

# Country and regional public sector finances QMI

Quality and Methodology Information (QMI) report for country and regional public sector finances, detailing the strengths and limitations of the data, methods used, and data uses and users.

Contact:  
Oliver Mann  
public.sector.accounts@ons.gov.  
uk  
+44 1633 456599

Release date:  
27 May 2022

Next release:  
To be announced

## Table of contents

1. [Output information](#)
2. [About this Quality and Methodology Information report](#)
3. [Important points](#)
4. [Quality summary](#)
5. [Quality characteristics of the country and regional public sector finances data](#)
6. [Methods used to produce the country and regional public sector finances data](#)
7. [Work with External Stakeholders](#)
8. [Other information](#)

# 1 . Output information

- National Statistic: yes
- Data collection: multiple
- Frequency: annual
- How compiled: using various data sources and constraining to the UK public sector finances
- Geographic coverage: UK, ITL1
- Related publications: Public sector finances

## 2 . About this Quality and Methodology Information report

This Quality and Methodology Information (QMI) report contains information on the quality characteristics of the data as well as the methods used to create it. The information in this report will help you to:

- understand the strengths and limitations of the data
- learn about existing uses and users of the data
- understand the methods used to create the data
- decide suitable uses for the data
- reduce the risk of misusing data

For a more detailed description of our methodology, please refer to the [methodology guide](#).

## 3 . Important points

- The country and regional public sector finances provide a picture of public sector revenue and expenditure for all countries and regions of the UK.
- Our statistics are fully coherent with the public sector finances (PSF) as this is the source of the total UK values.
- The country and regional public sector finances are based on the underlying data and concepts used in the UK PSF and, as such, are consistent with UK-level administrative data and national accounts concepts.
- There are important distinctions between the UK PSF and the country and regional finances.

## 4 . Quality summary

## Overview

The aim of the country and regional public sector finances statistics is to provide users with information on what public sector expenditure has occurred, for the benefit of residents or enterprises, in each country or region of the UK and what public sector revenues have been raised in each country or region, as well as the balance between them. We present data by country or region, revenue or expenditure item, and financial year.

Users of the country and regional public sector finances should note the following important distinctions between the UK public sector finances (PSF) and the country and regional finances:

- the main aggregates in the country and regional public sector finances are total current revenue, total current and capital expenditure, and net fiscal balance
- while net fiscal balance is the gap between total current revenue and total expenditure, this should not be interpreted as the “net borrowing” of a country or region – regions in England do not, with the exception of the Greater London Authority, have borrowing powers, and the net fiscal balance is not reflective of the limited borrowing powers of the devolved administrations
- the country and regional public sector finances do not present debt or any other financial account data on a country or regional basis owing to the complexities of allocating financial account flows and stocks to regions as well as the limited applicability of such statistics
- the country and regional public sector finances are not used in the management or monitoring of fiscal policy and are produced purely to support the growing demand for statistics at sub-UK level

## Uses and users

Our users include policy-makers, analysts and the general public. The stakeholders we have engaged with include government departments, devolved administrations, local authorities, research institutes, universities, charities and individuals.

These statistics may be used to:

- enable better consideration of policy and better modelling
- inform debates around tax devolution
- increase the evidence base to argue for or against policy changes in relation to local government (for example, the potential for devolution of specific taxes to local authorities)
- inform research on the fiscal position of UK cities and to develop policies that can support them to grow and boost the national economy
- provide descriptive analysis setting out historical evolution and look at projections into the future, based on variables like spending allocations and demographics

## Strengths and limitations

The main strengths of the data include:

- the country and regional public sector finances provide a picture of public sector revenue and expenditure for all countries and regions of the UK; these are currently the only statistics produced within the Government Statistical Service (GSS) that provide this information for the whole of the UK
- other government departments produce similar statistics, either for a particular country or region only for expenditure; we work with producers of similar statistics to ensure methods are harmonised

The main limitations of the data include that:

