| SITC 1 digit | SITC | Commodity |
|---|---|---|
| T | T | Total |
| 0 | 0 | Food and live animals |
| 0 | 00 | Live animals |
| 1 | 1 | Beverages and tobacco |
| 1 | 11 | Beverages |
| 2 | 2 | Crude materials |
| 2 | 24 | Wood and cork |
| 4 | 4 | Animal & vegetable oils and fats |
| 4 | 41 | Animal oils and fats |
| 3 | 3 | Fuels |
| 3 | 33 | Oil |
| 5 | 5 | Chemicals |
| 5 | 51 | Organic chemicals |
| 6 | 6 | Material manufactures |
| 6 | 61 | Leather manufactures |
| 7 | 7 | Machinery and transport equipment |
| 7 | 78 | Road vehicles |
| 7 | 78M | Cars |
| 8 | 8 | Miscellaneous manufactures |
| 8 | 8O | Other manufactures |
| 8 | 896 | Works of art |
| 8 | 897C | Jewellery |
| 9 | 9 | Unspecified goods |

Source: Office for National Statistics

Due to potential disclosure concerns, SITC 9 Unspecified goods is not published any lower than a one-digit level. In addition, some other series contributing to trade "erratic" series (erratic series include ships, aircraft, precious stones, silver and non-monetary gold) are also not identifiable in the SITC group published.

## Country

All countries available are included where trade with commodities are recorded in the country-by-commodity dataset, which is currently 234 countries.

# 6 . Top five traded commodities

Now that we have a country by commodity dataset we are able look at the leading commodities the UK trades and then see those countries involved in that trade. The UK trade in goods top five exported commodity groups in 2016 are shown in Table 2. These commodity groups were consistently the top five export commodities between 2011 and 2016 in value terms, although the ranking order does vary below the top two exported commodities, SITC 7 Machinery and transport equipment (£122.6 billion) and SITC 5 Chemicals (£53.6 billion).

SITC 7 Machinery and transport equipment includes commodities such as mechanical machinery, cars, ships and aircraft. Within SITC 5 Chemicals are commodities such as organics chemicals, and medicinal and pharmaceutical chemicals (see Commodity hierarchy).

**Table 2: UK trade in goods top 5 export commodity groups in 2016**

| Ranking | SITC | Commodity group description | Value £bn |
|---|---|---|---|
| 1 | 7 | Machinery & transport equipment | 122.6 |
| 2 | 5 | Chemicals | 53.6 |
| 3 | 8 | Miscellaneous manufactures | 43.4 |
| 4 | 6 | Material manufactures | 26.9 |
| 5 | 3 | Fuels | 21.2 |

Source: Office for National Statistics

Figure 1 shows the top five export countries for machinery and transport equipment in 2016. These five countries represent 44% of the total machinery and transport equipment exports from the UK in 2016.

Figure 1: SITC 7 Machinery and Transport Equipment exports, top 5 countries, 2016
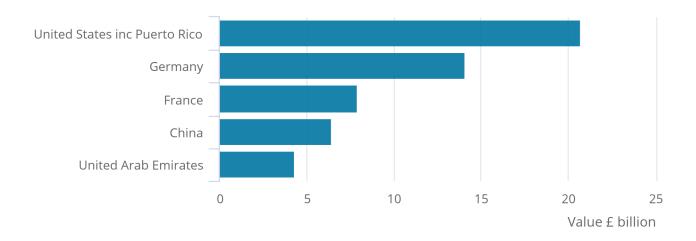
Table 3 shows UK trade in goods top five import commodity groups in 2016. Much like exports, these commodity groups were consistently the top five import commodities between 2011 and 2016; SITC 7 Machinery and transport equipment (£170.0 billion) and SITC 8 Miscellaneous manufactures (£70.1 billion) retain the top two ranking throughout.

SITC 7 Machinery and transport equipment includes commodities such as mechanical machinery, cars, ships and aircraft, while SITC 8 Miscellaneous manufactures includes works of art and jewellery.

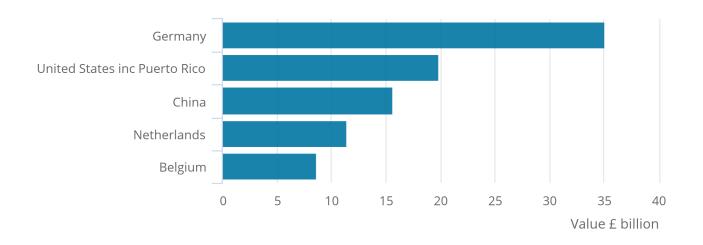**Table 3: UK trade in goods top 5 import commodity groups in 2016**

| Ranking | SITC | Commodity group description | Value £bn |
|---|---|---|---|
| 1 | 7 | Machinery and transport equipment | 170.0 |
| 2 | 8 | Miscellaneous manufactures | 70.1 |
| 3 | 5 | Chemicals | 56.2 |
| 4 | 6 | Material manufactures | 45.7 |
| 5 | 0 | Food & live animals | 35.6 |

Source: Office for National Statistics

Imports of Machinery and transport equipment from the top five countries listed in Figure 2 accounted for 53% of all imports of this commodity group in 2016 with Germany being consistently the top country the UK imported Machinery and transport equipment from between 2011 and 2016.