- there is usually a lag of 14 months or longer, particularly in some of the source data used to apportion UK revenue to countries and regions; however, these are typically instances where the source data provides stable country and region proportions over time
- where data sources are lagged by more than 14 months, the latest country and regional breakdowns that use these data sources are often estimated using “nowcasting” (and revised in subsequent publications when the source data become available)
- in general, as the country and regional proportions are relatively stable, nowcasting typically involves carrying forward the latest regional proportions based on the most recent available source data; so, while revenue and expenditure items at the UK level reflect the latest complete administrative data, some of the regional breakdowns for the latest years rely on previous regional apportionment; where timely data are not available, there is a continuing effort to find and use more timely data or appropriate indicators
- these statistics do not reflect the full administrative arrangements of tax collection and government expenditure, and they are estimated using the “who pays” and “who benefits” concepts; different concepts can be used to estimate public sector revenue and expenditure for the countries and regions of the UK (for example, the workplace-based concept, which allocates revenue based on workplace locations rather than residential locations); alternative measurements can provide additional information or different views

## Recent improvements

We continually look to improve our data sources and methods for both the UK and country and regional public sector finances statistics. At the UK level, we have previously published an annual article, [Looking ahead – developments in public sector finance statistics](#), which provides users with a short- to long-term overview of the main developments to the PSF. These developments are then reflected in the country and regional public sector finances. However, due to the coronavirus (COVID-19) pandemic, from the March 2020 PSF publication, a monthly [Recent and upcoming changes to public sector finance statistics](#) article has been included in each monthly PSF publication. This article updates users on ongoing short-term work as well as the immediate impact of new policies or events on the public sector finances.

At the country and regional level, we look for ways of improving methods to apportion UK revenue and expenditure to the countries and regions of the UK. For example, in earlier publications, we have made improvements to the methods used for Air Passenger Duty and Landfill Tax – these improvements better reflect the nuances of the tax base. We make these improvements in consultation with the main stakeholders and producers of similar statistics. Beyond data sources and methods, we regularly review our business processes to ensure they continue to remain robust and efficient.

As the existing data source for apportioning income tax revenue is not available for the latest years, the May 2022 publication includes country and regional apportionment of income tax revenue based on a mixture of real-time information on earnings and the number of income tax payers to inform the latest year of data where the existing data source cannot provide the information.

Other improvements made in the May 2022 publication include a new data source for the regional count of households, used as an indicator to derive a country and regional split for several revenue items. Country and regional breakdowns of these revenue items are now based on ONS’ Labour Force Survey results, bringing estimates into line with the most widely accepted annual source of regional household counts and introducing consistency with the methodology used in Regional GVA estimates.

An ongoing challenge is maintaining the relevancy of country and regional estimates of Public Sector Finances in the rapidly evolving landscape of the coronavirus pandemic. The May 2022 publication features regional estimates of expenditure that include the following government interventions:

- Self-employment Income Support Scheme
- Eat Out to Help Out
- various business loan schemes such as the Coronavirus Business Interruption Loan Scheme

Expenditure relating to the Coronavirus Job Retention Scheme was already included from the May 2021 publication.

These changes have been discussed and agreed with our stakeholders.

Other effects of the coronavirus pandemic will feature implicitly in existing source data – for example additional expenditure on health services, or reduced tax receipts.

## **5 . Quality characteristics of the country and regional public sector finances data**

### **Relevance**

(Relevance is the degree to which statistics meet the current and potential needs of users.)

We held consultations in 2016 and 2017 to gather information about the requirements of users and feedback on the 2017 publication. We hold regular working group meetings with producers and users of similar statistics twice a year, and work collaboratively to improve methods and ensure harmonisation. There is wide support for the completeness, consistency and comparability between countries and regions that the publication provides.

It is sometimes difficult to determine a suitable method for apportioning revenue and expenditure to countries and regions. We adopt the “who pays” and “who benefits” principles, which are described in the Concepts and definitions subsection. There may be instances where certain uses of our data are restricted by conceptual approaches. For example, Air Passenger Duty may be considered an indirect tax, placing the burden on passengers. During recent improvements to the way that we process the data, we presented stakeholders with two views of the data: one apportioning revenue to the location of airports and one apportioning revenue to home regions of passengers. Our stakeholders found the view from the location of airports more useful, and so we opted to use this going forward.

In some cases, revenue or expenditure are not directly attributable to countries and regions. In others, geographical data relating to the activity that raises the revenue or expenditure are unavailable. Under these circumstances, a proxy is used. Many such items are apportioned by population or gross value added (GVA).

### **Accuracy and reliability**

(Accuracy is the absence of systematic errors that will always cause estimated values to deviate from true values in the same direction. The main sources of error are described and assessed here.)

## Sampling error

Sampling error occurs when statistics are based on random samples from the population of interest. For example, the Living Costs and Food Survey (LCF), data from which is used to apportion tobacco duties, insurance premium tax, betting and gaming duties, and soft drinks industry levy (and, indirectly, alcohol duties), uses expenditure data from a random sample of individuals to estimate the average expenditure of the UK population. While certain statistical controls will increase the likelihood that the sample is representative of the population, the estimates are unlikely to be the same as the population averages. Moreover, different samples will produce different estimates. The variability among the individuals in the sample can be used to estimate the variability between all the samples that might have been taken and therefore the precision of the estimate.

Much of the data used come from administrative sources and are therefore not subject to sampling error. However, a non-trivial amount of apportionment data are from sample surveys. Measures of the sampling error present in these surveys can be used to construct estimates of the resulting sampling error in our statistics. Unfortunately, these measures are not always produced and when they are produced, it is not always at a granularity that suits our purposes. Owing to the range of data sources involved and the work needed to gather the necessary information, it has not been possible to include measures of sampling error in the current publication.

The Office for National Statistics' (ONS) Labour Force Survey is an example of a data source that is subject to sampling error. We use this for the regional household figures. All of the country and region household figures have a co-efficient of variation of less than or equal to 5%.

## Coverage error, measurement bias and processing error

Coverage error occurs when the population being measured does not align to the population of interest. This is present in the case of some proxy indicators.

Measurement bias refers to consistent differences between a measured quantity and the quantity of interest. This may be attributable to imperfect methods of observation or indirect measurement. One example is self-reported alcohol consumption, which is used to apportion alcohol duties. This is known to be lower than actual consumption. Under the assumption that under-reporting is proportionally consistent across regions, this is not a cause for concern.

Processing errors are mistakes made by humans. They include incorrect data entry, categorisation and calculation. These errors are minimised by quality assurance procedures.

Other sources of error include the use of tax cash receipts data as a proxy for accrued tax and apportionment by population or GVA where no preferable regional data are available or carrying forward country and regional splits where timely data are not available.

## Coherence and comparability

The public sector comprises central government, local government and public corporations. The remit of each subsector varies: the responsibility of central government bodies tends to extend over the whole country while local government bodies only serve local areas. Public corporations are publicly controlled companies and include both non-financial and financial corporations. Unlike central or local government bodies, public corporations may or may not serve a particular area.

Such administrative arrangements are important to consider when using statistics such as country and regional public sector finances. For example, expenditure by central government bodies is generally not planned on a regional basis and while local government spending is specific to a particular area, this expenditure may make up a small proportion of the total expenditure incurred by the public sector for the benefit of the residents or corporations of that particular area.

Similarly, taxes are not generally levied or collected on a regional basis. It can therefore be difficult to identify to which country or region tax receipts should be allocated. This is particularly so with indirect taxes, which are paid to government by corporations. Economic theory suggests that the incidence or burden of these taxes will sometimes fall principally on consumers but in other cases on producers, depending on market conditions. For pragmatic reasons, we base our apportionment methods on the assumption that the burden of indirect taxes falls principally on consumers and that they effectively pay the relevant taxes.

Our statistics are fully coherent with the public sector finance (PSF), as this is the source of our total UK values.