**Figure 2: SITC 7 Machinery and Transport Equipment imports, top 5 countries, 2016**

Figure 2: SITC 7 Machinery and Transport Equipment imports, top 5 countries, 2016



**Source: Office for National Statistics**

# 7 . Top five trading partners

As with commodities by country, using our new dataset we are now able look at the leading countries the UK trades and then see what commodities are involved in that trade. The top five countries that the UK exported goods to in 2016 are shown in Table 4. The United States including Puerto Rico was the UK's largest export partner in 2016 with a value of £47.9 billion, followed by Germany with £32.3 billion; these two countries were also the UK's leading export partners in 2011. The third-largest export partner in 2016 was France, which was the fourth largest in 2011, as the Netherlands was third in 2011.
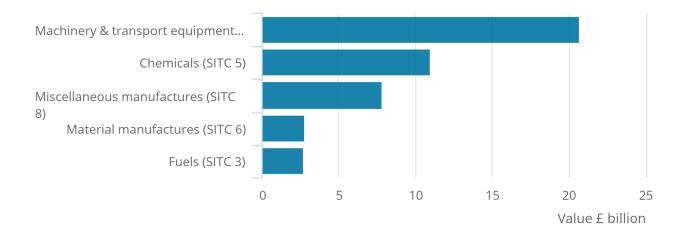
**Table 4: UK trade in goods top 5 trading partner countries in 2016, exports**

| Ranking | Country description | Value £bn |
|---|---|---|
| 1 | United States including Puerto Rico | 47.9 |
| 2 | Germany | 32.3 |
| 3 | France | 19.4 |
| 4 | Netherlands | 19.0 |
| 5 | Republic of Ireland | 16.8 |

Source: Office for National Statistics

SITC 7 Machinery and transport equipment was the highest-value commodity the UK exported to the United States including Puerto Rico in 2016 with an import value of £20.7 billion, followed by £11.0 billion in chemical exports.

**Figure 3: Exports to United States including Puerto Rico, top 5 commodities, 2016**

Figure 3: Exports to United States including Puerto Rico, top 5 commodities, 2016

The trade in goods top five countries that the UK imported from in 2016 are shown in Table 5. Germany was the largest country the UK imported from in 2016 with a value of £63.4 billion, followed by China with £39.2 billion. These two countries were also the leading two countries in 2011. The United States including Puerto Rico was the third largest in 2016, although in 2011 this was the Netherlands with the United States including Puerto Rico in fourth position.
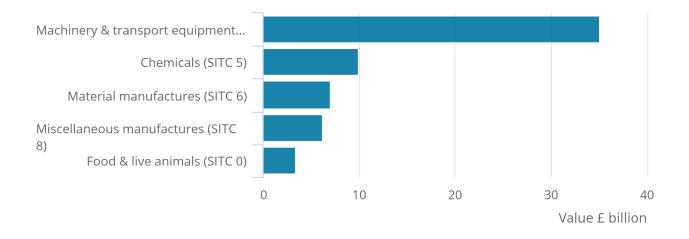
**Table 5: UK trade in goods top 5 trading partner countries in 2016, imports**

| Ranking | Country description | Value £bn |
|---|---|---|
| 1 | Germany | 63.4 |
| 2 | China | 39.2 |
| 3 | United States including Puerto Rico | 36.2 |
| 4 | Netherlands | 35 |
| 5 | France | 25 |

Source: Office for National Statistics

In addition to SITC 7 Machinery and transport equipment and SITC 5 Chemicals being the two highest-value commodity group exports to our largest export partner, the United States including Puerto Rico (Figure 3), these two commodity groups were also the highest-value commodities the UK imported from its largest import partner, Germany (Figure 4).

**Figure 4: Imports from Germany, top 5 commodities, 2016**



Figure 4: Imports from Germany, top 5 commodities, 2016

**Source: Office for National Statistics**

# 8 . Plans for future publications of country-by-commodity data

The UK trade in goods country-by-commodity data will be published monthly from July 2018. The full dataset that will include monthly data back to 1998 will be published via our "Customise my data" tool, which is still being developed to deliver trade data.

We will include some of the data in the UK trade publication tables that are released each month, for example, top five countries by commodity for exports and imports. We will also publish ad hoc articles that include more in-depth analysis of the data and what it tells us about the UK's trade in goods with its trading partners and how this has changed over the past 20 years.

# 9 . Authors

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