The Office for National Statistics (ONS) has worked with producers of similar statistics to develop the country and regional public sector finances. As such, the methods in our publication are the same as or very similar to those used in previous publications such as HM Revenue and Customs' (HMRC's) [disaggregation of tax receipts](#), and ongoing publications such as Scottish Government's [Government Expenditure and Revenue Scotland \(GERS\) publication](#).

As far as possible, the data are comparable across countries and regions, but certain items necessarily have different data sources for country-level data and English regional data.

Separate indicator datasets are used for countries and regions in the apportionment of offshore Corporation Tax, Petroleum Revenue Tax, Aggregates Levy, parts of gross operating surplus (GOS) and some expenditure items. Different data sources are used for different countries in the Climate Change Levy, Landfill Tax, Council Tax and non-domestic rates.

## Accessibility and clarity

Our recommended format for accessible content is a combination of HTML web pages for narrative, charts and graphs, with data being provided in Excel format. Our website also offers users the option to download the narrative in PDF format. In some instances, other software may be used or may be available on request. Available formats for content published on our website but not produced by the ONS, or referenced on our website but stored elsewhere, may vary. For further information, please refer to the contact details at the beginning of this report.

For information regarding conditions of access to data, please refer to the following links:

- [terms and conditions](#) (for data on the website)
- [copyright and reuse of published data](#)
- [accessibility](#)

## Timeliness and punctuality

The country and regional public sector finances publication is usually published on an annual basis, typically in May around 14 months after the reference period. The publication month is normally announced around three months prior to publication with the date finalised at least 28 days before publication. Information on upcoming releases can be found on the [ONS's release calendar](#). Publications of the country and regional public sector finances have consistently met these scheduled release dates.

## Concepts and definitions (including list of changes to definitions)

The estimates are based on two main conceptual bases: the “who pays” and “who benefits” concepts. The “who pays” principle is based on identifying the location where the revenue is raised (that is, the location of the individual who or enterprise that bears the tax burden). We base our apportionment of indirect taxes, such as Value Added Tax (VAT), on the assumption that consumers bear the burden of indirect taxes. For direct taxes, such as Income Tax, we allocate receipts according to the residential address of the individual who pays the tax. This residence-based approach contrasts with a workplace-based approach, which would assign revenues from National Insurance contributions (NICs) and Income Tax on earnings to the individual’s place of work.

For the “who benefits” principle, there are two approaches to consider:

- expenditure “for” a region: this is where spending is allocated to a given region if the benefit of the service or transfer derived from the expenditure can be shown to accrue to residents and enterprises of that region
- expenditure “in” a region: this is where spending is allocated to the region in which the expenditure actually took place

Instances where the “for” and “in” approaches would provide the same result include the case of local government expenditure on local amenities or NHS spending; these occur in a region for the benefit of residents or enterprises in that region. Where available, a “who benefits” definition would use source data that identify expenditure “for” a region. However, some source data are not able to make that distinction and instead use an “in” approach. For example, consider expenditure on a national museum. The “for” approach would estimate expenditure based on the residence of those who visited the museum (that is, the beneficiaries of the service provided), whereas the available source data support an “in” approach and would estimate expenditure based on the location of the museum.

### Accruals and accrued recording

Accruals and accrued recording are financial recording based on when ownership of capital assets transfers, when the liability to pay a tax is created, or when a service is provided (this is sometimes different to when cash is paid).

### Combined authorities

Combined authorities are legal bodies set up using national legislation that enable a group of two or more councils to collaborate and take collective decisions across council boundaries. Some local authorities secured devolution deals and have in place directly elected mayors.

### Current budget balance or deficit

The current budget balance or deficit is the gap between current expenditure and current receipts (while including capital consumption).

### Current expenditure

Current expenditure is spending on government activities including social benefits, interest payments and other government department spending (excluding spending on capital assets).

### Current receipts or revenue

Current receipts or revenue are income mainly from taxes (for example, VAT, income and Corporation Tax) but also include interest, dividend and rent income and payment for services provided.

### Devolved administrations

The devolved administrations are the governments associated with the devolved legislatures of Scotland, Wales and Northern Ireland – namely the Scottish Government, Welsh Government and Northern Ireland Executive.



## European System of Accounts 2010 (ESA 2010)

The ONS continues to draw on the European System of Accounts 2010 (ESA 2010) to provide the framework for the production of the UK national accounts, following the end of the EU transition period. The framework is based on the wider international framework set out in the System of National Accounts 2008 (SNA 2008). See End of EU exit transition period in the monthly [PSF](#) for further information.

### Financial year

The UK financial year runs from the start of April to the end of March in the following calendar year. Data on the country and regional public sector finances are presented on a financial year basis. In the country and regional public sector finances bulletin, the financial year commencing April 2020 and ending March 2021 would be represented as financial year ending (FYE) 2021.

### Fiscal policy

Fiscal policy is the means by which the government adjusts its spending levels and tax rates to monitor and influence the nation's economy.

### Indicator dataset

An indicator dataset is used to apportion a revenue or expenditure item at the UK level to obtain country and regional estimates.

### ITL1

The largest geographic areas within the International Territorial Levels. The UK territory is divided into 12 regions.

### Net fiscal balance

Net fiscal balance is the gap between total spending (current expenditure plus net capital expenditure) and revenue raised (current revenue). A positive net fiscal balance figure represents a deficit, meaning that a country or region is spending more than it is receiving in revenue, and a negative net fiscal balance represents a surplus, meaning a country or region is spending less than it is receiving in revenue.

### Net investment

Net investment is spending on capital assets, for example, infrastructure projects, property and IT equipment, both as grants and by public sector bodies, minus capital receipts (sale of capital assets).

### Public sector net borrowing

Public sector net borrowing measures the gap between revenue raised (current receipts) and total spending (current expenditure plus net investment). A positive value indicates borrowing while a negative value indicates a surplus.

### Public sector net debt

Public sector net debt is a measure of how much the government owes at a point in time. The measure is net of any liquid assets held.

### Public sector net cash requirement

Public sector net cash requirement is the amount the government needs to raise to meet the shortfall in net borrowing. The figure is measured in cash terms rather than accruals.

## **Public sector expenditure**

Public sector expenditure is the total capital and current spending (mainly wages and salaries, goods and services, and expenditure on fixed capital, but it also includes subsidies, social benefits and other transfers) of central government and local government bodies as well as public sector-controlled corporations. It is recorded on an accrued basis, following national accounts rules.

## **Public sector revenue**

Public sector revenue is the total current income (mainly taxes, but it also includes social contributions, interest, dividends and transfers) received by central government and local government bodies as well as public sector-controlled corporations. It is recorded on an accrued basis, following national accounts rules.

## **Sub-UK**

The countries and regions of the UK (ITL1).

## **Geography**

We define country and regional boundaries by level one of the International Territorial Levels (ITL1). Our statistics cover the four countries of the United Kingdom: England, Northern Ireland, Scotland and Wales. England is divided into nine regions.

## Output quality

(The range of information that describes the quality of the data and details any points that should be noted when using the output.)

The country and regional fiscal positions presented in this release are estimates around which there are bounds of [uncertainty](#). This is because of how they are produced. While some public sector revenues and expenditure are collected directly at a regional level, many are administered and documented at a UK level. In these cases, regional estimates are produced by apportioning revenues and expenditure across regions using an appropriate geographical indicator, but these are subject to their own limitations. Users should note that some of these indicator variables offer a stronger allocation mechanism than others.

For example, both the Labour Force Survey (used to estimate the number of households in each country and region) and the Living Costs and Food Survey (used to estimate revenue share for taxes dependant on the consumption of households) are subject to sampling error. The Labour Force Survey is benchmarked against 10-yearly census results, and, as highlighted in [the Labour Force Survey weighting methodology](#), the ONS has recently introduced steps to improve the accuracy of estimates in the intervening years by comparing with PAYE real-time tax information. It is based on a rolling quarterly sample of 40,000 households. By contrast, the Living Costs and Food Survey offers a very detailed snapshot of the expenditure patterns of households in different regions, sampling around 13,000 addresses each year.

For income related taxes, regional estimates are based on [the HMRC's Survey of Personal Incomes \(SPI\)](#). This is a large survey based on a sample of administrative data which are subject to their own statistical error. At the regional level, the most recent available data for the number of taxpayers are subject to a 95% confidence interval of positive or negative 1% of the estimate.

In other cases, information held about the size and geographical location of businesses are used to apportion tax revenues, based on records held on the Inter-Departmental Business Register (IDBR). This register includes information from a variety of administrative sources such as Companies House, Value Added Tax (VAT) and PAYE registrations, but may not include (for example) sole proprietors or partnerships who do not meet the requirements to register for these schemes. These are supplemented by data collected by the [Business Register and Employment Survey](#), which includes workplace-level information. In some cases, geographic apportionment may need to be made to a head or local office location as the level of data available on the IDBR does not necessarily reflect a very detailed spatial record of where all business activity is carried out.

Collectively, the sources and methods used to estimate country and regional receipts, expenditure and net fiscal balance mean that different measurements are each subject to a degree of uncertainty. Users should consider this when comparing estimates that are similar to each other – for example, when drawing inferences about the relative performance of countries or regions within a ranked presentation, or when interpreting the performance of any one country or region between time periods. Users wishing to make comparisons between regional estimates of revenue and expenditure data should be aware of the potential for statistical error.

Input datasets are compared with the data received for each variable in previous years' deliveries. Large fluctuations against previous years are investigated using regional intelligence compiled within the branch, supplemented by information received from external quality assurance. Following this investigative procedure, any anomalous data that remain unexplained are followed up where appropriate with the relevant data providers for clarification.

The complex process by which the country and regional estimates are produced means that it is not currently possible to define the precision of the estimates in terms of detailed statistical properties, for example, through their standard errors. Therefore, the reliability of the estimates is measured by the extent of revisions. UK estimates will be affected by revisions to the UK PSF.

The country and regional public sector finances revisions policy mirrors that of the UK PSF where national totals are subject to revision. In addition, revisions to the regional indicator datasets will impact upon the regional GVA estimates.

Therefore, there are two causes for revisions within country and regional public sector finances revisions in the UK PSF figures and revisions in regional inputs data.

There are other aspects of accuracy, which revisions analysis cannot attempt to measure. A value can be reliable (as in, not revised) without being accurate.

## Trustworthiness

The underlying data and concepts used in the country and regional public sector finances are consistent with those in the UK PSF. Therefore, the country and regional public sector finances are also compliant with guidance in the ESA 2010.

# 6 . Methods used to produce the country and regional public sector finances data

## Main data sources

The primary data source is our UK public sector finances (PSF). The publication presents main aggregates such as total current receipts, total current expenditure, current budget deficit, net investment, public sector net borrowing, public sector net debt and public sector net cash requirement. These main aggregates are used to monitor and manage fiscal policy.

For each revenue and expenditure item in the country and regional public sector finances, the UK total is taken from the PSF. The following table lists the main data sources that are used to split the totals into ITL1 estimates.

## Main data sources and their uses in the country and regional public sector finances

### Office for National Statistics

- Mid-year population estimates – used as a multiplier of per head values for alcohol duties and proxy indicator for various revenue and expenditure items.
- Regional accounts – used for non-market capital consumption for general government gross operating surplus (GOS) and consumption of fixed capital as well as gross value added (GVA) for various revenue and expenditure items.
- Living Costs and Food Survey – used for tobacco duties, Insurance Premium Tax, betting and gaming duties, Soft Drinks Industry Levy, National Lottery.
- Inter-Departmental Business Register – used for Distribution Fund, Value Added Tax (VAT), Corporation Tax (onshore).
- PAYE Real-Time information – used for Income Tax.
- Labour Force Survey – used for tobacco duties, Insurance Premium Tax, betting and gaming duties, Soft Drinks Industry Levy, National Lottery Distribution, VAT.

### HM Revenue and Customs

- Survey of Personal Incomes – used for Income Tax.
- 1% PAYE sample – Used for VAT.
- Administrative data – used for Corporation Tax and Capital Gains Tax as well as England and Scotland split for Corporation Tax (offshore) and Petroleum Revenue Tax.
- VAT Theoretical Tax Liability model – used for sectoral split of VAT revenues net of refunds.
- Hydrocarbon Oils Duties bulletin – used for fuel split for fuel duties.
- Alcohol model – used for proportion of ready-to-drink drinks for wine and spirits duties.
- Climate Change Levy bulletin – used for Climate Change Levy.
- Stamp Duty Land Tax bulletin – used for Stamp Duty Land Tax.
- Inheritance Tax statistics – used for Inheritance Tax (after accruals adjustment).

## **HM Treasury**

- Public Expenditure Statistical Analyses – used for expenditure.
- Country and regional analysis – used for expenditure.

## **Department for Levelling Up, Housing and Communities**

- Local authority expenditure data – used for apportionment of local government VAT refunds to English regions.
- Council Tax and non-domestic rates statistics – used for English regional proportions for Council Tax and non-domestic rates.
- Housing Revenue Account data – used for apportionment of gross operating surplus (GOS) for the Housing Revenue Account.

## **Department for the Environment, Food and Rural Affairs**

- Family Food report – used for alcohol duties.

## **Department for Business, Energy and Industrial Strategy**

- Sub-national road transport fuel statistics – used for fuel duties.
- Sub-national electricity consumption statistics – used for Climate Change Levy, environmental levies and EU Emissions Trading System (ETS) auction receipts.
- Sub-national gas consumption statistics – used for Climate Change Levy.
- Sub-national non-domestic electricity consumption in Northern Ireland – used for Climate Change Levy, environmental levies and EU Emissions Trading System (ETS) auction receipts.
- Sub-national residual fuel consumption data – used for Climate Change Levy.

## **Department for Transport**

- Vehicle licensing statistics – used for Vehicle Excise Duty.

### **Extra data for Northern Ireland**

- Utility Regulator's Transparency Reports – used for Climate Change Levy.
- Department of the Environment landfill statistics – used for Northern Ireland's share of Landfill Tax.
- District Domestic Rates and Regional Domestic Rates data – used for Council Tax and non-domestic rates.

### **Extra data for Scotland**

- Outturn data for Scottish Landfill Tax – used for Scottish Landfill Tax.
- Scottish Land and Buildings Transaction Tax data from Revenue Scotland – used for Scottish Land and Buildings Transaction Tax.
- Local government finance statistics – used for Council Tax and non-domestic rates.

### **Extra data for Wales**

- Welsh Revenue Authority – used for Landfill Disposals Tax and Land Registration Tax.
- Local government finance statistics – Council Tax and non-domestic rates

## **How we process, analyse and quality assure the data**

The country and regional public sector finances totals are constrained to the UK PSF, published the previous quarter. This means the publication in May is consistent with the February PSF (which is published in March). The reason for not using the PSF published in May is because of the time required to process the data.

A “top-down” approach is used to calculate country and regional figures from the UK-level data. The allocation of revenue and expenditure to regions is based on a variety of methods, consistent with the “who pays” and “who benefits” concepts. We use what we call an “indicator” dataset to apportion revenue to countries and regions. These indicator datasets usually reflect the tax base or regional distribution of individuals and enterprises paying the revenue to the public sector. As mentioned earlier in the QMI, the data sources chosen to provide these indicator datasets are chosen due to their availability, accuracy and closeness to the tax base or regional distribution, as well as their timeliness. The vast majority of these data sources are updated annually, some maybe biennial or ad hoc. In these cases, we impute values to fill gaps in the data sources.

Our main expenditure data source is HM Treasury's [Country and Regional Analysis \(CRA\)](#). The allocation of UK expenditure to countries and regions is performed by the relevant government department – also using the “who benefits” concept. We process these data, apply accounting adjustments to reconcile differences between what is measured by HMT (in CRA) and then constrain to UK PSF totals.

## How do we quality assure our statistics?

Quality assurance is performed at each stage of processing. Once the processing of the indicator datasets is completed, there are a series of internal checks on the final dataset. This includes reviewing the data source, checking processes have been completed according to the desk instructions and analysing any changes and revisions in the data and querying any unexpected changes.

An important aspect of our process is to carry out a peer review of our data with external and internal stakeholders. As part of this review, external and internal stakeholders receive data tables produced with updated indicator sources, based on the latest quarterly PSF publication at time of review. The peer review allows us to get feedback from others who may have regional expertise, produce similar data or are key data suppliers. This opportunity enables them to use their knowledge to review the results of the data, data sources and methodology. Where appropriate, feedback received from the peer review is incorporated into the final dataset or further explanations are provided.

Our processing systems predominately use spreadsheets, but we also use R – an open-source statistical programming language. In addition, we use CORD, an internal data processing system in the ONS, which allows for repeatable analysis, maintaining versions, reviewing calculation steps and provide quality assurance testing. These processes and data sources are reviewed regularly to ensure they remain robust and efficient.

Where we introduce new or updated methodology to produce these data, changes are reviewed, quality assured and peer reviewed by internal and external stakeholders.

## How we disseminate the data

The country and regional public sector finances statistics are published annually on the Office for National Statistics' (ONS') website. A PDF of the publication is available for download, as are separate charts and data tables.

# 7 . Work with External Stakeholders

In compiling these estimates, we gather source data from a wide range of external stakeholders and we engage their expertise during the peer review part of our quality assurance work. The Office for National Statistics (ONS) organises a working group meeting with our external stakeholders to discuss sub-national public sector finances statistics twice a year. These external stakeholders include governmental departments, such as HM Treasury and HM Revenue and Customs, non-departmental bodies such as the Office for Budget Responsibility (OBR), as well as the devolved administrations (Scottish Government, Welsh Government, and Northern Ireland Executive) and English regions (Greater London Authority).

We carry out engagement with external stakeholders to ensure the data are of the highest possible quality and meet the needs of users. The publication is produced according to the [Code of Practice for Statistics](#). To ensure that these data are produced free from undue influence, the ONS maintains control over the final contents of the publication, limits access to pre-release data so that they are only for quality assurance by relevant stakeholders, and ensures all of the underlying definitions used for measuring transactions and classifications are consistent with those set out in the relevant internationally agreed statistical frameworks.

## 8 . Other information

The [country and regional public sector finances bulletins](#) are available. Supporting documentation includes a [methodology guide](#).

Information about the [2017 consultation](#) and [scoping study](#), as well as the [2016 consultation](#), are also available.

The [Country and Regional Analysis](#) is an annual publication by HM Treasury that is usually published around November. It is the primary source of data on expenditure by government and the broader public sector at country and regional level.

The [public sector finances](#) (PSF) is the source of our total UK values. It is a monthly joint publication between the Office for National Statistics (ONS) and HM Treasury that provides the latest information on the UK government's public sector net borrowing, net debt and net cash requirement.

HM Revenue and Customs' (HMRC's) [disaggregation of HMRC tax receipts](#) was an annual publication that presented country-level breakdowns for each of the taxes collected by HMRC. The disaggregation involved apportioning UK totals to England, Northern Ireland, Scotland and Wales. From 2020, HMRC no longer produce this annual publication.

[Government Expenditure and Revenue Scotland](#) (GERS) is an annual publication that provides an estimate of the PSF such as the expenditure, revenue and net fiscal balance attributable to Scotland.

The [Northern Ireland Net Fiscal Balance report](#) (NINFBR) is an annual publication that provides an estimate of the PSF such as the expenditure, revenue and net fiscal balance attributable to Northern Ireland.